Sheppard Memorial Compendium Essays

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Winner of the Sheppard Memorial essay competition 2021, Undergraduate category

The Shadow Pandemic: Domestic Violence and Healthcare in the Wake of Covid-19

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Introduction

While the damage and incalculable losses of Covid-19 continue to be felt globally, many people have been left to struggle with an intimately related and urgent crisis: the soaring rates of domestic violence worldwide.1 Domestic Violence (DV) or Intimate Partner Violence (IPV) is defined as "physical, sexual, psychological, or economic violence that occurs between former or current intimate partners".[2] It is the most common cause of non-fatal injuries to women worldwide, with 1 in 3 women experiencing it in their lifetime. [2, 3] IRISi research states that for women attending general practice appointments in the UK, the rate of domestic violence can be as high as 41%.[4] The United Nations Secretary General has previously identified violence against women as a global pandemic.[5] Furthermore, a UN warning issued in March of 2020 cautioned that rates of domestic violence would increase drastically due to lockdown measures put in place to fight Covid-19, with member states urged to take steps in order to protect those affected and mitigate harm.[5] Now more than ever governments and medical professionals have a clear moral obligation to tackle domestic violence, which should ostensibly be framed as an issue of public health.[5-7, 8]

The Effect of Covid-19 on Domestic Violence

Rising domestic violence rates have been reported in countries worldwide including China, France, Spain, Italy, the United Kingdom, and the United States.[1, 2] Women's Aid, one of Ireland's leading national charities working to stop domestic violence, reported a 43% increase of contacts with their service in 2020, which is an unprecedented annual rise since their formation in 1974.[9] The measures put in place to address Covid-19 have contributed to significant increases in the rate of child abuse and domestic violence globally.[10] Lockdowns and quarantine measures provide a perfect breeding ground for domestic violence risk factors including increased relationship strain and stressors, social and geographical isolation, and an inability to access support services.[2]

There has been a 60% increase in calls to domestic violence services reported in the World Health Organization's EU member states during the Covid-19 pandemic, with online inquiries increasing fivefold in 2020.[6] Common phrases in the literature of late pertaining to domestic violence are “hidden” or “shadow” pandemic, just the “tip of the iceberg”, and “paradox”: the latter referring to the oxymoron of instructing people to stay home in order to save lives, something which may be tantamount to requesting at-risk individuals take shelter in a burning building, endangering themselves to protect others.[5] The United Nations Population Fund has warned that continued lockdowns could result in 31 million more cases of gender-based violence globally over the next decade due to the delayed and abortive rollouts of preventative and interventional programmes designed to tackle domestic violence.[6] Regardless of future predictions, it is already evident that the Covid-19 pandemic will have reaching ramifications in the coming years for millions of men, women, and children whose health, wellbeing, and lives will continue to be endangered in their homes.

The Cost of Domestic Violence

Domestic violence carries a high cost in lives, in physical and mental ill health, and in impaired childhood development. It strongly correlates with increased morbidity and mortality.[7, 8] “Women who experience domestic violence often suffer from chronic health problems including gynaecological issues, gastrointestinal disorders, neurological symptoms, chronic pain, cardiovascular conditions, and mental health difficulties”.[11] Beyond this very salient human cost, intimate partner violence also carries a high economic price. Sonas, the leading Irish provider of refuge services for women in the greater Dublin area, estimates that domestic violence costs the Irish economy 2.2 billion euro annually. Despite this, less than 1% of the cost, approximately 20 million euro, is spent on responding to or preventing domestic abuse.[12] IRISi estimates that the annual cost of healthcare provision to domestic violence survivors in the UK, not including mental health treatment, is 1.7 billion pounds.[4]

The Role of Healthcare Providers

Healthcare professionals and general practitioners specifically are uniquely well-positioned to identify and address domestic abuse, which is an imperative when one considers the following statistic: 45% of women murdered by their partner will have presented to a healthcare professional for the treatment of a domestic violence related injury in the 2 years prior to their death.[3,8, 13] 80% of women in violent relationships seek help from health services, which are often their first, or only, point of contact.[4] In terms of clinical presentation, head, neck, and upper extremity injuries are the most common injuries in domestic violence survivors, however the responsibility of general practitioners and healthcare providers in identifying potential cases must go beyond critical appraisal of a patient’s presenting complaint for potential warning signs.[3, 8] General practitioners must become comfortable asking about domestic violence and educating themselves continually about local resources.[10, 11]

Beyond screening, general practitioners can provide support around immediate patient safety and the creation of a safety or escape plan for affected patients, as well as referrals to social workers and local support organisations.[2, 3, 8] The cooperation of general practitioners with local and specialist services is vital for the success of interventions, and a multidisciplinary approach is preferred to ensure survivors are not lost along a referral pathway.[4, 5, 8, 14]

Psychiatrists, emergency medicine physicians, GPs, radiologists, dentists, maxillofacial surgery teams, gynaecologists, and professionals working in sexual health clinics are all likely to encounter survivors of domestic violence and should receive appropriate training.[14] Indeed, sexual health and gynaecological problems are the most consistent and largest physical health difference between female abuse survivors and women in the general population.[15] Barriers to healthcare professionals in identifying domestic violence include insufficient training, fear of breaking confidentiality, the prioritization of Covid-19, and "the perception that this topic is not their responsibility."[5, 17] For some, domestic violence is a "family issue" that is not routinely discussed as part of a healthcare appointment, especially given the lack of resources, lack of consultation time, and the perceived or actual lack of effective support that can be given to patients at risk.[17] Despite this, women want healthcare professionals to have an active conscience, to be opened minded, to be unhurried, and to respect their confidentiality when it comes to issues around domestic abuse.[18]

The Need for Education

There is an urgent need for education and dialogue around domestic violence among healthcare professionals, students, survivors, and the general public. Public media campaigns are vital for raising awareness and sensitizing the public as well as empowering survivors to come forward.[2, 5] General practitioners and pharmacies can establish confidentiality codes or signals for survivors to indicate that they need help.[5] "Safe words" can be used in telemedicine appointments where the patient may be in the same building, or even the same room, as their abuser.[11] Midwives and clinic nurses in particular could receive training around the identification of domestic violence and the utilization of codes or safe words, as pregnancy is one of the most high-risk times for women who are being abused.[13] Unfortunately, while interventions involving "safe words" seem promising and cost-effective, they still rely on the initial education of both the general population and the healthcare team via public campaigns, informative leaflets, handouts, and training sessions, without which these interventions are liable to lead to miscommunication and missed opportunities.[5, 8] More costly interventions include standardized training programmes, such as those devised by IRISi, or the appointment of an Independent Domestic Violence Advisor (IDVA) within a hospital or general practice to provide support and education to staff and patients.[4, 14] One study in which IDVAs were appointed to five hospitals in England allowed for significantly earlier identification of survivors, as well as the contacting of survivors who otherwise would have been "hidden from society" beyond the reach of community-based organizations.[13]

With regards to medical education settings, one study demonstrated that medical students show poor clinical performance with simulated domestic violence patients, sometimes subjecting the domestic violence survivor to an "event orientated interview" more befitting of a law enforcement officer than the "patient centred communication" expected of a healthcare professional.[19] Of 25 medical schools surveyed in the UK, both staff and students, 75% of respondents felt that the training they received around domestic violence was inadequate or insufficient.[20] Similar to the barriers cited by physicians in clinical practice to addressing domestic violence with patients, the reasons cited in educational settings include a lack of time, a failure to consider domestic violence a medical problem, and an assumption that it will be covered elsewhere.[20] Unfortunately, quality education around domestic violence in healthcare settings is far from a guarantee.[13]

Conclusion

Domestic violence is a shadow pandemic that will continue to affect millions in the wake of the Covid-19. Healthcare does not respond adequately to violence against women in most settings.[8, 14] Multidisciplinary approaches and integration with community-based services to ensure direct referral pathways exist is vital for identifying and treating survivors of domestic violence in the healthcare environment. Healthcare providers are uniquely positioned to provide useful aid to survivors of domestic abuse. General practitioners in particular occupy a trusted societal role and are frequently exposed to populations who could benefit from guidance, intervention, and referral. This is both a moral and professional obligation, as the soaring rates of domestic violence worldwide constitute a global health emergency.

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Don’t Forget Your Mask If You Want to Go To Work

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2021

As I put on my “Sunday best” on a crisp and cold mid-December morning in preparation for my first stint at a GP practice, a well-known song by Christy Moore was playing in my head, but I amended the lyrics. “Don’t forget your mask if you want to go to work, don’t forget your mask if you want to go to work, don’t forget your mask if you want to go to work, a-deedle-didle-doh”. It was 8:30 AM and I was marching up and down the hallway in my noisy brown brogues, checking my bedroom and living room to make sure that I wasn’t forgetting anything. I then made my way to the kitchen to rustle up a breakfast of hearty porridge sweetened with honey from a squeezy bottle which was washed down with the finest black coffee, courtesy of Dunnes Stores. “Don’t forget your coffee if you want to go to work, don’t forget your coffee if you want to go to work, don’t forget your coffee if you want to go to work, a-deedle-didle-doh”. My morning at the GP would start at 9:00 AM, so I threw the dishes into the sink, rinsed them, dried them, returned them to their cupboards; then I walked out the front door and got into my trusty white Seat Mii, a car that bears a striking resemblance to a washing machine. “Don’t forget your steth-o-scope if you want to go to work, don’t forget your steth-o-scope if you want to go to work, three syllables don’t really seem to work, a-deedle-didle-doh”.

Being a medical student in the early stages of my training means that I have to develop an unfaltering proclivity to following up-to-date health guidelines and in line with that ethos, I must adhere to mask-wearing during this pandemic when I am out and about in crowded areas indoors and outdoors. Many people worldwide have become facemask wearers and of course there are those that decline such a status. My personal gripe with facemasks (especially the run-of-the-mill blue surgical ones) is that apart from not being aesthetically pleasing, the elasticated strings which loop around my ears can cause considerable pain and irritation after an hour or so. I own a few non-surgical facemasks which have convenient adjustable elasticated loops which provide a more comfortable mask-wearing experience, however for the sake of professionalism, I decide not to wear them for my first day at the GP clinic. Besides the ear-loops being uncomfortable, glasses fog up, itching can ensue, the lower face can become sweaty, breathing difficulties may arise, and voices can be muffled. Like many people, I have asked myself: how effective are facemasks (worn correctly) at preventing infection with COVID-19?

SARS-CoV-2 (the agent responsible for COVID-19) is an enveloped positive-strand RNA virus of the family Coronaviridae which is primarily transmitted in the setting of poor ventilation via droplets and aerosols. It was first detected in Wuhan, China at the latter end of 2019. It has brought the world to its knees, killing millions worldwide and leaving many suffering from long-term illnesses collectively known as “long COVID”. According to the World Health Organisation (WHO), masks should be part of a ‘do it all!’ approach to ameliorating the spread of SARS-CoV-2 along with social distancing, adequate ventilation, good hand hygiene, and good cough/sneeze etiquette. For healthcare workers, it is recommended that they wear medical masks (also known as surgical masks) which can be either flat-fold or duck-bill. When choosing the right mask, the choice must be based on filtration, breathability, and fit. In regard to fabric masks, the masks must be made up of three layers of fabric: an innermost layer of absorbent material, a middle layer of non-woven non-absorbent material, and an outer layer of non-absorbent material (WHO, 2021).

In 2020, Bae (a name that will resonate with many millennials) and colleagues compared the efficacy of reusable cotton and disposable surgical facemasks in the filtration of SARS-CoV-2. Four participants infected with SARS-CoV-2 coughed onto a petri dish while not wearing a mask and repeated the procedure two more times, each wearing a cotton facemask and then surgical facemask, respectively. What they found was three out of four participants wearing the surgical facemask and two out of the same four wearing a cotton facemask ended up successfully transferring the virions onto the dish. It was concluded from this very small-time study that there was no difference in either facemask, even though it did seem to provide a sort of barrier. The limitations were that other types of facemasks, such as N95s were not included in study. N95 masks are so called because the ‘N’ stands for non-oil, and the ‘95’ refers to 95% efficacy. They also overlooked the role of air penetration around the borders of the mask. However, they noted from other literature that hand hygiene and use of N95 masks reduced prevalence of SARS-CoV-2 in the healthcare setting (Wang et al, 2020; Bae et al, 2020; Delgahi et al, 2020). If this was my only source of information on the effectiveness of surgical masks in the clinical setting, I would not be fully assured that my effort to reduce the likelihood of catching/spreading SARS-CoV-2 would be satisfactory. An N95 mask would be the better option. But where would I get one on my way to the GP practice? I hoped that they would have one available for me there while I was stuck in traffic on the way to the practice.

There was an article in the Irish Medical Times that delved into the use of face shields versus surgical masks. The author of the article mentions a study conducted at Philipps University in Marburg which compared the filtration efficacy of 32 types of masks in the hospital setting which included cloth and surgical masks, respirators, and face shields. Each type of mask was attached to an air-collecting tube in an airtight tank. The filtration efficacy was then tested by pumping in a chemical called di-ethyl-hexyl-sebacat and seeing how many particles penetrated the materials and into the collecting tube. It was found that cloth masks had the lowest efficacy at 28%, then non-certified surgical masks at 63%, followed by certified surgical masks at 70%. The most effective masks for particle filtration were the KN95 and FFP3 respirators with efficacy percentages of 94% and 98%, respectively. When the same collection of masks was tested when worn by people, it was found that cloth and non-certified surgical masks had filtration efficacies between 11% and 14%. Certified surgical masks had a filtration efficacy of 47%, KN95 respirators were at 41% and FFP2 respirators were at 65%. Some of the experiments prioritised particles of 0.5 µm in size, which is similar size to SARS-CoV-2 particles. It was concluded that face shields are a waste of time if someone wants to protect themselves and others from COVID-19 (Cosgrave, 2021).

You would expect that all good medical students would strictly adhere to mask-wearing in these times. A study was conducted by Szepietowska et al (2020) where they compared medical to non-medical students in Poland on proper mask-wearing. There were 1,173 participants in the study where 665 were medical students. Unsurprisingly (and thankfully), 85.7% of medical students and 75.2% of non-medical students were compliant with proper facemask wearing. It was reported that sensitive skin and facemask-induced itch predisposed students to reduced adherence to mask-wearing guidelines.

My contemplation on the subject of mask-wearing en route to the GP practice prompted me to think, despite the obvious benefit of mitigating the spread of COVID-19, what kind of effects are mask-wearing having on patients and practitioners in the general practice setting?

A study carried out by Wong et al investigated the negative effects facemasks have on communication in the setting of primary care. 514 patients were randomly assigned to doctor-mask wearing consultations and 516 patients to non-mask wearing consultations. The doctors who participated were also randomly assigned as mask-wearing and non-mask-wearing. The patients were attending clinics situated in the Shatin district of Hong Kong. The primary outcome of interest in this study was the Consultation and Relational Empathy (CARE) measure. Patients who knew their doctor relatively well gave a higher CARE score than those who did not. However, when the well-known doctors started wearing masks, the CARE score went down. The extent to which the CARE score went down was considered likely to be clinically significant. While doctors wearing facemasks had little to no effect on patient enablement and satisfaction, there was a significant negative effect on patients' perception of the doctor's empathy. These effects were probably due to physical obstruction of facial expressions (Wong et al, 2013). I think it is important to consider some of the lesser-known negative impacts of mask-wearing and for general practitioners to be conscious of them. Even though the overall care of the patient is not compromised, the patient's experience with a doctor may be not as

satisfactory as before the pandemic. However, such factors will never outweigh the pragmatic goals of mask-wearing.

After having parked my washing machine in a carpark outside the town cathedral, I walk for about two minutes down the brick-paved footpath toward the blue door of the general practice, with the Christy Moore song still playing away in my head. The morning sun shone down beautifully, with my body casting a long shadow as I walked. After arriving a few minutes before 9:00 AM I was warmly greeted by the secretary. The mask-wearing GP who was taking me under his wing zoomed down the stairs and bumped elbows with me. “Hey, how’s it going? Ready to see a few patients?” “Absolutely!” I replied enthusiastically.

It was a typical GP office. Bright and patterned linoleum flooring, examination bed nestled in the corner, child-friendly stickers of cartoon elephants and giraffes on the wall, and various apparatus for clinical examination and sample-taking. I sat on a chair about two metres away from the office door while the GP briefed me on the first patient of the day. “She’s an absolute delight! I’ll just go out and ask her in, she should be okay with you sitting in” he said as he suavely exited the room. As I waited, I started to think about the topic of mask-wearing again. I was thinking to myself, “what if the patient refuses to wear a mask?”

In a viewpoint article by Lehmann and Lehmann (2020), the response to patients refusing to wear facemasks during the pandemic in the US was discussed. It is mentioned that people have many reasons for deciding not to wear a mask. One common belief was that if you were not infected with SARS-CoV-2 or were infected and asymptomatic, you were not required to wear a facemask. Interestingly, others decided not to wear masks based on their political leaning. Apparently less than 50% of Republican American citizens chose to wear masks versus over 75% of Democratic American citizens. Part of the rationale was that anyone wearing a facemask would be considered ‘weak’, especially if they were male. It was acknowledged that states that mandated mask use in public had a substantially greater reduction in COVID-19 growth rates when compared with states that did not mandate mask use. Some patients may declare that their right to free choice is being undermined by the public health guidelines on mask-wearing.

A reference is made to John Stewart Mills, who was a nineteenth-century British philosopher. He argued that individuals are free to act as they desire, as long as their behaviour does not pose a threat to others. Anyone who chooses not to wear a mask in a GP practice is violating Mill’s Harm Principle as they would be potentially infecting healthcare workers and patients with SARS-CoV-2. If the patient refusing to wear a mask is causing a scene and starting to threaten staff, the healthcare professional is ethically obliged to end the patient-doctor relationship. Also, if the uncooperative patient is not in need of acute care, the healthcare professional is ethically allowed to discontinue the consultation. In cases where patients are refusing to wear a facemask, efforts should be made to engage with the patient and to try and ascertain their reasoning while encouraging cooperation. This fulfils the role of the doctor where a considerable effort is made to care for the patient while protecting himself/herself and the staff and patients in the clinic (Lehmann and Lehmann, 2020).

I immediately snap out of my introspection as the GP and our first patient of the day burst through the door. The patient was a woman in her mid-fifties who was giggling away at some of the anecdotes the GP was telling her. To my relief, she was wearing a surgical mask. She came into the clinic because she was starting to have an increase in frequency of panic attacks while at home. I was prompted to ask her a few questions. One of the questions I asked her was about how she was coping through the pandemic. “It’s been really tough. I find that I’m getting claustrophobic with all that’s happening” she said. It was a sentiment that has been ubiquitous throughout the country since the pandemic started. Nonetheless, there are vulnerable people out there who are really struggling throughout what has been one of the most trying times in human history. After further discussion and assessment, the woman left the clinic seeming much more content with how to deal with her anxiety. I suppose the results would have become apparent at follow-up. Once that consult was finished, I continued to sit through a whirlwind of patient consults, each one as interesting as the last. I was totally absorbed, I truly felt like I was in my element. Thankfully, there were no patients from the no-mask brigade.

I finished my first day in the GP practice at 16:00 PM. It was one of the finest experiences in my life and I was filled to the brim with excitement considering that this is the career path ahead of me. “See you all tomorrow” I chirped to the GP and secretary as I strolled out of the clinic. The setting sun shone down beautifully on the town, my body casting a large shadow, but in a different direction this time. I sat back into my washing machine car, took off my facemask and turned on my Bluetooth car speaker. The tune I chose for my drive home was none other than ‘Don’t Forget Your Shovel’ by Christy Moore.

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A Move Towards a Planetary Health Approach: The Role of Primary Healthcare in Responding to the Climate Crisis

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2021

Doctors, vow to “First, Do No Harm”. In the context of a climate catastrophe that is damaging health and costing lives, contributing to climate change must be seen as a violation of the Hippocratic Oath. It has been over a decade since The Lancet declared that “climate change is the biggest global health threat of the 21st century”[1]. While the clinical skills that underpin general practice have not changed in this time, the environmental context has shifted [2]. The health professions therefore have a moral obligation to take action to mitigate and adapt to the effects of climate change on the healthcare system[3].

A need for greater understanding of the link between planetary systems and human health has led to the emergence of “planetary health”. According to the Lancet Commission on Planetary Health: “Put simply, planetary health is the health of human civilisation and the state of the natural systems on which it depends”[2]. It is not possible to have a healthy population on an unhealthy planet, so it is becoming increasingly important to recognise the impact of damage to natural systems on human health. By embracing a planetary health approach, we can avert the worst impacts of climate change and safeguard a healthy and sustainable future[2]. More than anyone else in the healthcare system, community healthcare professionals such as GPs can make the link between people’s health and the environment they live in[4], thus they play a key role in promoting planetary health. The COVID-19 pandemic has brought into focus the importance of planetary health and demonstrated how the public and the medical profession can adapt to make radical change in response to public health emergencies[2].

Climate change is a health emergency and GPs have a critical role in mitigation and adaptation[2]. This response must include education and research, promotion of “co-benefit” actions, managing the effects of climate change on human health, collective advocacy and building a more sustainable healthcare system.

Education and Research

GPs can work to protect the environment by ensuring that medical education, general practice training and continuing professional development programmes reflect a planetary health approach[2]. Environmental literacy is essential if practitioners are to work towards, and educate for, sustainable healthcare, but environmental concepts may not be familiar to all health professions educators[5]. Planetary health education across all levels and disciplines will equip and enable learners to protect and restore planetary health and achieve the United Nations Sustainable Development Goals[6]. This education should not only impart the relevant knowledge and skills, but also values[3]. For practitioners to be aware and responsive to planetary health issues, they must recognise the relevance of related fields such as health equity, human rights and respect for life and ecosystems[3]. Within the field of general practice, there is a great opportunity to develop and share educational opportunities and resources related to planetary health.

The importance of research in the area of planetary health cannot be understated. Relevant research is required to both better understand the health and health care system effects of climate change and develop an evidence-based approach for adaptation and health protection[7]. As with all facets of medicine, greater knowledge of how the climate crisis will affect general practice will empower data-driven decisions, enhance technologies and encourage collaborative action to improve and protect patient health[7].

Promotion of "Co-benefit" Actions

GPs are well-respected professionals widely dispersed within Irish communities and have strong ties to the population with over 100,000 patient contacts a day[8]. Therefore, the delivery of a message from a trusted source such as a GP, to live more sustainably, has the potential to have a large cumulative effect on improving the health of the patient, health of the planet as well as fiscal and societal costs[8]. Routine promotion of healthy behaviours also aligns with some needed-and powerful-solutions to the climate crisis[9]. This allows GPs to promote 'co-benefit' actions that improve individual health as well as the health of the environment[2,10]. The World Organisation of Family Doctors (WONCA) Statement on Planetary Health supports this approach, saying:

As family doctors we are in a unique position to promote knowledge about Planetary Health and behaviour changes, which can improve both individual health and Planetary Health - the so called co-benefits, such as active transportation, low emission sources of energy and a more vegetable based diet in our patient communities[10].

An example of co-benefit activities that could be discussed in a consultation are sustainable diet and active transport methods. It is well established that using active transport and increasing consumption of plant-based foods not only reduces carbon-emissions but also improves health and decreases the burden of chronic disease through the benefits of greater exercise, healthier diets, and reduced air pollution[2,9].

Despite the potential benefits, some practitioners may be reluctant to discuss climate change with patients. This may be due to time constraints, a lack of personal knowledge or training, perception that climate change is controversial, and the view that discussing it with patients would not make a difference[9]. Although the scope of the problem may seem daunting and the actions of any individual practice may appear small, general practitioners can have a large influence on how individual patients, families and communities understand climate change and the urgent need to combat it. In the course of daily practice, general practitioners are well-poised to reduce harms to patients and to promote health equity in responding to the climate crisis. This could be as simple as changing the phrasing of a conversation about diet and exercise to include a focus on planetary health:

"Getting more nutrients from plant sources is good for you and good for the planet."

"Walking and cycling to school and for close errands helps keeps you fit, helps improve the air in your community, and helps address climate change"

"Playing outdoors, in nature and parks, has lots of benefits for children beyond just exercise"[9]

It is clear that one of the easiest, and most impactful ways that GPs can address the climate crisis is by promoting co-benefit activities to patients and empowering patients to live more sustainably.

Managing the Effects of Climate Change on Human Health

Altered planetary conditions combined with direct disruption to health infrastructure as a result of climate change would profoundly transform the practice of medicine, therefore GPs have a key role in supporting the adaptation of the health system to the impacts of climate change[2]. The health consequences of climate change are many and varied eg. increased infectious diseases alongside increasing antimicrobial resistance, air and water pollution, increasing frequency and severity of extreme weather events[8]. The effects on human health may be categorised as direct (eg. heat stroke), indirect (eg. mental illness after experiencing floods) or mediated through societal systems (eg. population displacement after drought or conflict)[11,12]. These effects are not shared equally among or between people, as they disproportionately affect the vulnerable: poorer communities and countries, those geographically vulnerable to extreme weather events, and those highly dependent on agriculture for their livelihood[8,12].

Adaptation to the effects of climate change on healthcare are likely to include adaptation to increasing extreme weather events, adaptation to increasing infectious diseases, and education of patients about the potential effects of climate change on their health.

Extreme weather events are increasing in frequency and severity due to climate change[8] and have a considerable effect on human health. GPs may need to adapt to provide support to reduce physical and mental health effects in affected individuals[11]. They also may play a key role in contributing to the development and implementation of emergency response plans that need to reflect the evolving threat of extreme weather events[2].

Climate change is likely to cause an increase in infectious diseases[8]. As GPs are often the first to encounter infectious diseases, they serve an important surveillance function for these conditions[11]. Adaptation of Primary Healthcare to the potentially increasing burden of infectious diseases may include surveillance of risk factors (such as vector populations), vaccination programmes and increased collaboration with Public Health services[4,12].

By applying a planetary health lens to clinical practice, GPs may find it necessary to educate vulnerable patients about the potential effects of climate change on their health. GPs can actively work to ensure vulnerable patients are aware of the dangers of extreme heat, support the adoption of protective behaviours and adjust medications to reduce risk[2,11].

The effects of climate change on health are wide and varied and particularly affect the vulnerable in society. GPs can adapt to these changes by being prepared for extreme weather events, adapting to manage the increasing burden of infectious diseases, and educating patients about the effects of climate change on their health.

Collective Advocacy

Health professionals can drive social and policy change through collective advocacy. GPs are in a strong position to drive social and policy change because they are generally highly trusted, have influence at all levels of society and are widely distributed and connected to their communities[3,11]. This connection to the community also allows GPs to involve social and environmental determinants of health, instead of taking a purely biomedical approach[11]. With this trust comes responsibility to influence wisely and lead effectively, thus:

Health professionals will be called on to engage as humble, informed, and trusted partners in the collective, boundary-crossing effort of transforming practices and structures to better sustain the health and well-being of all life, including our own[13].

Advocacy will allow GPs to have a larger and wider-reaching impact than they might otherwise have. This advocacy for adaptation and mitigation actions can occur on a local, national, and international level.

At a professional level, a number of prominent medical colleges and organisations, including the World Organisation of Family Doctors, have declared that climate change is a health emergency requiring urgent action and are leading the way in collective advocacy[2,11]. Collective advocacy within the professional sphere provides an opportunity to support larger-scale decarbonisation and transition towards an environmentally sustainable economic system. It can also increase capacity to prevent and manage climate-related health risks[2]. GPs can prompt governing bodies to take actions that affect the climate, highlight the health implications of the climate crisis and advocate for evidence-based interventions[11].

At a local level, GPs can become engaged in civil society and health groups that promote actions addressing the health impacts of climate change[2]. This may include aiding in community intersectoral co-operation, advocating for structural changes to the built environment that promote equitable access to green space, or involvement in strategies to tackle anti-microbial resistance within a One Health approach[4,9,11].

Collective advocacy allows GPs to use their links to the community, respect as a profession and understanding of planetary health to have a wider effect on mitigation of and adaptation to climate change. This can be carried out on a local, national, or international level.

Building a More Sustainable Healthcare System.

Health Care Without Harm have calculated that if global healthcare itself were a country, then it would be the fifth largest producers of greenhouse gas emissions[8]. In Ireland, healthcare is classed as a "major emitter", releasing 0.5-1 t per capita, approximately 4% of all of Ireland’s emissions[8]. In addition to advocating for a society-wide move towards sustainability, healthcare itself must be made more sustainable. GPs must become involved in reducing emissions in the healthcare system, decarbonising the healthcare supply chain, and increasing the resilience of healthcare to the effects of climate change.

The transition to a more sustainable healthcare system will require action on a local level, such as by adapting "green" technologies and managing prescriptions. On a national level, this will require policy changes, waste management changes and a clear roadmap to net-zero emissions.

Adapting "green" technologies in a practice can reduce harm to the environment and can also benefit a practice's bottom line[9]. Changing to LED bulbs, installing smart thermostats, and unplugging electronic devices that are not in use are practical first steps. For some practices, it may be feasible to use a renewable energy source, such as solar panels. The continued role out of telemedicine and other virtual processes may also benefit the environment, with the NHS finding that the provision of telehealth and telecare for people with long-term health conditions in the community could bring returns of £5.1M in healthcare savings, a reduction of 67,000 tons of CO2 and 5,671 quality adjusted life years[8].

GPs have a unique role as a gatekeeper for tests, investigations, and prescription medications, so practices may find it beneficial to examine prescribing practices. Over-prescription of medication and non-adherence to prescribed regimens contribute to global carbon emissions and healthcare waste[9]. In the NHS 80% of all prescribing occurs in primary care and this makes up the largest proportion of the carbon footprint[8]. Examining prescribing practices in a GP Practice may highlight opportunities for a practice to reduce its carbon footprint.

As well as reducing the carbon emissions, there must be changes in the amount of waste produced by the healthcare system. One big part of tackling the waste produced by healthcare is reducing the use of plastic, which has become indispensable to clinical care. Hospitals are among the top consumers of single-use plastics in Europe, with approximately 25% of total waste being plastic[14]. It may not be feasible for one hospital or practice to change their procurement systems, but policy changes relating to procurement could put pressure on the Pharmaceutical and Medical Technologies industries to behave more sustainably[14]. The HSE’s climate action plan has ambitions to reduce the amount of waste sent to landfill to 10% by 2035 and recycle 70% of packaging waste and 55% of plastic packaging waste by 2035[14].

While managing waste and adapting "green" technologies will reduce the impact of the health system on the environment, the ultimate goal must be a net-zero emissions healthcare system. This would require a baseline estimation of Ireland’s healthcare emissions to identify priorities, a co-ordinated multi-health sectorial procurement strategy to substitute high carbon items, annual reporting, and ongoing review[8]. Changes should be made to procurement policy so that production, packaging, and transportation, reusability and recycling must all be weighted along with price[8]. This health care decarbonization should be included in the Nationally Determined Contribution to the Paris Agreement[15]. It would require not only the co-operation of the entire healthcare system, but also the national governing bodies.

Although it is not entirely within the control of any individual health system, healthcare has the power to demand supply chain decarbonization, which may in turn encourage supply chain companies to take on the challenge of achieving zero emissions production, packaging, and transport[8]. For healthcare to achieve zero emissions, all healthcare institutions, suppliers, manufacturers, and all agencies involved distally will also need to achieve carbon neutrality. The health sector can only truly decarbonize in tandem with every other sector of the economy and society, so this fundemental transition will require collaboration, innovation, and investment at the highest levels to not only improve the existing quality of care but prevent disease upstream of primary and secondary healthcare.

As well as collaborating and co-operating with stakeholders to increase the sustainability of the healthcare system, GPs must contribute to increasing the resilience of the healthcare system to climate change[3]. The Intergovernmental Panel on Climate Change defines “resilience” as:

The capacity of a system to cope with a hazardous event or disturbance, responding or reorganizing in ways that maintain its essential function, while also maintaining the capacity for adaptation, learning and transformation[7].

Resilient healthcare facilities must be equipped to anticipate, respond to, and adapt to climate impacts such as altered patterns of disease, threats to infrastructure due to changing weather patterns and psychological impacts[3]. This increased resilience will require increasing the health system’s ‘surge’ capacity to respond to emergencies[4,12] and preparing facilities for possible disasters by assessing and planning for threats such as extreme heat, flooding, or storms[3]. This large-scale adaptation would require the input of the entire healthcare system, including Primary Healthcare providers.

Conclusion

Climate change is still “the biggest global health threat of the 21st century”[1]. Due to their position in the healthcare system, GPs will have an important role in mitigating and adapting to climate change. This must include education and research, promotion of co-benefit actions to patients, adaptation to the effects of climate change on health, collective advocacy and movement towards a more sustainable healthcare system. By adapting a planetary health approach, GPs can fulfil their moal obligation and vow to “First, Do No Harm”.

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The Symphony of Us: COVID-19 Vaccinations in Ireland

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2021

What soundtrack would we give the COVID-19 pandemic? Would it be a thunderous, unrelenting rock anthem in the vein of "Helter Skelter" by the Beatles? Or possibly a more sombre refrain like the solitary bugle player in the military tradition of the "Taps"? Or perhaps an elegy which is a "piece of music in the form of a lament"[1]. There are many who did not live to hear the finale of this piece but were part of the collective harmony the country gave in battling the virus back.

I turned thirty in December 2020 and how differently the tune has changed since then. Radio voices gave reports of six thousand new confirmed cases a day. Footpaths were cold and empty. Yet hospital wards became flooded with bodies like crashing waves on the shore after an earthquake. In the UK, the NHS became the pioneer in delivering novel vaccines into millions of waiting arms. Vaccines brought into existence by many earnest and conscientious hands in laboratories and board rooms across the world merely nine months previously. Did we really know how the next part of the song was to go? There was no manuscript after all.

Yet, perform we did. The country assembled the technology, the expertise, the personnel, the locations and the vaccines into our own creation in order to write the lines of the next verse. Like the flourishing daffodil bulbs or the precious extra seconds and minutes of sunlight in the evenings, the spring unfolded into a new tempo. One that was a welcome change from the heavy cadence of the many days spent at home.

On a bright March morning not long before the 1 year anniversary of the pandemic, I was notified that I had been accepted to GP training. I felt honoured to be selected to become part of this medical community that had been so central to all our lives in the past year. I thought of how all of us had become accustomed to the habitual message playing on repeat over the last year to "phone your GP if you have symptoms" and only go out for "essential journeys". These phrases were stuck on repeat. It seemed as though we weren't able to turn them off.

I signed up to work as a COVID-19 vaccinator in the Kildare area that March. The days were spent traveling the county visiting nursing homes, convents and care facilities. The chime of cups on saucers, hissing kettles and crumbling biscuits usually announced our arrival to each place. Many happy smiles and fond farewells marked our exits. Each vaccination represented a new security, a safeness for many that was difficult to comprehend. For the few that yelped at the pinch of needles there were many more breathing long sighs of relief. But when would the time come for the rest of us patiently waiting at home? When would we get to hear the chatter of many voices coming together again?

The stands and concourses at Punchestown Racecourse lay quiet. This venue and many others like it were to be the setting for mass vaccination centres. An operation the likes of which have never been undertaken in this country. Crowds of a different sort were to soon arrive, not for the thrill of the race but for a chance to change the reality of the previous twelve months. On my first day on site, an eager army of doctors, nurses, volunteers hummed in unison into the bar area to await the morning briefing. There were announcements of fire safety, processes to follow for making up doses and the final ending chorus to take care and stay safe.

The dry buzzing of the walkies talkies fizzled in the air as volunteers steadily moved those arriving into the marked walkways for the registration desk. Each person had a story about how they had come to be affected by the pandemic. Yet there was an ephemeral collective understanding of what we all shared in. At the coffee break, some of the volunteers recounted how they had been in the perfect position to help when the time came for the vaccination rollout. Recently retired, still healthy and having some time on their hands, they were only too glad to join the effort. Others were in different situations where they had lost their jobs, had to give up working to look after a loved one or were in education. All of them came without looking for recognition or reward. The only thing they brought with them was a stoic sense of community and commitment.

Shimmering plastic screens covered the registration desks at the entrance to the vaccination centre. Dozens of young people in their late teens and early twenties sat neatly at each window. Black microphones and speakers were used to communicate with the next waiting person as the que flowed steadily. Patience and courtesy never dipped as the fuzzy microphones sometimes smothered the requests for photo ID and proof of appointment. Despite only entering my 4th decade of life and only a few years difference in age between us I thought about how the immediate generation behind me had been changed irrevocably by the events of 2020. I was lucky enough to be embarking on a new chapter of my career. For many there, working in a vaccination centre was only the beginning of trying to make sense of the chaotic events of the past year.

With the onset of April, the pace of the rollout quickened. The high ceilings and plastic cubicle walls reflected the sounds of voices up into the air as crowds gathered. Chat and murmur floated all around as the click on and click off of the green and red traffic light signalled for the next to come. As Irish people do, many talked to their neighbours in the que and to the volunteers that guided them on their way. ‘What a set up!’, ‘It’s actually flowing quite well isn’t it?’ and ‘how long have you been working here?’ were some of the common phrases. I memorised a familiar script as well, telling patients to remember to take paracetamol if needed and to wait for ding of the text message for the second appointment. All of us neatly fit into our sections, like an orchestra, our high-vis vested shift leader acting as our conductor. It was a real joy to move through those days and try to take in some of the atmosphere amongst the surreal nature of our work.

There were times when the record seemed to skip however. When the busy wall of sound around would fade to a low rumble. I remember the lady who cried as she sat down in the chair for her first dose. She was pleasant and chatty up until I started to read the pre-injection questionnaire. She started to remember her husband who had passed away from COVID-19 not 3 months ago. He was in his fifties. He was weeks away from sitting in a similar cubicle to where she was now. She thought about the cruel timing of his passing. If only we were quicker than the virus.

Ireland is in the top ten countries in the world in terms of the amount of the population fully vaccinated [2]. Our vaccine uptake rate has been described as “the envy of Europe”[3]. While the numbers tell one story, individuals moving through the many community halls, GP clinics, nursing homes and hospitals of Ireland tell another. Each person may have differed in their underlying reasoning for getting their jab. Some may say that they did it for loved ones, but don’t believe the science. Others more passionately embrace the data and trust what the rest of the world is doing. But do the headline figures speak to something deeper? How can we can express what we have all been through?

The ‘’key” of a piece of music is the instructions to musicians at the start of a piece about how each of the notes and chords will relate to each other. As the music develops, the musicians play around a central anchor, a root on which the variation of the notes creates the beauty of the melody. Can the same be said for us? Meeting the many faces of the Irish public moving through the halls of the vaccination centres, there was a familiarity amongst complete strangers. A shared consciousness that we had travelled the same road together. While the burden of this virus was undoubtedly felt by the older and sicker in our population, no one was left unaffected. How will we write this chapter in the history books?

As we come towards a beginning of a new phase of this saga, I hope that we will be able to retain the central themes of the collective melody that sustained us over the past eighteen months. Will we be able to continuously rewrite it again and again for ourselves? Perhaps change the key altogether for the new challenges of the future? There has never been a shortage of music on the island of Ireland. Let us hope that we may continue to listen and enjoy each other’s song for many days and nights to come.

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The Efficacy of Probiotic Supplementation in the Treatment of Urinary Tract Infections: A Systematic Review of the Current Literature

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2021

Keywords: probiotics, *Lactobacillus*, urinary tract infection, urogenital health, systematic review

Abstract

Urinary tract infections (UTIs) are one of the most commonly diagnosed medical conditions worldwide. With the up rise of antibiotic resistance in the past number of decades, alternative methods to avoid over-prescription of said antibiotics, especially in the GP setting, is warranted. Probiotics have been gaining popularity amongst the scientific community and general population alike for their broad range of health benefits. The literature suggesting probiotics have the potential to efficaciously treat UTIs has been mixed thus far, often due to large variations between the methodology of the studies. In order to assess the evidence provided by recent literature, a systematic review of randomized controlled trials (RCTs) assessing probiotic efficacy in the treatment of UTIs was undertaken. MEDLINE, Embase, and Scopus were searched using the terms “probiotic”, “urinary tract infection”, “UTI”, “treatment”, and “supplementation”, and all possible results were assessed for relevancy. Articles that met the inclusion criteria were analyzed at full-length, data was extracted from each study, and the quality of the paper was scored. Inclusion criteria included: RCTs, published dates between 2000-2021, papers published in English, participants of any age and gender, treatment group consisting of probiotic supplementation, and control group consisting of antibiotics or a placebo. All trials not meeting these criteria were excluded. Due to the heterogeneous nature of the data, a qualitative assessment was undertaken to reach an overall consensus regarding probiotic efficacy in UTI treatment. Though there were limitations regarding the strength of data extracted due to lack of blinding in some of the studies, the evidence does suggest with optimization of methodology for future studies, the true potential for probiotics to be applied to UTI treatment could be unlocked.

1. Introduction

Probiotics have been gaining popularity over the past decade for their ubiquitous efficacy in the treatment of numerous medical conditions. With their ease of administration and generally high safety profile[1], probiotics provide more than just a promising field of research. Probiotics have been defined as “live microorganisms which, when administered in adequate amounts, confer a health benefit on the host"[2]. By gaining both consumer and scientific popularity over the past decade[3], research of these symbionts has grown exponentially. Studies have shown efficacious use of probiotics for the treatment of bacterial vaginosis[4-5], inflammatory bowel disease (IBD)[6-7], irritable bowel syndrome (IBS)[8-10], depression[11], and eczema[12-13], among many others. The mechanisms behind which probiotics are able to confer their health benefits has been diligently studied, with numerous proposed theories depending on the condition.

For example, proposed mechanisms for probiotic treatment of IBD include modulation of the host immune system, production of short chain fatty acids, up-regulation of tight junction expression, and reducing apoptosis of intestinal epithelial cells[6]. It is proposed that probiotics can play a role in the treatment of depression through modulation of the gut-brain axis via stimulation of the enteric nervous system, and through the production of cytokines and neurotransmitters[14]. Other studies have shown how probiotic supplementation can help restore the natural vaginal flora present in women with bacterial vaginosis. The vaginal flora of women with BV have been shown to contain a large number of pathogenic bacteria, in contrast to the *lactobacillus* species that reside in women without BV[4]. It is thought that this depletion in lactobacilli drives the formation of BV[15]. Probiotic supplementation has been suggested to treat BV through *Lactobacillus*-induced H_2O_2 production[16], *Lactobacillus* displacement of pathogenic bacteria[17], and through the production of bacteriocins[18].

With probiotics yielding such promising results in the field of urogenital health, proposing that probiotic supplementation could be efficacious in the treatment of urinary tract infections (UTIs) is a justified supposition. This is especially applicable to the General Practice (GP) setting where UTIs are a very common presentation. The data, however, have been mixed thus far with much yet to be uncovered. Disparities between studies may exist due to use of different probiotic strains, with some shown to be more effective than others in UTI treatment[19]. Inconsistencies in length and route of supplementation between studies may also provide a conduit for mixed results. Thus, with the ever-growing knowledge surrounding probiotics and their potential health benefits, a review of the most current literature investigating their use in the treatment of UTIs is warranted.

2. Methods

2.1 *Selection Criteria*

Randomized controlled trials (RCTs) assessing probiotic supplementation in the treatment of UTIs in humans were included in the review. All studies were published in English between 2000-2021 to assess the most current literature. Patient populations included individuals of any age and gender who were experiencing confirmed UTIs. The treatment group was defined as those administered probiotics, with the strain and dose of probiotic stated. The control group was those administered either antibiotics or a placebo. Outcomes reported included occurrence of UTIs after initiation of the treatment or control, with or without measurement of antibiotic resistance.

2.2 *Search Strategy*

Databases used included MEDLINE, Embase, and Scopus. Search terms for each database included probiotic(s), supplementation, treatment, urinary tract infection, and/or UTI (Table 2). All studies identified through database searching were imported to EndNote X9[20]. Duplicates were subsequently deleted, and paper titles were scanned for relevancy. Studies identified as potential candidates were examined via full-text analysis. Those that did not fit the inclusion criteria were excluded from the review.

2.3 *Data Extraction and Quality Assessment*

Data extracted from each study included: publication date; study design; length of study; age and gender of the study participants; occurrence of UTIs as the main outcome measured; strain, dose, and route of administration of the probiotic group; sample size; statistical analysis of the data including p-values; any sub-outcomes reported by the authors including antibiotic resistance; conclusions made by the authors regarding efficacy of treatment. Quality assessment of the included studies was performed with the Critical Appraisal Skills Program (CASP) RCT checklist[21], and risk of bias was subsequently assessed with the Cochrane Risk of Bias Tool[22]. Due to the heterogeneous nature of the studies, a qualitative analysis of the evidence was undertaken. An overall consensus was reported based on the quality of the papers and risk of bias from each study.

3. Results

3.1 *Selection of Appropriate Literature*

Studies identified through database searching yielded 4244 potential results. After duplicates were eliminated (n = 21), 4223 results were screened for potential relevancy. Records excluded consisted of 4204 results, with 19 papers reaching full-text analysis. Studies included in the final qualitative synthesis comprised of 9 papers, with 10 studies being excluded due to not meeting eligibility criteria (Figure 1).

3.2 *Characteristics of Included Studies*

A total of 1,316 participants were assessed over 9 randomized controlled trials (514 children, 802 adults). One study included postmenopausal women, 3 studies included adult women, 4 studies included children, and one study included both men and women in their patient population. Five studies included antibiotics as the control group and 4 studies included identically matched placebos. The primary outcome assessed in all studies was incidence of UTI upon initiation of the treatment or control. A positive UTI ranged from $1x10^2$ to $1x10^5$ colony forming units (CFU) per mid-stream clean catch urine (Table 1). Four RCTs included antibiotic resistance as a secondary outcome measurement.

3.3 *Selection of Treatment and Control Groups*

Patients in each study were randomized to receive either probiotics as the treatment group, or a control containing antibiotics or an identically-matched placebo. Strains of probiotic used included: *Bifidobacterium bifidum*, *Bifidobacterium breve*, *Bifidobacterium lactis*, *Bifidobacterium longum*, *Lactobacillus acidophilus*, *Lactobacillus bulgaricus*, *Lactobacillus casei*, *Lactobacillus crispatus*, *Lactobacillus reuteri*, *Lactobacillus plantarum*, *Lactobacillus rhamnosus*, and/or *Streptococcus thermophilus*. Concentrations of probiotic ranged from $1x10^7$ CFU to $4x10^{10}$ CFU, and routes of supplementation included capsules, yogurt, or suppositories. Antibiotics chosen for the control group included either trimethoprim-sulfamethoxazole (TMP/SMX) or nitrofurantoin (Table 1).

3.4 *Assessing Risk of Bias*

Each study included in the final qualitative synthesis underwent a quality assessment via the CASP RCT checklist. Four studies were considered of high quality, 1 study was of moderate quality due to lack of accountability of participants lost to follow-up, and 4 studies were considered low quality due to lack of blinding (Figure 2). All studies were subsequently assessed for risk of bias using the Cochrane Risk of Bias Assessment Tool[22], with 3 studies containing low risk of bias, 4 studies with high risk of bias due to lack of blinding, and 2 studies with an uncertain level of bias (Figure 3).

3.5 *Summary of Treatment versus Control Group*

The incidence of UTI upon commencement of the RCT was reduced in the probiotic group compared to the control group in 4 studies, with 3 of these studies comparing probiotics to a placebo control, and 1 study comparing a probiotic-antibiotic combination to antibiotics alone. The incidence of UTI was as common in the probiotic group compared to the control group in 4 RCTs, with all 4 of these studies comparing probiotic efficacy to antibiotic efficacy. One study showed no benefit to probiotic supplementation in the treatment of UTIs when compared to an identically-matched placebo (Table 1). Antibiotic resistance was measured as a secondary outcome in 4 studies, with all 4 RCT reporting increased resistance to antibiotics in the control group compared to the probiotic group.

Of the 4 studies that demonstrated probiotic efficacy in the treatment of UTIs, 2 of the studies were of high quality, 1 study was of moderate quality, and 1 study was of low quality due to lack of blinding. Of the 4 RCTs that demonstrated no difference in the efficacy of probiotics compared to antibiotics, 3 of the studies were of low quality due to lack of blinding, and 1 study was of high quality. The RCT that demonstrated no benefit to probiotic supplementation in the treatment of UTIs was of high quality.

4. Discussion

4.1 *Quality of Data Reviewed*

This systemic review of recent literature on the efficacy of probiotic supplementation in the treatment of UTIs combined a group of datasets, with the goal of determining the strength of evidence in supporting the use of probiotics for said treatment. Due to the heterogeneous nature of the data, each study was examined individually and then considered alongside its counterparts as a whole. The authors' final conclusions were documented during the data extraction process, however, an alternate viewpoint can be noted for some of the evidence that the original authors may have overlooked. For example, both Mohseni, *et al* and Beerepoot, *et al* concluded that no significant difference in probiotics versus antibiotics in the treatment of UTIs was evidence against the use of probiotics, and that the original hypothesis was not supported (Table 1). However, an alternative view of this evidence is that probiotics were just as effective as antibiotics in reducing the occurrence of UTIs. Probiotics did not perform worse than antibiotics, but instead performed just as well as antibiotics, all the while preventing the onset of antibiotic resistance in these studies.

All data considered as low-quality was done so due to lack of blinding in their respective trials. This includes the studies conducted by Heidari, *et al*, Mohseni, *et al*, and both studies conducted by Lee, *et al* (Figure 3). The rationale for why the authors chose not to blind the participants is not known. It may be arguable that participants being aware of which group they are allocated to may not dramatically change the objective measurement of their

UTI. However, one undeniable conclusion of who should be blinded is the individuals collecting and assessing the data. All studies considered of low-quality evidence also did not blind their data collectors and assessors, and thus their low quality status remains.

The study conducted by Stapleton, *et al* received a moderate-quality rating due to the fact that there was some uncertainty regarding the handling of unreported data in individuals who dropped out of the study. On the other hand, though the authors of the paper conducted by Sadeghi-bojd, *et al* noted the possibility of ascertainment bias present in their study, this paper still received a high quality rating due to the presence of blinding and accountability of all data obtained.

4.2 *Efficacy of Probiotic Supplementation*

It has been documented by Falagas, *et al* that not all probiotics have equal efficacy in the treatment of UTIs. *Lactobacillus rhamnosus* and *Lactobacillus reuteri* have shown benefit in the treatment of this urogenital infection while *Lactobacillus GG* has shown to be less efficacious. *Lactobacillus casei* and *Lactobacillus crispatus* have also shown to be possible candidates for treatment in some studies[19]. Thus, careful and justified choice of probiotic is essential in gaining accurate and precise evidence for the use of probiotics in the treatment of UTIs. Such careful selection is highlighted in the study by Toh, *et al*. Initial statistical evidence showed no benefit to using probiotics for the treatment of UTIs, however *post hoc* analysis isolating the effects of *Lactobacillus rhamnosus* and *Lactobacillus reuteri* did provide statistically significant results favouring the use of these probiotics for UTI treatment.

When examining the data as a whole, there does appear to be some promising results. Though not all data was of high quality due to lack of blinding in some studies, the overall consensus showed probiotics to be either more effective than identically-matched placebos, or just as effective as antibiotics in reducing incidence of UTIs. The one study that did not support probiotic use by Toh, *et al* eventually did conclude that there is evidence suggesting certain probiotics do show efficacy. Optimization of the RCT via double blinding, using an evidence-based choice of probiotic, assessing probiotic colonization in the urogenital region of participants, standardizing the most effective route of probiotic administration, and comparing probiotics against antibiotics are all components of study design that should be implemented moving forward. Doing so will allow investigators to ascertain robust and accurate data regarding this area of research, so as to allow a proper consideration of probiotics for clinical use in the GP setting.

4.3 *Proposed Mechanisms of Treatment in the Literature*

There have been many studies performed to investigate the possible mechanisms of probiotic use for UTI treatment. These include colonization of the vaginal flora thereby eradicating pathogenic bacteria, inhibition of *Escherichia coli* adhesion via blockage of type 1 fimbriae, and inhibition of pathogenic bacterial growth through H_2O_2 production[23]. Other metabolites produced by probiotics to inhibit bacterial growth include lactic acid, acetic acid, bacteriocins, and antifungal peptides[24]. Probiotics have also been shown to compete with uropathogens for nutrients, modify cell signaling via NF-Kβ and TNF- α, enhance production of IgA and cytokines, as well as increase the barrier efficacy of the local mucosa by stimulating proliferation. Actions of specific bacteria have also been elucidated via *in vitro* studies. *Lactobacillus acidophilus* and *Lactobacillus reuteri* produce H_2O_2 and biosurfactant to prevent uropathogen adhesion, while *Lactobacillus rhamnosus* GR-1 attaches directly to the urothepithelium to achieve the same. *Lactobacillus casei* increases the activity of natural killer cells and enhances the response of the immune system in order to eradicate pathogens[24]. It is clear by the elucidation of how probiotics eradicate uropathogens that there is a great potential for them to be efficacious in UTI treatment.

4.4 *Adverse Events*

There are ever-increasing incidences of antibiotic resistance since their discovery in 1928[25]. With UTIs being one of the world's most commonly diagnosed conditions[26], it is no surprise that prescription of antibiotics for their treatment would be a large source of breeding resistance[27]. Thus, finding effective alternative solutions to treating UTIs without the use of antibiotics is a highly warranted field of study. With the 4 RCTs that assessed this outcome, all 4 trials showed resistance to antibiotics by the end of the study. On the other hand, the probiotic group in each of these RCTs did not display such resistance. Probiotics may actually confer a protective effect against acquiring resistance. Mohseni, *et al* showed decreased resistance in their probiotic plus antibiotic group when compared to their antibiotic group alone. This phenomenon has been displayed elsewhere, when probiotics administered with antibiotics produced less superinfections, lowered the bacterial load, and increased the immune response of the local mucosa[28]. Further examining the relationship between probiotic supplementation as a protective mechanism for antibiotic resistance is another avenue of research that would be much warranted.

4.5 Limitations

Though there are a number of promising avenues presented, there are limitations to this systemic review. The quality of many studies included could certainly be improved due to lack of blinding. The interpretation of their extracted data must thus be weighted lightly as bias can easily be found. There are also a number of high quality studies currently being conducted that could not be included in this review due to lack of extractable data, and thus though the most current literature was attempted to be included, there will soon be a host of new data ready to be reviewed.

5. Conclusion

Despite the heterogeneous nature of the studies reviewed and lack of unanimously high quality data, there are important findings within this review that suggest probiotic use in treatment of UTIs is not without benefit. It was found that some studies initially viewed probiotics as not useful due to their inability to produce statistically significant results compared to antibiotics. However, another interpretation is that probiotics were just as efficacious as antibiotics when preventing occurrence of UTIs, with the added benefit of not producing antibiotic resistance. Another study found that probiotics used in combination with antibiotics helps mitigate some of this resistance, thus perhaps a combination treatment of antibiotics plus probiotics should be the focus of further research. Probiotics have been extensively studied in recent years as they gained popularity, and even more so due to their ability to treat a multitude of medical conditions. With their high safety profile, general lack of side effects, ease of administration, and diverse applicability, rigorous and high quality research my one day bring widespread clinical prescribing of probiotics for the treatment of UTIs to the horizon.

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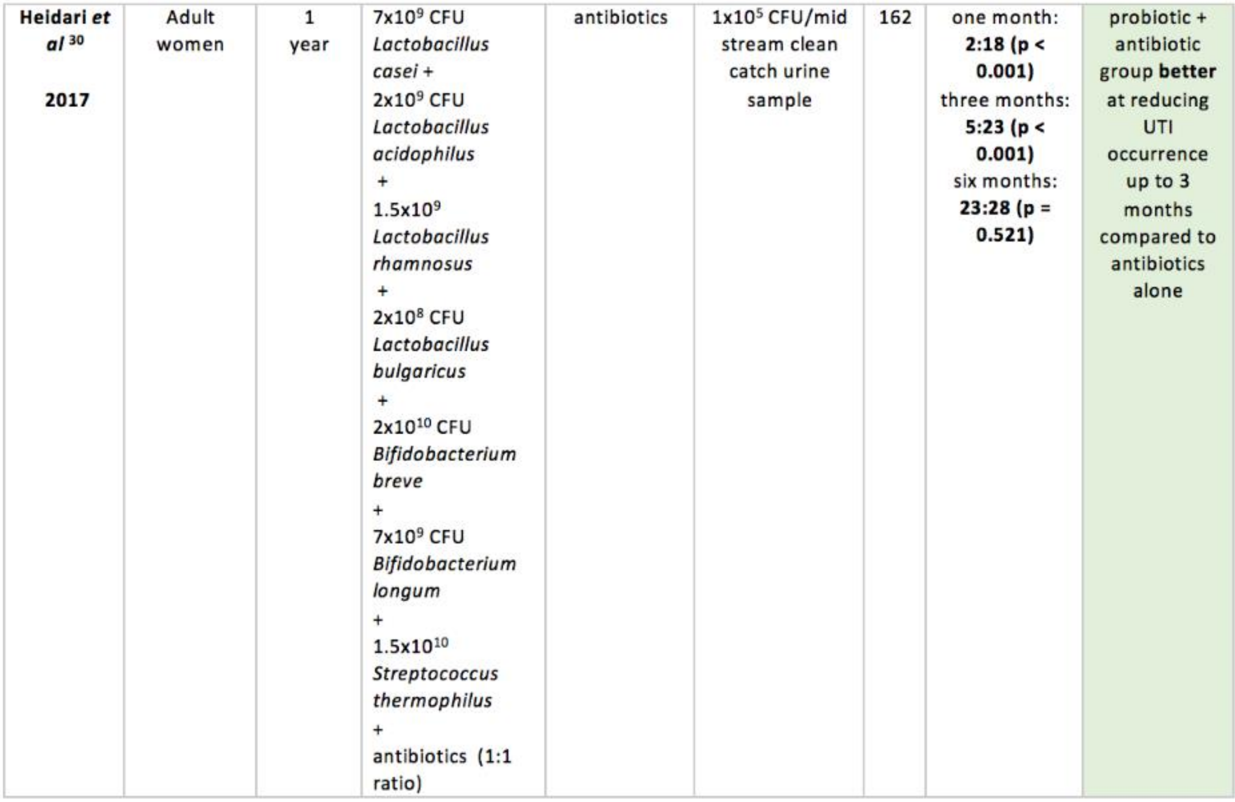
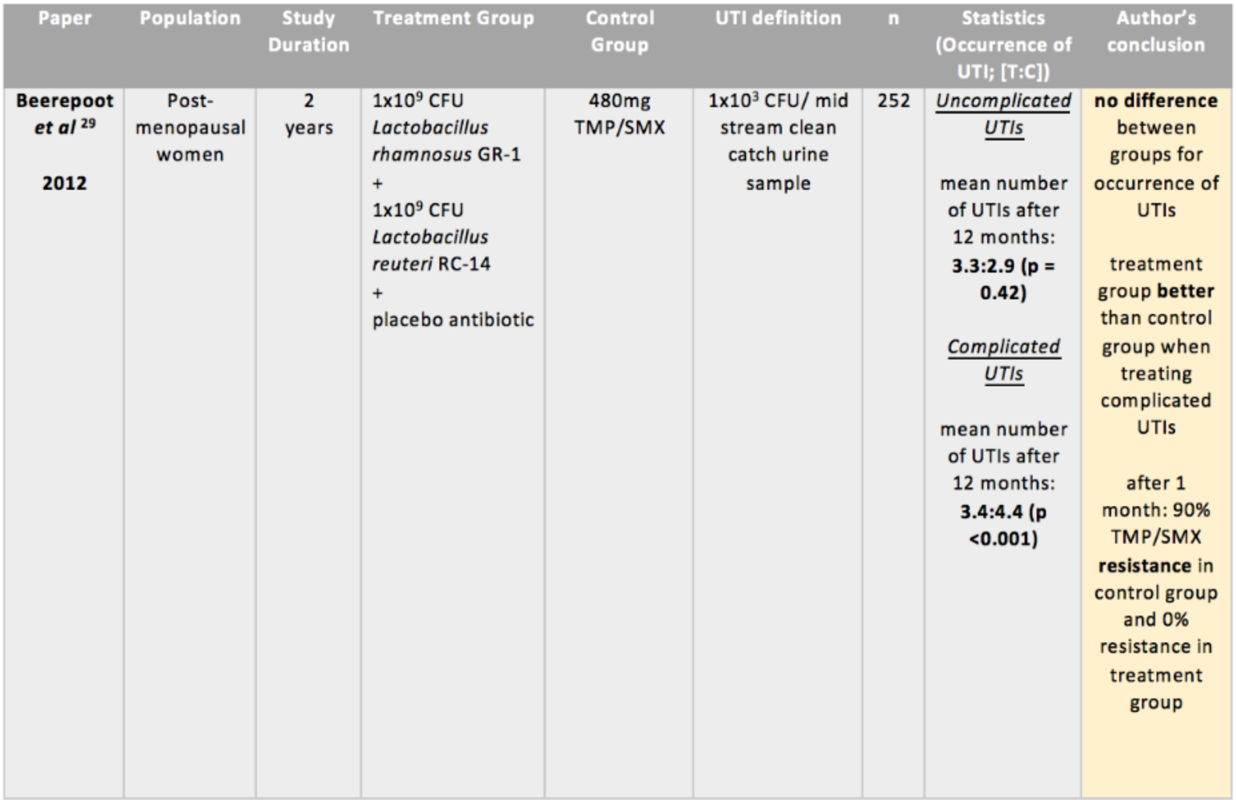
Figures



Heidari *et al* [30] **2017**	Adult women	1 year	7x10^{9} CFU *Lactobacillus casei* + 2x10^{9} CFU *Lactobacillus acidophilus* + 1.5x10^{9} *Lactobacillus rhamnosus* + 2x10^{8} CFU *Lactobacillus bulgaricus* + 2x10^{10} CFU *Bifidobacterium breve* + 7x10^{9} CFU *Bifidobacterium longum* + 1.5x10^{10} *Streptococcus thermophilus* + antibiotics (1:1 ratio)	antibiotics	1x10^{5} CFU/mid stream clean catch urine sample	162	one month: **2:18 ($p < 0.001$)** three months: **5:23 ($p < 0.001$)** six months: **23:28 ($p = 0.521$)**	probiotic + antibiotic group **better** at reducing UTI occurrence up to 3 months compared to antibiotics alone



Paper	Population	Study Duration	Treatment Group	Control Group	UTI definition	n	Statistics (Occurrence of UTI; [T:C])	Author's conclusion
Beerepoot *et al* [29] **2012**	Post-menopausal women	2 years	1x10^{9} CFU *Lactobacillus rhamnosus* GR-1 + 1x10^{9} CFU *Lactobacillus reuteri* RC-14 + placebo antibiotic	480mg TMP/SMX	1x10^{3} CFU/ mid stream clean catch urine sample	252	*Uncomplicated UTIs* mean number of UTIs after 12 months: **3.3:2.9 ($p = 0.42$)** *Complicated UTIs* mean number of UTIs after 12 months: **3.4:4.4 ($p < 0.001$)**	**no difference** between groups for occurrence of UTIs treatment group **better** than control group when treating complicated UTIs after 1 month: 90% TMP/SMX **resistance** in control group and 0% resistance in treatment group

Lee *et al*[33] **2014**	Infants with primary VUR	4 years	$1x10^{8}$ CFU *Lactobacillus acidophilus* ATCC 4356	2/10mg/kg TMP/SMX	$1x10^{3}$ in suprapubic aspirated culture; 10^{5} in catheterized and clean catch	128	1 year: **21:26 (p = 0.348)**	Occurrence of UTI in the treatment group was **as common** as control group **Resistance** of *E. coli* to TMP/SMX in treatment group versus control group: 3 versus 11 (p = 0.026

Koradia *et al*[31] **2019**	Adult women	26 weeks	BKPro-Cyan capsule (18mg cranberry extract + $5x10^{8}$ CFU *Lactobacillus acidophilus* PXN 35 + $5x10^{8}$ CFU *Lactobacillus plantarum* PXN 47 + vitamin A)	identical placebo capsule	$1x10^{3}$ CFU/mid stream clean catch urine	81	26 weeks: **4:15 (p = 0.0053)**	probiotic group **better** at reducing UTI occurrence compared to placebo
Lee *et al*[32] **2007**	Children with primary VUR	4 years	$1x10^{8}$ CFU *Lactobacillus acidophilus* ATCC 4356	2/10mg/kg TMP-SMX	$1x10^{3}$ in suprapubic aspirated culture; 10^{5} in catheterized and clean catch	120	2 years: **11:13 (p = 0.926)**	Occurrence of UTI in the treatment group was **as common** as control group **Sensitivity** of *E. coli* to TMP/SMX in treatment group versus control group: 4 versus 0 (p < 0.019)

Sadeghi-bojd ***et al*** [35] **2019**	Children	18 months	15x10^{9} *Lactobacillus acidophilus* + 1x10^{9} *Lactobacillus rhamnosus* + 4x10^{9} *Bifidobacterium bifidum* + 15x10^{9} *Bifidobacterium lactis*	identical placebo	5X10^{4} CFU via transurethral catheterization or suprapubic aspiration	181	18 months: **3/91:15/90 (p = 0.03)**	probiotic group **better** at reducing UTI occurrence compared to placebo
Stapleton ***et al*** [36] **2011**	Adult women	4 years	1x10^{8} *Lactobacillus crispatus* CTV-05	identical placebo	1x10^{2} CFU/mid stream clean catch urine sample	100	10 weeks: **2:9 (p <0.01)**	probiotic group **better** at reducing UTI occurrence compared to placebo

Mohseni ***et al*** [34] **2013**	Children with unilateral VUR	4 years	1x10^{7} CFU *Lactobacillus acidophilus* LA5 + 1x10^{7} CFU *Bifidobacterium lactis* BB12 + 1mg/kg nitrofurantoin	1mg/kg nitrofurantoin	1x10^{5} CFU/mid stream clean catch urine sample	85	*Afebrile UTIs per person* 12 months: **1.21:1.29 (p = 0.9)** 24 months: **0.63:1.29 (p = 0.1)** 36 months: **0.51:0.81 (p = 0.3)** *Febrile UTIs per person* 12 months: **0.07:0.25 (p = 0.1)** 24 months: **0.04:0.15 (p =0.1)** 36 months: **0:0.13 (p = 0.03)**	**no difference** between groups for occurrence of afebrile UTIs probiotic + antibiotic group **better** at reducing febrile UTI occurrence at 36 months compared to antibiotics alone probiotic group versus antibiotic group **resistance** to nitrofurantoin at 3 years: 0 versus 6 (p = 0.02)

Database	Search Term
MEDLINE	((probiotic[MeSH Terms]) OR (probiotic[Title/Abstract])) AND (lactobacillus[Title/Abstract])) AND (supplementation[Title/Abstract])) AND (treatment[Title/Abstract])) OR (urinary tract infection[MeSH Terms])) OR (urinary tract infection[Title/Abstract])) OR (uti[Title/Abstract])
Embase	probiotic in Title Abstract Keyword OR probiotics in Title Abstract Keyword AND supplementation in Title Abstract Keyword AND treatment in Title Abstract Keyword AND urinary tract infection in Title Abstract Keyword
Scopus	TITLE-ABS-KEY (probiotic) OR TITLE-ABS-KEY (probiotics) OR TITLE-ABS-KEY (lactobacillus) AND TITLE-ABS-KEY (supplementation) AND TITLE-ABS-KEY (treatment) AND TITLE-ABS-KEY (urinary AND tract AND infection) OR TITLE-ABS-KEY (uti)

Table 2. Search terms used for each individual database

Toh *et al* [37] **2019**	Adults with SCI	6 months	**RC14-GR1 =** 5.4×10^9 CFU *Lactobacillus reuteri* RC-14 + *Lactobacillus rhamnosus* GR-1 **LGG-BB12 =** 7×10^9 CFU *Lactobacillus* GG + *Bifidobacterium* BB12 **Group 1** = RC14-GR1 + matched placebo (no LGG-BB12) **Group 2** = LGG-BB12 + matched placebo (no RC14-GR1)	double matched placebo (no RC14-GR1 and no LGG-BB12)	1×10^3 CFU/mid stream clean catch urine	207	Group 1 @ 6 months: **0.67:1 (p = 0.17)** Group 2 @ 6 months: **1.29:1 (p = 0.37)** post-hoc analysis of RC14-GR1 against all other groups: **hazard ratio 0.46 (p = 0.03)**	**no effect** of RC14-GR1 or LGG-BB12 in preventing UTI in people with SCI post hoc analysis of RC14-GR1 alone **better** at reducing UTI occurrence compared to all other groups

T:C = treatment data versus control data; CFU = colony forming unit; TMP/SMX = trimethoprim/sulfamethoxazole; UTI = urinary tract infection; VUR = vesicoureteral reflux; SCI = spinal cord injury; green shading = authors concluded probiotic benefit; yellow shading = authors concluded equal efficacy; red shading = authors concluded no benefit

Table 1. Summary data of studies included in qualitative synthesis

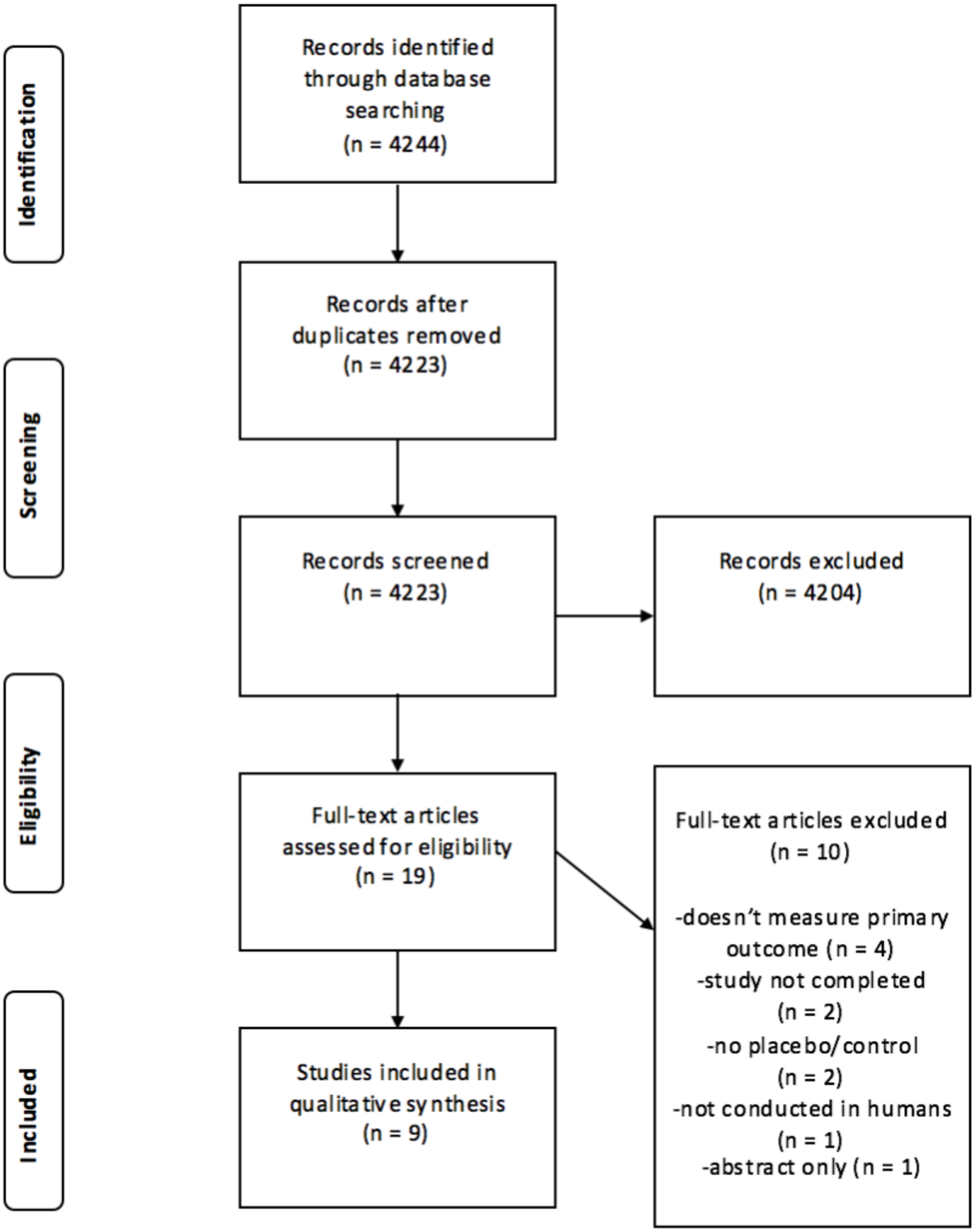
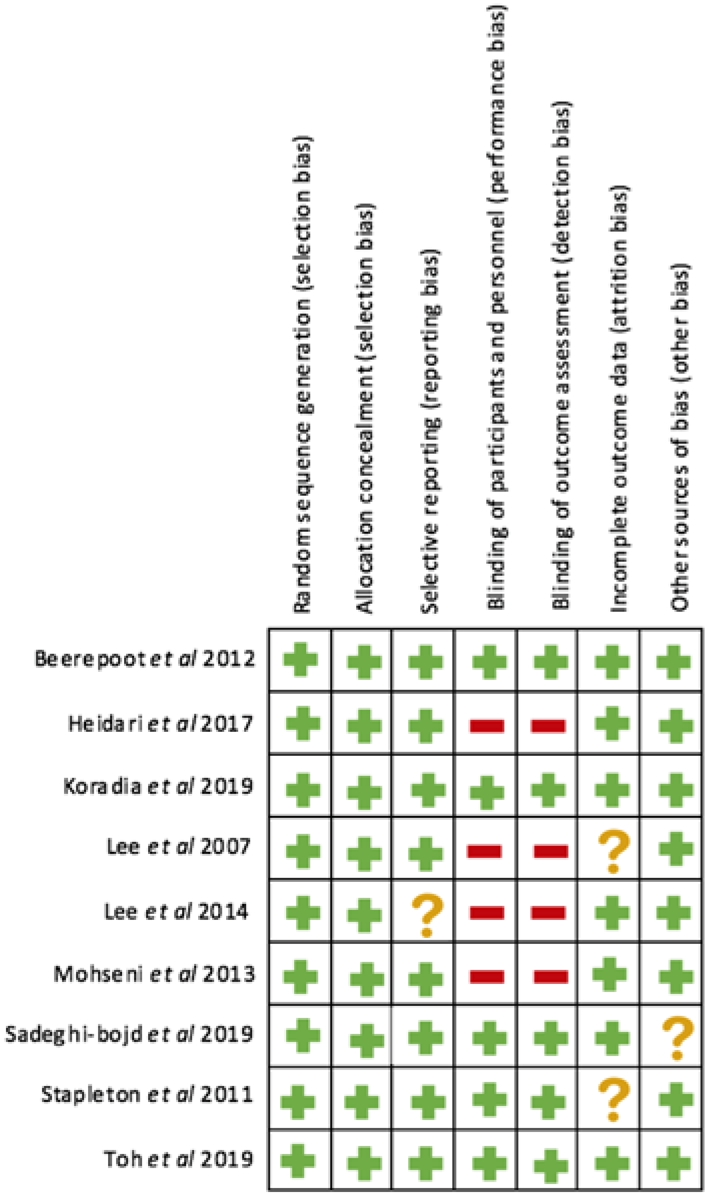


Figure 1. PRISMA flow chart.

	Did the study address a clearly focused research question?	Was the assignment of participants to interventions randomized?	Were all participants who entered the study accounted for at its conclusion?	Were participants and study personnel "blind" to treatment?	Were the groups similar at the start of the study?	Aside from the experimental intervention, where the groups treated equally?	Were the effects of intervention reported comprehensively?	Was the precision of treatment effect reported?	Do the benefits of the treatment outweigh the costs?	Can the results be applied to your local population?	Would the experimental intervention provide greater value than any existing intervention?
Beerepoot *et al* 2012	+	+	+	+	+	+	+	+	+	+	+
Heidari *et al* 2017	+	+	+	−	+	+	+	+	+	+	+
Koradia *et al* 2019	+	+	+	+	+	+	+	+	+	+	+
Lee *et al* 2007	+	+	?	−	+	+	+	−	+	−	+
Lee *et al* 2014	+	+	+	−	+	+	+	−	+	−	+
Mohseni *et al* 2013	+	+	+	−	+	+	+	+	+	+	+
Sadeghi-bojd *et al* 2019	+	+	+	+	+	+	+	+	+	+	+
Stapleton *et al* 2011	+	+	?	+	+	+	+	+	+	+	+
Toh *et al* 2019	+	+	+	+	+	+	+	+	+	−	+

Figure 2. Critical Appraisal Skills Program Checklist of included studies.



	Random sequence generation (selection bias)	Allocation concealment (selection bias)	Selective reporting (reporting bias)	Blinding of participants and personnel (performance bias)	Blinding of outcome assessment (detection bias)	Incomplete outcome data (attrition bias)	Other sources of bias (other bias)
Beerepoot *et al* 2012	+	+	+	+	+	+	+
Heidari *et al* 2017	+	+	+	−	−	+	+
Koradia *et al* 2019	+	+	+	+	+	+	+
Lee *et al* 2007	+	+	+	−	−	?	+
Lee *et al* 2014	+	+	?	−	−	+	+
Mohseni *et al* 2013	+	+	+	−	−	+	+
Sadeghi-bojd *et al* 2019	+	+	+	+	+	+	?
Stapleton *et al* 2011	+	+	+	+	+	?	+
Toh *et al* 2019	+	+	+	+	+	+	+

Figure 3. Cochrane Risk of Bias Tool assessment of included studies.

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Treatment burden: Causes, solutions and obstacles for the future GP and patient

Author: **Cian O'Sullivan, 5th year Undergraduate, NUIG.**

2021

The role of the general practice physician is unique among the medical sciences. Like an infant taking their inchoate motions, I am only beginning my ascent up the Aesculapian tree, but it is already evident that general practice holds a singular place under the medical canopy. It holds a pivotal role in primary prevention and the care of disease and illness among the population. Elements of the general practitioner branch are cross-pollinated with varied flora spanning many fields; operational management, staff organisation and budgeting, etc; this all before any patient enters the clinic. Among the innumerable pedagogic events I have attended during my medical schooling, one lecture has remained foremost in my mind. Quite in contradiction to my previously established assumptions, we were informed by a somewhat mischievous microbiologist that the hospital environment was among the worse settings a sick, vulnerable person could be placed in; surrounded by other convalescents, where the risk of illness transmission was at its greatest. Since that 9 a.m. Monday morning, luminescent in an otherwise cloudy recollection of lectures, I hold great admiration for the role a GP plays in managing illness and decreasing the need for hospital admissions.

In recent times, more is expected of the GP. TILDA reports that an estimated one million people in Ireland suffer with diabetes, asthma, COPD or cardiovascular disease and approximately 65% of those over 65 years of age live with co-morbidity.[1]

Modern medicine has brought impressive benefits to the world, including improved clinical outcomes of acute disease and increases in expected lifespans.[2] However, the rod of Asclepius carries a double-edge, with this prolonged survival bringing about a rise in the prevalence of chronic conditions and multi-morbidity. This exacts pressure upon the physician, as the need for provision of continued and effective care increases, but ultimately it is the patient who must confront the increased workload, responsibilities and challenges that their chronic disease, multi-morbidity and its treatment exacts.

Each patient exists at a crossroads between their social, personal and clinical circumstances.[3]

Each of these pathways presents challenges of their own. These vary between individuals and, even when two different patients find themselves at similar “crossroads”, their reactions and responses to such difficulties will differ. Obstacles that the modern patient must overcome on their path of chronic disease management amount to more than the manifestations of the pathological processes of the disease itself.[4]

When patients are recruited as active partners or ‘co-workers’ in the delivery of their healthcare, the liminality between their personal, social, occupational and environmental circumstances from their clinical circumstances become ever friable.

The invasion into patient’s lives and the hurdles that accompany it are beginning to take a seminal role in recent medical literature under the umbrella term of “burden of treatment”. This is a “multi-dimensional phenomenon (that) describes the… workload (i.e. requirements and demands) for patients in order for them to adhere to recommendations made by their clinicians to manage their morbidity and wellbeing.”[5] The term ‘workload’ is used to encompass the everyday tasks that patients must confront as they self-manage their illness; these vary from undergoing therapeutic interventions (prescriptions, procedures), collecting and assimilating relevant information, extensive interaction with healthcare services, suffering adverse reactions to treatment measures to mundanities including the organising of transport and attending appointments. These factors are often unavoidable and are in a constant melee with a person’s ‘capacity’.

In this context, capacity refers to the varied skills and strengths that enable a patient to overcome the demands exacted by a physician, healthcare service or life in general .[6] Capacity and workload are weighted against each other on a scale that determines the ‘burden of treatment’ a patient carries. Assets that compound one’s capacity include financial security, support from family and friends, education and literacy but also intangible faculties such as personality and resilience.[6] There are significant variations in the degree of capacity found in patients. Some patients persevere despite tremendous workloads; others falter even when relatively unencumbered. Capacity is a dynamic entity, that possesses a fluidity related to the patient’s environment and current circumstances; capacity and health are interdependent. Symptoms can erode one’s inner-strength, tipping the delicate balance of the burden of treatment against the patient as their self-capacity dissolves. Healthcare workload and care deficiencies can influence and be influenced by patient capacity. The dichotomy between workload and capacity is an ever-changing battleground in this war of attrition, as the patient engages with their burden of treatment. Unfortunately, capacity seems to be an exhaustible resource; one is never overcome by a surplus of capacity. In contrast, many patients are overwhelmed by their workload and burden of treatment. A patient’s reservoir for capacity must be accurately plumed and utilised.

There are a number of factions and ‘*dramatis personae*’ involved in the burden of treatment. In this essay, I hope to elucidate the roles of the major triadic influences involved in a patient’s management and treatment; namely, the pharmaceutical industry and major guideline producers, the physician and the patient themselves. I will consider the policies and actions of the institutions that compose the world’s major medical guidelines and the pharmaceutical industry together, as both parties exist outside of the patient-physician relationship, yet their exploits carry major repercussions for this partnership.

We have already addressed that the medical domain of the GP is quite distinct from that of secondary care. Yet the same clinical guidelines developed for the latter are forced upon GPs. Their application in primary care is questionable, considering the complexities and uncertainties that are the norm in general practice. This creates a kind of ‘Procrustean bed’ where both physician and patient are forced to comply with ill-fitting principles of care. The pitfalls that can be encountered as physicians are pressured into following evidence-based guidelines is comprehensively examined by Hughes et al 2013. The authors in this study describe how such guidelines are insipid in their acknowledgement of co-morbidity and adherence in the care of older patients; major factors that add to the burden of treatment and can impede the provision of care in the primary setting. In fact, this paper found that close adherence to guideline recommendations when managing the treatment of “an older person with multi-morbidity would often lead to complex and… contradictory drug and self-care regimes”,[7] unintentionally encouraging polypharmacy if applied to a realistic patient.
The guidelines reviewed in the mentioned study did address the importance of tailoring treatment to each unique patient and their multi-morbidity; but the advice was repetitive and facile, failing to offer effective guidance for achieving patient-centered care and reducing burden of treatment;[7] such efforts would help make such criterion more useful and appropriate for both the GP and patient.

The quagmire of definitions and infatuation with semantics is a problem the GP often encounters when deciphering modern guidelines and disease classification systems. This desire to categorise and condense disease into a few words, snug in a box to be carefully filed away extends as far back as the fifth century BC, when Hippocrates tried to systematically explain human behaviour in his description of the four “humours”. Guidelines and their insular fastidiousness and the over-zealous adherence to nosology that they promote can be counter-productive, even dangerous, when applied to patients if suitable clinical judgement is not applied by the physician.

Such guidelines are composed with the purpose of managing the disease entity; but the GP is more often faced with the idea of “illness”; that which embodies both the underlying pathological malfunctioning of the body along with the accompanying unwell state of mind or body that the patient subjectively experiences. Primary care typically requires an illness-focused, holistic view of the patient, acknowledging the subtleties and intangibles of the patient’s life.[8] These intangibles are nigh impossible to account for in objective disease-focused guidelines that target whole populations. Their production relies on the scientific method, whose linear algorithms cannot function in such a minefield of relativism.

An apparent result of adhering to guidelines is the phenomenon of “over-diagnosis”. WONCA Europe defines over-diagnosis as the unnecessary identifying of people as patients, through the recognition and treatment of problems that were never going to cause harm, or “by medicalising ordinary life experiences through expanded definitions of disease.”[9] Expanding definitions of disease come from both the broadening of guidelines and the over-reliance of GPs on such recommendations, rather than adapting them to patients with appropriate clinical judgement. Currently, diagnostic definitions label 10% of the adult population as having chronic kidney disease, the number of pregnant women defined as having gestational diabetes has tripled with the latest criteria and the margins that define ADHD continue to grow, “meaning more children and adults will be diagnosed”.[10]There is always a grey area in clinical diagnosis that GPs struggle against, but such attempts to do away with diagnostic uncertainty may cause as much harm as good.

Many forms of the medicalisation of ordinary life can be further defined as ‘diagnostic-creep’ or the even more sinister “disease-mongering”. These terms describe the increased labelling of healthy individuals as ill so as to widen the diagnostic limits of illness. Juxtaposed with promoting public awareness of same, pharmaceutical companies, insurance companies, medical equipment manufacturers and other groups involved in the selling of medicine are able to widen their potential markets and increase their monetary gain and power.[10,11]

This promotion of pseudo-diseases creates a conflict of interest between the citizen and those who sell and distribute medicines; [13] such a conflict should not exist.
Unfortunately, “Big-Pharma” does not seem to be bound by the same Hippocratic oath as doctors, instead dedicating themselves to increasing market share rather than, the less-profitable, sharing of health. Many pharmaceutical companies employ more staff working on marketing than research.[12]

Many of the panels charged with the responsibility of composing guidelines have conflicting bias that can have insidious effects on how medical care is provided across population; in some cases, up to 75% of panellists have financial ties with multiple pharmaceutical companies, commissioned for “speaking, consulting, advising or researching.”[10] Such blatant abuse of the public trust has and will lead to dire consequences into the future. Take for example the negligent marketing of opioids by pharmaceutical powers and the resulting addiction crisis in the USA.[14] Such abuse of physicians and patients trust ultimately leads to increases in patient’s treatment burden and such perfidious modes of operating will ultimately disintegrate public trust in healthcare. It is no longer such an audacious example of intellectual antagonism to agree with Dr. Heath’s advice: ‘Whenever I see the sort of guidelines that are, right now, driving overdiagnosis and overtreatment, I think of this: our responsibility not to follow the rules."[10]

Despite these external powers and their influence, at the heart of general practice is the relationship between GP and patient; both of these parties can reduce or augment the burden of treatment. It is difficult for the GP to avoid becoming like Sisyphus, entrammelled and forced to continually promulgate the belief that modern medicine has encouraged (through its impressive success) that more medicine is better, irrespective of context. Exponents of pharmacology offer patients the latest panacea for all ailments; *Hic Rhodus, hic salta!*

In fact, studies have shown that the contrary is more often true, with increased number of consultations and prescriptions associated with increased risk of iatrogenic harm, threatening the individual's capacity and compounding the burden of treatment.[14]

GPs play a pivotal role in educating patients that a life of no medical risks (a medical "zero-vision") is both unhelpful and potentially harmful.[9] We can be removed from the routine of our life by illness, but we cannot remove the threat of illness from our lives. Efforts must be made to facilitate and encourage the patient's self-empowerment and self-capacity when bearing the burden of both disease and treatment; dispossessing them of this capacity leaves them vulnerable to treatment fatigue and non-adherence.

The GP and patient are not altogether powerless against treatment burden or its root causes. There are many tools available that allow the physician to operate their care deductively, incorporating all aspects of the patient's life in a setting of holism, rather than the inductive sophistry that guidelines can promote. There has been a pivotal shift in the relevant literature towards "patient-centered care" rather than the traditional disease-centered one. This is focused on strengthening the patient-caregiver relationship by means of establishing holistic focused treatment. It utilises the bio-psychosocial complex, shared decision-making and is founded upon an enduring personal relationship.[15] However, other than these central pillars, it is difficult to find a widely accepted definition of patient-centered care that is distinct and carries general agreement. Unfortunately, the use of the term is often merely insincere rhetoric.

This has led to the development of adjuncts that aim to evolve these principles to effectively combat the complex interplay between disease, treatment and the associated burdens patients carry. Appreciating the importance of a holistic perspective when considering patients living with illness, ‘minimally disruptive medicine’ asks “what is the situation that demands medicine and what is the medicine that the situation demands?”[6]

It acknowledges guidelines as useful resources for treatment, but highlights the need for the physician to challenge its application to the individual patient. It views a patient’s capacity as a valuable resource to be mobilised and supported, complementing the provision of ‘thoughtful care’ that aims to minimise treatment burden for patients.
A key role that the modern-day GP has inherited is “protecting people from the unnecessary diagnosis of disease”.[10] A “minimally-disruptive” outlook provides a novel armoury to help interpret the benefits and potential harm of shifting diagnostic thresholds; a guideline for guidelines.

Furthermore, as the GP of the future looks for support to unburden their patients from the workload of both disease and the corollary pressure exerted by treatment, they may find it in the teaching of ‘Interpretative Medicine’. J. Reeve describes this model of care as “the critical, thoughtful, professional use...of knowledges in the dynamic, shared exploration and interpretation of individual illness experience, in order to support the creative capacity of individuals in maintaining their daily lives”.[8] The emphasis placed on a specialist model in the setting of secondary care may provide positive clinical outcomes in that environment, but in primary care, it only results in a stifling of the creative bond that physician and patient share. In contrast, general practice demands for “the provision of personal, holistic, lifelong, generalist care” in response to the illness-experience of its community of patients.[8]

Interpretative medicine tries to accommodate the ongoing “dance” between physician and patient. It subsumes the biological manifestations of disease, the biographical incarnation of the illness in the patient’s lived reality and the specific nosopoetic factors that precipitate and perpetuate sickness. By following the guidance provided by interpretative medicine, customised interventions to reduce burden from multi-morbid syndemics can restore patient determined goals of treatment. The patient who is allowed to interpret their own illness experience and treatment goals engages and takes a more active role in their therapy. This increases their self-capacity and the likelihood that they will achieve success in the pursuit of whole-person wellbeing or “dynamic continuity of embodied consciousness”[8], rather than simply averting death or disability.

Thus far, I have outlined some of the contributors to treatment burden and the resulting deleterious effects on the patient and their care; the solutions that the GP of the future requires are not so easy to predict. Although one should be wary of kalopsia when considering the future, neither should the GP of today and tomorrow be without hope. The ideals of patient-centered care, minimally disruptive medicine and interpretative medicine will continue to grow and develop alongside other therapy modalities to create a syncretism that will expand patient's capacity and support the general public in the attainment of their health needs. The GP is not some dilettante; rather they are the vanguard protecting both the individual's and the public's health. In accordance with such demands, they require the latest developments in healthcare theories to be able to offer successful medical care.

I wish to describe such practices using a term developed by the Norwegian physician and humanitarian activist, Mads Gilbert; 'Evidence-based Solidarity'. Although used in a different context, I believe the term encapsulates the use of new treatment methodologies to transcend evidence-based medicine and tailor it to the individual needs of the patient. Hitherto, the patient was forced to adopt a diagnostic label and the assigned disease models were often inadequate to reflect patient's individual experience of illness.

Albeit slowly, classifications evolve to incorporate new discoveries, guidelines become shibboleth and recommendations obsolete. However, the role of the GP remains consistent throughout this melee of conditionality and we must question any conventional classification's ability to apply stultifying and determinate definitions to a patient's individuality. We must avoid becoming like the "Country Doctor" that Franz Kafka (an epitome of the hardship that results when the burden of treatment overwhelms one's capacity) illustrated in the eponymous short story; begrudging the people as they are "demanding the impossible from their doctor."[16] As Kafka adumbrates, "filling prescriptions is easy, but getting on with people is much harder".[16]

The philosophical teachings of Scholasticism suggest that the human being is formed from three principles; substance, form and 'virtu'. But as Karl Marx declared, "The philosophers have only interpreted the world... The point, however, is to change it." GPs are placed in a unique position of responsibility as they have the power to respond to and alter the social, political and economic influences[13] affecting the health and well-being of their patients.

Ernesto 'Che' Guevara declaimed in a speech to newly qualified medical students in 1960 that "The battle against disease should be based on the principle of creating a robust body- not through a doctor's artistic work on a weak organism- but... through the work of... the whole social collectivity."[17] The physician must remain close to a patient, familiar with both their personal psychology and pathology. By dynamically interpreting their needs, both physical and metaphysical, they will remain at the fore of effective community healthcare by giving value to a patient's capacity to pursue their personal aspirations.

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Transgender Health and Disproportionate Health Outcomes: A Sociological Approach to Health as a Direct Marker of Marginalization

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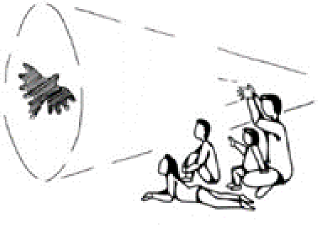
2021



The issue of disproportionate health outcomes facing transgender people in Ireland, particularly from an epidemiological standpoint, is one that demands urgent study and action; this scope offers a challenge in education and delivery methods for those who provide health services, as well as those who require these services. Transgender healthcare spans a broad range of services providing for the care of transgender people, whose needs can be widely different. This can include services related to gender transition, where individuals seek to access hormones or surgical procedures to affirm the gender they identify with (Vincent, 2018). However, most of the existing literature and current practice only considers gender transition. It is also important to consider the treatment of transgender people in cases where their trans status is indirectly related or perhaps not relevant at all. While current practice focuses on the biochemical components of health, including etiology and varying surgical techniques, there needs to be a shift in emphasis to recognize the limitations of a strictly biomedical framework, and embrace a more sensitive, holistic approach that creates a space of inclusivity for transgender people in medicine.

Who treats the health concerns of transgender people? At the time of writing, it varies throughout Ireland. For reasons that are predominantly historic, transgender health happens within Gender Identity and Psychosexual clinics, but most of the treatment and management of hormones begins in GP clinics. This has become an increasingly common presentation in the GP setting with greater mainstream discussion and trans individuals becoming aware of their options and presenting earlier. However, there exists a clinical deficit about the spectrum of trans health, and the best practice in initiating as well as managing services. It has been reported that GPs, “too often lack an understanding of: trans identities; the spectrum of care…and their own role in prescribing hormone treatment” (Vincent, 2018). Therefore, it is understandable that a GP who is faced with a transgender patient, particularly their first, might feel out of their depth, being that trans healthcare most likely was a mere footnote in their medical education or perhaps, it was completely sidelined.

It is important to recognize that the ignorance or perhaps undermined information and knowledge about transgender health, especially from a primary care outlook, is not merely a flaw in education; it is rather a cultivated ignorance that is rooted in political, historical, and socio-economic contexts. Therefore, this essay employs the 4 dimensions of the sociological imagination framework – historical, cultural, structural, and critical – to see how underlying notions of discrimination and exclusion contribute to the lower aggregate health outcomes experienced by transgender people. In doing so, it reveals how a lack of adequate trans healthcare services is not simply a medical administrative flaw, but a complex issue constructed by the intersectionality of various social and oppressive factors, which then influence health and well-being.

The underpinning social issues that drive poorer health outcomes for transgender people are complex. Although specific epidemiological data does not yet exist for transgender health outcomes in Ireland, we can extrapolate data from other countries, as anecdotal evidence from trans health services in Ireland report similar experiences. For example, transgender individuals are at greater risk for HIV and for poorer physical and mental health outcomes (Camilleri, 2017). In fact, the US National Transgender Discrimination Survey Report on Health and Health Care (NTDS) reported that transgender individuals in the United States experience over four times the national average of HIV infection and are over 25 times more likely to have attempted suicide (Camilleri, 2017). Across the board, and especially in mental health status, transgender people report having lower health standings across all sectors of healthcare.

It is worth noting that these poorer health outcomes are not due to being inherently trans, but rather the result of a society that is exclusionary and is conditioned to ignore the needs of certain minority groups, namely trans people. Therefore, health outcomes become shaped by social inequities, rather than medical ineptness. For example, data collected shows that 19% of transgender individuals in Ireland report having been homeless at some point in their lives (Transgender Equality Network Ireland (TENI), 2019). Furthermore, another 34% of respondents report they were living in poverty, and over 50% reported facing rates of unemployment. On a macro level, trans people face some of the highest rates of stigmatisation, discrimination, and marginalisation in Ireland. They are highly vulnerable to incidents of extreme physical violence, assaults, damage against property, and incidents of threats and physical violence (TENI, 2013). Despite these experiences, trans people are not expressly protected under any equality or hate crime legislation in Ireland (TENI, 2013). This then continues a cycle of violence and hate, that leads to poorer health outcomes. Moreover, it further perpetuates the societal norm of marginalizing minority groups.

Accordingly, we can see that trans health is more than limited to transition related care. This essay is truly democratic, and above all, practical. It reflects on the importance of primary health care workers, namely GPs, to gain a wider based understanding of trans health services and needs. Trans health is not an esoteric little micro-speciality, but a field that is growing, complex, and shaped by various social factors beyond clinical medicine. Trans healthcare belongs to all of us and is the duty and responsibility of every medical practitioner to educate themselves, and more importantly, advocate for political and social reform in managing gender-related health issues effectively. This issue highlights the future of medicine, which is universal, inclusive, and in need of a timely step towards a holistic approach.

History

Gender Binary

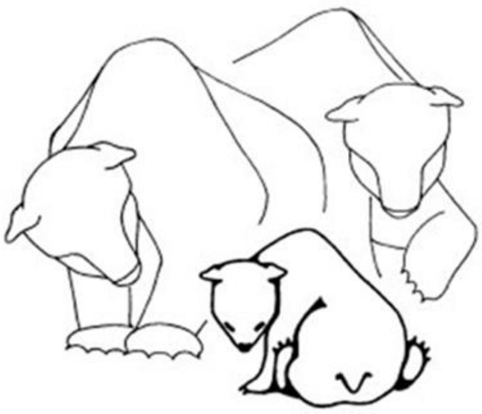
*Taken from the sign outside of a restaurant bathroom

The gender binary is a picture I took from outside the bathroom of a restaurant in Athlone. It represents the normative male-female binary that society has held about gender, which ignores the existence of other genders. Elements in Irish society have historically been hostile to queer identities and these factors have cultivated the heteronormativity upon which a patriarchal society is built (Price, 2013). Therefore, we have become accustomed to living in a social world that only views itself as having two genders. This then displaces people who identify with other genders, as society is systematically designed to ignore their existence.

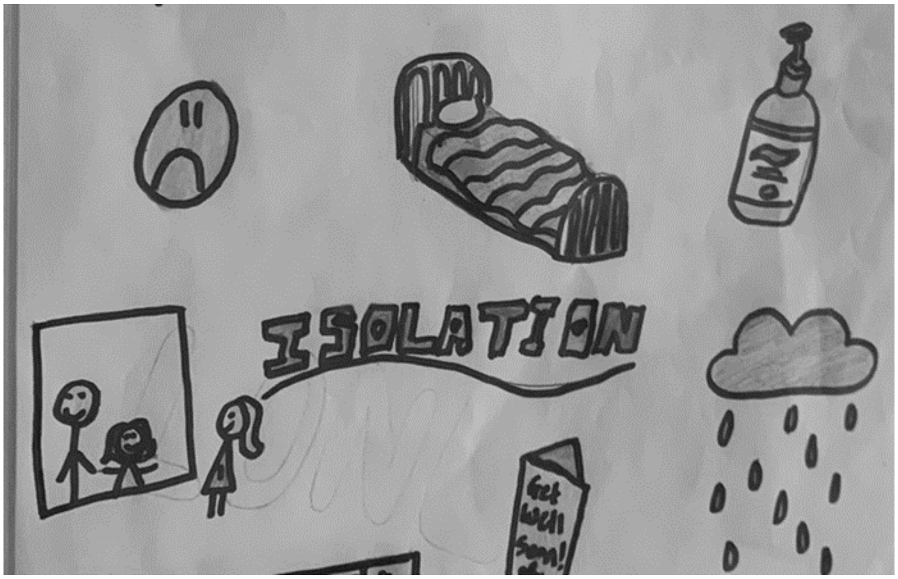
Then over time, the constraint of gender expression has cultivated a societal norm of transphobia. Talia Mae Bettcher, a professor of philosophy at California State University, defines transphobia as an uncontroversial and ubiquitous global occurrence which manifests differently in different cultures. She notes that while transphobia exists, based on documented evidence of sexual violence, physical violence, and verbal harassment of trans people, it is far from evident what transphobia exactly is (Bettcher, 2015). Derived from homophobia, transphobia carries a similar broad interpretation, but Bettcher provisionally uses the word to mean any negative attitudes (hate, contempt, disapproval) directed toward trans people because of their being trans. Transphobia is then the hostile response to perceived violations of heteronormative gender norms and/or to challenges to the gender binary (Bettcher, 2015).

She reinforces the notion that transphobia is not correlated to the general phobia which implies an irrational fear of some sorts, but instead is a part of a broader social context that systematically disadvantages trans people and promotes and rewards anti-trans sentiment (Bettcher, 2015). Therefore, it carries a rationality that is based in heteronormative social contexts. Such an ideology- which is heterosexual and patriarchal- is pervasive with Irish historical narratives as legislation, social standards, religion, and infrastructures have been gendered and heterosexual (Million, 2012). Accordingly, transphobia exists because we live in a society that legislates and morally polices a heterosexual norm.

Culture



Isolation



*Taken from a pediatric ward showing the emotional toll of being in hospital from a patient's perspective

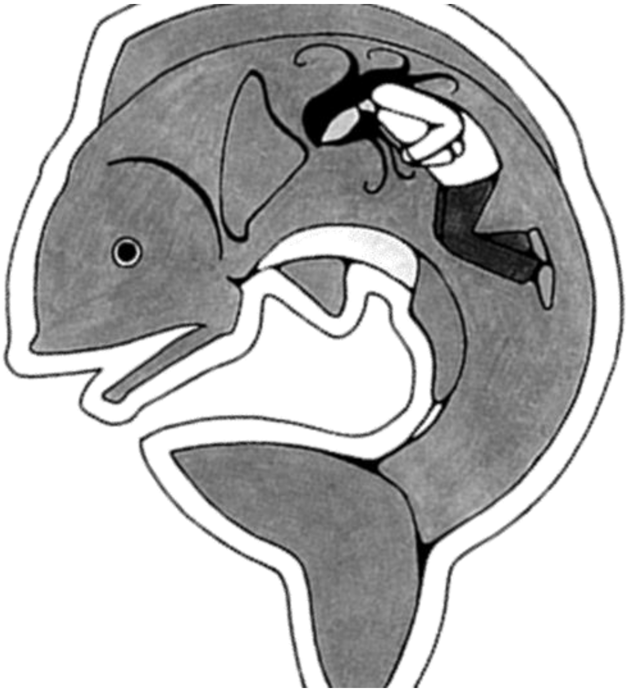
Isolation is a picture that shows the emotional toll of being a patient, particularly from a patient's perspective. Beyond the sick role and the emotional manifestation of illness, it represents the bigger picture of how medicine and the experience of medicine itself can impact the patient experience. Medicine has had a long-standing culture of dominance, by using a strictly biomedical model, where an illness is always explained with one or more physical malfunctions (Rocca, 2020). However, this model is reductive because it has the tendency to treat existential issues and life events as medical ones, and then exclusively as biomedical problems; it then objectifies the patient and reduces them to a passive target of therapy, rather than seen as an active actor in healing (Rocca, 2020).

This model has then been applied to trans healthcare, which has been a long-standing issue for transgender people in accessing quality care, especially at the primary level. The current relationship between transgendered people and the medical community is contentious. There certainly appears to be a deep conflict among transsexuals and general practitioners which reinforces the institutional exclusion of transgendered people (Barnes, 2001). A general lack of awareness and sensitivity to transgenders in the health community is evident by many personal case stories of maltreatment at the hands of professional health care providers (Barnes, 2001). In addition, care is centered around the over-medicalization of trans bodies, with many trans people reporting a lack of social and psychological support at the primary care level.

The purpose of the public health system is to improve aggregate health outcomes while focusing on the needs of the most disadvantaged (Gostin & Powers, 2006). Therefore, our public health care system is the causes of the disproportionate rates of health problems facing trans people because it disregards the needs of this marginalized group. Primary health care services for transgender individuals are the same as those for the general population. However, they need to be able to find a culturally competent health care provider and gain access to screening, prevention, and diagnosis and treatment services, including referrals to specialists (Taylor, Jantzen, & Clow, 2013). The primary healthcare needs of transgender people are particularly acute because like all sexual minority populations, they face undue health disparities and inequities that should be addressed (Mollen, 2012). Yet, the transgender community has had difficulties with access not only to care related to the gender issues, but to primary health care in general (Taylor, Jantzen, & Clow, 2013). Access to primary healthcare for transgender individuals is never as simple as making an appointment because of the highly specialized and often stigmatizing issues facing trans people. Transgender experiences with primary health care include avoidance of health care, refusal of care, difficulties getting referrals, lack of provider information on transgender issues, and uncomfortable or problematic interpersonal interactions (Taylor, Jantzen, & Clow, 2013).

Our medical system also limits and regulates how practitioners focus narrowly on transition related care and gender issues, rather than primary care (Feldman and Goldberg 2006). Stigma and discrimination lead to negative encounters of trans people with the health care system that seems to ignore issues pertinent them and instead focuses on the overmedicalization of their pathology. When a marginalized group feel the need to avoid health services, not only does their health and well-being suffer, but the ignorance about their health also persists.

Structure



Institutional Paradox

*Picture of a GP examination bed taken from hospital training room

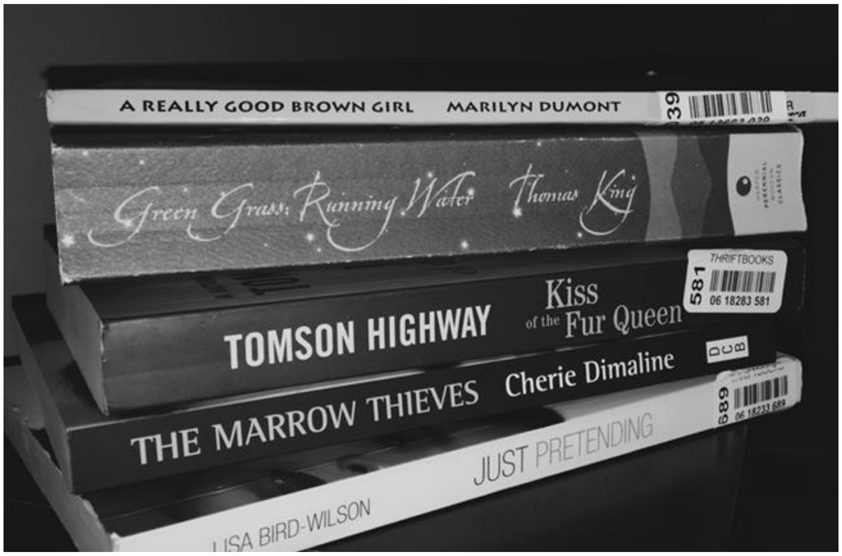
Institutional paradox is a picture of an examination bed which is common to all GP clinics. It is meant to represent the structural ineptness of primary care centers in meeting the health needs of transgender people. Beyond the lack of knowledge on the part of family doctors in Ireland, specific trans related healthcare services for both adults and adolescents, are severely lacking (TENI, 2021). Specifically, we see that trans healthcare delivery for young persons in Ireland is essentially non-existent and contributes to unnecessary risk to young people's mental health. In fact, the average young person must wait up to 5 years to have their first appointment in relation to their gender identify, and when one considers the data on mental health conditions experienced by trans people, this delay is a cause for concern (TENI, 2021).

When trans people eventually get access to health services in Ireland, the administrative process is complicated, unofficial, and very difficult to maneuver. Trans people report an extensive process of meetings with designated psychologists who are only located in certain parts of the country and with very limited availability. Without confirmation of a trans identity from these psychologists, treatment cannot be started. In addition, this identification needs to be verified by a second psychologist, which adds to the duration to access treatment (TENI, 2021). When treatment can eventually begin, that is when many trans people face primary care providers who do not have the knowledge to prescribe a hormone regimen and many trans people find themselves without access to treatment. There are also very few designated general practitioners who are experts in this field.

All these barriers to access have forced some trans people to manipulate different areas of the medical community to circumvent some of these regulations, but most transgender people must adhere to the criteria set forth by the medical institutions governing their transition (TENI, 2021). Therefore, a lot of people are left without treatment. In addition, many people are not able to afford the extremely high costs of sex re-assignment surgery, which is not available in Ireland at the time of writing. Therefore, many people are forced to raise the money to travel and have procedures completed abroad. Unfortunately, many transgender individuals under-utilize or avoid health care services altogether. A study conducted in 2013, 29% of transgender individuals who needed emergency services were unable to access them (Camilleri, 2017). Understanding what prevents transgender individuals from accessing health care, including environmental, social, and legal barriers, is crucial for improving the overall health and wellbeing of this population.

Critical

Trans Inclusion



*Collection of books by authors covering a range of topics such as queer identity and gender

Trans inclusion is an important concept because it gives power and a voice to transgender people, about issues that pertain to them. This picture attempts to fix the critical thinking issue of cultivated ignorance, which is the root of inequity faced by transgender people. In healthcare, for too long has the trans perspective been clinical, unknowledgeable, misinformed, and told from the perspective of clinicians with little insight into the needs of the community. What this picture symbolizes is that if marginalized groups, especially trans people, are given the opportunity to tell their own stories and explain their needs, steps can be taken, especially at the primary care level, to improve quality care delivery as well as access.

The little information about trans health is often disconnected from the inner workings of the trans community. By listening to advocates of trans health and trans alliances, we can see that transition-related health care should be included under the rubric of primary health care because it is apparent that there are many barriers limiting access to these services. Without public health insurance coverage for surgery, hormones and other therapies, the costs of transitioning may be crippling for some while making them entirely inaccessible to others. Economic constraints are of particular concern for transgender populations because they are at high risk of poverty, job insecurity and homelessness (Taylor, Jantzen, & Clow, 2013). This becomes an issue of equity because a marginalized group that already faces economic disadvantages is further deprived since their health is determined by their ability to pay, rather than a basic human right.

There is a need for trans people to feel a sense of connectedness and to have a safe place to belong and have their needs addressed. It is past time to develop inclusive and positive approaches to health research, policy, and practice for transgender populations.

A promising new initiative to learn from is the Canada Trans Health Project, which is a community-based research project that is investigating the impact of social exclusion and discrimination on the health of trans people in an Ontario population (Gapka & Raj, 2003). Their position paper and resolution adopted by the Ontario Public Health Association outlines a series of recommendations to improve the standards of trans health services. In relation to medical, health, and clinical support, they recommend an educational protocol for combined health and community centre for trans people. To be an effective example of a community health model, it will incorporate an anti-oppression framework and a harm-reduction approach in a non-forensic environment; a repository of a diverse range of relevant resources and supports. They aim to train trans positive, trans-inclusive and trans responsive medical care professionals, who are knowledgeable in all aspects of transgendered health care needs. There should also be advocacy from a medico-political point for comprehensive medical and clinical services which include primary health, sex-reassignment therapies, mental health and addiction treatment, and sexual health advocacy (Gapka & Raj, 2003).

The effectiveness of this protocol is that it focuses directly on the needs of transgender people. It eliminates the stigma and lack of awareness in the primary system which acts a barrier for many trans people. In addition, it advocates for increased public funding and resources for trans services, which are often left out of health policy.

The 4 Photos Together

Together

The photos work together to highlight the concept that disproportionate health outcomes facing trans people in an intersectional issue which is quite complex. Ireland should establish more comprehensive transgender health centers and services since our current public system is not effective at meeting the specialized needs of the trans community. As the trans community grows in visibility, our public system will grow more incapable of addressing issues specific to trans people. This group is highly marginalized and faces undue social discrimination, hence a social justice framework requires our public system to pay more attention to their needs. Because of the current lack in specialized trans-positive services, trans people in Ireland face disproportionate health issues and barriers to access care. The recommendations of more inclusive education, centers, and services by trans advocacy groups and allies will improve the goal of our public system in ensuring at every Irish person has access to appropriate and capable heath care.

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Exercise q.d.

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As I'm writing to you, we are amidst the lifting of the final COVID-19 restrictions. The cautious prospect of the COVID-19 pandemic coming to an end is on all our minds. Though we are not in the clear yet, we can look to the future and agree that the world we left in March 2020 was different to the one we will be returning too. COVID-19 has left us with many new issues to add to our unresolved problems. Before and throughout the pandemic the subject of non-communicable diseases remained a topic of discussion (1-7). The COVID-19 pandemic highlighted the vulnerability of people who live with one or multiple chronic diseases (1, 7). The prevalence of non-communicable diseases and their growth within the Irish population was concerning before the pandemic (8, 9). Cardiovascular diseases, chronic respiratory diseases, diabetes, and malignancy are the leading causes of death and disability in Ireland (8, 9). Moreover, the rising proportion of adults and children who are overweight or obese is extremely worrying as a high BMI is one of the major risk factors for non-communicable diseases (1, 7). Prevention and control of non-communicable diseases remained crucial during this pandemic as they are a major risk factors for COVID-19 patients (1, 5, 7). However, the restrictive measures like social distancing, travel limitations and lockdowns implemented to diminish the spread of infection in Ireland unfortunately impacted people living with non-communicable diseases by hampering their activity, capacity to eat healthily and access to preventive/health promotion facilities (1, 7). I speak from experience on this point as during my first two years of medical school I was involved in a rehabilitation service where patients with cardiovascular disease came twice weekly to a prescribed exercise class.

During my involvement with MedEx UL, I observed a system that functioned extremely well. As we will discuss later the idea of prescribing exercise as medication is concept with a spectrum of views associated with it (9, 10). Every medical student learns that the 1st line treatment for cardiovascular disease is lifestyle changes – increase physical activity, dietary modification, and smoking cessation (2-6, 9, 11-13). Most of the population are familiar with the phrase 'eat less, move more' (9, 10). However, this blanket statement is open to interpretation by the recipient if not adequately explained by the care provider (9). MedEx UL is a community-based rehabilitation programme where patients with cardiovascular disease received exercise as a form of medication (13). Referrals were accepted from general practitioners and hospitals (13). The service provides aerobic exercise classes supervised by health professionals as well as educational workshops about nutrition and peer-support through social gatherings after class (13). As a medical student I was partnered with a patient where I learnt about his medical journey up to this point. I was greatly surprised how remarkably positive he reflected on his medical history now. He admitted that even though he did not live the healthiest up until his diagnosis of cardiovascular disease, his diagnosis and enrolment into the MedEx programme had given him a new lease on life. I realised through my time with him and his friends on the MedEx that exercise is an outstanding way to improve one's health while simultaneously boosting self-confidence. Exercise has many obvious health benefits both physical and mentally with almost no side effects (13). I found it awe-inspiring to observe the remarkable progress the MedEx patients had made in bettering their health. It prompted me to research further the extensive list of benefits that exercise can offer everyone.

Firstly, let us take a whistle stop tour through the history of exercise and medicine. Exercise in the ancient civilisations of China and Greek was seen as essential element for good health (3, 14). Physical activity has historically always been a component of human life through labour and remains so in many regions of the world today (3, 14). However, this theory was not enduring and by the early 20th century, opinions about exercise were now entirely the opposite (3, 14). Our grandparents would have been warned that exercise was dangerous and treatment for many illnesses such as ischaemic heart disease was complete bed rest (3, 14). Medical professors at Cambridge and Oxford, even did studies analysing the relative risks of exercise by contrasting their rowing athletes to scholars as recently as the 1950s (3). Thankfully by the midpoint of the 20th century opinions began to sway back to thinking of exercise as healthy (3, 14). Thorough epidemiologic studies have been conducted researching the link between physical inactivity and chronic disease (3). In 2007 the American College of Sports Medicine, introduced an international programme prompting all healthcare professionals to encourage their patients to exercise as a way of preventing, controlling, or treating their non-communicable diseases (3). From this initiative, the term 'Exercise is Medicine' was born (3). The current guidelines recommended by the American College of Sport Medicine is that an adult should participate in at least 150 minutes of moderate aerobic activity per week (1-7, 9, 11, 12, 15-19).

From 2007 to present there has been thousands of studies furthering the evidence that physical inactivity is responsible for a percentage of coronary artery disease, type 2 diabetes and malignancies like colon and breast cancer (1-6, 9, 11, 12, 17-19). Physical inactivity is characterized as a risk factor as dangerous as smoking or obesity to personal health (2, 3). A fascinating action I saw when researching these facts was that if everyone embraced the recommend guidelines of exercising for just 30 minutes every weekday, we could increase our global life expectancy by 8 months (3). Unfortunately, despite all our knowledge about exercise and its positive effects on health, the 2025 global physical activity target won't be achieved (2, 3). This means that up to 1.4 billion people will be at risk of developing new or exacerbating existing non-communicable diseases (3). So, looking at all the risk associated with physical inactivity, how can we change our current situation? Millions of people are developing these non-communicable diseases because of risk factors such as physical inactivity (2, 3, 6, 18). This could read, exercise is preventing millions of people from developing coronary heart disease, type 2 diabetes, and some cancers (2, 3). Or even, exercise is helping millions of people dealing with ischaemic heart disease, type 2 diabetes, and certain cancers (9). Many people believe when they begin taking medications for their chronic illnesses that they have gone beyond the point where exercise can help them (9). I see it on clinical placement every day, the doctor will be speaking about exercise and weight loss while the patient is looking down at their prescription - the most important object in the room, the main objective of their visit. Perhaps effectively prescribing exercise as medication through exercise classes or wearable technology physical fitness monitors could shift the public perception of exercise being a recommendation to a treatment (9). Additionally, self-directed exercise is free, even my suggestion of prescribe exercise through classes or monitors would be cheaper to the health system than the billions the Irish government spends on non-communicable disease medications each year (8). Furthermore, exercise has far fewer side effects than those of their pharmacological counterparts (3, 9, 10). Two of those side-effects are increased self-esteem and improved quality of life (9, 10, 13).

It's not just cardiovascular diseases, chronic respiratory diseases, diabetes, and malignancy that exercise can help heal (1-6, 9, 11, 12, 17-19). How many of us go for a run to clear our head? Exercise has clear connections with mental health and stress but remarkable it also revives brain function (17, 20-22). The theory most of us have come to believe is that as a child you are creating new neurons constantly but this ceases in adulthood when the brain is fully matured (15, 22). Some of you may laugh at the though of an 18-year-old being fully mature, and you'd be right. An adult brain still has the capability to generate new neurons (15, 22). In the 1990s mice studies showed that running can create new neurons within the brain's hippocampus, an area associated with memory (22). So, we've seen how exercise is an effective treatment for coronary artery disease, type 2 diabetes and certain cancers but can we add Alzheimer's to the list? It appears we can (15). It is simple to understand how exercise aids your cardiovascular system (21, 22). As you exercise, your body's muscles demand more oxygen which your cardiovascular system must supply, so over time your heart and blood vessels increase in size and strength to support this (21, 22). Some of you may argue that you do you best thinking while jogging; however, the mechanism is a bit more complex to figure out (22). One thing is certain though, we do not 'run' on autopilot (22). Exercise seems to be both a cognitive and physical activity (10, 15, 21, 22). If we can understand this balance, it's possible exercise could enhance people's cognition as they age (10, 15, 21, 22). Studies on hospitalised dementia patients have already shown the benefits of adding small amounts of exercise into their treatment plan greatly improved their neuropsychiatric symptoms and signs (15). Astonishingly positive results were seen in this study after just two weeks of exercise classes and these participants were in moderate stages of dementia (15). So, to add to my point, perhaps exercise has a preventive and therapeutic effect on major neurocognitive disorders (15).

Obliviously we couldn't overlook the enormous implications that exercise has on mental health (10, 17, 20, 21, 23, 24). A sensitive subject but a very important one, especially during the COVID-19 pandemic when we were all forced into lockdown for our own health and everyone else's (10, 21, 23, 24). Many of us grappled with the social isolation and the uncertainty of living in a global pandemic (23, 24). Many people struggle with both these anxieties and cardiovascular disease (20). The link has been well documented, that there is a direct relationship between high anxiety levels and worse cardiac outcomes (20). Anxiety disorders are the most diagnosed mental illness and account for a huge portion of the national healthcare expenditure (8, 20). This can be because, as many of us know, anxiety can manifest as physical illness (20, 23, 24). Where cardiovascular disease and anxiety have a positive correlation, exercise and anxiety are suggested to have an inverse relationship (20, 24). It appears that exercising on a regular basis decreases your chance of being diagnosed with generalised anxiety disorder (20, 24). Could it be that less anxious people tend to partake in physical activity or that by engaging in exercise, you are literally burning calories and anxiety (20, 24). The true facts remain vague (20), but I believe that exercise is worth trying for anyone during this stressful time and I intend to keep running off my worries or burning them off in the Irish sea.

Depression is another risk factor for cardiovascular disease (17). Depressive disorders are common with tens of millions of people suffering with them (17, 23, 24). As the personal and societal burden of depression is so immense tactics for combating these disorders are hastily required (17). One risk factor for depression is low physical activity (17, 23, 24). Half of people dealing with a depressive disorder do not meet their recommended weekly exercise quota (17, 24). Furthermore, structured exercise programmes have been shown to reduce depressive symptoms in those with depressive disorders (17, 24). I can tell you with confidence having looked up the literature for you, that exercise is considered a protective agent against the onset of depression in individuals regardless of their age, gender, or geographical location (17). Therefore, I think this is a significant reason for us to all try to be more activity, as mental illnesses can affect any of us. Though some people are more genetically suspectable to depressive disorders than others (17), I feel the last year and a half has been extremely testing on all of us.

The COVID-19 pandemic has been especially hard on our elderly population (10, 21, 23). Generally, they are less familiar with technology, something we used to bring us all closer when we needed to be apart (23). They were also classified as one of the high-risk groups (10, 21, 23). Elderly people with multiple comorbidities like hypertension, diabetes, cardiovascular disease, or respiratory conditions were asked to cocoon, cutting themselves off from the world beyond their front door (10, 21, 23). Though this was the best option to keep them safe, this quarantine may have had secondary impacts on secluded people’s health (10, 21, 23). When Ireland’s first lockdown was announced people had to quickly react to a new way of living and people’s activity dropped (24). These sudden changes were especially felt by people with non-communicable diseases who require a certain level of physical active to maintain decent health (1, 7). In recent times, older people haven’t been able to lead an active lifestyle, which they need to slow the effects of aging and its complimentary diseases (10, 15, 21, 23). Exercise in advanced age prevents frailty, risk of falls and cognitive decline which will inversely raise their self-esteem and allow them to continue living their independent lives (10, 15, 21). When asked about the stress factors contributing to their low moods many elderlies reported their fears of extended lockdowns, infection, boredom, frustration, and loneliness (10, 21, 23). I remember in January I was working in my local pharmacy when we entered our 3rd lockdown. One elderly resident came in to read the paper on the pharmacy’s chairs designated for people waiting on prescription. When I approached him to ask was, he seen to, he replied that he was only here for company. He lived alone and used to walk up to the café to meet neighbours every Saturday for two hours. He explained that the pharmacy was the only place left open in our village, so he came here as an escape from his relentless loneliness. He continued that as time passed, he became less worries about COVID-19 but feared the merciless loneliness which was consuming him. Now that the world is reopening, I often think of that gentleman sitting in our village café. I imagine that many elderly people are akin to him. I feel exercise programmes like MedEx which I attended before the pandemic have become even more valuable now as exercise has a double therapeutic effect of directly treating non-communicable diseases and the mental stressors (10, 21, 23). One of MedEx's biggest draws was the sense of community it had (13), which elderly people are craving after a year and a half of solitude (10, 21, 23).

Although during the pandemic outdoor activities were still available (24). I would know being from Co. Wicklow, day-trippers swarmed our hiking trails and beaches for sea-swimming. However, incidences and severity of obesity and non-communicable diseases increased (1, 7). Therefore, it's clear that some people need a bit of extra support when it comes to remaining active (9). The benefits of MedEx, routine and encouragement; were proven when unfortunately, the service was suspended during the Covid-19 pandemic. My patient who was thriving, is now struggling; he is regressing into old habits, and he is gaining weight from being constantly at home. Although he is happy being surrounded by his family; he is frustrated at his inability to motivate himself to exercise. He admits that he needs an external influence to push him. I sympathise with him as he was jubilant last year when I attended MedEx with him. MedEx helped to dismantle barriers patients had and encouraged them to become healthier versions of themselves (13).

We all know that doing any exercise is better than nothing, but perhaps doctors should prescribe exercise with clear cut instructions, for instance prescribing an exercise programme (21). The importance of exercise is to enhance physical fitness components like cardiorespiratory fitness, coordination-agility and muscular strength which relate to physiological functions of the prime organ systems – respiratory, circulatory, nervous, muscular and skeletal systems; but it also improves the functioning of other systems like endocrine, gastro-intestinal, immune, and renal systems (21, 22). These relationships between our body's organ systems and exercise prevent against frailty and improve functional reserve (10, 21). Therefore, exercise is exceptionally important for older people during the pandemic because preserving physiological function and conserving the organ systems could aid the fight against the severity and mental and physical complications of COVID-19 (10, 21). I believe a multicomponent exercise programme like MedEx which incorporates circuit training and gym machines under trainer supervision, would be most appropriate for older people (10, 13, 21). The programme could be tailored to suit elderly living independently or in a community setting (10, 21). The multicomponent curriculum should include aerobic, balance, coordination, mobility, and resistance training exercise, as well as cognitive training potentially, for maximum benefit (10, 21).

If patients do not feel comfortable returning to a world where COVID-19 is still as large GPs should accommodate them (21). Therefore, other options are available. The COVID-19 pandemic has shown us how limitless the potential of technology can be. There were friendly 5km challenges, exercise classes over video chat and marathons being run remotely.
I participated in two of the three, I never manged to run a marathon. If you partook in any of these activities, you may be familiar with the technology I'm talking about. The use of activity trackers may be more accessible to both general practitioners and patients instead of attending affiliated exercise classes (9, 21). In this case, a GP could prescribe certain exercises like walking inside or outside of the house for aerobic exercise as well as squatting holding a chair, stepping up and down off a step, lifting objects of moderate weight like vegetables or rice for resistance training (21). The GP can set fitness targets with patients and the wearable physical fitness monitors will recorded the exercise done at home (9). Technological advances like this are rapidly progressing in conjunction with diabetes management where smartphone applications, glucose monitors, wearable physical fitness monitor and closed-loop systems all work to help people achieve the exercise goals needed to control their diabetes (16). The technology aids the challenges related to exercise frequency, duration, mode, and intensity (16).
Finally, I think the COVID-19 pandemic has been difficult for us all, especially the higher risk populations (10, 21, 23). Involving patients in supervised exercise classes would be safest and most beneficial as they are provided with a social outlet (10, 13, 21). However, if they would prefer not to attend, technology has advanced so that in collaboration with their GP and wearable fitness monitor, a patient can ensure that their daily exercise requirement is being met (9, 21). Prescribing exercise has proven preventive and therapeutic benefits for many diseases both physical and mental (2, 3, 9, 10, 15, 21, 23). Physical activity could be considered a polypill to work as a first line treatment or in conjunction with medication (9, 21). When I am qualified, I hope that I can emulate the positive mindset that MedEx has, to inspire my future patients to pursue exercise as a form of medication.

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Finding meaning in a modern world and renewing our purpose in General Practice

***Author*: Sean Owens, 5th year Postgraduate, NE training scheme graduate 2019**

Cheltenham: noun; a city in north Gloucestershire, host to horse racing festivals; a style of print.

Cheltenham-ing: adj; to mass socialize with reckless abandon directly contravening overwhelming scientific consensus to the contrary.

2020 started as the year to be remembered for the Australian wildfires that destroyed unimaginable swathes of natural habitats, with human efforts to contain it humbled. A matter of weeks later a novel coronavirus originating from Wuhan, China entered the fray altering life events for the global population in its wake. One of the lasting images of 2020 was of the masses attending the Cheltenham racing festival while the first COVID wave had begun in earnest. While this event appeared in real-time, and more so retrospectively, as reckless it was in fact endorsed by government approval despite overwhelming scientific evidence to the contrary. If those who attended had a chance to do so again with the benefit of hindsight, would they still make that journey? Since March 2020 COVID-19 has dominated print, television and social media, as well as water cooler conversations (the virtual version of course). What has been striking however is how few column inches or commentary is devoted to why this pandemic has come to pass. Perhaps the reason that conspiracy theories have gained such traction is because of the startling void left in explaining how this pandemic was born.

A non-peer reviewed back of the envelope analysis of the literature

Continual medical education, webinars, grand rounds and journal clubs are how most healthcare professionals stay up to date. However, it has been noticeable how little is written about why COVID happened and how we should act to prevent the next pandemic. A cursory search in the BMJ, Lancet, New England Medical Journal and JAMA for "COVID" and "cause" in 2020 resulted in 248, 274, 170 and 323 results respectively. On perusal of these entries there were only 7 that addressed the root cause of the pandemic or how we may prevent the next one. There was no shortage of studies examining the efficacy of hydroxychloroquine, all cause mortalities, the benefits of lying patients prone, the nuances of cloth versus respirator masks and the synergistic effects of non-communicable diseases and COVID. This is consistent with our disease-care model of healthcare which is reactive rather than protective in nature. Only the Lancet had exclusively published on the connection between climate change and zoonotic causes of the COVID pandemic. There was a notable shortage of editorials or opinions about the issues of the global food system. One May 2020 Lancet article, by respected author on nutrition Marion Nestle, did expressly call for a change on the global food system, citing issues with its "abundance of cheap food at the expense of health and environmental sustainability". A July 2020 BMJ article by editor in chief Fiona Godlee entitled "COVID 19: what we eat matters all the more now" did address the syndemic effect of COVID-19 with chronic disease, the major driver of which is what we eat. But overall there was a paucity of analysis advising us how we may prevent the next pandemic.

COVID-19 is not a Black Swan event

COVID-19 is frequently described as something that could not have been predicted or a freak occurrence event, yet the infectious disease literature differs. Outbreaks arrive with surprising cadence, and if anything, we are now seeing them more frequently. As recently as December 2019 an issue of Infectious Disease Clinics of North America warned that "novel highly pathogenic viruses crossing the animal-human barrier remain a major threat to global health security." At time of publication, Wuhan had already gone into lock down. Nomenclature matters, and that COVID-19 is rarely named as a zoonotic disease allows its existence to appear a random occurrence. The 2009 swine flu pandemic was rebranded as H1N1 and thereby distanced from its zoonotic origin. It is estimated that 60% of emerging infectious diseases are of animal origin1. Explanations include how our globally consumptive way of living has invaded and eroded wildlife habitats, markedly reducing biodiversity and natural barriers and the ever greater intensification and stressing of farmed animals. Yet the vast majority of global meat consumption comes from factory farmed food. The wet markets in Wuhan allow us to feel like COVID-19 is an exotic outlier, but why couldn't the next outbreak be Irish? The H1N1 outbreak started in Mexico, but with over one million pigs in Ireland (half of which in only 40 farms), why not the next outbreak in Monaghan? With the current Chinese outbreak of African swine flu, our order book has conversely swollen to meet Eastern demand.

Diet is the denominator

Anthnoy Fauci has stated "it boggles my mind how when we have so many diseases that emanate out of unusual human-animal interface that we don't just shut it down". If the next pandemic is predicted to be avian H5N1 or H7N9, should we act differently now to prevent it occurring? Is the annual factory farming of 70 billion chickens in cramped conditions every year conducive to zoonotic transmission of the next avian flu? Our food choices don't just affect global health from carbon emissions, antibiotic resistance and future pandemic risk, but of course our personal health. Transitioning to healthier plant based choices will not only mediate the risk of the next pandemic, they will also decrease the rates of chronic disease that have shown to be synergistic with SARS, MERS and COVID-19. That is to say the same diet that can protect us from the worst effects of COVID-19 can also help prevent the next outbreak. This is planetary health in a nutshell; living within our planet's natural boundaries, not as a concession, but to live a healthier and happier life.

Normal is what got us here

UN Secretary General Antonio Guterres recently stated that "Humanity is waging a war on nature". A retrospective analysis of how we have dealt with the climate crisis in the coming decades will de damning. We will no longer be able to say we were uninformed. Unless the conversation in the news cycle, medical meetings and journals changes and begins to address the root cause of not only COVID-19 but also the next pandemic threat, then are we as a profession and as a society akin to the masses at Cheltenham in 2020? The major geological event of our planet's history, the human driven melting of polar ice, is happening in our lifetime yet collectively we are not acting in accordance with the overwhelming scientific advice to stop and act. Is the Cheltenham festival a microcosm of our global response to climate and biodiversity breakdown? As the summer approaches and the clamor for a reprieve in restrictions so that we may again enjoy a cheap flight to the sun, ask if we are behaving any differently? The COVID-19 vaccines will undoubtedly be remembered as one of our greatest achievements, but if they are used to accelerate a return to business as usual then business as usual is what we can expect i.e., wildfires and pandemics.

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The media are responsible for eating disorders

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Introduction

In a study from the Medical Anthropology Journal, adolescent girls described the ideal women as 5'7, size 5, 45 kgs with blonde hair and blue eyes (1). This idealisation of a woman's bodily features may seem harmless. However, when females do not and cannot achieve these slender beauty standards, problems ensue (2). The internalization of such extreme and unattainable standards of beauty can lead to increased levels of body dissatisfaction, low esteem or even eating disorders (3, 4). Furthermore, eating disorders increase the risk of onset of obesity, substance abuse and depression (5).

Out of the features described above, idealisation of the thin body feature has been society's focus, especially in women, since the early 1920s (6). Adolescent girls from a very young age are subjected to the societal pressure of the ideal body image and when females do not fit the ideal body standards, they agonize about the shape of their bodies (7). The body dissatisfaction associated with this encourages many girls and women to diet in order to manipulate their size and shape (2). Girls and women take up dangerous dieting habits which often induces eating disorders like anorexia nervosa and bulimia nervosa (8).

Most of the research that is available on eating disorders focuses on the two most prevalent eating disorders - anorexia nervosa and bulimia nervosa. Anorexia nervosa is a potentially life-threatening disorder characterized by the refusal to eat enough to maintain body weight below the norm for the person's age and weight (6). Bulimia nervosa is a related disorder characterized by patterns of bingeing (eating large quantities of food in a short period of time) followed by purging (inducing vomiting, abusing laxatives and diuretics and, severe fasting and exercising) (6). Epidemiological evidence from Morris et al. (9) outlines that the incidence of eating disorders among adolescent girls has increased drastically over the past 50 years. Clinical eating disorders are prevalent in about 2-3% of adolescent girls and adult females of the Western population (10). Although eating disorders are prevalent in both males and females, the incidence of eating disorders in females against males is 3:1 (11). Hence, this review will focus on the eating disorders of females.

In terms of understanding the factors that contribute to the high incidence of anorexia and bulimia, there are four major risk factors as outlined by Harrison et al. (6) – biological, psychological, familial and sociocultural. Out of the four, the sociocultural factor is paramount in promoting and maintaining eating disorders (12). Many researchers have suspected that mass media, an important component of the sociocultural risk factor, plays a significant role in the rise in incidence of eating disorders (13-15). Although several studies present a compelling argument, they do not provide a conclusive evidence of the causal role of media on eating disorders and thus media's influence on people's disordered eating behaviour is not well understood. This review attempts to present the current research that is available on why media is responsible for the high prevalence of eating disorders.

Furthermore, since the causality of the eating disorders is multi-factorial as evidenced by Harrison et al. (6) and Irving (16), this review also presents the counterargument of why factors other than media play a role in the increased incidence of eating pathology. Although the other contributing factors are multiple, I will focus on peer and family influence, childhood trauma and, the value of thinness.

Discussion

Social learning and comparison theory

Before we dive into the argument of whether and to what extent the media is responsible in fostering eating disorder patterns, it is important to understand the theoretical framework of how media's influence of spreading the idealised thin body image motivates people to adopt extreme dieting habits. An important term that is often used to explain this theoretical framework is 'modelling' which occurs when individuals copy behaviours they see others perform (17).

The concept of 'prevalence' from Bandura's (18) social learning theory provides an explanation to this theoretical principle (6). The more prevalent an event is, the more likely the behaviour associated with that event is modelled (6). Similarly, in the context of media, as images of the thin idealised body image prevails, modelling of eating disorder behaviours should also prevail. This theory is evident in the statistic reported by Boskind-White and White (19), "the highest reported prevalence of disordered eating occurred during the 1920s and 1980s, the two periods during which the 'ideal woman' was thinnest in US history".

Social comparison is another concept that explains media's effect on people's disordered eating behaviours. To put it simply, social comparison refers to a person's tendency to compare themselves to other people, this includes a person in real life or in the media like a celebrity. Festinger (20) theorized in his theory of social comparison that people have a natural drive to compare themselves and they often compare themselves to people with similar abilities or opinions. However, in the absence of people with similar social standards, people tend to make inaccurate self-evaluations of themselves (20). Models are portrayed in magazines and televisions and when women compare themselves to these models, who have prepared painstakingly to appear attractive, they are likely to make distorted evaluations of their own attractiveness (21). Irving's (16) finding supports Festinger's theory (20) - when subjects are shown images of thinner models, they reported a lower level of body satisfaction and self-esteem than when they were shown images of larger models.

Hence, there are compelling theoretical reasons to expect a relation between media and eating disorders.

Influence of Media

The increase in incidence of eating disorders over the past 50 years has been a major cause for concern. It has stimulated an extensive amount of research on the causation of the high prevalence of eating disorders. Many researchers have long suspected that media play a significant role in transmitting the societal norms and values of thinness (6). Transmission of the idealised thin body image by the media has been thought to promote and maintain eating disorders. With the theoretical basis of Bandura's social learning theory (18) and Festinger's social comparison theory (20) illustrating media's influence on people's disordered eating behaviour, several studies have investigated the link between eating disorders and media exposure.

Irving (16), Richins (21) and Stice et al. (13) documented an increase in eating disorder symptomatology in women following exposure of a variety of media-generated images. Stice et al. (13) went a step further in investigating the link between eating disorders and media exposure. Their study not only found a significant direct link between media exposure and eating disorders, they discovered endorsement of gender roles as a mediating factor for media's influence on eating disorder (13). The media bombards the audience with social norms of masculinity and femininity which results in increased stereotypes of social roles of both genders (13). For example, large, muscular women are often oppressed in the society as a bulky, muscular body type is stereotyped to be a masculine feature. Gender role endorsement's mediating effect on eating disorders is evidenced in Lampis et al. study (22) which documented that adolescents who endorsed a gender role that is socially considered inconsistent from their biological sex (girls with higher levels of masculinity and boys with higher levels of femininity) are likely to show higher level of bulimia and drive of thinness.

Several studies like the Hamilton and Waller study (23) showed only anorexic and bulimic women demonstrated increased body overestimation in response to exposure of media generated images. While Hamilton and Waller (23) presented a convincing argument, their study was riddled with multiple limitations like the use of only one type of media and the use of a small cohort of subjects with eating disorders in their study. Further research on anorexic and bulimic subjects should involve other types of media like television to obtain a more standardised result.

Furthermore, a handful of studies like Cusumano and Thompson's study (24) found no significant correlation between media exposure and eating disorder when subjects were exposed to a range of body shape images from popular magazines. Cusumano and Thompson (24) outlined rationalisations for their failure in finding a correlation. This included the effect of desensitization of the subjects due to constant bombardment of the idealised thin body images. The 'perfect figure' has become a common sight for numerous avid readers of these popular magazines that their body satisfaction is no longer affected by the exposure of such images. Another possible reason for failure is the age groups of the female participants in the study (age 18-49) (24). It is possible that exposure to media may be an important risk factor for eating disorders at certain stages of a woman's life (24). Grogan, Williams, and Connor's study (25) portrayed that out of female participants from age group 10-70, adolescent girls and college women are most affected by poor body image and are more likely to diet. These points depict that while media might play a role in eating disorders, discrepancies in the results of studies investigating the link between media and eating disorders might occur due to these factors.

Overall, these studies do not provide the required qualitative and empirical data to apprehend the link between media exposure and eating disorders. Thus, although it is widely believed that media plays a significant role in transmitting the social norms of thinness and in turn influencing the society to adopt eating disorders, the causal role of media on eating disorder is inconclusive. Further research needs to be carried in larger case-cohort studies, with the prospect of nullifying the limitations associated with most of the current studies like using a wider range of media and abolishing the influence of other factors like peer groups and gender endorsement on eating disorders.

Influence of other factors

Although the influence of media on eating disorders has not been confirmed, it is possible that eating disorders are to some extent fostered by the media, and to some extent by other factors like peer and family influence. Several studies have been carried out to investigate the role of moderators other than media in fostering eating disorders in the society.

Quiles Marcos et al.'s meta-analysis (17) determined that both peers and family influence not only dieting behaviour but also body dissatisfaction and bulimic symptoms in adolescents. An important finding of this study was the variability in the magnitude of eating disorder patterns in certain cases which was thought to occur due to factors like gender, sample country and the type of influence (17). In terms of influence type, out of teasing, modelling of peer groups and encouragement to diet, modelling of peer groups was the strongest influencer. This argument was backed by Crandall's study (26) which argued that modelling of peer groups was the most important factor responsible for bulimic behaviours. Peer groups influence eating disorder behaviours through modelling of excess dietary restraint, binge behaviour and even vomiting for weight control (17).

While peer and family influence are an important factor, childhood adversity is also thought to contribute to the development of eating disorders. Johnson et al.'s (27) study found that a wide range of childhood adversities tend to be associated with elevated risks for problems with weight and eating during adolescences and early adulthood. The adversities include low paternal affection and care and high paternal unfriendliness, overprotectiveness and seductiveness (27). Furthermore, Johnson et al.'s (27) study portrayed a very interesting finding – maladaptive paternal role plays a more important role than maladaptive maternal role in the development of eating disorders in offspring. Although the findings of this study provide a detailed and methodological basis for the influence of childhood adversity, the findings are based on prospective longitudinal data. Thus, the findings provide compelling support for the hypothesis of childhood adversity's influence on eating disorders.

Lastly, the value of what thinness symbolises in the sociocultural context is also thought to be a factor responsible for eating disorders. Thinness in the current sociocultural platform symbolises a sign of moral integrity that centres around willpower and self-control (28). Giordano et al. (28) backs this argument with a common western philosophy 'the Official Doctrine' (29) that states that one's ability to master their body and mind is associated with their ability to control their passions and impulses. In the context of thinness, the impulse is hunger - one of the most powerful physiological impulses of the human body (28). This is perhaps why the longer a person with an eating disorder endures the suffering associated with it, the more powerful they feel (28). Ultimately, Giordano et al. (28) suggests that it is this core value of what thinness symbolises in the society that needs to be addressed if we are serious about resolving eating disorders.

Conclusion

To conclude, media's presentation of the 'idealised body shape' is not likely to be the primary cause of all eating disorders. In fact, continuing to blame media risks eclipsing other important factors that are responsible for eating disorders. That includes peer and family influence, childhood adversity and the valuation of thinness as discussed earlier in this review. However, this is not to deny that media's effect on eating disorders is substantial enough to suggest that media may have practical relevance. Further research on this topic is essential to understand the cause of this highly prevalent disorder and thus devise pertinent treatment programs such as cognitive behavioural therapy that is modulated in tandem to the various aetiological factors of eating disorders to effectively resolve this issue.

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Winner of the Sheppard Memorial essay competition 2021, Postgraduate category

Shopping for Sleeves

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'Is there something you want to tell me?', my partner asked incredulously across the breakfast table. I spied my phone in her hand and suddenly developed a pit in my stomach. 'O no', I thought, has she finally discovered how much I spent on that last amazon order, I knew I should have deleted the email confirmation! I mumble something incoherent and non-committal back. She turns the phone with a swift flourish to reveal a pop up ad for gastric sleeves - now 25% off and hotel included if you book today! My cornflakes catch in my throat as I breathe a small sigh that she still doesn't know the extent of my online shopping.....Phewwwww. Swiftly I explain that it's for work. I'm not entirely sure she believes me but she doesn't ask any more questions and I take my phone back hastily, casually deleting the incriminating email receipts.

What Facebook advertising and my partner do not realise is that gastric sleeve surgery is by far one of the most popular elective surgeries I have come across since I commenced working in Dublin's North City Centre. Unfortunately, when patients ring in with questions and complications, all I can offer is a somewhat more refined google search than they themselves can conduct. How does it work? What are the complications? What are the outcomes? And how does it compare to traditional lifestyle measures for weight loss. These are the questions that I hope to answer for you, so that when confronted with a patient contemplating or having had such surgeries, you will at least have a better understanding of the procedure, require less googling and hopefully avoid unwanted Facebook ads on your phone!

It is common knowledge that most westernized countries are struggling to grapple with the obesity epidemic that is plaguing their societies. Over the last two decades we have become increasingly sedentary with little over a third of the Irish population meeting the recommended physical activity levels on a weekly basis. At the same time, we have seen an increasing dependance on convenience foods and sweetened beverages, with over 60% of Irish people consuming at least one portion on a daily basis. Given these facts, there is little surprise that in Ireland now only 37% of our population is considered to have a normal weight, 37% is considered overweight, and 23% of our population is considered obese. This has resulted in a myriad of weight loss solutions becoming available to the Irish public. (1) Surgical options are one such solution. Increasingly popular every year, it is estimated that in 2020 there were over 685,000 bariatric weight loss surgeries conducted worldwide. Gastric sleeves accounted for nearly 50% of these procedures. (2) Most gastric sleeve surgeries are conducted laparoscopically. The anaesthetist passes a boogie, akin to a silicon tube, into the stomach. The surgical team then staples the fundus and greater curvature in a manner parallel to the boogie, removes the rest of the stomach and thus leaves the patient with a much smaller tube like stomach that cannot tolerate as much food. (3)

Most national guidelines still follow the criteria agreed at the 1991 'National Institutes of Health' Consensus Conference, that such weight loss surgery is appropriate for all those with a BMI greater than 40kg/m2 or for those with a BMI greater than 35kg/m2 but who have a serious comorbidity. These patients should also be committed to long term lifestyle changes and have a psychological assessment deeming them fit to undergo the surgery and engage with weight management post operatively. (4) Indeed the HSE referral form for bariatric surgery specifically mentions the criteria of BMI and also asks that the patients have tried a community weight based management programme and are interested in attending such a programme in the future. (5) However, a google search of the private options quickly shows that not all facilities are following this guidance, with some simply requiring a BMI less than 45. Another selling point listed on many websites is that a GP referral is not required. Therefore, unfortunately, often the first we will hear about these procedures is when a patient books in with post-op complications or questions.

So what do we need to be on the lookout for? There is no doubt that most of this patient cohort is at significant risk of anaesthetic and intraoperative complications. Thankfully most patients are managed in hospital for a minimum of 3-5 days to ensure any acute risks such as bleeding (which occurs at the site of anastomosis in 2%) or infection, is identified early. Once discharged these patients are subject to the common post-operative complications such as VTE and pneumonia. However in the ten day post-operative period, those who have undergone gastric sleeve surgery specifically, may also present with peritonitis secondary to anastomotic fistula. This occurs in up to 7% of those who have had a gastric sleeve operation. It is really important that we are aware that the classical signs of peritoneal irritation, such as guarding and rigidity, are often not present in obese patients. Therefore, one of the most important red flags we may see will be a post-operative tachycardia. However, other symptoms noted include fevers, abdominal heaviness and hiccups. Hiccups can also be a symptom of a more chronic fistula at the upper end of stapling, which usually presents in the first three months following surgery. Traditionally patients complain of dysphagia and pain often localized to the left hypochondria or shoulder region. Rarer complications include herniation, small bowel obstruction, gallstones, gastric ulcers, dumping syndrome (characterized by abdominal pain, vomiting and vasomotor symptoms), mesenteric or portal vein thrombosis and neurological complications secondary to thiamine deficiency. (6).

Although nutritional complications such as malnutrition are rare with the gastric sleeve procedure, patients are usually given a progressive meal plan which begins with a liquid diet of around 600 calories a day, 60% of which should be protein, progressing to solid foods with similar protein requirements. Early eating is encouraged to ensure better optimization of bowel function. (6,7) Also it is worth noting that any woman, post gastric sleeve, considering getting pregnant should have vitamin profiles run to ensure no deficiencies in folate or B1.

The most significant long term complication that these patients experience seems to be gastroesophageal reflux. At five years post-op, 31.8% of people experienced a worsening of gastro reflux symptoms and 31.6 percent who had none pre op developed the condition. Overall 14.9% of those who underwent a gastric sleeve required additional surgical or endoscope interventions up to 5 years later (8). A systematic review published in JAMA reported a longterm reoperative rate of 7% due to treatment failure and a 4% rate of incisional hernia development. (9)

So why would our patients undertake such risks to their health? Well firstly for the obvious weight loss. After 1 year the gastric sleeve, akin to other bariatric surgeries such as the roux-en-y, results in an average weight loss of 72.4%. At 5 years this was maintained at a 61.1% decrease in weight from baseline before the surgery. (8) There are few studies evaluating the hormonal impacts of gastric sleeves but it has been shown that in the 6 months following the surgery, ghrelin, also known as the hunger hormone, is decreased. This hormone is usually upregulated one year post dietary weight loss. It accounts for one of the reasons why people regain the weight they have lost. The fact that the gastric sleeve reduces this, indicates it may be easier for people to maintain the weight loss they have experienced at 1 year, although the levels were only measured up to 6 months. (10) The impact on weight related comorbidities is also quite stark , with remission rates in those with type two diabetes recorded at over 60% at 5 years. Those patients with high cholesterol saw a complete remission in 42.6% of cases at 5 years. Hypertension was reduced in 40% of people. Obstructive sleep apnea resolved in 45.8% of people and back or joint pain was resolved in 55% of people and improved in a further 38.3%. A majority of patients also reported a significant improvement in their overall quality of life. (8)

How does this then compare to traditional weight loss through lifestyle measures alone? It is difficult to estimate as there are very few direct comparisons made in the literature. Most surgical papers report weight loss as a percentage and do not provide the absolute weights whilst most lifestyle papers only describe the difference in absolute weight outcomes further confusing the issue. Indeed there are also very few papers comparing the outcomes of the diets commonly subscribed to, such as Weight Watchers or the Atkins Diet. One meta analysis showed that after 12 months of engagement with a prescriptive diet i.e Weight Watchers, most participants lost between 6.3kg and 6.5kg. Low carbohydrate or low fat diets had the most significant effect on weight loss and the authors concluded that it didn't matter which diet a patient ascribed to so long as they adhered to it. (11) Similarly to gastric sleeve surgery, weight loss achieved through diet, positively impacts type 2 diabetes. Up to 80% of patients can achieve remission with sufficient weight loss although the weight loss required can be up to 15kg. (12) Weight loss through diet and exercise also positively impacts cholesterol. The 'Portfolio Study' compared a low cholesterol diet with a statin and showed that over 2 weeks a low cholesterol diet with plant sterols and viscous fibers lowered their LDL cholesterol by 28.5%. (13) The DASH diet has also been proven to reduce systolic blood pressure by 11mmHg over eight weeks (14). There are few to no risks associated with positive lifestyle measures like dietary change and exercise. None of the measures are irreversible and so can be tailored and augmented to the individual patient. Why then are gastric sleeves becoming so popular?

I once read that the majority of people become overweight by eating just 150 extra calories a day, that's the equivalent of 2 digestive biscuits, over 10 years. That's how weight gain creeps up on us, it is insidious and for the most part asks us to forgo the little pleasures in life, like a biscuit with our tea, which never seems that harmful when we are biting into it. Despite often gaining weight over a number of years, we rarely give ourselves that same time to lose the weight. Facebook and social media platforms can inundate us with quick dietary fixes that promise to get us back in shape within six months or less. The adherence rate for most prescribed diets is 25% (15). So when these measures fail we look for alternates and the internet is awash with success stories of gastric sleeve surgeries. The idea that we have to maintain lifestyle changes for a lifetime seems like an incredible ask when weighed against the simplicity of undergoing a gastric sleeve surgery which promises incredible results in an immensely quick period. Therefore, as doctors we may see more and more patients opting for surgical management of their weight. Rather than fear this proactive patient approach to weight management, I hope this article provides a better understanding of the procedure, alerts us to the complications we need to be aware of and enables us to accompany patients along their weight loss journey, whilst of course avoiding any further unwanted Facebook ads for gastric sleeve surgery.

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Combating The Iron Overload In Patients With Hereditary Hemochromatosis

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Abstract

Audit Question

Are patients in Clanmaurice Medical Practice who are undergoing venesections for hereditary haemochromatosis achieving the desired target of ferritin <50 ng/ml as per recent ICGP guidelines?

Aims and objectives

The audit aimed to investigate and evaluate our current adherence according to the most up to date ICGP guidelines and to improve our practice. It is hoped that a minimum standard of 80% compliance with said guidelines is evidenced.

Background and rationale

Elevated iron stores in patients with hereditary hemochromatosis have been linked with a multitude of issues such as excess morbidity, negative effects on health-related quality of life, serious complications i.e., diabetes, liver cirrhosis, congestive heart failure and even a 5-fold relative increase in death.

Methodology

A retrospective audit was performed on HealthOne of all patients who had been diagnosed with hereditary haemochromatosis and were undergoing venesections. A novel audit tool on Microsoft Excel recorded the diagnosis specifying the genetic mutation, current ferritin levels result and further management plan. Following on from Phase 1, results were discussed at a practice meeting, along with dissemination of the recent ICGP guidelines. A prospective re-audit carried was out after the intervention. Standards were set at 80% adherence. No ethical approval was required and data was collected and stored per General Data Protection Regulation

Results

In total 40 patients were included in this audit. The first cycle revealed compliance of around 22% with the ICGP guidelines and that men were more likely to be at risk of iron overload.

After the intervention, there was a significant improvement in compliance of approximately 62%.

Conclusion

GPs should be aware of the serious complications of iron overload in patients with hereditary haemochromatosis. It is imperative to monitor and improve our current practice as per the latest ICGP guidelines to avoid serious complications in our patients.

Introduction

Hereditary haemochromatosis is a common autosomal recessive disease accounting for approximately 1 in 83 people in Ireland[1]. It is associated with a defect in hepcidin, an iron regulating hormone, resulting in increased intestinal absorption of iron and subsequent deposition in the liver, pancreas, heart, skin, joints, and gonads leading to organ damage. Up to 85% is because of a mutation in the human haemochromatosis protein (HFE) gene being expressed through C282Y homozygosity, though other genes are also implicated. [2]

Hereditary Haemochromatosis (HH) can be classified into the following; [3][4]

Haemochromatosis HFE (High Iron Fe) gene related, including:

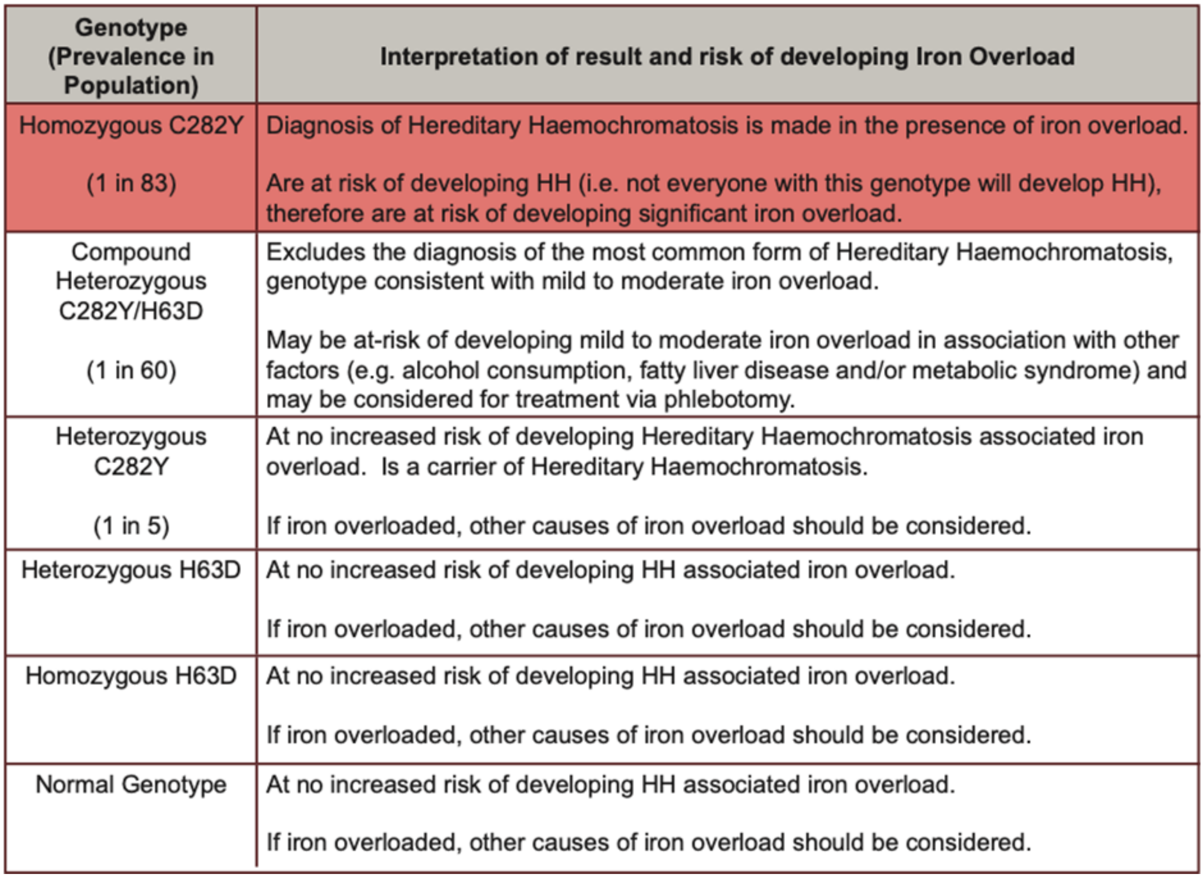
- C282Y/homozygous
- C282Y/H63D compound heterozygous
- Other mutations e.g. S65C

Haemochromatosis non–HFE gene related, including:

- Juvenile Haemochromatosis
- “Autosomal Dominant Haemochromatosis”
- Other

Over 93% of Irish hereditary haemochromatosis patients are homozygous for the HFE gene C282Y. Not all patients homozygous for C282Y or compound heterozygous (C282Y / H63D) develop iron overload[5]. Some patients who are heterozygous carriers for C282Y can develop iron overload. The factors that affect penetrance are gender, age, physiological and pathological blood loss, blood donation, dietary intake of iron, alcohol, infection with hepatitis C and B, obesity and the use of dietary supplements (iron and vitamin C).

The following figure shows the estimated risk of iron overload in patients with HFE mutations.[6]



Genotype (Prevalence in Population)	Interpretation of result and risk of developing Iron Overload
Homozygous C282Y (1 in 83)	Diagnosis of Hereditary Haemochromatosis is made in the presence of iron overload. Are at risk of developing HH (i.e. not everyone with this genotype will develop HH), therefore are at risk of developing significant iron overload.
Compound Heterozygous C282Y/H63D (1 in 60)	Excludes the diagnosis of the most common form of Hereditary Haemochromatosis, genotype consistent with mild to moderate iron overload. May be at-risk of developing mild to moderate iron overload in association with other factors (e.g. alcohol consumption, fatty liver disease and/or metabolic syndrome) and may be considered for treatment via phlebotomy.
Heterozygous C282Y (1 in 5)	At no increased risk of developing Hereditary Haemochromatosis associated iron overload. Is a carrier of Hereditary Haemochromatosis. If iron overloaded, other causes of iron overload should be considered.
Heterozygous H63D	At no increased risk of developing HH associated iron overload. If iron overloaded, other causes of iron overload should be considered.
Homozygous H63D	At no increased risk of developing HH associated iron overload. If iron overloaded, other causes of iron overload should be considered.
Normal Genotype	At no increased risk of developing HH associated iron overload. If iron overloaded, other causes of iron overload should be considered.

Figure 1 Genotype and risk of iron overload

Presentation

The “Classical presentation” due to end-organ damage such as liver cirrhosis, diabetes, skin pigmentation (bronze tan) is only seen in 10% of cases. The most common avenue to diagnosis in primary care is abnormal LFTs (liver function tests).[2]

Around 30% of patients may be asymptomatic throughout life, especially women where blood loss through menstruation and childbirth is protective. Symptoms usually start during the fourth or fifth decade of life. Patients would present with vague complaints such as lethargy, weakness, somnolence, arthralgia, vague abdominal complaints. Physical findings can include arthropathy, chondrocalcinosis, heart failure, erectile dysfunction and porphyria cutanea tarda.[7][2]

Diagnosis

As per ICGP guidelines[3], a fasting ferritin >300ng/ml in men and post-menopausal women or >200ng/ml in pre-menopausal women with normal inflammatory markers + a fasting transferrin saturation levels over 45% suggest hereditary haemochromatosis. However, they do not necessarily indicate a need for treatment unless the ferritin threshold is exceeded. If iron studies are positive, then genetic testing for C282Y and H63D mutations should be performed.

Management

Patients with hereditary haemochromatosis and evidence of iron overload should undergo venesection. 400-500ml of blood should be removed at a time. Each 500ml of blood contains 200-250mg of iron. The frequency of venesection varies depending on the patient. However, it is preferable, in the initial phase, to reduce the patient's iron as quickly as possible and normalise iron levels (ferritin <50ng/ml). Venesection should take place weekly until ferritin is less than 250 ng/ml and then monthly until ferritin is less than 50 ng/ml.[3]

Patients with hereditary haemochromatosis need regular monitoring of their renal function, liver function, glycaemic control, and lipid profile with consideration of ECG, chest x-ray, joint x-ray and DEXA scanning as appropriate. They should also be referred for specialist assessment if there is a concern regarding organ damage. [3]

Rationale

Iron overload in hereditary haemochromatosis has been suggested to cause most complications leading to end organ failure. The guidelines recommend keeping the ferritin levels <50 ng/ml, which is one measure of iron levels in the body. Early detection and treatment prevent organ damage and allows a normal life expectance.

A recent study comprising around >450,000 volunteers of European descent aged 40 – 70 years was undertaken where homozygous patients were compared to controls. It showed HFE p.C282Y homozygosity (High risk of iron overload) was associated with excess morbidity in both men and women[5]. Several studies have shown a negative effect of haemochromatosis on health-related quality of life (HRQOL). Elevated iron stores, particularly transferrin saturation and serum ferritin levels and comorbidities contribute to reduced HRQOL [4]. Another study concluded that in hereditary haemochromatosis patients homozygous for HFE C282Y, serum levels of ferritin greater than 1000 µg/L at diagnosis were positively associated with cirrhosis and they carried a 5-fold increased relative risk of death even with the treatment.[8]

Given the evidence surrounding raised iron levels and future complications in patients with hereditary haemochromatosis, I felt it was of utmost importance that these patients are managed according to the best practice. Hence, after discussion with my trainer and other staff, I undertook this audit to evaluate our current practice and improve it.

The treatment of this condition involves venesections, which is a simple procedure carried out by most primary care practices across Ireland. If patients are managed according to the most recent guidelines. It can prevent complications that can have an enormous impact on the lives of our patients and decrease the burden on the healthcare system. It is a good source of revenue for the practices and can be an added benefit in the long term.

Methodology

The audit was carried out in Clanmaurice Medical Centre, Co. Kerry between October 2020, and March 2021. The first stage of the audit involved identifying the patients in our practice who were diagnosed with hereditary haemochromatosis and receiving venesections. Using a searching tool in the HealthOne Patient Management Software System, I identified our haemochromatosis patients and set up a patient register.

A novel audit tool on Microsoft Excel recorded the diagnosis specifying the genetic mutation, current ferritin levels result and further management plan. For this audit, I excluded any patients who were not homozygous for the C282y gene, as they are less likely to be affected by iron overload and further complications.

Following on from Phase 1, results were discussed at a practice meeting, along with dissemination of the recent ICGP guidelines. All hereditary haemochromatosis patients were also booked for an abdominal ultrasound to screen for liver associated complications. Each of the patients had a reminder put on their file depending on whether they were actively venesected or not showing their genetic status, a reminder of genetic counselling, plus education regarding diet and the disease.

There was a reminder put in place for all patients not undergoing venesections for yearly blood to assess for iron overload.

Timeline

Date 2020/2021	**Action**
August	Discussion with trainer
August/September	Audit planning and summary submission
October	The first round of data collection and analysis
November/December/January/February	Action plan, intervention, and implementation
March	Re-audit and analysis
March	Written report
March	Audit presentation

Table 1 Timeline of the audit

Guidelines

ICGP Haemochromatosis Quick Reference Guide – January 2020 Edition “Hereditary Haemochromatosis – Diagnosis and Management in primary care”[3]

Standards

Greater than 80% compliance with the latest ICGP GuidelinesEthical Consideration

This audit solely investigated analysis of data, no personal identifiers were included, or demographic information was included in the audit statistics. For this reason, ethical approval was not a requisite for the completion of this audit.

Data Protection

All data was collected, recorded, and stored per General Data Protection Regulation Legislation. Data were anonymised and stored on a password-protected computer.

Results

Audit Cycle 1

	Patient with Ferritin <50ng/ml		
Sex	No	Yes	Grand Total
Female	10	3	13
Male	21	6	27
Grand Total	31	9	40

Table 2 Demographics and results from Audit cycle 1

I identified 45 patients as having a diagnosis of haemochromatosis. Three patients did not fulfil the criteria of having homozygous c282y gene defect, one patient was not fit for venesection because of multiple comorbidities and one patient was attending a private hospital for disease management. The final number of patients included in this audit was 40, and this number remained the same between the initial audit and re-audit.

The initial audit showed compliance of only 22.50 % with guidelines of keeping the ferritin levels below <50ng/ml. It also showed that male patients were less likely to adhere to the treatment and follow up appointments. As a result, men were also at a higher risk of complications. It also highlighted three patients who had ferritin levels >500 and therefore needed urgent management and screening for complications.

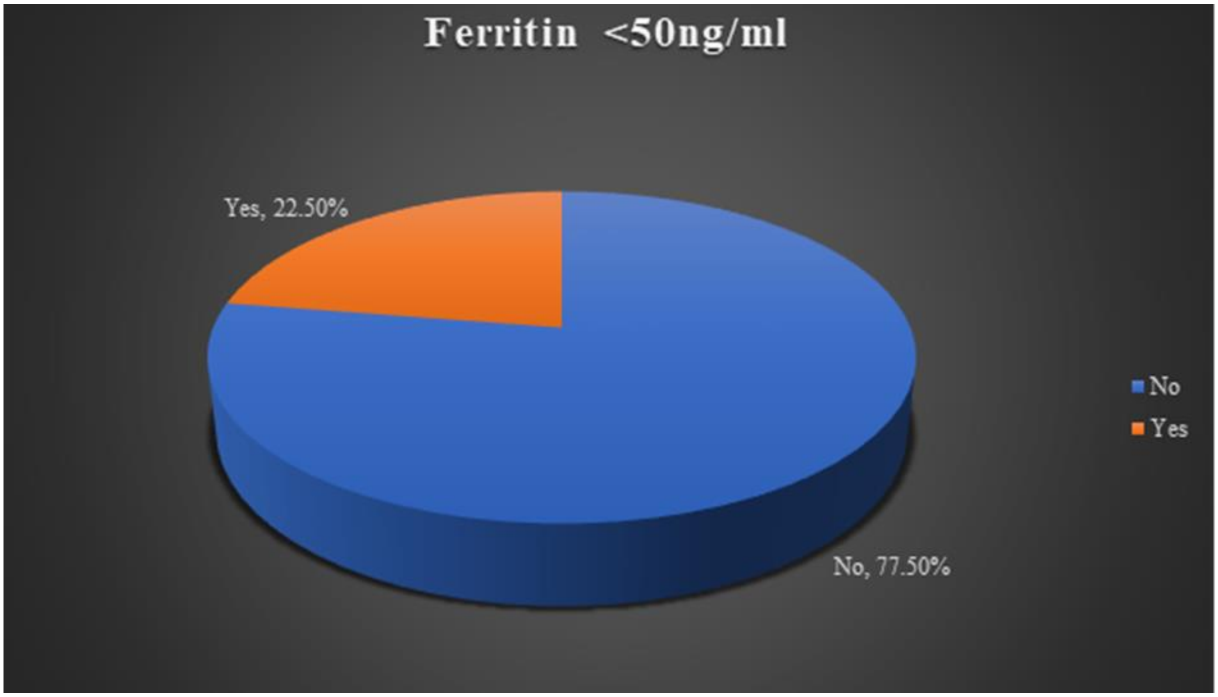


Figure 2 Percentage of compliance from Audit cycle

Audit Cycle 2

	Patient With Ferritin <50ng/Ml		
Sex	No	Yes	Grand Total
Female	5	8	13
Male	10	17	27
Grand Total	15	25	40

Table 3 Demographics and results from Audit cycle 2

I undertook Audit cycle 2 in March 2021 after 4 months of interventions. The results showed an immense improvement in compliance of 62.50% from 22.50% in October. All patients had also undergone a screening abdominal ultrasound which highlighted five patients who had Non-Alcoholic fatty liver disease(NAFLD).

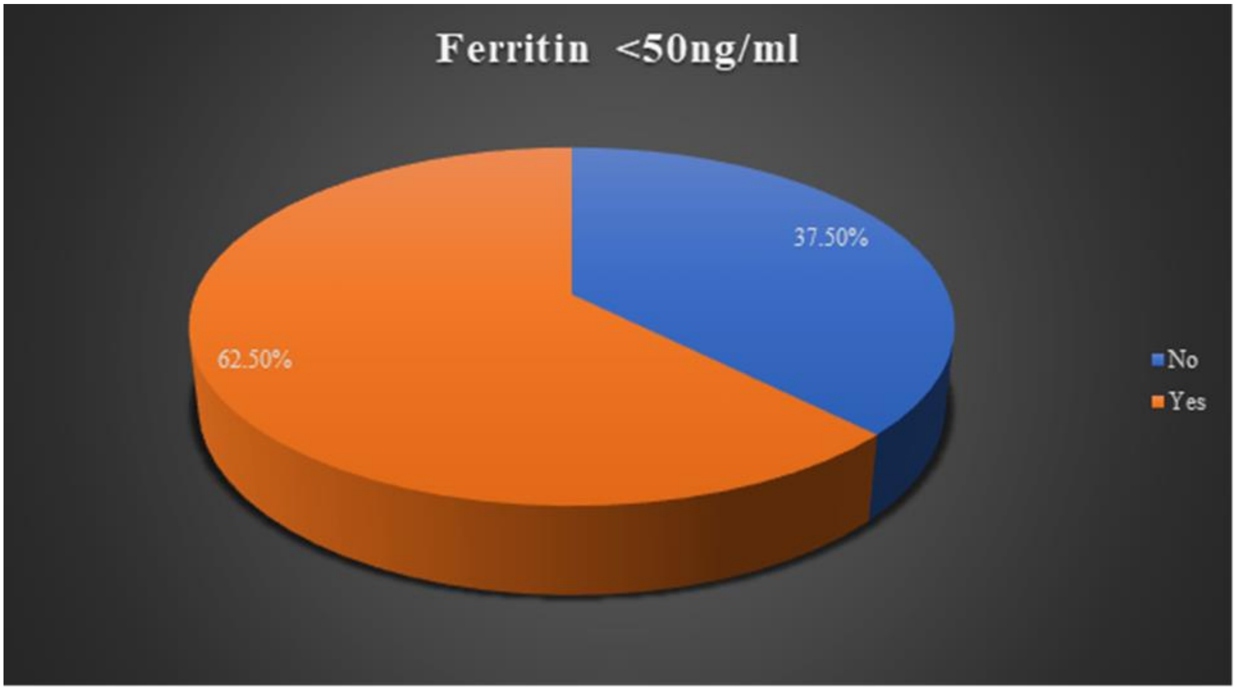


Figure 3 Percentage of compliance from Audit cycle 1

Discussion

The audit proved very effective in highlighting key deficiencies in our practice and enabled us to significantly improve our practice. The target of 80% compliance was not reached, however, it is important to point out that all the patients who have a ferritin >50ng/ml are still undergoing venesections. We estimate that within six months we will achieve greater than 80% compliance.

As discussed earlier, haemochromatosis has a higher incidence in Ireland as opposed to other countries. Over 93% of Irish hereditary haemochromatosis patients are homozygous for the HFE gene C282Y which puts them at a higher risk of iron overload.

Tighter monitoring of patients and regular venesections can minimise the complications of iron overload.

This audit resulted in a register for patients with hereditary haemochromatosis which will be used to monitor the overall iron overload, recalls for bloods and yearly investigations to rule out any secondary complications. All the patients with the diagnosis have been coded in HealthOne for easy identification. Also, a reminder system has been put in place for all patients not undergoing venesections for yearly blood to assess for iron overload.

After the 1st audit cycle, it was decided to book all patients for an abdominal ultrasound to screen for any liver associated abnormalities. This proved to be hugely beneficial as it highlighted five patients who were identified with Non-alcoholic fatty liver disease(NAFLD) that can progress to cirrhosis, hepatocellular carcinoma (HCC), and death[9][10]. We then started these patients on management plans to prevent further deterioration.

The study also shed light on another potential incentive for practices to perform regular venesections as it is a good source of revenue for the practice. At present venesection for a GMS patient is reimbursed at approximately € 100 and most patients on average undergo at least 3 venesections. This is an added benefit and might lead to further compliance.

This audit has several limitations.

- A time interval of only 4 months coupled with Covid-19 restrictions proved to be the biggest limitation of this audit. As a practice policy, we had to minimise our face-to-face interactions, and this limited our initial plan of undertaking regular venesections to achieve the desired ferritin levels. Our patients were also not comfortable with attending the practice, and this resulted in fewer venesections.

- The primary way in which we identified our patients with hereditary haemochromatosis was using multiple search terms in our Health One database, hospital letters, genetic studies, and abnormal iron studies. However, it is a possibility that some patients might have been missed who have no recorded diagnosis or genetic testing. After discussion at the practice meeting, we have introduced proactive measures like dedicated staff to handle all blood results and investigations to identify any missed patients.

- The guidelines recommend fasting ferritin levels to assess for accurate results, however, there was no documentation whether the patient was indeed fasting at the time of measurement. This would introduce systematic error when calculating overall compliance with guidelines and future steps should be taken to properly document the patients fasting status at the time of measurement.

Conclusion

Iron overload in hereditary haemochromatosis patients has been proven to be linked with serious complications and below standard management can cause tremendous clinical and economic burden and poor patient-reported outcomes.

This audit has highlighted key areas of improvement and has led to multiple initiatives to further enhance our duty of care to our patients. I would recommend repeating this audit in a year to ensure continued compliance with guidelines to uphold the excellent quality of care.

This audit is based on ICGP guidelines and would be recommended for all practices to undertake due to its vast benefits for patients, practices and the healthcare system.

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2022

Runner up, Sheppard memorial essay competition 2022, Undergraduate category

Should Studying Medicine Hurt This Much?

Author: Catharine Ronayne, 4th year Undergraduate, TCD.

I first read Adam Kay's 'This is going to hurt' as a passionate, inspired and enthusiastic student who dreamed of studying medicine. I was in fifth year of secondary school, and at the time of reading, it didn't deter me from my dream job but rather spurred me on. By the time it had been adapted to TV, I was a third year medical student. I had finished episode two and was discussing it with my friend during a study break the following day. He told me not to continue watching it. He had been on the phone to his older brother, a doctor himself who was now living in Australia who had finished the series. He warned that it might be too upsetting for us to finish it due to "everything that has happened recently". I was confused. I had read the whole book, it was an incredibly upsetting experience that Kay had described at the end of the book; however I didn't understand why it would be specifically too upsetting for us.

"The TV show ends differently to the book," he explained, "In the last episode, the junior doctor dies by suicide". In the previous 2 weeks, a fellow student in the year above had taken his own life. This was not the first time this had happened since we began college.

I was in my first week of my first year when I was told of a Trinity medical student who had taken their own life in the previous year. Only months later as the first Covid-lockdown hit did I hear of the second, and only months after that, of the third. It became clear that a pattern was emerging. It was February 2022, when the fourth Trinity medical student in five years took his own life in the Ussher library, on Trinity campus.

Throughout this time, conversations began, and it became clear that change was needed. Each time the death of a classmate was announced, we would be reminded to reach out for support when we were struggling, and to avail of the student counselling service. Each time such emails would enter my inbox, angry conversations broke out between myself and my peers. While mental health supports are needed and appreciated, we did not want extra supports to help deal with the stress of our course. We wanted a course that did not require us to seek mental health support.

We had four months of non-covid medical school. Once Covid hit, we went online for a year and a half. Through our screens, we watched as the health service we are training to be the future of, become overrun and the professionals we aspired to be, declaring their own burn out.

Physician burnout has been a massive and vital conversation in the media since the beginning of the pandemic. It is an issue that requires a specific and targeted management. However as with many areas of medicine, it seems there is little emphasis on prevention. What happens in the five or six years that causes students to go from driven and passionate to cynical and uninspired? Is the structure and exam process of our medical schools creating highly qualified doctors or is it feeding into the burn out rates and emigration of young medical professionals?

In the aftermath of a student suicide within the School of Medicine, I have overheard and been a part of a number of conversations. Some of these have been with my non-medical student friends. Others, amongst medical students or at home with my family. Many of my peers outside of medicine believed that suicides amongst medical students were likely due to their "type A personalities" or "the pressure their families must have placed on them" to perform academically. Amongst my peers, we felt it must be due to the immense workload, the long hours required to pass our exams and the incessant, never-ending cycle of exam, after exam. The precise cause of such an incident will never be known, and whilst this makes it very easy to ignore the issue, this is not a helpful approach. It isn't helpful to current medical students, it isn't helpful to qualified doctors and it isn't helpful to the Irish health service as a whole. So, let's focus on what we do know.

Burnout syndrome is defined as emotional exhaustion, depression, and impaired personal accomplishment, following repeated exposure to workplace stressors (1). Within a student population burnout is considered to be a triad of exhaustion, cynicism and the feelings of inefficiency (2). A systematic review that looked at learning environment interventions and medical student well-being in the setting of US medical schools (3) found that medical students began their training with lower rates of depression and burnout in comparison to their non-medical student peers. Their reported well-being then decreased during the undergraduate medical education (UME) years. Rates of moderate to severe depression were reported as high as 14% and burnout symptoms at 52%. Suicidal ideation was reported at a rate of 1 in 10 students.

In recent years there have been calls for Universities Mental Health services and indicators of student mental well-being to be included as a part of the University World Rankings. Ben West, a mental health campaigner in the UK, is one of the drivers of this campaign which is calling for universities to be rated on their ability to support student mental health. The aspect of mental health is not currently included in the QS world rankings which has placed Trinity as No. 1 in Ireland and 98th in the world for 2023. I wonder if this would be the same if mental health supports were to be considered. Encouragingly, at present Trinity is carrying out an online anonymous survey: the SHAPE Study survey (Suicide Help-Seeking and Prevention in Trinity), to help to better understand these issues and how to best support student's needs.

While this all may seem to be an issue for medical students and their medical schools to work through, this couldn't be further from the truth. On the 26th of January 2022, the Irish College of General Practitioners (ICGP) appeared in front of the Oireachtas Joint committee to discuss urgent measures to address GP shortages (4). Over the next decade it is estimated that Ireland will need over 2,000 new GPs to meet the needs of our growing population and the increasing number of people over 65. At present the ICGP is increasing its training numbers with the aim to train 350 new GPs annually by 2023.

One of the issues compounding the GP shortage crisis is the emigration of young Irish Doctors. While this is not a new occurrence, it is increasingly impacting the stability and staffing levels of the Irish Health Service. The top destinations for young Irish doctors were Australia, New Zealand, the UK and the USA (5). Reasons for emigrating included: reduced working hours, improved work-life balance, increased income and more certain career pathways.

While much of the focus in determining reasons for emigration is on the time spent as an overworked non-consultant hospital doctor (NCHD), I believe the years spent in medical school are over-looked as a contributing factor. In many cases, the young doctors deciding to emigrate do so just after the completion of their intern year. This means that they emigrate after 5/6 years in medical school followed by a single year working as a doctor. In 2021 the number of visa application granted to Irish doctors was 391, this represents a 44% increase in 3 years (6). Perhaps if rates of burnout were lower and college-work -life balance was better during our years as medical students, there would be less newly qualified doctors emigrating in search of a less stressful working environment.

A study to identify the factors associated with the migration of newly qualified Irish doctors, found that only 36% of Irish interns intended on remaining in Ireland following their intern year. Again this study predominantly focused on the time spent working as an intern (1 year) and their perception of the health service during this time (7). From my point of view as a fourth year medical student, it seems that the decision to emigrate after intern year, is not one that is made during intern year. So many of us medical students speak of Australia as if it is the light at the end of the tunnel, perhaps this would not be the case if the tunnel were not so dark.

I do not have to do much research to know that poor mental health, burnout and suicidal ideation is not an issue isolated to medical students. It permeates through all levels of training in Medicine, and indeed all levels of society. I know this from the endless news coverage on such topics throughout the Covid pandemic, from conversations with colleagues in the hospital and by the fact that the majority of media (fiction or otherwise) based on the life of a doctor, portrays it in a very grim light. The novel I just finished, 'The night interns' written by Dr Austin Duffy, follows three doctors through a series of night shifts during their intern year. Within the space of this short novel, there is reference to two suicides, both doctors working at the hospital. While this is a fictional story, at no point in reading did it feel unrealistic. In fact, had I not been told by a friend that it was a work of fiction, I would have thought it was memoir.

As mentioned previously, the rates of burnout within medical students are reported as high as 52% (3), this appears to be the beginning of a career long issue. Studies conducted amongst American physicians suggest that this increases to 76% in medical residents (8). Rates of suicide are just as stark. A systematic-review and meta-analysis conducted in 2019 calculated an overall mortality rate of 1.44 for suicide amongst physicians (9). In the UK the suicide rate for UK doctors is estimated to be somewhere between 2 and 5 times higher when compared to the general population (10,11). Therefore this problem is not one that is confined to medical students, or any other sub-group within this community for that matter. It is a widespread problem, within all levels of medicine, across universities, hospitals and countries. The problem begins long before we start as practicing doctors and it is time that we look at our medical school as a starting point for prevention.

Solutions to complex problems such as this, do not come in the form of a simple quick fix. However, this is no excuse to ignore the problem. To make meaningful changes in order to prevent such bleak mental health outcomes among medical students and doctors alike we must make sustainable and lasting changes to the system. An editorial published in The JAMA; Medical Student Mental Health: Culture, Environment and the Need for change (12) found that several aspects in the culture of medical education has influenced the delay in response to the problem of poor mental health in medical students. Some important aspects included: that being a doctor is a demanding profession and therefore so should being a medical student. Students should be able to handle the stress, if they wish to becomes a doctor. Such thinking is representative of the negative belief that more pressure and demands must means better education and more highly qualified doctors. Another aspect of the culture listed was the “relative indifference and concerns held by the medical school administration relating to student mental health” as well as the “lack of accountability that deans are generally held to for the mental health outcomes of their students”. A third aspect included was the tendency of medical schools to focus on teaching self-care and emotional resilience instead of addressing problems within the learning environment. While this may satisfy educators that change is being made, it is most likely to be a distraction from the root of the problem. This editorial identified problematic features in the culture of Medical Schools as found by Rotenstein et al (13) in meta-analysis that included studies carried out across 43 countries and Wasson et al (3) in a systematic review across US Medical schools. While these studies were not carried out across the Medical Schools in Ireland, it highlights areas that perhaps we should be putting more focus on.

The study conducted by Wasson et al (3) provided some evidence for possible approaches to improve mental health among medical students. Those that related to curricular and environmental changes included Pass/Fail exams in the preclinical years and increased clinical time. The study found that using a pass/fail grading system improves medical student well-being. It also suggests a structured curriculum that balances clinical and non-clinical learning environments. Less burnout and stress was reported among medical students when clinical time was increased.

Interestingly, Trinity School of Medicine recently introduced pass/fail grading system for third year. I am not aware of any official survey conducted to measure improvements in student mental health between groups with regular exam grading in comparison to the year groups who were graded using the pass/fail system. However, as someone who sat my first and second year exams with the typical grading system I did not find any change in my perception of stress leading up to my third year exams with pass/fail grading. This does not appear to have been uncommon within my peers. With many of us feeling that with our exams being so difficult to pass and the pass mark being 50%, changing the grading system didn’t change our levels of stress or improve mental well-being. It did however make us feel that we had been left without feedback. However I believe pass/fail grading has the potential to have a positive impact, particularly if used for first year exams, allowing students to adjust to college exams without any additional pressures.

While this is just a personal anecdote and perhaps does not ring true for the majority of my peer group, what is important is that changes such as this should be measured. Surveys should be performed before and after such changes and analysis of the structural change observed. So much of our time as medical students is dominated by learning about the newest treatment and how it compares to our current options. If a patient was on a medication that was producing harmful side-effects their doctor would look to change to the next best (evidenced based) option. However when it comes to student mental health and even mental health of qualified doctors, it seems that evidenced based practice is not a priority. I struggled to find a single study that looked at medical student mental health in Ireland and ways to improve it. It is time that we start to analyse what areas within Medical Schools in this country serve the students, their education and their well-being and what areas are detrimental. Perhaps these vary across the six medical school in the Republic of Ireland, but research done across all six would allow us to look at the differences between the culture and environment within each. Allowing each school to learn from the different curriculum formats, clinical hours and grading systems of its fellow medical schools to determine what would reduce burnout rates, improve mental well-being and continue produce highly qualified doctors.

The purpose of this essay was not to participate in the blame game or as a means for a rant. It is a call for change. Change so that losing a classmate or colleague to suicide is not considered the norm.

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Runner up, Sheppard memorial essay competition 2022, undergraduate category

Porous Barricades: The Pharmaceutical Industry's Infiltration of General Practice

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Introduction

One morning last spring, I arrived at the hospital to join my assigned team on clinical placement. That day was due to start with journal club, so I went to the conference room on the ward. However, at the front of the room was not the usual registrar or SHO in their scrubs frantically setting up a slideshow on the computer in front of several consultants. Instead, it was a tall, slight and well-groomed man in a dark suit. He proudly announced that breakfast was on the table for everyone to enjoy, on him no less! The other medical students and I made a beeline for the free coffee, pastries and fruit. The doctors and assorted healthcare professionals also tucked into the free alimentation. Then, without me having given any more thought to who this man-in-black was, he began espousing the merits of his company's new inhaler. I examined everyone's facial expressions in the room. Blank. It was 8am - the coffee hadn't yet kicked in. This man, an alien in the hospital environment, excised people's remaining scepticism with the instrument of free food and then bombarded the weary brains with promotional information about his new product. Some of the material must have sunk in, even a little. I was introduced, unexpectedly early in my medical career, to the siren-like pharmaceutical industry that was possibly already trying to lure me onto rocks.

This experience during my clinical placement made me wonder about the relationship between "Pharma" and general practitioners. Drug expenditure in the community accounts for around 85% of the state's spending on medicines[1]. Therefore, general practitioners represent a gateway to huge dividends from drug sales. Indeed, the absolute worst case scenario for industry encroachment on general practice was dramatized in a recent television series about the opioid crisis in the United States. The prescribing landscape had undoubtedly changed since then, so this essay intends to explore the current state of affairs in Ireland regarding the pharmaceutical industry's relationship with general practitioners.

Regulation of the Pharmaceutical Industry - the State of Play

Medical and pharmaceutical products make up a massive part of Ireland's industry and exports; exports between July 2021 and July 2022 of these products were valued at €5.737 billion[2]. The economic value of the pharmaceutical industry to Ireland is such that regulation is a fine line to tread - the state will always want to keep pharmaceutical industry in the country as it generates economic growth, creates jobs and promotes innovation. However, while fostering these opportunities, the state must legislate and regulate to ensure that medicines remain affordable and accessible, that unmet medical needs are researched and that the most cost-effective medicines are primarily used. The European Union's Pharmaceutical Strategy for Europe exemplifies this quandary very well, citing the need for enforcement of supranational competition rules while needing to nurture the valuable sector[3].

In France in 2013, Janssen-Cilag, whose parent company is Johnson & Johnson, was fined for blocking entry to and growth within the market of a generic form of a potent opioid analgesic produced by a rival company[3]. Market obstruction was achieved with a two-pronged tactic, part of which involved disparaging the generic form of the drug among hospital doctors and general practitioners. This was done with newsletters and press briefings but also by training 300 sales representatives called '*commandos*' to convince medical practitioners that the generic drug was less effective and safe. This is a blatant example of Pharma targeting general practitioners to boost sales of an originator drug, thereby costing the taxpayer more money, also entailing an opportunity cost. In spite of all of this, the fine was a mere €25 million! That amount is but a drop in the ocean of J&J's $71.3 billion worldwide sales in 2013[4]. This again underlines the difficulty countries have in regulating Pharma; the sector’s economic significance means that any regulation or enforcement thereof tends to be limited.

Current Regulations in Ireland

While regulation is of Pharma is a difficult, there are certainly legal restrictions and industry guidelines in Ireland that govern the practices of companies in their interactions with medical practitioners. The Irish Pharmaceutical Healthcare Association (IPHA) is a representative organisation of which most major pharmaceutical companies are members. IPHA published a code of conduct document in 2019 with "a view to securing [...] adoption of high standards of conduct in the interactions with healthcare professionals [...] and the marketing of medicinal products to healthcare professionals"[5]. This is based on and acts alongside the Medicinal Products (Control of Advertising) Regulations 2007[6]. Doctors also have guidelines from the Irish Medical Council to follow[7].

The code and regulations set out fairly stringent rules that definitely help to rein in the industry in its advertising activities, but some wiggle room persists. The code mentions "restraint" that should be exercised in the frequency and volume of promotional material distributed; 'restraint' is a word open to interpretation. Other relative terms in both the code of conduct and regulations like 'inexpensive' and 'relevant to the practice of medicine' are used in relation to promotional materials distributed to professionals. Companies are legally permitted to cover travel, meal, accommodation costs for doctors who attend conferences and meetings - some might call this an all-expenses-paid holiday. Moreover, the rules do not prohibit the provision of samples of medicines to prescribers. These are just a few examples of avenues that Pharma could exploit with the aim of influencing the independent judgment of general practitioners when it comes to prescription. The medical council guidelines state the doctors 'should not' accept gifts or hospitality from the pharmaceutical industry of any value, but the document does not constitute a legal code, but simply the organisation’s principles.

Pharma's current activity in Ireland

Pharmaceutical companies spend a lot of money on promotion and advertisement of their therapies. A significant amount of money is spent by companies giving direct or indirect financial support to healthcare professionals and organisations, information which has been made publicly available in Ireland since 2016 – a reasonably progressive measure. At a glance, one can see that IPHA member companies transfer substantial amounts of money to healthcare professionals. For example, Janssen spent €243,363 on fees and paid expenses to healthcare professionals in 2021[8]. Other well-known companies like Pfizer and AbbVie spent €166,511 and €212,970 respectively[8]. Payments between

2015 and 2019 amounted to €33.6 million[9]. Patently, this is evidence of Pharma's intent to influence medical practice and prescription.

Although the intent behind the GP payments database is a step in the right direction, the Irish Medical Independent[10] did highlight its inaccessibility due to the lack of a “search” feature for individual doctors and the lack of clarity as to the services provided to and by doctors. The IPHA transfer of value database also allows recipients of financial support to remain anonymous, with only 59.9% of doctors disclosing identities, even further reducing transparency[9]. Furthermore, significant errors were revealed[9] in data reported to transferofvalue.ie as well as significant variation between companies in their methodologies for disclosing payments to the database. Some exclusions of payments by companies were in clear breach of the IPHA code of practice. This reveals that, on top of some fairly ambiguous regulations, the companies' activities are not always in accordance with the clear-cut rules governing pharmaceutical promotion. Alarmingly, inaccessibility, errors and rule breaches could indicate that Pharma's influence in general practice could be larger than reported and that we probably underestimate the extent of the industry's reach.

On top of financial transactions, a recent study[11] showed that Pharma also visits Irish GPs in their practices, either one-on-one or in groups. These meetings would range in frequency from daily to three-monthly and there were beliefs among some GPs that pharma representatives were profiling their prescribing behaviour. The industry was also determined by GPs to be 'intrinsically linked' to continued medical education (CME) and conferences. Notably, companies would often hire consultants or GPs to talk on their behalf to promote the product. Despite gift giving and receiving being against all codes and regulations, food and smaller items were still brought by representatives. Larger gifts were raffled off at certain conferences for those who supplied their names and contact details to Pharma companies.

Prescribing habits - is there an effect?

The long history of pharmaceutical industry investment into GP interactions implies that there is a significant effect on prescribing habits following contact with drug companies. The medical council guidelines[7] also acknowledge the effect promotion of medicines can have on doctors' prescribing habits. A 2017 meta-analysis[12] found moderate quality evidence that there was indeed an association between promotion of a medication, inappropriately increased prescribing rates and increased prescription costs. A review in the UK[13] found that GPs that prescribed a lot of new drugs generally saw pharmaceutical representatives several times per week, while 'lower' prescribers of novel drugs saw representatives less and consulted colleagues afterwards more often. Perhaps this uncovers an idiosyncratic component of the effect of pharmaceutical promotion on GPs, but nonetheless demonstrates the effect of industry activity on prescription rates. An older study in Ireland[14] also showed a certain reliance on Pharma for information; in 2001 in 42% of cases of a new drug being prescribed by a GP, the evidence informing the decision was acquired solely from a pharmaceutical representative. These influences are reluctantly recognised by GPs in Ireland who also tend to lack knowledge regarding regulations governing interactions with Pharma[11].

In Ireland, expenditure on drugs has risen sharply since the 1990s, reaching a peak of €2.7 billion in 2019[1]. The HSE tried to counteract this upsurge with the Medicines Management Programme (MMP) in 2013 as well as other cost-containment schemes. Measures like MMP have the aim of making budgetary room for expensive novel therapies by reducing spending on drugs for chronic or common issues, which are often highly profitable for Pharma. Preferred drugs for the MMP are decided by factors such as efficacy, dosing and administration, interactions, side effects, cost and international guidelines; choices are then disseminated to GPs via meetings and publications[15, 16]. Despite the introduction of the MMP, it has been demonstrated[15] that the HSE's preferred drugs didn't rise in prescription rate very dramatically. Between introduction of the MMP and 2016, there was only a small rise in prescription of preferred PPI, statin and SNRI but there was little to no impact in preferred ARB, ACE, SSRI and urology drugs[15]. Consequently, the state saved merely €2.67 million in that three year period. To contrast, the HSE spent €123 million on new drug Humira (adalimumab) in 2016[17]. This shows that the 'soft' measures of the MMP brought in by the HSE to highlight the most cost-effective drug were likely entirely ineffective against years of Pharma influence.

Atorvastatin is the most prescribed medicine in Ireland[1]. While it is indeed the preferred drug according to MMP, there have been suggestions that statins are overused. A study in 2019 suggested that statins only provide net benefits at cardiovascular risk scores higher than the current guidelines[18], which implies that statins have been overprescribed. Another study in Ireland suggested that the expansion of eligibility for statins in the last 30 years has been an example of "pharmaceuticalisation"[19]. The paper posited that hypercholesterolaemia may have metamorphosed from a risk factor for a cardiovascular disease into a disease in of itself to benefit pharmaceutical companies. This could potentially highlight a second method by which Pharma influences GP prescriptions – by altering treatment guidelines through lobbying at higher levels. GPs are then left at risk of legal exposure if something happens when they prescribe or fail to prescribe an item in a manner out of step with guidelines.

Yet another pertinent example of Pharma's influence on general practitioners is over-prescription of proton pump inhibitors. PPIs are started without a clear indication in 40% of cases and are continued inappropriately in 81% of cases[20]. Around 4 million prescriptions for PPIs are written every year, amounting to €45 million spent by the State. Despite pantoprazole being the preferred drug according to the MMP, only 21% of patients are on it versus 39% on esomeprazole (Nexium). Esomeprazole costs more than double what pantoprazole costs per prescription[1]. Moreover, an inappropriately large number of patients are on high dose therapy (93%) compared to low dose therapy (7%)[20]. This is a prime example of the insidious effect of marketing on general practitioners' prescribing habits which results in a serious yet perfectly avoidable financial burden on the state[1].

A final example of the effect of Pharma's activity is the strong preference among Irish clinicians for originator drugs, especially biologics, with biosimilars and generics being perceived as less effective. Only 40% of medications prescribed in Ireland are generics, compared to 85% in the UK and 52% across the OECD[21]. This incurs a massive cost for the state and entails a significant opportunity cost.

How do we reduce Pharma's influence on General Practitioners?

The pharmaceutical industry has always made marketing a priority and has evident regulatory latitude to market its drugs to GPs; it is clear across the literature too that the marketing to GPs is effective. One must also recall that many GPs in Ireland reluctantly admit that they are probably unconsciously influenced by Pharma representatives[11]. Thus, a strategy for limiting the influence of Pharma is necessary to reduce the financial burden of medicines on the state and to ensure optimal evidence-based treatment for patients.

An glaringly obvious aspect of marketing to tackle is Pharma's involvement in CME of GPs. GPs in Ireland are acutely aware of being vulnerable to Pharma influence when they control the discourse at CME events[11]. In addition, it has been demonstrated[22] that CME events that are financially supported by industry tend to cover a narrower range of topics, with a focus on new therapies developed by the benefactors, than if the CME is organised by the medical profession. Therefore, it would be logical to ban or severely limit pharmaceutical involvement in CME of practising clinicians, so that it cannot be used as a platform for promotion of a drug that may not be the optimal therapeutic or financial option. Alternatively, there could be some mechanism for screening of material provided by Pharma for CME, but this would likely be a much more costly scheme for the state than a simple ban.

GPs in Ireland are of the opinion that two of the major ways in which Pharma influences their prescribing behaviour are 'biased information' and gifts and contributions[11]. Biased information and gifts are blatant violations of the IPHA code of ethics and the 2007 government regulations. Hence, the option could be explored of creating a system through which GPs could report marketing behaviour violating industry regulations. IPHA already has a complaints procedure for breaches of their codes but complaints are reviewed by a board composed primarily of members from the pharmaceutical industry, who are likely far from impartial[5]. Healthcare professionals are also prohibited from making a complaint anonymously, which may deter complaints. It would be desirable, therefore, to create a complaints procedure independent of industry. However, there could be several issues with setting up such a system. A significant cost would likely be involved in creating a new office to deal with complaints, and if such a system were set up, there would likely be industry and political pushback. Therefore, while more oversight is desirable, there would be budgetary and political factors to negotiate.

Another way to reduce Pharma influence in prescribing behaviours is to regulate prescription more tightly. Regarding generics and originators, a HSE report outlines two potential ways in which increased generic prescription could be achieved[21]. Firstly, mandatory generic drug substitution could be introduced where pharmacists are required to replace branded drugs with generics when dispensing. The other proposed measure would be 'chemical-based prescribing' where clinicians prescribe by pharmacological and not brand name, encouraging dispensing of a generic drug. These measures would be expected to be very controversial as they would undermine prescriber autonomy and could impact patient safety.

The generic versus originator dilemma in Ireland produced another means of reducing Pharma marketing effects. A policy of a gainshare for clinicians' practices when they prescribe a generic over an originator has proven to be effective and produced €50 million in savings[21]. This demonstrates that incentivising doctors to prescribe in certain ways could be hugely effective in negating the effects of Pharma; beating industry at its own game. However, a review[23] of effectiveness of pay-for-performance schemes shows that they may not be that efficacious, and that they only produce a modest improvement in prescribing behaviours, though the review conceded that there was low certainty for these findings. Therefore, while incentivisation is anecdotally effective in Ireland, there is little research to go off for determining whether big differences can be achieved.

Conclusions

Pharmaceutical industry regulation is a politically contentious issue given the value of the sector to modern Western countries. A consequence of this is that there is clear regulatory room for marketing manoeuvres in the industry, whose code of ethics is overseen by an industry body. It is also abundantly clear that the Pharma is very active in Ireland in its promotion of drugs, which leads to evident prescribing habits that defy fiscal and, occasionally, clinical logic. This essay explored various ways of correcting these bad habits, such as more stringent industry marketing oversight, incentivisation, prescribing rules and barring of industry from CME.

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The New Assisted Decision-Making Framework and its Implications for General Practice

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It has certainly been a long time coming, but it now appears that the new assisted decision-making framework as set out in the Assisted Decision Making Capacity Act 2015i ("the Act") is about to go live. Advocates for the new framework have trumpeted its flexible and functional approach to capacity and the positive effect this will have on a wide range of persons with disabilities and cognitive impairments. Critics however point to the uncertainty that still exists around how this functional approach will operate in day-to-day practice. Perhaps many of the Act's effects will not truly be known until the initial dust has settled and all of its provisions are fully up and running. However, whilst many of the conversations have been around its implications both for hospitals as well as mental health and disability support services, what likely problems and benefits could this new legislation herald for general practitioners as they deliver care to their patients?

Before we delve into some of the implications for general practice, it would be useful to give a brief summary of what exactly is changing in the area of decision making in Ireland. Until now in Ireland the only recognised legal mechanisms for making decisions on behalf of another person in Ireland were either through the Power of Attorney Act 1996 (the legislation underpinning enduring powers of attorney) or the Lunacy Regulation Ireland Act 1871 (the legislation underpinning wards of court). Whilst they have functioned reasonably well in practice, enduring powers of attorney are only useful where a person has both the foresight and the capacity to put them in place in advance of losing capacity, thus avoiding the possibility of them having to be made a Ward of Court in future. Wards of court, being based on legislation which pre-dates the foundation of the Irish State by some fifty years, are wholly inconsistent with any sort of modern approach to assisted decision making. They are inflexible by their nature (allowing no room for those who may have partial decision-making capacity) and demeaning towards the persons whom they seek to protect – orders are still made to this day declaring that someone has been found by inquisition 'idiot, lunatic or of unsound mind'.

The Act attempts to overhaul and modernise Ireland's capacity and decision-making landscape. Its primary purpose, as stated in its preamble, is to maximize a person's right to make their own decisions (with legally recognized supports) wherever possible, either immediately or in the future. One of its central tenets is the winding up of the ward of court system and its replacement with a tiered approach to decision making. Practically speaking, this entails providing a graduated level of assistance to persons depending on their level of disability or cognitive impairment. Of course, some may still require maximal support akin to wards of court, but many may be able to function and make decisions with a lower and less intrusive level of assistance. In addition, and regardless of the level of assistance, there is a far greater level of oversight of those persons making decisions and new periodic reporting requirements – with the ultimate aim of minimising the potential for abuse. The enduring power of attorney system meanwhile will largely remain unchanged, with the exception of some increased oversight and reporting requirements around its operation. So undoubtably the overall aim of the legislation is certainly commendable, but what should Ireland's general practice community be aware of with its implementation looming?

The new system allows for a person to appoint decision making assistants or co-decision makers to assist them with decisions (as well as allowing for the Circuit Court to appoint decision making representatives for persons with greater incapacity / cognitive impairment). These represent a new cohort of person and terms whom general practitioners may start to encounter in day-to-day practice – alongside the already existing attorneys under the enduring power of attorney system. One of the benefits of the new system for all of the above persons is the increased reporting and oversight of these persons by the newly appointed Decision Making Support Service ("DSS"). Whilst both society and the law expect all such persons to act in the best interest of the person whom they are representing (and indeed the vast majority will do this) – human nature dictates that there will always be exceptions to this general rule. Under the current system for both enduring powers of attorney and wards of court the powers there are very limited oversight and reporting requirements. It is not clear to whom or what body a general practitioner should refer to if they have concerns that a patient's attorney or representative may not be acting in their best interests. With the new system, general practitioners may report any such concerns directly to the DSS, who will then arrange for a 'visitor' to check in on the arrangement and ensure that the patient's best interests are indeed being protected.

A further positive for general practice, as well as the wider healthcare community, will be the inclusion of 'healthcare decisions' within the remit of the new system. Under the current system, all healthcare decisions pertaining to a ward of court need to be made by order of the High Court. This of course presents huge procedural obstacles to any practitioner looking to provide care of his or her patient. Whilst there has always existed a 'best interests' exception in the case of emergencies, any routine procedures and so forth would by the letter of the law require High Court approval. It is unclear how low the threshold would be set for which approval may be required – for example would the commencement of a new medication also require such approval? As such, and in addition to the procedural obstacles, this places a general practitioner on very uncertain grounds legally speaking when making many medical decisions for a ward of court. With the new decision-making system, all healthcare decisions are now explicitly listed as being amongst the decisions for which the assisted decision-making process is applicable - removing both the procedural barriers to care as well as placing the medical professional on much surer legal footing. The exception to this is those decision relating to life-saving treatment, which are still decided by the medical practitioner in case of incapacity, subject to any applicable advanced healthcare directive. It is important to note however that a last-minute amendment has been proposed in advance of the full implementation of this system which would exclude Enduring Powers of Attorney from this change. So, a discrepancy would exist whereby those utilising the new tiered assisted decision-making system could make healthcare decisions as part of it, but decisions for those under the Enduring Powers of Attorney system would remain within the domain of the medical practitioner.

On a practical level, the new system now provides for a searchable register of some decision-making agreements and of enduring powers of attorney – this register will be available online and searchable by either i) a recognised member of a professional body that has been approved by the decision making support service; or ii) a member of the public who can demonstrate an legitimate interest. Although there is no further clarity as yet as to which professional bodies will be so approved, one assumes that medical professionals will be included. This will allow general practitioners to ensure that they are dealing with the right persons when it comes to treating persons with reduced capacity, as well as ensuring that the decision-making agreement in question covers the decision being contemplated.

Finally, the Act does provide much firmer legal foundations for the operation of advanced healthcare directives on these shores. Whilst previously recognised in common law (i.e. by the Irish Courts) there was no piece of legislation until now which set out how they should operate and what the requirements around making them may be. The Act states that anyone over the age of 18 who has capacity may make an advanced healthcare directive. It provides that the making of such a directive should be witnessed, but that the directive itself need not be in writing (i.e. a video / audio recording may suffice). Once made, any refusal of treatment contained in it must be respected. An advanced healthcare directive may also set out treatment requests, and while a medical practitioner is not obliged to provide such treatments, they are obliged to take them into consideration when deciding on a treatment course. Following the entry into force of the Act general practitioners can now proceed more confidently and with more robust legal backing when presented with these advanced healthcare directives.

Unfortunately, however, and in contrast to decision making agreements, there will be no searchable register of advanced healthcare directives. It is not entirely clear why these directives will not have a searchable register (although it may have something to do with data protection and the more sensitive nature of their contents), and this surely represents a real missed opportunity in this area. General practitioners dealing with acute deteriorations in the community or in care homes may often be presented with documents purporting to be advanced healthcare directives, but it may often not be possible to quickly establish their veracity or whether they have met procedural requirements. Without an official register to rely on, many may understandably choose to err on the side of caution and treat or refer to acute services as applicable- the uncertainty coupled with the irreversibility often associated with choosing alternative option leaves many with little in the way of real choice. It is noteworthy that section 86 of the Act does exclude medical practitioners from criminal or civil liability if they had reasonable grounds to believe, and did believe, that the advanced healthcare directive in question was valid and enforceable. Nevertheless, for most general practitioners this does not provide complete comfort – with no clarify for example on the position as regards professional complaints against them on foot of their actions.

At the time of writing, the go live date for full implementation of the Act is the 21st of November 2022. There have been false starts before and it is possible there may be one or two more twists on the road yet, but at this stage we can expect that such delays will be in the order of no more than a few short months. As such, it is crucial that the General Practice community familiarise themselves with the changes that are afoot in this area, and ready themselves for both new actors and terms which they will shortly be encountering as well as the benefits and complexities that the Act may herald.

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Otalgia in GP practice, a diagnostic dilemma

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Patients walk in through the door with various health issues and concerns, ear pain is not an exception and is a very common presentation in everyday GP practices.

I recently reviewed a 69-year-old male, who was referred by his GP to ENT A&E department. Reason for referral being unilateral (left) otalgia for 6 weeks associated with mild peri auricular tenderness. No relief despite two different courses of antibiotics and was referred to ENT for further assessment. He has a background history of hypertension, Atrial fibrillation, prolonged CCU admission due to covid pneumonitis, COPD and dilated cardiomyopathy. He is also an ex-smoker (quit 20 years ago) and drinks 6-10 units of alcohol weekly. On examination the gentleman was vitally stable, under otomicroscopy his both ears appeared normal with an intact and functional tympanic membrane. His facial nerve was intact. The oral examination was unremarkable apart from a mildly coated tongue. Noted tiny palpable L2 lymphadenopathy on left side of neck palpation. Patient at this time mentioned that he could have occasional painful swallowing (odynophagia) however denied any dysphagia, weight loss, night sweats and family history of any malignancies. For completion of an ENT examination a flexible nasendoscopy was performed and to everyone's disbelief a mass lesion/ tumour in the left base of tongue was spotted. Which was unfortunate for the pleasant gentleman but was very surprising as the only presenting complain this man described was a unilateral otalgia. He is now being investigated further to distinguish the extent of disease, available treatment options and prognosis.

Now, as the title suggests, Otalgia is indeed a diagnostic dilemma for us clinicians, for which in this essay we will try to find answers and connect the dots to deliver effective and exceptional care for our patients.

Otalgia can be categorized into two types. Primary otalgia is known as pain that originates from the ear itself, whereas Secondary Otalgia (or in other words referred pain to the ear) originates outside of the ear. Primary otalgia is commonly seen in children and adolescents whereas secondary otalgia is more common in adults. Within the 10-15 minute consultation time we spend with each patient, a comprehensive history and physical examination is key to determine the etiology and to manage appropriately

From the time the patient walks into the consultation room, observe and listen closely to what the patient has to say regarding the pain. Question the location, duration, aggravating and alleviating factors, medical history, associated symptoms such as hearing loss on the symptomatic ear, headache and so on. Ask for specific symptoms such as otorrhea, tympanic membrane fullness and vertigo which may suggest a primary etiology. Social history such as smoking, and alcohol abuse is important to take note of in every initial assessment. The character of pain also provides important clues, for example a continuous and progressively worsening pain is more likely to be associated with infection which is a primary etiology. Intermittent pain is likely to be associated with secondary causes.

Remember a unilateral Otalgia may be the only presenting symptom in several serious conditions such as malignant neoplasms and temporal arteritis almost always with a normal ear examination like the case we discussed already at the beginning. Assess potential risks such as age being 50 years and older with a concerning history of unintentional weight loss, heavy alcohol consumption, tobacco exposure, is a diabetic, coronary artery disease and or immunocompromised. This population is at higher risk for head, neck and esophageal cancers. Studies mention consumption of 50g or more of alcohol per day increases the risk of head and neck cancers by two to three times compared with nondrinkers; smoking and drinking alcohol increases the risk more than three folds compared with alcohol use alone. In addition, complaints of unilateral hearing loss warrant further investigation if an obvious cause is not apparent (e.g., lodged foreign body, cerumen impaction etc.)

Examining the patient is a crucial part of any consultation. Physical examination should include inspection of the auricle and periauricular region, as well as an otoscopic examination. GP's often do not have access to readily use otomicroscopy in the community.

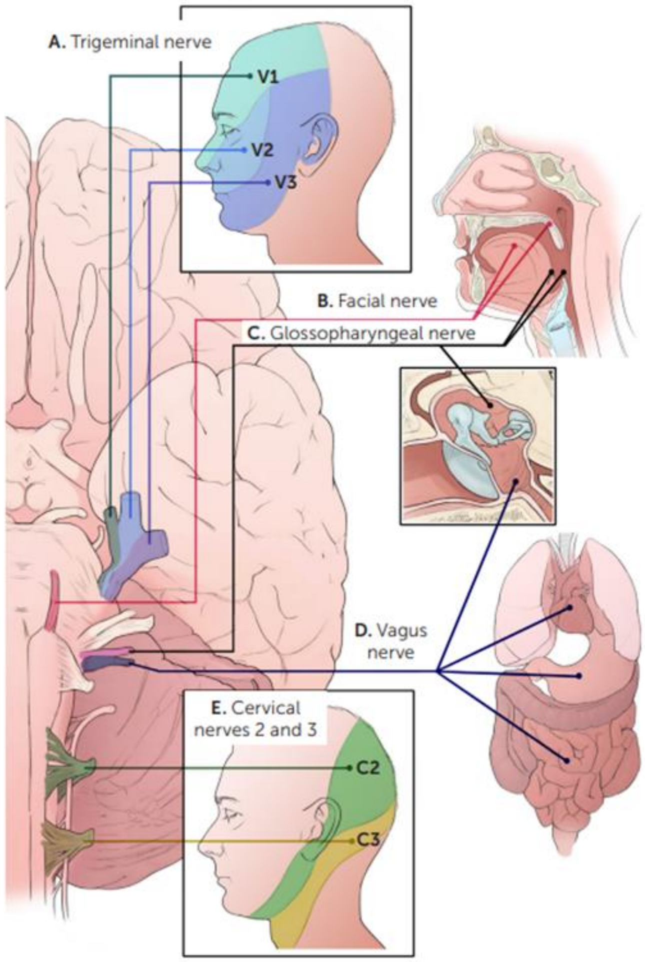
In terms of Primary otalgia, can be further delineated into pain originating from the external ear, ear canal or middle ear. Causes such as trauma, sunburn, acute folliculitis, cellulitis of auricle, contact dermatitis and other skin conditions can trigger external ear pain. Make sure to further assess with imaging when trauma is suspected as there could be potential temporal, parietal, and or skull base fracture which can be fatal if missed. Rare systemic disease called relapsing polychondritis may cause pain which is characterized by a relapsing, bilateral, erythematous or violaceous appearance on the external ear, sparing the ear lobes.

Pain originating from external auditory canal may be due to cerumen impaction, foreign bodies (seen usually in pediatric and elderly population) and most commonly otitis externa (also known as swimmer's ear). Otitis externa is often associated with otorrhea, swelling, redness and inflammation along the external auditory canal. Bacteria accounts for 90% of infection and 10% fungal. An effective aural toilet is the treatment of choice to achieve resolution. Malignant otitis externa is a rare condition found in patients with diabetes or who are immunocompromised. Which is characterized by severe unrelenting pain and a subtle finding of inferior external auditory canal granulation tissue at the bony cartilaginous junction. Herpes zoster oticus is caused by reactivation of latent herpes zoster infection from the geniculate ganglion (facial nerve) but also can involve cranial nerves V,IX and X. Symptoms include facial paralysis and ear pain while the patient has vesicles in the external auditory canal.

Thirdly pain originating from middle ear typically is due to acute otitis media in which the onset of pain would be acute (less than 48 hours) , middle ear effusion with erythema and moderate to severe bulging of the tympanic membrane. History of tympanic membrane perforation associated with active otorrhoea may indicate chronic suppurative otitis media which does require aural toilet and further ENT referral for elective myringoplasty if beneficial for patient, particularly in young patients with associated conductive hearing loss. Bullous myringitis is uncommon but occurs when serous or hemorrhagic blisters form in the ear canal or on the lateral tympanic membrane. Symptoms generally include sudden onset of severe pain and hearing loss. Pain often decreases after bullae rupture and drain. Eustachian tube dysfunction affects an estimated 3% of population presenting with primary otalgia, in which tympanic membrane retraction is visualized, a negative valsalva maneuver and or tympanogram indicate negative middle ear pressure. Other uncommon causes include infectious, neoplastic and inflammatory etiologies. Especially tumours in the postnasal space obstructing the eustachian tube may show a middle ear effusion on examination. Mastoiditis is an infection in the air cells of the skull behind the ear, this is a rare complication from acute otitis media. This is a clinical diagnosis with peri auricular tenderness, erythema, edema, and warmth in the mastoid region. Cholesteatoma may produce a sense of fullness rather than a severe pain but may also be asymptomatic. These abnormal findings with apparent cause can be identified and treated appropriately.

Now, when it comes to secondary otalgia with a normal or equivocal finding of the ear, warrants further head and neck examination, as it is a referred pain arising from an origin elsewhere other than the ear. The etiology of secondary otalgia is more complex as the nerves innervating the ear have a shared distribution to include the head, neck, chest and abdomen. These nerves provide sensory innervation to these regions. Cranial nerves V, VII, X,C2 and C3 innervate the auricle; the external auditory meatus and canal by cranial nerves V,VII and X ; the tympanic membrane by cranial nerves VII, IX and X and the middle ear by cranial nerves V, VII and IX . Any kind of lesion (such as a tumour, infection, or an inflammatory process) within the sensory distribution of any of these nerves may cause referred pain to the ear. Sensory distribution of the nerves innervating the ear is portrayed in figure 1 below for better understanding.

FIGURE 1



Sensory distribution of the nerves innervating the ear. ***(A)*** **Trigeminal nerve (V): face, sinuses, teeth.** ***(B)*** **Facial nerve (VII): anterior two-thirds of the tongue, soft palate.** ***(C)*** **Glossopharyngeal nerve (IX): posterior one-third of the tongue, tonsils, pharynx, middle ears.** ***(D)*** **Vagus nerve (X): heart, lungs, trachea, bronchi, larynx, pharynx, gastrointestinal tract, middle ears.** ***(E)*** **Cervical nerves 2 and 3 (C2 and C3): external ears, ear canals, anterior region of the neck, posterior region of the neck.**

Illustration by Dave Klemm

Let's focus on frequent etiologies that are responsible for the referred ear pain. Pain arising from the trigeminal nerve (CN V) is the most common source of secondary otalgia in adults, stemming from TMJ syndrome, dental infections, trigeminal neuralgia, and mandibular osteomyelitis or tumour. Herpes zoster can affect cranial nerve VII to a lesser degree than in Ramsay hunt syndrome, which can cause otalgia associated with bell's palsy and a normal ear examination. Cranial nerve IX can cause referred pain to ear which is caused by tonsillitis, pharyngitis, sinusitis, pharyngeal tumour, or glossopharyngeal neuromas. Interestingly the vagus nerve affects many systems as inferior as the colon and can be activated by any vagal stimulation. Otalgia has been reported as the presenting symptom of myocardial ischemia from irritation of this nerve. In Patients with risk factors for coronary artery disease with unilateral otalgia (however uncommon) consider ECG, CXR and blood troponin. If any abnormal result refer patient to nearest Emergency department for cardiac work up. In patients older than 50 years with headache, especially scalp tenderness, diplopia, fever ,anorexia and malaise with a ESR of >= 50 mm per hour highly suspect a diagnosis of Temporal arteritis. Which requires immediate treatment with high dose systemic steroids (to prevent permanent blindness) and urgent referral to appropriate specialty for biopsy and further management. Temporal pain is only present in 40% of patients with temporal arteritis.

Secondary Otalgia may indicate a pool of other diagnosis. Less common subacute etiologies can be cervical spine arthritis, cervical adenopathy, gastroesophageal reflux, trigeminal/glossopharyngeal/geniculate/sphenopalatine neuralgia, myofascial pain, psychogenic, salivary gland disorders and thyroiditis. Less common acute etiologies include subdural hematoma, central line placement, carotid artery aneurysm and pott's puffy tumour.

Otalgia as a symptom in Primary care may interpret a wide spectrum of diagnosis, few unfortunately serious conditions which needs prompt medical attention. A decent knowledge in anatomy, knowing the origin and distribution of various nerves which richly innervate the ear can give us valid clues to find the missing pieces of this mystery puzzle. Treatment is most effective when there is minimal delay after a diagnosis is obtained. Making ourselves aware of this symptom and understanding more about it, helps us clinicians to deliver patients the best care which they deserve and to improve their quality of life.

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Assisted-Dying: The Future of General Practice in Ireland?

Perspectives from a New Zealand Practitioner

***Author*: Harry Delany, 3rd year Undergraduate, UCD GEM.**

“Good morrrrning." The way she rolled the letter 'r' made me smile. "I'm detecting you grew up somewhere in Southland?" My accent almost matched hers, yet mine reflected a North Island background. The zoom connection was not perfect, but her distinct branch of the Kiwi accent was unmistakable through the monitor. "Born and raised in Invercargill," she laughed.

Dr Emma Calvert is a general practitioner (GP) currently residing in Wellington, New Zealand. Since graduating from medical school in 2014, she has completed her general practice scope and is working part-time as a clinical advisor for a Primary Health Organisation – a group which oversees general practice administration. Even so, within the past year, however, Dr Calvert found a new vocation. "I'm an AMP [attending medical practitioner], the main go-to person for the process." The 'process' to which Dr Calvert referred to is administering medication for assisted dying.

Dying is a certainty in life, yet until recently, a legal decision on its precise timing for consenting terminally ill patients has not been possible in any country. Assisted dying allows the right to end one's own life with the assistance of a doctor. Such is its controversy as part of medical practice; only six countries globally have legalised it. Ireland is no exception, with assisted dying regarded as either manslaughter or murder. In recent years, however, Ireland has taken steps to put in motion more ‘progressive’ policies. In 2015, same-sex marriage was legalised, quickly followed by abortion rights in 2018 (McDonagh, 2020). Consequently, assisted dying is an important topic of discussion.

An attempt at assisted dying legalisation was initiated with the Dying with Dignity Bill 2020, but it was ultimately scrutinised and discontinued for various reasons, including fears over the provision of inadequate safeguards. A special Oireachtas committee is expected to re-examine the bill in late 2022 in another effort to establish its presence within the country (Kennedy-

Cochrane, 2021). Although presently illegal in Ireland, assisted dying is likely to serve a future role in Irish medicine. Albeit, if permitted, the procedure's blending into medical practice is unlikely to be streamlined, given its practical and ethical complexities. If Ireland were to instate assisted dying into medical practice, following in precedence of another country may benefit. As a country of similar size, values and healthcare tactics, New Zealand's management of assisted dying, via its integration with general practice, may provide a necessary blueprints.

No dedicated assisted dying physicians presently exist in New Zealand. Therefore, medical doctors of any specialist scope can be certified to become such a practitioner. General practice appears to have ushered up most of the vacant positions. GPs are aware of the consequences of a diagnosis – having in all likelihood been involved in the earlier management of the particular patient, and as they often treat the same patient for years or decades – it is reasoned that they would be in the ideal position to guide those same patients to end of their lives Nonetheless, assisted dying is a practice still in its infancy in the South Pacific. Emotions remain high, and data is limited on the subject. A qualitative examination of the role through Dr Calvert is therefore welcome. She provides insight into how this emerging role could be integrated into future general practice, thus setting potential guidelines for future requirements of Irish GPs - should assisted dying be legalised.

Discussions on assisted dying are usually unsettling and consequently are invariably avoided. It can precipitate ill feelings, antagonism, and cause emotions to ‘boil over’. Assisted dying is generally believed to be a practice that one could only venture into after years of emotional reconciliation. As a young professional, Dr Calvert appears to break these assumptions. However, her passion has spawned only recently. While voting 'yes' on New Zealand’s 2020 Assisted Dying referendum, she admits to not having had harboured any strong feelings towards the subject. Rather, the subsequent discussions in her professional circles later shifted her mindset. "As [the law] started to come into effect, I became indignant that professional bodies were active against it," she said, "I went to a College [of General Practitioners] conference [where the topic was discussed], and they only had objectors on the panel. There are many conservative views within the sphere of general practice." Dr Calvert is not mistaken. While the New Zealand End-of-Life Choice Act received 65.2% public support, a recent study found that only 41% of New Zealand general practitioners were in favour (Young et al., 2019). Interestingly, palliative care specialists were the most opposed (Oliver et al., 2017). It appears that even fewer supporters in Ireland are represented. One survey showed that only 17% of physicians favour assisted dying in Ireland (Crowley et al., 2021). Alternatively, 52% of the Irish public is in favour (Leahy, 2020). As the younger generations, who, it seems, are more in favour of such ‘progress’ slowly gather more influence, assisted dying in Ireland may become inevitable. Standards and opinions evolve, and doctors may have no choice but to acknowledge the subject and adapt their thinking.

Frustrated that patients may struggle to find an obligative practitioner, Dr Calvert took matters into her own hands. "It set a fire in me," she reported. As part of her clinical advisor role, she initiated the legislative requirements for her region to provide an assisted-dying service. While doctors can conscientiously object to providing an assisted-dying service, the new law compels them to yield adequate contact details for patients to access an alternative practitioner. Suddenly understanding the necessity of the provision, Dr Calvert thought she "might as well get on board."

In New Zealand, eligibility for assisted dying is strict. Patients must be over 18 years of age and have a terminal illness likely to end their lives within six months. Unlike in Belgium, patients in New Zealand who are only suffering from psychiatric conditions are not eligible (Dyer et al., 2015). Should patients seek assisted dying in New Zealand, they must first undergo an initial assessment with an AMP, such as Dr Calvert. An independent medical practitioner will subsequently examine the patient for re-assessment. If the decision is considered uncertain, the patient is reviewed by a psychiatrist to ensure that they are competent in their decision-making. A registrar and panel reviews the patient before eligibility is confirmed (Ministry of Health, 2022). The time and the date for the administration of the medication are subsequently finalised.

Although rejections are frequent. From November 2021 to June 2022, 211 assisted dying applications were made, but only 68 patients were considered ineligible (Ministry of Health, 2022). Dr Calvert obtained similar ratios. "I've been given 14 cases, but I've performed five assisted deaths," she said. Dr Calvert elaborated further that several accepted patients passed before they could undergo the procedure. She later revealed that a colleague had rejected all nine applications they had received. "That is a difficult conversation with people if they're really set on having it," she said. Explaining further, she has found patients do not want to die, but are unable to bear the existence of living. The cessation of suffering can thus be considered compassion – a motif that seen throughout the rest of the interview.

The core principle of assisted dying advocacy is the elevation of patient autonomy above other moral standards. Such autonomy even extends to the environment of their last 'hurrah'. "I had a younger guy with ‘death metal’ music playing in the background at his house, with 40 people around," Dr Calvert said. The day is specifically catered to the patient. While some patients have farewell parties, others may only have one or two people with them. In one instance, a karakia - a Māori spiritual ceremony - was performed for the patient. "I was blessed to be a part of it”, she recalled. Such personal experiences are not unique to Dr Calvert's patients. Private homes make up 79% of assisted dying locations, with hospices representing only 4% (Ministry of Health, 2022).

Arguments used by proponents against assisted dying refer to the doctor’s emotional discomfort during the procedure. Given its conflict with traditional religious teaching, apparent societal morals or beliefs, such as the belief in the ‘sanctity of life’. They could remind one of the Hippocratic Oath’s'do no harm'. Perhaps, some feel it to be an admission of guilt – feeling as though (our) medical science has ‘failed’. Recent studies have suggested that 30-50% of doctors find discomfort in participation in assisted dying (Kelly et al., 2020). They can hardly be blamed for such feelings. Dr Calvert's emotional experiences were, in contrast, divergent. "I've found it to be the most rewarding work which I do," she said, "This is the time and place to connect with a patient and learn what matters most to them." She reports how the AMP seems to develop a highly personal relationship with the patient during the initial assessment. Understanding their mindset, experience, and the collateral effect of the illness (towards carers, friends and family) is integral to understanding their reasons for such a decision.

The emotional quotient required for such human connectivity is the cornerstone of a GP's skillset. Given that patients can spend years or decades with the same GP, assisted dying could be considered the final stage of caring for the patient. Smets et al. (2011) determined that GPs were the most willing doctor specialty to perform assisted dying among Belgian physicians. While no medical professional should be expected or required to cater for assisted dying, general practice may already hold some of the desired skillsets to carry out the procedure. House calls, although waning as a custom within general practice, are integral to the assisted dying process. Most patients prefer assisted death to be in their own homes. Dr Calvert reports that she once travelled to Westport from Wellington, a distance of hundreds of kilometres, to carry out the procedure.

Utilising GPs for assisted dying is almost crucial when attempting to prevent any form of patient coercion. One of the concerns of assisted dying is that patients may feel inclined to die for someone else's benefit. Assisted death must be a self-directed decision with no external influence; otherwise, all participants involved would be considered aiding a suicide, a universal felony. Possible reasons for coercion range from reducing emotional familial burden to life insurance fraud. When examining the risks of coercion, Dr Calvert reflected on a case where reducing household stress weighed heavily on the patient. "He had a daughter jumping around outside, and had gone from full-time father to being bed-ridden and fed within five months," she said, "The patient didn't want to extend the memories for the daughter". While coercion was present, the patient's state of suffering could still qualify them for end-of-life care. The benefit of involving GPs is their ability to distinguish between coercion and essential altruism, a skillset attributed to their understanding of the family dynamic.

The close relationship between the patient and the GP will probably generate improved recognition of falsehoods during the initial assessment. Hypothetically, a patient may ask the GP for an assisted death to reduce the burden on a specific caregiver. However, if the GP was historically aware of an estranged relationship, they could suspect the caregiver of convincing the patient to influence or falsify an intimate relationship for personal gains, such as the attainment of inheritance.

A common misconception of the physician’s role in assisted dying is that it predominantly involves 'death and destruction'. These physicians administer the lethal medication to the patients, but as Dr Calvert informed, the practice represents only a tiny fraction of their job description. "[Non-assisted-dying physicians] see that I'm not running around playing Grim Reaper," she said, "Most of the time, we're not administering the medication, but rather giving the patients some peace of mind that they have another option". In the final few months of a patient's suffering from a terminal illness, there can be loss of body function, quality of life, dignity, and above all, autonomy. Dictated by hospital schedules and what others consider best for them (despite how well-intended). The inability to engage in what previously made their lives meaningful can be as distressing, if not more, than the illness itself. The patient, not the doctor, defines unbearable suffering. In a study completed in Oregon and Washington, two of the few US states that have legalised assisted dying, loss of autonomy was stated to be the primary reason for undergoing the procedure, closely followed by impaired quality of life (Al Rabadi et al., 2019).

Dr Calvert observed that many people whom she initially assessed for assisted dying never actually completed the process, regardless of their eligibility. "[The patient] gets relief in knowing that they have this control over the disease ravaging their bodies, whether they use it or not," she said, "There is a real beauty in that, knowing they can get some peace if [the illness] becomes too much."

When asked to compare the practice of assisted dying to 'traditional medicine', Dr Calvert noted how extensively focused assisted dying is on patient control. For example, when administering the medication, Dr Calvert described 'extra-long tubing' was used to ensure that the doctor could remove themselves to the other side of the room and for the family to be as close as possible to the patient. To end their life when they wish - in an environment of their choosing – helps restore some autonomy of which the patient has been stripped for so long.

Given the controversy and recent enactment of the law, assisted dying undoubtedly carries a stigma in New Zealand society. However, as the law is unlikely to be reversed, physicians in New Zealand must begin to accept assisted dying as part of the medical field. Dr Calvert describes how some palliative care centres previously dissuaded her from entering the premises to see a patient. The spectrum of reasons typically fell between religious affiliation, or personal morals, with the phrase "it's not right" frequently used. Nonetheless, Dr Calvert has observed that palliative care groups are becoming more supportive of the practice. "This would be very anecdotal, but there appears to be a general softening," she affirmed. However, when asked if she ever endeavours to express and justify her stance to others, she appeared disinterested. "Often I don't find myself getting into conversations, as it's quite an emotive topic," she responded, "Arguing back will likely push people into the opposite direction." Her emphasis continues to be comforting the patient, rather than trying to instil her opinion onto others. Social attitudes toward assisted dying may change, just as they have towards abortion, a previously contentious issue in New Zealand.

Assisted dying has an unknown future in Ireland. If Ireland continues its momentum as a ‘progressive’ leader with changing definitions of ethics and morality, the legalisation of assisted dying will likely be realised in the next decade or two. To whom its responsibility should fall will likely be of significant debate. Adding assisted dying to a specialty would change not only the job description but also the reputation of the role, for better or worse. Dr Calvert's experience as a New Zealand GP may help pave an understanding of a potential future collaboration between general practice and assisted dying in Ireland. GPs understand their patients most intimately. With an understanding of the patient's life, a GP could likely detect possible external pressures for coercion. However, assisted dying is a complex issue. It is susceptible, controversial and culturally specific, which forms the perfect storm for an unpredictable future. Only time will tell.

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Stigma and Community Medical Termination of Pregnancy:

Reflections from a General Practice Clinic in Ireland

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Introduction and Background

Termination of pregnancy, or abortion, are terms that possess ethical significance and persisting stigma. This stigma has been brought to the foreground following the overturned Roe v. Wade 2022 decision that previously protected the right to abortion in the United States (1). The decision was met with international outrage and disseminated an eery notion of a present-day The Handmaid's Tale (2) becoming reality. In the context of Ireland, prior to January 2019 (3), "one of the few options available to those seeking abortion in [the Republic of Ireland and Northern Ireland] was to travel abroad for legal access to services (most often to England)" (4). A history of forcing citizens to leave the country to access a medical service has lasting effects on societal perceptions, perpetuating shame. Furthermore, implications of the political and historical context on the individual, self-stigma, are important to consider, even in countries with current protected access to termination of pregnancy.

General practitioners are ideally situated to provide the service of medical termination of pregnancy (MTOP), and to simultaneously combat the stigma that patients may encounter when accessing this service. In a general practice clinic in Ireland as a medical student, I was privileged to observe and participate in MTOP consultations. The experience and observations inspired reflection and research into community MTOP in Ireland, a topic that has not been greatly explored since the widespread adoption of MTOP services. Themes discussed include: stigma, support, access, humanism, and risk prevention.

Stigma

From the moment patients entered the consultations, internalised stigma was evident. The gravity of the consultation for patients was tangible through closed body language and visible signs of anxiety. The physician immediately normalised the consultations and empowered patients by stating:

I see from your appointment that you are here for a medical termination of pregnancy. I hope that this consultation will be helpful to you. I understand that this is a very difficult decision for anyone to make, and as long as it is your decision, I am certain it is a good decision.

Following focused histories and describing the MTOP procedure, patients frequently had queries and expressed fear regarding confidentiality. Numerous levels of discretion concerns were described: partner, family and friends, other healthcare staff and physicians, and the general public. Stigma also manifested in behaviours such as hiding the pills out of concern that individuals in the waiting room would recognise them. These concerns and behaviours powerfully illustrate how stigma permeates the thoughts and beliefs of those accessing MTOP. Patients were reassured that the consultation was confidential, and that they were in control of information sharing. The physician asked permission from patients to write a letter to inform their general practitioners of the medical procedure, and in doing so continued to normalise the service by reassuring patients that their doctors would appreciate this information for continuity of care. Some patients refused this request in favour of complete confidentiality. It is evident that stigma, both internal and external, remains a significant burden for individuals accessing MTOP.

To combat stigma, both societal reform and individual interactions must be considered. Normalisation is a major approach, utilised widely by awareness campaigns and individuals on social media. Specifically, following the overturned decision in the United States, individuals worldwide turned to social media to share their personal experiences of termination of pregnancy. These voices amplified a message of support for MTOP access, and worked to shift the views of the public, as well as empowering individuals who may access MTOP in the future. Providing MTOP in general practice clinics integrated in the day-to-day caseload strongly normalises the service and further de-stigmatises patients by allowing for anonymity in the waiting-room, which would not be possible in a dedicated MTOP service. General practitioners have the opportunity to engage in large-scale advocacy, as well as individually address the self-stigma felt by their patients. Regarding advocacy, the Irish physician group Doctors for Choice (DfC) is an excellent example of how physicians can positively influence public perception of MTOP and pressure government concerning MTOP legislation (5). Importantly, physicians providing and advocating for MTOP may also endure stigma and marginalisation from other medical professionals (5), therefore supports for physicians must also be considered when addressing MTOP stigma. At the individual level, general practitioners can conduct MTOP consultations founded upon the principles of validation and empowerment. General practitioners are also in the position to offer further counselling support to alleviate the internalised stigma endured by patients.

Support

A factor alleviating anxiety for patients was the role of supportive partners, family members, or friends in the consultations. These individuals were welcomed by the physician and thanked for their roles as advocates for the patients, further normalising the consultations and protecting against external stigma. Throughout the consultations, the support provided by these individuals was both emotional as well as cognitive. The individuals were able to provide comfort to patients, in addition to offering the capacity to attend and recall the instructions for the termination procedure. In consultations with patients who attended alone, patients often requested instructions to be repeated numerous times, and shared remarks of distress in forgetting and incorrectly performing the procedure. Recognising the nature of an MTOP consultation and the stress experienced by the patient, having a supportive individual present in the consultation is of great benefit. Although not observed, it is important to note that conversely, in circumstances where coercion may be suspected, it would be appropriate to ask the individual to leave the consultation in a tactful manner.

A next step in mediating stigma through providing support may be to have the primary care team encourage patients to have a supportive individual attend the consultations. This discussion would occur upon booking the appointments and would be careful to avoid pressuring patients if they preferred to attend alone. It is possible that patients are unaware of the option, and patients may be more likely to do so if informed.

Access

Access was not explored with patients directly, nevertheless accessibility of MTOP services should be examined as barriers to access prevent normalisation of the service and perpetuate stigma. As an Irish resident, access to medical termination of pregnancy is free. The 'My Options' service (myoptions.ie) provides counsellors who will share information and a list of clinics who offer the service up to 9 weeks gestation (6). Accessibility is multi-faceted, beginning from obtaining information about the service and continuing until the care has concluded. Importantly, barriers to access are not alleviated simply by offering a free service which addresses only a financial barrier. Firstly, patients require access to the internet, technological literacy to navigate the site, and access to a phone and a safe space to contact the 'My Options' counsellors. Upon review, the 'My Options' resources were reachable as a top result following internet search of keywords such as 'abortion Ireland', and the information is clear and non-judgemental. Access also incorporates acceptability of the service (7), which is influenced by stigma, a sociocultural barrier discussed previously.

As only certain clinics provide the service, accessibility is dependent on the clinics available. Throughout one week in the clinic, there was a marked increase in the number of MTOP consultations, with numerous per day. It was discovered that a physician at a different clinic who provided the service was on holiday. This increase in appointments demonstrates the essential nature of MTOP service providers. The MTOP legislation requires three visits, presenting a barrier to access for patients and a time-demand for physicians. The first visit to confirm an informed decision and gestational age, the second visit taking place a minimum of three days after where the medications are dispensed, and the third visit two weeks following the procedure to assess completion, complications, and contraception (8). Reflections from Mullally et al. (2020) following eighteen months of the MOPT service in Ireland included discussion about the three-day wait, asserting that:

Apart from the presumptive and patronizing insinuation that people are not certain in their decision, we have all had experience where this waiting period has resulted in a person being unable to avail of care in the ROI and being forced to travel or avail of medications elsewhere. Legislation will be reviewed after three years and this will be an area for advocacy (3).

General practitioners should not be required to enforce this waiting period, as they are physicians who have expertise in risk-management, and the service should be left to their discretion to be provided in a safe way that does not limit access. A factor that increased accessibility during and following the consultations was providing a one-page patient leaflet, created by a previous medical student, that detailed the procedure steps, what to expect, and possible complications to be aware of. This take-home resource enhanced understanding of the procedure and increased patient confidence, making for a more comfortable and secure patient care pathway. Ease of access is integral for MTOP services, consequently, all components must be evaluated and optimised.

Humanism

Humanistic care is fostered by a safe environment and doctor-patient trust. By providing the MTOP service, general practitioners have the opportunity to respond to sensitive topics with compassion. Emphasising the confidential nature of the consultation, demonstrating empathy by acknowledging the weight of the decision on the individual, and empowering the patient in their decision were approaches utilised to enhance patient comfort. Patients are not required to justify their decision for medical termination, they are only asked to confirm that the decision was their own. However, some patients chose to share circumstances including intimate partner violence and assault. These disclosures allowed the opportunity to listen and validate patients' experiences, and to offer further supportive services and advice. Furthermore, throughout the consultations, the physician offered themself as a point of contact for any concerns, and scheduled follow-up phone-calls. Despite being standard practice and part of legislation to safety-net and follow-up, the relief patients felt was evident knowing that the physician, who was not their primary care physician, cared enough to do so. General practitioners are uniquely situated and skilled in communication to be able to extend humanistic care to the MTOP service.

Risk Prevention

A crucial component of the MTOP consultation is discussing future contraception options. Most frequently, no regular method of contraception was being used prior to conception. Research by Horgan et al. (2022) on MTOP in Ireland corroborated this finding with "Three hundred fifteen (66%) of women at the time of presentation for first visit reported using no contraception" (8). The physician emphasised the importance of creating a contraception plan, often recommended the Mirena intrauterine device, then detailed the timeline of steps to arrange device insertion. Aiding in contraception prescribing is the recent HSE announcement, September 2022, of free prescription contraception of all methods for those 17-25 years of age (9). However, the arbitrary age cut-off excludes patients who should also benefit from this programme and re-evaluation of eligibility is necessary. Reproductive health, including MTOP and contraception carry historical and present-day stigma, and a general practice clinic offers a safe community space for education and service provision.

Conclusion

General practitioners are well-suited to provide MTOP and to additionally challenge stigma surrounding the service. As a physician, it is important to recognise the external and internalised stigma patients may experience in order to empower and advocate for patients. Encouraging supportive individuals to attend the consultations alongside the patient may also moderate stigma. Challenges to access of MTOP, such as the legislated three-day wait between first and second visits, must be addressed moving forward. Additionally, the MTOP consultation allows the opportunity to offer compassionate care, to provide a safe space for patients to disclose sensitive issues, and to discuss future contraception options. Following my experience, I greatly appreciate the importance and significance of providing MTOP in the community. I hope to have shed light on the impact of stigma-informed care for patients and the skills general practitioners have honed that aid in providing the MTOP service.

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Communication in General Practice: Crossed Wires or Crossing Barriers?

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As I was driving towards my first placement of Year 4, General Practice, the city morphed slowly into fields and farmhouses. This seemed like a far cry from the glamour of the operating theatres or the urgency of the Coronary Care Unit I witnessed on my year three hospital placements. In fact, as a medical student, I am embarrassed to admit that I bought into the rampant slew of negative media coverage and public scrutiny aimed against General Practice in the wake of the COVID-19 pandemic. I pulled up the car outside the two-story building, fresh scrubs, stethoscope in bag and ready to meet the challenge of another placement with enthusiasm and vigour, even if I did not expect it to give me any sway towards a future career.

By the time I pulled the car away for the last time three weeks later, I was a bona fide #TeamGP convert.

During my brief time in General Practice, I had the privilege of being part of many patient consultations, some of which were GP bread and butter such as viral illness and cardiovascular disease, and some were with the most complex patients suffering from chronic pain, mental illness or malignancy. The word 'privilege' is often used when describing a career in medicine, but no other specialty illustrated this to me in such a poignant way as General Practice. Some of the simplest connections with patients always left me with a smile on my face. I chuckled to myself as a little girl explained to me that her teddy that had accompanied her to the Doctor's for some moral support was named 'Stinky', a pet name that we have bestowed upon our family dog. Who knew these trivial things could spark such joy?

Yet this rapport with patients did not come to me naturally as I gingerly picked up the phone to carry out my first consultation on day one of my placement. In a frenzy I bombarded the patient with my rehearsed, OSCE style questioning only to leave her dumbstruck at the other end of the phone and invariably dissatisfied with the consultation I should imagine. Luckily, I had the good fortune to have excellent mentors who I reckon have schooled me well in the nuances of a GP consultation. This was my first learning point; the General Practitioner is a Master of Communication.

This was when I was introduced to the concept of the Golden Minute. The concept of the Golden Minute stipulates that the GP begins the consultation with an open question which allows the patient to recount in their own words the reason behind their visit. During this time, the GP does not interrupt and instead reaffirms their attention via non-verbal techniques such as nodding or open body language. This is hugely beneficial as the patient will often have thought long and hard at home, before the consultation, about the key points they wish to discuss with the GP. The golden minute grants them the opportunity to get these worries out in the open straight away and this guides the consultation in a direction which is fulfilling to the patient and deals with the most pressing matters on their mind.

From my short experience in General Practice, a common consultation opener can often be, “Doctor, I need an antibiotic.” This is an interesting one to explore as the doctor potentially needs to challenge some health beliefs here around the use of antibiotics. This is incredibly important in this age of antibiotic stewardship. Indeed, a Northern Irish study found that in water samples from the river Lagan, antibiotic resistant bacteria have been found which can in some cases be multi-resistant of up to 11 major classes of antibiotics [1]. A shocking statistic to the scientific world and the ecologically minded amongst us but not one at the forefront of the average patient’s mind when they are suffering through the annual cold and flu season. The doctor now relies on their well-honed history and examination skills to distinguish the agonising strep throats and bacterial sinusitis infections from the self-resolving yearly URTIs and post COVID cases of costochondritis.

At this point, the explanation of the diagnosis to the patient lies in the hands of the GP, or possibly more accurately, their words. Someone who booked their appointment with the intention of receiving an antibiotic will likely not be impressed with their diagnosis of a viral URTI and so from our key Golden Minute, the consultation has now widened its scope into challenging the health beliefs of the patient. To finish, this consultation would be safety netted, in that the door would be left open for the patient to return if they noticed any worsening of their symptoms and this would conclude a consultation which is satisfying to the patient and responsible in today’s fragile world.

There is perhaps no better figurehead for communication in General Practice than Michael Balint, a Hungarian psychoanalyst whose legacy lives on today in the form of Balint groups. Balint Groups are safe spaces where local doctors meet, seated in a circle, and discuss their most complex patients confidentially [2]. General Practice is renowned for complex and co-morbid patients, and a group such as this allows the care of these patients to be discussed in a way which focusses on the emotional and psycho-social needs of the patient and doctor. The ultimate intention is to improve the doctor patient relationship by working collaboratively with others and sharing the burden of difficult cases.

In the wise words of Michael Balint, the doctor-patient relationship is based on a “mutual investment” [3]. In the world of finance, to invest is to give money, time or effort into a project, bond, or property in the hope that this will yield a financially beneficial result in the future. In the same way, doctors give their time, advice and knowledge in the hope that someday they will see a positive ‘return’ in the health of their patient - mentally, physically and socially. Doctors often open themselves up in emotionally charged consultations in the hope that providing a patient with a listening ear will enable them to step upon the path to recovery. Perhaps this is by making an opportunistic attempt at steering a patient towards smoking cessation, perhaps it is a red flag cancer referral. Indeed, such is the personal and emotive nature of this investment, Balint went one step further in saying that “the doctor is the drug” [4].

This is a huge responsibility. Potentially one that can be overwhelming. The BMA published a report in October 2019 entitled “Mental Health and Wellbeing in the Medical Profession” containing a qualitative research study on the issues various medical specialists believed could lead to a deterioration in the mental health of doctors [5]. One intriguing point highlighted the increasing demand placed upon General Practitioners to consult more and more patients within more stringent time limitations. Moreover, public expectation has increased, to a point where doctors can feel that their industrious efforts are met with disdain. Today’s general practitioner is certainly resilient. However, as we think about the “mutual investment”, it is important to remember that it is mutual and therefore works both ways. If the doctor’s best efforts are met by an unmotivated patient, little is likely achieved. Therapies such as Cognitive Behaviour Therapy to treat the likes of chronic pain cycles or anxiety states rely entirely on patient engagement. I can only hope that the rise of public health in the wake of the COVID-19 pandemic, championed in Northern Ireland by the ever level-headed and diligent Sir Michael McBride may engage patients in their own well-being and self-care and lead to a future-proof generation of patient experts.

Now for more myth-busting. General Practice is not simply a watered-down secondary care. In fact, GPs often pull up the slack of secondary care and act as final decision makers in cases where patients have been recirculated around various specialists only to feel like they have moved no further forward. Unsurprisingly, Michael Balint had an astute term for this as well; "the collusion of anonymity" [6]. A BMA study has shown that in July 2022, 39% of patients were waiting over 18 weeks for consultant led elective care [7]. This is a massive jump from pre-COVID times. As such, the weight of caring for frustrated, anxious patients as they wait on referrals falls on the General Practitioner and the Primary Care MDT.

Indeed, during my attachment, I was fortunate enough to attend a GP Minor Surgery Clinic, in which I had the opportunity to assist the GP in performing punch biopsies of suspicious lesions and to observe draining of sebaceous cysts. Being part of the process of removing worrying lumps/moles for patients and seeing the immediate positive impact this can have on them was a profoundly rewarding experience and one which I did not expect to have in General Practice. Most importantly, this is a process which can take place on the patient's doorstep in a timely manner. It ensures continuity of care to those who are the most vulnerable, for example, the elderly population in rural areas who may struggle to reach the nearest hospital. The roll out of the diverse MDT across all 17 GP Federations in Northern Ireland will be a revolution in primary care once complete, and such collaborative practice will be an asset to the diverse range of patient groups that they cover.

Communication strategies and consultation styles such as the wise words of Balint may be a useful starting point when it comes to medical training, but a 'one size fits all' approach is useless at best and irresponsible at worst in the world of General Practice. Often mental health conditions present to the GP couched as physical health problems and the doctor in this case must maintain an open mind to explore this with the patient. Northern Ireland has a complex past. This trauma persists in certain patient demographics and has even trickled down through to the ceasefire generation. It was when considering this that I learned of Trauma Informed Care. In September 2018 the Safeguarding Board Northern Ireland commissioned a rapid evidence assessment to facilitate and support the adoption of Trauma Informed Care across NI [8]. Trauma Informed Care encourages the clinician to understand the past experiences which have shaped a patient into who they are today and stresses the significance of empowering these individuals to accept their past experiences and forge ahead into the rest of their lives with a support network around them.

Trauma permeates much deeper than just how a patient perceives their illness. It has been shown that four or more 'Adverse Childhood Experiences' (ACE) can have a substantial impact on a person’s life in real terms, from doubling the risk of developing a chronic disease to increasing the risk of heroin use 16 times [9]. These adverse childhood experiences accumulate and comprise social issues such as parental separation, domestic violence, neglect or abuse in all its forms. They are at their highest prevalence in areas of social deprivation, making this a serious public health concern. Urban GPs in inner city areas are beacons of light and safety in areas hit hardest by poverty, the current cost of living crisis and relics from the Troubles. The consequences of which come in the form of high levels of mental health issues such as anxiety and PTSD, as well as increased levels of criminal activity. Trauma Informed Care ensures that as healthcare professionals, we have the open mindedness to consider the effect a traumatic childhood has on physical well-being. It normalises talking candidly with patients about the trauma which alters how they view the world and themselves.

Social prescribing is a technique which aims to improve patient outcomes by engaging them in group activities which mend the body and soul. These include anything from walking groups to cold water swimming for the more adventurous patients. Indeed, a local GP surgery engages some of their patients in a unique experience known as ‘Alpaca Therapy’ and this was nominated for the Nursing Times Awards 2022 under the category of ‘Children’s Services’ [10]. Creative innovations such as this in the world of General Practice is just the novelty needed after the trauma of COVID-19. Indeed, concept of “dualism” in that the mind and body are intricately intertwined has existed since the 17th Century after being formulated by the great philosopher René Descartes, and in today’s world this remains more relevant than ever.

From the building blocks of the past in the form of Michael Balint to modern innovations such as social prescribing, the GP consultation has evolved alongside the diverse patient base which it serves. To understand the illness, it is crucial to understand the patient and no other profession in medicine can provide this quite like the general practitioner. The GP maintains continuity of care throughout a patient’s lifetime and in doing so the profession has navigated a changing world. The GP has stayed resilient in times of crisis such as COVID-19. They have opened their minds to the changing landscapes of mental health consultations in medicine. They have opened their practices to new members of the MDT, all in the hope of providing a complete and fit for purpose service in today’s world. To say a GP is a jack of all trades is both a complement and an offense. Yes, a GP is capable of medically managing anything from an arthritic joint to acute anaphylaxis, but they are also masters of the specific field that is Generalism. Masters of the consultation, the patient, the Swiss Army Knife of the community who can cope with any issue thrown at them. As a medical student, I realise that it will take many years for me to achieve the skill sets which I observed on my short placement in General Practice, but I will end by saying that I anticipate the journey with excitement.

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Impacts of Climate Change on Waterborne Disease in Rural Communities in Ireland

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Abstract

Climate change is expected to impact the spread of waterborne disease globally. Waterborne disease disproportionately affects rural populations in Ireland. In this review, the potential effects of climate change on waterborne disease in rural populations in Ireland are explored. Verotoxigenic escherichia coli and cryptosporidium are used as indicators of waterborne disease. Increased intensity and frequency of rainfall events may amplify the risk of drinking water contamination in rural private water supplies, exacerbating existing high levels of microbiological contamination and increasing the risk of subsequent disease. Urban drinking water has very low levels of microbiological contamination, and contamination levels are not clearly endangered by changes to rainfall patterns. Surface water pollution may be worsened by increased runoff and wastewater discharge secondary to intense rain. Contamination of surface waters has been associated with waterborne disease. More frequent flooding is expected, and increased contact with contaminated floodwaters has previously been linked with VTEC and cryptosporidiosis incidence in Ireland.

Introduction

The climate emergency will have a huge impact on the transmission of waterborne disease globally. Increases in storms can contaminate coastal water, heavy rainfall events can overwhelm existing infrastructure, and increased ambient temperatures make bacterial and protozoan waterborne pathogens more likely to grow.(1,2) Climate change is already causing migration and conflict, which damages water infrastructure and leaves populations without adequate access to sanitation and clean water.(3,4)

Diarrhoeal disease is the 8th leading cause of death globally, and in under 5s diarrhoeal disease causes 8% of deaths. Rates of diarrhoeal disease are dropping worldwide. In 2000, diarrhoeal disease accounted for over 2,600,000 deaths globally, compared to 1,500,000 in 2019.(5,6) There is concern that climate change will slow the decline in deaths globally.(7)

Most diarrhoeal disease can be spread through waterborne transmission. In Ireland, key pathogenic causes include salmonella, campylobacter, escherichia coli, and the protozoa cryptosporidium, as well as myriad viral causes.(8) The identification of the route of transmission of diarrhoeal disease often requires significant investigation. Many waterborne organisms are commonly spread by foodborne or person-to-person routes in Ireland. The terms "food poisoning" and "acute gastroenteritis" are often used for diseases associated with these organisms.

In the Republic of Ireland (ROI), many of the organisms responsible for gastroenteritis are notifiable organisms.(9) In Northern Ireland (NI) food poisoning is notifiable, as are the causative organisms. (10) In 2003, a telephone survey across Ireland identified that of an estimated 3.2 million cases of gastroenteritis, only 29% attended a GP, and under 7% of people submitted a stool sample for lab analysis.(11) While this is an old study, it shows that a large portion of people with acute gastroenteritis are not represented in national statistics.

In this review, focus will be placed on cryptosporidium and verotoxigenic escherichia coli (VTEC) due to the important role that waterborne transmission plays in their aetiology in Ireland, and because they are well-studied in both water contamination and epidemiology. (12,13)

Rates of cryptosporidiosis in the Republic of Ireland (ROI) are the second highest Europe, although monitoring is limited in some countries. In the ROI, crude incidence was 12.8 cases per 100,000 people in 2018, and in Northern Ireland (NI) it was 15.8. Cases in under 5s were even higher, at 92.3 per 100,000. (8,13)

In 2017, rates of VTEC in the ROI were the highest in Europe, and 10 times higher than the European average at 19.4 cases per 100,000 people. Incidence in under 5s was 109 per 100,000. In NI, there were 3.0 cases per 100,000, although NI records only one of the verotoxin-producing serotypes of E. coli. (8,12)

Rural populations experience a higher burden of these diseases and have a higher exposure to their risk factors: untreated water and contact with livestock. People in rural areas are 3 times as likely to develop VTEC infection.(14–16) Rural populations are less likely to be connected to water infrastructure, and so have higher reliance on private water sources and wastewater management systems.(17–21)

This review aims to explore how climate change will affect waterborne disease in rural communities in Ireland using VTEC and cryptosporidium as indicator pathogens.

Drinking Water Contamination

Private Water Sources

Around a third of households in the ROI rely on septic tank systems for waste management.(21) In 2009, 17% of households in NI used septic tanks.(20) This is more common in rural areas, as urban and suburban areas tend to be supplied by public sewerage.(22) In the ROI, half of these septic failed inspection in 2021, and of those, half did so due to health risks.(21) Septic tanks are not routinely inspected by the Northern Irish government.(20)

When water moves through the top layers of earth, solutes are carried down towards groundwater. Higher intensity rainfall increases the depth and velocity of percolation, which in turn increases the risk of groundwater pollution.(23) Contamination can come from different sources. Having a septic tank within 40-100m of the wellhead increases contamination.(24) Grazing animals in the area are also associated with microbiological pollution.(25) Other sources include run-off from fertilised fields, or overground storage.(26) 137,000 households in the ROI have both a septic tank and a private well.(27)

Hydrogeology also plays a large role in groundwater contamination. Differences in the permeability and thickness of soils, as well as the type of bedrock in the area all affect groundwater vulnerability. In Ireland, particularly vulnerable areas include counties Kerry, Cork, Clare, Wicklow, Mayo, and Donegal.(28) NI also has areas of high vulnerability.(29)

Given the likely increase in warming of 1.5 degrees in the coming decades, Ireland will see increases in mean annual temperature. Although a 2017 report from the EPA predicted decreases in annual rainfall due to climate change, the IPCC Sixth Assessment Report predicts increases in rainfall in the next 20 years. Summer precipitation is predicted to decrease with further warming, while winter precipitation is predicted to increase. River flooding is set to decrease in Northern Europe, while pluvial flooding is predicted to increase. Extreme rainfall events will become more frequent and more intense.(30,31)

High rainfall increases the radius of impact from pollution sources.(25) High rainfall was found to be associated with contamination in a study on private wells in County Cork.(32) This was supported by a study in the mid-western region of Ireland, and an Ireland-wide study found increased contamination in wells with high rainfall in the 5 days before measurement.(24,33)

In the ROI, 10.6% of the population rely on private wells for access to drinking water, and these tend to be untreated. An additional 5% use private group schemes and small private supplies, which can be treated by the owner. 1% of the population relies on private supply in NI. These supplies tend to be drawn from groundwater. Levels of microbiological contamination in these supplies are high. 30% of private wells were found to be contaminated in 2013, and around 1 in 20 private group schemes and small private supplies were contaminated. In NI this trend continues with 5% of private water supplies showing contamination.(18,19,34)

Private well use is a strong risk factor for VTEC infection: a 2014 paper predicted a 5-6 times higher likelihood of infection. High cattle density also increased the likelihood of infection within rural areas.(15,16) High rainfall was associated with VTEC outbreaks in Ireland between 2005 and 2012.(35) Floods in the winter of 2015 showed associations between groundwater contamination, rainfall, and cryptosporidiosis.(36)

As Ireland sees more frequent and higher intensity rainfall events with climate change, rural water supplies are likely to face higher risks of contamination from sources such as domestic waste water systems and agriculture.

Public Water Sources

Public water supplies are the main water source for over 84% of the ROI population and over 99% of the NI population. In both countries, water compliance with microbiological parameters was over 99.9%, meaning no E. coli or Enterococcus detected in water samples.(18,19,37)

In 2020, there were 46 water supplies on the Remedial Action List in the Republic, affecting over 1 million people and signifying insecure or unsafe water supplies due to contamination. No water supplies were put on the Remedial Action List due to bacterial contamination – 7 were due to inadequate management of cryptosporidium, and the rest were for reasons of chemical contamination. Cryptosporidium is not eradicated in normal water treatment, and if there is a risk from the pathogen then additional treatment must be instated. This makes it a poor indicator for the presence of other pathogens in treated water.

In 2020, 43 boil notices were put into place, indicating a risk to public health from drinking water. This affected nearly 75,000 people. These were due to treatment failures or discrete incidents.(38)

Although there are still improvements to be made, water quality in public supplies is very high in the ROI and NI. Decreases in water quality tend to be due to failures in the treatment process.

Surface Water Contamination

Agriculture is the primary polluter of surface waters in Ireland, accounting for 63% of pollution. 28% can be attributed to human activities affecting hydro morphology such as dams, and 14% comes from forestry runoff and sediments. Another 12% comes from run-off from urban areas.(17) Intense periods of rainfall increase runoff and increase the movement of sediment and other polluting material.(39,40)

Urban wastewater also plays an important role in surface water pollution, contributing to 13% of pollution. Urban wastewater is managed by Irish Water in the ROI. 52% of wastewater is not treated to EU standards, and 34 towns and villages pump raw sewage into watercourses in normal weather conditions.(22) In Northern Ireland, NI Water is the provider of sewerage, treatment, and discharge services. 116 town and city networks don’t have the capacity to manage the waste produced by their catchment area. 7 million tonnes of raw sewage are discharged annually into watercourses.(Greene, 2021; Water Framework Directive Statistics Report, 2021) Heavy rainfall can also overwhelm existing sewer systems, causing more untreated wastewater to be discharged into surface waters through storm drains.(22)

Surface water bodies are in a poor state across Ireland. In 2020 in the ROI, 56% of lakes and 57% of rivers were of satisfactory biological quality. This is a decrease in comparison with previous years.(43) None of the 571 water bodies in NI were appraised as having “good” water quality in 2021.(41) Poor water quality poses a risk to the health of those who use surface waters for occupation and recreation, particularly when polluted with raw sewage.(44) Urban wastewater discharge into surface waters was associated with VTEC and cryptosporidiosis infections during the 2015/2016 Irish floods.(36)

People are also exposed to surface water pollution in floods. Analysis in the UK showed that flood waters pose increased risks of gastroenteric disease to those who have direct contact with them, and a study of urban pluvial flooding in the Netherlands showed increased incidence of acute gastroenteritis in people affected by flooding.(45,46)

As periods of intense rainfall and pluvial flooding events become more common with climate change, runoff into watercourses could be expected to increase. Increased pressure on urban wastewater systems could increase the discharge of waste into surface water, and increased flooding will increase the exposure of the population to polluted floodwater. This could increase the risk of contracting waterborne disease from surface waters.

Conclusion

Climate change is expected to lead to increased incidence of higher intensity rainfall events in Ireland. This could worsen the risk of microbial contamination in private water supplies (which make up a large portion of water supplies in rural areas) and increase the risk of waterborne disease. Drinking water in urban and suburban areas tends to be high quality and has a low risk of contamination. Increased high-intensity rainfall could worsen surface water quality through increased runoff and discharge of wastewater from overwhelmed wastewater networks. Contact with polluted surface water carries a risk of waterborne disease. Expected increases in pluvial flooding may increase exposure to contaminated floodwaters, which has been associated with VTEC and cryptosporidiosis in Ireland.

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2023

Winner of the Sheppard Memorial essay competition 2023, Undergraduate category

The ‘Doctor’ Will See You Now:

Calling Upon Artificial Intelligence in General Practice

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Introduction

Artificial intelligence (AI) has taken the world by storm and is reshaping our society at an accelerating speed.[1] From applications in marketing and e-commerce to education and healthcare; AI has permeated many aspects of our daily lives.[2] Yet, AI is not a nascent development with Stanford Professor John McCarthy coining the term in 1955, defining AI as “the science and engineering of making intelligent machines”.[3] The advent of AI in medicine dates back to the 1970s with the design of computer-based programs for diagnostic and patient-management support.[4,5] Today, AI technologies influence several areas of medicine including diagnostics, patient monitoring, drug development and telemedicine.[6] AI technology in the primary care setting is a developing field with the potential to simplify workflow, automate administrative tasks, and provide diagnostic support.[7] In Ireland, the general practice setting is experiencing a workforce and workload crisis due to an increase in demand and staff shortages.[8] This essay will explore the current issues facing general practice in Ireland and how the adoption of AI technology may offer some solutions to improve the lives of general practitioners and their patients.

Artificial Intelligence

Stanford University defines intelligence as “the ability to learn and perform suitable techniques to solve problems and achieve goals, appropriate to the context in an uncertain, ever-varying world”.[3] AI combines computer science and robust datasets to facilitate problem-solving.[9] AI can mimic human intelligence through a variety of methods such as pattern recognition, machine learning, natural language processing (NLP), data analysis, and deep learning. Weak AI or narrow AI is a type of AI that is trained to only perform certain tasks, examples of which include Amazon’s Alexa and Apple’s Siri.[9] Strong AI is composed of Artificial General

Intelligence (AGI) and Artificial Super Intelligence (ASI) which are theoretical forms with the ability to match or surpass human intelligence, respectively. While no practical forms of these exist today, there is potential for them to be developed in the future.[9] For now, current forms of AI employ machine learning techniques to improve performance through the accumulation of experience.[3] Deep-learning, a subset of machine learning, uses artificial neural networks to learn from and analyse larger datasets.[3] There are numerous applications of artificial intelligence being used today, examples of which include: speech recognition, online virtual customer service agents, search engines, and social media algorithms.[9,10] It cannot be disputed that AI has already permeated many aspects of today's society and one could argue that we might be left with no choice but to embrace and integrate this technology. The film director Christopher Nolan referred to the current AI revolution as an 'Oppenheimer Moment' and calls for accountability in developing these technologies, with careful consideration for the ramifications of such advancements.[11] Notwithstanding the potential implications of AI in the future, it would be advantageous to shift our focus onto how we can use AI to address and ameliorate issues within our healthcare service, particularly within the context of general practice.

Issues Facing General Practice

The role of the general practitioner (GP) is unique in that it requires a broad knowledge of medical conditions and expert generalist skills.[12] GPs are the first point of contact for many patients, providing comprehensive and continuous care to people of all ages. They are a mainstay within local communities and have the opportunity to establish a strong rapport with their patients.[8] However, the general practice workforce is under strain in Ireland due to a myriad of reasons as summarised in a 2022 report[8] by the Irish College of General Practitioners (ICGP). Some of these include: a growing and aging population with increased complex care needs; an aging GP workforce that is not being replaced at an equal rate; and the need for more GPs in rural practices.[8]

As of April 2023, Ireland's population was estimated to be 5.28 million, rising by 97,600 from 2022, the largest 12-month population increase since 2008.[13] Moreover, approximately 800,000 people are aged 65 years and over, which is a 23.6% increase since 2017.[13] Older people are considered to be "high users of health services" and many of them are living in rural locations.[8,14,15] It is imperative that we address the GP workforce crisis, especially in rural settings, to provide this demographic with timely and high-quality care. Furthermore, with the demand for primary care predicted to rise by 46%, it is crucial that we address current staffing issues so that practices can keep pace for all demographics within the growing population.[8]

In terms of the GP workforce crisis, the HSE predicts a GP shortage of between 493-1,380 by 2025[8,16] with a 2021 Medical Council report calling for a 42% increase in the number of GPs to accommodate demand.[8,17] Alongside GP shortages, another issue that must be addressed is the burden being placed on GPs working in Ireland today, with many being overworked and experiencing burnout. A cross-sectional study conducted in 2016 by O'Dea et al found that 52.7% of GPs reported high levels of emotional exhaustion, 31.6% reported depersonalisation and 16.3% with low levels of personal accomplishment.[18] 6.6% of participants presented with all three symptoms, meeting the criteria for burnout. [18] In addition to these prevalent levels of burnout, the COVID-19 pandemic has accelerated retirement plans of many GPs further exacerbating this workforce crisis.[8,15] Action is being taken to address some of these staffing issues with the ICGP increasing their intake of GP trainees to 350 in 2024, allowing for a record number of applications into the scheme in July 2023.[19,20] These measures should help to tackle the diminishing GP workforce and increased demand for services in the future however, there are some caveats that need to be considered including the immediate need for more GPs and the impact of shortages on rural practices.

Ireland has one of the highest rural based populations in Europe.[8,21] Approximately 15% of the GP workforce are located in single-handed rural practices with many finding it difficult to find a successor or locum cover for sick and annual leave.[8] Moreover, newly-qualified GPs are drawn to multi-faceted urban practices that can offer them a combination of teaching, research, and specialist medicine opportunities leaving many rural clinics with no option but to close their doors to new patients or altogether.[8] This could have a profound impact on rural communities who have already seen the closure of vital services in their localities such as post offices and banks.[22] Therefore, there is a need to not only increase the number of GPs in the Irish healthcare system but also to incentivise them to work in rural practices.[8] The ICGP calls for a non-EU rural GP scheme alongside the introduction of more remote consultations.[8] In their report, the ICGP explores the utility of remote consultations in the clinical setting and how these facilities may help to support acute and chronic disease management and patient connectivity for vulnerable or geographically disadvantaged populations. They also consider the ethical issues surrounding telemedicine including confidentiality, consent, and the quality of care.[8] Moreover, A 2021 report by The Standing Committee of European Doctors notes that while telemedicine may benefit patient time management, there has been no evidence to suggest that it reduces clinician workload.[8,23] The issue regarding clinician workload could be addressed with advancements in telehealth through the Sláintecare and eHealth Ireland strategies.

Sláintecare, the government's ten-year programme, aims to reform Ireland's health and social services.[24] In the most recent 2023 report, focus is being directed on several areas of the health service including enhanced community care, workforce planning, and eHealth.[24] The eHealth Ireland strategy was established in 2013 and aims to integrate all information and knowledge sources involved in the delivery of healthcare through technology-based systems.[25] A recent conference held in May 2023 predicts that telehealth will become the norm in the next 10 years and will "improve links between the community and acute healthcare sectors" through services such as video-enabled-care, remote health monitoring, and online support and therapies.[26] It is also envisioned that AI technology will be integrated into these services with the ability to process large datasets to support clinical decision-making and provide patients with interactive and tailored care.[26] The integration of such technology into telehealth services may also help to ameliorate the previously reported non-reduction in clinician workload. These strategies provide an agenda and structure for enhancing healthcare services in Ireland and serve as a foundation for integrating technological advancements, such as AI, into medicine.

Existing Applications of AI in Healthcare

AI technologies are already having a profound impact on several areas of healthcare and medicine, providing diagnostic and patient-oriented support. The Abramson Cancer Centre at the University of Pennsylvania uses a Chatbot service, Penny, to monitor patient health and reply to patient messages.[27] This bi-directional text system supports patients undergoing oral chemotherapy by confirming daily medication schedules and monitoring both their physical and mental health.[27] If a patient's reply show any reasons for concern, Penny will alert the clinician to contact the patient to set-up a consultation either online, via telephone, or in-person.[27] Chatbots are also being used to monitor patient health throughout pregnancy and for post-operative patient support following orthopaedic surgeries.[27] AI technologies have also been harnessed in the field of medical imaging and have the ability to detect various clinical conditions with a high level of accuracy and sensitivity.[28] While these programs have been shown to be no more accurate in detecting cancer than a radiologist; they do have the ability to detect more subtle lesions with high sensitivity.[28,29]

It can be seen from existing applications that AI technologies are designed to support the clinician rather than to replace them. Face-to-face consultations still remain the gold standard[8,23], however AI can be used as a tool to streamline current workflows. For example, the MyChart patient portal used in UC San Diego drafts responses for non-emergencies such as prescription refills and appointments but responses are reviewed and revised by clinicians before they are sent to ensure accurate and appropriate information is delivered to patients.[27] This evidences continued clinician involvement in patient care but with the help of AI in streamlining and stratifying certain tasks. The developers of these services do however note these technologies will only be considered a success if they can improve patient outcomes, enhance patients' lives, and make the work of a clinician more efficient.[27] Further integration and trials of such services will provide evidence of its ability to accomplish precisely that.

The Future of AI in the General Practice Setting

Based on existing applications in healthcare, AI may have the opportunity to alleviate some of the demand that is placed on GPs and their practice staff. The use of chatbot services and patient portals discussed earlier could improve patient care and clinician workload in the general practice setting allowing for quicker access to certain services and reducing admissions for non-emergencies. Many GPs are still dealing with the aftermath of the COVID-19 pandemic with 89% reporting that their practices are busier than ever.[8,30] However, the pandemic highlighted just how flexible and adaptive general practice can be, acting as a catalyst for the introduction of new health technology.[8,31] During the pandemic, GPs played a crucial frontline role in providing healthcare to their patients by pivoting to telephone and video consultations which now remain an important component in general practice.[8,32] Not only that, but AI technologies were also employed during the pandemic. A chatbot service was used to triage COVID-19 patients and received approximately 30,000 users each day.[31,33] The pandemic showcased the flexibility and adaptability of general practice with the continuation of these telehealth services post-pandemic.[8] Furthermore, the introduction of the COVID-19 chatbot service evidences that AI technology can be implemented in Ireland's healthcare service when required. Our next aim should be focused on providing a standardised and nationwide approach to its integration.

Much research surrounding the implementation of AI in healthcare has been focused on diagnostic support, but AI also has the potential to automate certain administrative tasks, particularly in the general practice setting. Administrative tasks can be defined as tasks that are secondary to patient care such as managing finances, printing letters, communication via text and transcription to name but a few.[34,35]A scoping review conducted by Sørensen et al, found that research into machine learning applied to adminsitrative tasks in general practice is lacking with more focus being directed on diagnostics.[35] They found that administrative tasks have a high potential of being fully automated in general pratice but do note that it is difficult to determine GP involvement in existing research alongside elucidating the actual need for the automation of these tasks.[35] Willis et al, found that 44% of administrative tasks conducted by practice staff could be mostly or fully automated but note that discussions with practice staff highlighted the need for a cautious approach to its implementation.[34] Another report by Dr Willis found that no single full-time occupation in the practice could become fully automated but suggested that it could instead allow practice staff time to focus on other tasks such as dealing with backlogs of work or reform current ways of working through the development of new training programmes.[36,37] In their 2022 report, the ICGP do indeed call for the role of the practice manager be revised to enable GPs to focus on clinical care and spend less time on administrative tasks.[8] Automating certain administrative tasks using AI may present the opportunity to do just that and could grant staff time to focus on tasks that cannot necessarily be automated.

Challenges in Implementing AI

In theory, the adoption of AI technologies into our healthcare system could be advantageous based on the existing literature however, the practicalities of this may prove challenging. 85% of Irish hospital records remain paper-based and there is still no standardised national approach to electronic record keeping.[38,39] The introduction of a standardised national electronic record system would allow for more efficient and high-quality patient care.[39] Fran Thompson, the HSE's Chief Information Officer, said that it could take another five to seven years before this is realised with the initial roll out due to commence in 2018, being pushed back until the completion of the new Children's Hospital.[39,40]

In addition to a delay in an e-platform roll out, there are other caveats to consider when introducing an AI system into healthcare. Fahrud et al summarise the potential implications of introducing widespread AI use in the healthcare system namely: privacy and data protection, informed consent and autonomy, and the potential widening of existing social gaps.[41] The article calls for experts to continuously consider the ethical, legal, and medical implications of AI in medicine.[41] Moreover, it may also be worth noting that many patients may simply not wish to divulge certain information to a chatbot and would prefer to speak face-to-face with their doctor. This highlights the need to not only address the ethical and legal implications of AI in medicine but also to develop platforms that are secure and easy to use to promote patient trust and uptake. It is also important to stress that these chatbot services will not and cannot replace a consultation with a GP but instead could allow for the automation of services such as prescription refills, appointment booking etc.

Conclusion

It is apparent from the existing literature and current applications that AI has the potential to make a considerable difference to the lives of healthcare staff and their patients, especially in the general practice setting. The GP workforce and workload crisis requires not only more members of staff but applications to simplify and streamline current workflow to reduce burnout and improve quality of life. Significant advances have been made in the field of telemedicine; strategies such as Sláintecare and eHealth Ireland will allow the further development of such technologies with potential AI integration. Whether or not this will serve to reduce clinician workload and improve patient outcomes remains to be substantiated however in theory, the automation of certain tasks within the general practice should grant GPs more time to tend to their patients and allow them to continue providing high-quality care. The rate at which these AI technologies are being developed and advanced is startling and at times it is difficult to keep pace with our ever-changing technological landscape. While it is crucial to approach new technologies with caution and careful consideration, especially in the context of healthcare, these advances should be embraced and harnessed to adapt and improve the delivery of general practice services in Ireland.

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Ireland’s Codeine Crisis

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‘We recommend not taking this medication for longer than 3 days at a time, and to see your doctor if the pain continues’.

This is a statement I repeated countless times while selling codeine containing products as a pharmacy assistant. Codeine is a weak opiate analgesic and a prodrug of morphine. At present, medications containing codeine are available to buy over the counter (OTC) in Ireland under the supervision of a pharmacist. As an analgesic, it is available in combination with paracetamol or ibuprofen, most popularly Solpadeine and Nurofen Plus. It is also available to buy as a cough syrup, namely Codinex. It is intended that codeine containing analgesics should only be used to treat moderate pain as a second line treatment. Current guidelines state that codeine should not be taken for more than 3 days at a time due to its addiction potential [1]. Ingesting a codeine containing medication can result in individuals feeling euphoric and elated, while also providing an analgesic effect [2]. Codeine has its place in our healthcare system, however its status as an OTC drug means patients can access large amounts of the drug without the supervision and support of their primary care provider. Sales of codeine are increasing rapidly in Ireland, with an increase of 7.3% in OTC sales between 2018 to 2021 [3]. While not usually considered as dangerous as stronger opioids, codeine misuse comes with its own harmful effects, and with the number of codeine sales on the rise, so too will the number of people potentially affected by Ireland’s codeine crisis.

Within days of working in a pharmacy I was astounded by the number of patients requesting codeine containing products. How could so many people require the use of this drug? Patients presented with a variety of reasons for requiring these painkillers, most commonly stating back pain, sciatica, menstrual pain, toothache, and migraines as their reason for purchase. In my personal experience, counselling patients seemed futile in many cases. I’d warn customers of the side effects, address the risk of addiction, and suggest alternative pain remedies but to no avail. I found individuals were set on what they wanted to purchase and saw my questions and counselling as an inconvenience rather than an attempt to evaluate the suitability of the product. Customers would regularly approach me with the answers to my questions already prepared, and their cash ready in their hands before I even greeted them. I was deeply affected by this experience. At the end of every shift, I would wonder just how many of the people I had served were addicted to codeine and worry that I had not done enough to help them, despite following the guidelines put in place.

Codeine products are not allowed to be displayed to customers in a pharmacy, which in theory eliminates the opportunity for self-selection. This means customers must have heard of these products elsewhere in order to request them, potentially from their healthcare provider or other sources. As is the case in many aspects of medicine, there exists the concern that the patient has received misguided advice through word of mouth and now harbours misbeliefs about codeine and how to use it safely. If someone gave a reason for wanting a codeine product deemed inappropriate by the guidelines I would offer an alternative product or refer them to the pharmacist. Such reasons included taking it to manage anxiety, to aid sleep, or to treat a hangover. Notably, 'I'm going on a holiday, so I want it just in case' was a statement I heard echoed time after time. These encounters were often tense, and despite my best efforts I had customers raise their voices at me on multiple occasions, demanding I stop questioning them and provide them with the medication. One particularly memorable encounter resulted in a patient reacting to my questions with disbelief and snapping 'I'm an adult, I can make my own decisions'. I sympathise greatly with individuals in this position because, as we know, opioids are incredibly addictive. These interactions helped me to understand the prevalence of codeine misuse in our society, and how many individuals have normalised it as part of their daily lives. An aspect of codeine sales that stood out to me was how the number of individuals requesting codeine products increased noticeably at the weekend. It is difficult to determine the extent of which this is the case or the exact cause of this phenomenon, however I hypothesise it is a combination of people wanting to take it as a hangover cure and people taking it for the 'high'.

The likelihood of patients visiting multiple pharmacies to purchase codeine also cannot be undermined. At present, Ireland has 1905 community pharmacies [4] and these are often found in close proximity to one another, in shopping districts or town centres. Even if a pharmacist does deem the sale of codeine inappropriate in the case of a particular patient, they can easily visit another pharmacy and adapt their reason for purchase to something more suitable. Patients can also partake in 'pharmacy shopping', in which they visit multiple pharmacies to obtain a large supply of the drug. Codeine misuse can occur in several ways. It can often begin with a seemingly harmless desire to control pain, but as the pain persists and patients continue to take codeine products past the three day mark it becomes increasingly difficult to stop taking it. Another example of abuse is patients performing a 'cold water extraction' of the product in order to remove the non-codeine ingredients. Simply searching 'Codeine cold water extraction' online will bring up tips on how to remove the non-codeine ingredients from a codeine containing product. A study on patients who carried out cold water extractions credit the wealth of information available online as a contributing factor to their misuse of the drug. Many of these patients were also heroin users who took codeine-containing medications at times where they could not access heroin [5]. Another example of codeine abuse is the creation of 'lean' or 'purple drank', in which codeine is mixed with promethazine, a first-generation antihistamine. Promethazine is also available to buy without a prescription in Ireland, and I encountered situations in which patients attempted to purchase both products, which is not permitted. Some individuals also combine codeine with substances like alcohol or benzodiazepines in order to get a better 'high' [6]. The widespread availability of codeine means it has the potential to be abused in a variety of ways.

What is the role of the primary care physician in this public health crisis? If a pharmacist feels a conversation about codeine misuse may be beneficial, they can bring the patient to a private consultation room and discuss their concerns. However, many pharmacies have a high staff turnover, with some pharmacists working locum shifts in different pharmacies. Therefore, it is often challenging for pharmacists to develop a rapport with patients, which may contribute to their patients' reluctance to discuss a developing addiction with them. It has been shown patients often feel more familiar with their general practitioners (GPs) [7] and therefore I believe that they would be better placed to have a conversation with them about their codeine use. GPs are also in a position to provide their patients with opioid substitution therapy or refer them to an addiction specialist. It has been shown that GP involvement is highly effective when it comes to patients remaining on a methadone therapy, as patients being treated at a specialist site were twice as likely to leave the programme than those being treated by their GP [8].

On certain occasions when I would begin questioning a patient looking to buy a codeine-based product, they would interrupt me by saying 'It's okay, my doctor told me I can take it'. In Ireland, over one million prescriptions for codeine were issued through public medicine schemes in 2022. This is a 22% increase in prescriptions since 2012 and does not account for private prescriptions [9]. While it is possible for a patient to become dependent on codeine without ever having been prescribed it by their doctor, it is undeniable that the increase in prescriptions plays a part in our codeine misuse problem. Interestingly, there is an almost 50:50 split between individuals who source the majority of their codeine containing products from prescriptions versus OTC [10]. Doctors should be acutely aware of the fact that patients can easily obtain codeine from pharmacies unmonitored even after their prescription has expired. On the other hand, patients also need to have their pain concerns taken seriously by GPs to prevent them from feeling like they need to resort to self-medicating with it. The prevalence of chronic pain in adults in Ireland is estimated to be around 35% [11], and while codeine is not intended for the treatment of chronic pain, many of these patients feel that turning to over the counter painkillers is their only option. GPs, while being able to provide more suitable pharmacological treatment, can also involve the multidisciplinary team and refer patients to physiotherapists and pain specialists to help manage their problem. The treatment of pain is a nuanced and multifaceted issue, and I believe it is the responsibility of every doctor to ensure that they are as well educated as possible on this matter in order to care for patients and help prevent them from feeling the need to self-medicate.

Codeine misuse poses numerous dangers to the health of an individual, especially when one considers the effects of taking large amounts of paracetamol or ibuprofen. Prolonged use of Nurofen Plus specifically (ibuprofen and codeine) can have severe consequences, such as renal tubular acidosis and gastrointestinal perforations, which can be fatal [12]. The paracetamol contained in products like Solpadeine can result in hepatotoxicity. Dr. Garrett McGovern, a GP specialising in addiction medicine, stated on the current affairs program Prime Time that many patients are likely to present to a general hospital with the physical manifestations of codeine containing medication abuse before they present to an addiction specialist [3]. Certain individuals, known as ultrarapid metabolisers, have multiple functional CYP2D6 alleles. This places them at a higher risk of suffering from severe adverse effects such as respiratory depression, as they convert codeine into morphine more quickly. Codeine abuse can be fatal, which was demonstrated in the tragic case of a 39-year-old Irish woman, who passed away due to codeine related complications, which she had been taking to cope with the pain of undiagnosed endometriosis [13]. The psychosocial effects of a codeine addiction can be equally harmful. Individuals with a dependence on codeine report feeling depressed, anxious, tired, and somnolent. Social issues arising from codeine abuse included social isolation, inability to continue employment, and loss of children and spouses [14]. This addiction often begins with people using it as intended and that is one of the reasons I think it is so dangerous. Individuals need to be counselled on its addictive nature from their first use, by their general practitioner or pharmacist. One patient in particular stated 'If it was explained to me properly what the risks could be, I may not have even gone down that road in the first place'. [6]. Individuals have also described codeine as a more 'socially acceptable' addiction, as it is available through pharmacies and patients often rationalise its use by believing it is serving a therapeutic purpose in their lives. [6]. Codeine does not carry the same stigma as stronger opioids do, both in the eyes of patients and of healthcare providers, but I truly believe it can be just as damaging as an addiction to more potent opioids.

In a conversation about codeine misuse, it is often valuable to discuss the change implemented in Australia. A three-year process saw codeine rescheduled from an OTC to a prescription only drug. Use of codeine was widespread in Australia prior to this change, with a 2013 study showing that Australia had a higher codeine use than the United States, despite having approximately 7% of the population [15]. In 2010, Australia's drug regulatory body put in place legislation stating that codeine products could not be self-selected, and that a pharmacist had to be involved in their sale. This resembles the rules in place in Ireland at present, however this measure was shown to have little effect on codeine misuse [16]. New legislation was put in place in 2018, rescheduling codeine as a prescription only medication. While it is difficult to evaluate the effects this rescheduling has had on individuals, in general it has been shown that this change reduced codeine use and its harm [17]. The Royal Australian College of General Practitioners also highlights how the rescheduling has provided GPs with the opportunity to talk to patients about safer pain management and support patients with addiction issues [18].

There are many valid concerns that muddy the waters regarding the change of codeine's OTC status in Ireland. It is feared that this would not change the fact that people would suffer from addiction, and that people would simply turn to more harmful drugs. The change of codeine from an over the counter to a prescription only drug would also prevent people who need a stronger painkiller than paracetamol or ibuprofen to treat acute pain from getting treatment without going to a doctor. It is concerning to envision individuals suffering needlessly while waiting for a GP or a dentist appointment. There is also often an additional cost associated with visiting a doctor or dentist, which may place an additional financial burden on those in need. While making codeine prescription only would undoubtedly reduce the number of individuals at risk of developing an addiction, is this worth taking away pain relief from those in need?

On a personal level, it is deeply upsetting to know that despite my best efforts to comply with the guidelines, I have sold codeine-based products to people who are potentially addicted to them. No matter how careful one is with questioning and explanation of the side effects, it is practically impossible to determine if a patient is making a purchase for a genuine reason or if they are intending to abuse the medication. It is inappropriate to interrogate people in a pharmacy setting and it is simply not feasible for pharmacies to determine if patients are using the medication as directed or not, providing they give valid excuses. Regular codeine users are acutely aware of what will be asked of them and can evade the questions with relative ease. With regards to prescription codeine abuse, in Ireland we do not have a system in which doctors can see every medication a patient has been prescribed. There is nothing to prevent a patient visiting many different doctors to get multiple codeine prescriptions.

I have seen first-hand how pervasive of an issue this is in Irish society. The crisis was undoubtedly exacerbated by the COVID-19 pandemic, in which healthcare became more inaccessible and patients felt forced to self-medicate in order to manage their pain. In my opinion, the unfortunate truth of the matter is this; as long as codeine remains available to buy over the counter in Ireland, it will be abused. Codeine addiction is a multidisciplinary issue between pharmacists, pharmacy assistants, general practitioners, and those working in addiction services, and I believe that at the very least anyone working in healthcare should be well educated on the risks associated with codeine use. I am a medical student with limited clinical experience, however I am someone with extensive experience directly related to this issue, and I am gravely concerned about what I have witnessed. There is no such thing as a typical codeine abuser, and we must maintain a high level of suspicion so that we can best support patients who may be struggling with this addiction. We hear about codeine misuse significantly less than other types of substance abuse, however it can be incredibly harmful and it is crucial we take it seriously so that we can best support our patients.

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Chronic Disease Management in General Practice: Bridging the Gap between Urban and Rural Ireland

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Introduction

Chronic disease management (CDM) is crucial in healthcare, particularly in general practice. While touring the National Ploughing Competition in Ireland, a farmer's remark struck me: finding a veterinary doctor often seemed easier than finding a General Practitioner (GP). This essay delves into the complexities of managing chronic diseases in Irish urban and rural settings, enriched by personal observations and comprehensive literature review.

Chronic Disease Management in Ireland: Current State

General practitioners (GPs) in Ireland are the front-liners in managing chronic diseases, yet disparities in training and resource allocation exist. For instance, only 17% of GPs are trained in exercise counselling for chronic disease management. The launch of the structured CDM programme in 2020, under the GP agreement with the Irish Medical Organisation (IMO) in 2019, was a significant step towards enhancing the management of diseases like cardiovascular disease, diabetes, COPD, asthma, and type 2 diabetes.

Annual Chronic Disease Management Prevention Programme

This programme underscores a collaborative approach between patients and healthcare providers, focusing on risk reduction for cardiovascular disease and diabetes. Components include:

Annual reviews with GPs and nurses.

Medication reviews.

Health promotion advice and risk management plans.

Access to medical treatments and referrals to support services.

Emphasis on community-based care.

These initiatives are vital, especially considering the increasing demand on health systems worldwide due to rising chronic disease prevalence.

Urban vs Rural Disparities

In rural areas, healthcare access issues lead to delayed diagnoses and treatment. The national survey on chronic disease management in Irish General Practice, acting as a baseline for future improvements, reveals stark contrasts. It indicates that GPs are interested in CDM but face challenges like unequal access to diagnostics between fee-paying and General Medical Services (GMS) patients.

Addressing the Gap

Education and Training

Tailoring medical education to include more rural background students and emphasizing general practice training, especially outside Dublin, are key. Furthermore, enhancing Continuous Medical Education (CME) specifically for rural GPs is crucial.

Financial Incentives and Infrastructural Support

Scholarships and service-linked educational loans at medical school entry, along with support for rural practice infrastructure, are necessary steps. Rent-free practice premises and funding for services and equipment can help bridge the urban-rural divide.

Policy and Systemic Changes

Policies must address primary care expansion and ensure rural healthcare access. Consideration of the unique needs of rural practices in new contracts, such as restoring rural practice allowances, is essential.

Integrated and Collaborative Approaches

Effective CDM needs integrated healthcare professional input, technological use, and a focus on community-based care. The Chronic Care Model suggests a framework for evaluating and improving chronic care management in Ireland.

Technological Advancements

Investment in digital health platforms and telemedicine, particularly for rural communities, can play a critical role. The national survey points to widespread use of IT and electronic patient medical records, providing a solid infrastructure for high-quality chronic disease care.

Systemic Reforms

Implementation of policies to strengthen primary healthcare in rural areas is urgent. The snapshot from the Chronic Care Model indicates considerable strengths but also highlights areas needing improvement in Irish chronic disease management.

Personal Reflection and Policy Recommendations

My interactions with the farming community and a deep dive into Irish rural healthcare issues underline a crucial juncture in healthcare delivery. Bridging the gap in chronic disease management reflects broader societal and infrastructural disparities. A unified effort incorporating policy change, educational reform, and community involvement is crucial for an equitable, accessible, and efficient healthcare system for all Irish citizens, irrespective of their location.

Conclusion

Chronic disease management in Ireland, particularly in rural areas, requires immediate and robust action. While there are commendable strides in the structured CDM programme, gaps remain, especially in rural healthcare access and resource allocation. Bridging this gap necessitates a multifaceted approach, integrating technology, education, policy reform, and most importantly, a shift in perspective towards a more equitable healthcare system.

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“I do not like this reddish spot, I am very sorry to say, I do not like this dark black dot. You may have cancer here today.”

***Author*: Camille Lartaud-Balosso, Undergraduate, 4th year TCD**

“Do you remember the patient with a mole on his right temple? asked the GP. He’s lucky that we removed it, because it’s a melanoma in situ.” I remembered the patient well. He was a nice gentleman in his forties, wearing glasses, and had spotted the mole himself. I wonder what he might have said had he known it was a melanoma. As you may have guessed reading the title, I enjoy reading Dr. Seuss. He was a communication genius, and would our patient appear in *The Cat in the Hat* (1), it would probably look like this:

“Remove it!” said the man.

Pointing next to his eye.

“Remove it!” said the man.

“I do NOT wish to die!”

After all, melanoma is responsible for 1% to 2% of cancer deaths worldwide (2). At his next appointment, the patient was therefore deeply relieved to hear that it had been removed in time. My own mother has had a melanoma removed on her leg at age 44, so I know the feeling well. Skin cancer is the most common cancer in Ireland, with over 13,000 new cases diagnosed every year, a number that is expected to double by 2040 (3). However, the burden of diagnosis still relies heavily on the patient, as doctors don’t have the time to perform total body skin examination. It is unfortunate, as more than 60% of patients with melanoma visit their GP for another issue within the year prior to the diagnosis (4).

But let’s go back to the start. This summer, I had the privilege of spending 2 weeks at a semi-urban, semi-rural GP practice in the Alsace region of France. I shadowed a veteran of the profession, an old-school GP who had been running the practice for more than 30 years and was still using paper files (to the dismay of his younger colleague). He was a bit of a MacGyver, going everywhere and doing everything, whether it be IUD insertion, abscess drainage, anoscopy for hemorrhoids, intra-articular injections or audiometry. He was responsible for the care of dementia patients in 4 nursing homes. Most of all, he was fond of minor surgery. Anything he could do himself, he would.

My placement was due to start on a Monday, so I first met him on the previous Friday. I thought we would only exchange a few words, but MacGyver placed a small white package in front of me. “Show me how you put on aseptic gloves” he said. After my clumsy attempt, I was given ownership of the gloves to train at home. The GP then opened a drawer, which for some reason contained kitchen twine, and attached the string to a shelf. “Now show me how to suture.”

Needless to say, the twine also went back home with me.

Why was MacGyver so interested in suturing, you may ask? One answer: skin cancer.

Why would general practitioners deal with skin cancer?

When hearing “skin cancer”, most people think “dermatologist”. However, in October 2023, more than 46,000 patients were on a dermatology waiting list in Ireland (5). Hospitals are now resorting to purchasing private capacity, and patients are assessed via DermView. One in five patients referred to the private service were diagnosed with skin cancer, including melanomas (6). This pressure on resources also means than dermatologists can only provide short consultations, with only 30% performing a total body skin check on everyone (4).

Now let’s look at the data: with every 50 patients examined without a total body skin check, 1 skin cancer is missed, and 1 melanoma is overlooked every 400 people. The implication is chilling: a patient can leave a dermatology consultation with an undiagnosed skin cancer. Thankfully, most melanomas grow superficially for years before acquiring a nodular component (vertical growth) and metastasizing. However, 10% are rapidly growing. These are largely responsible for mortality as they invade the dermis in a matter of months, so patients do not have the luxury to wait for another appointment (4). Every year in Ireland, more than 1,000 melanomas are diagnosed, with over 150 melanoma-related deaths (6). The system simply isn’t coping.

Even if there were enough dermatologists, a suspicious mole first has to be recognized for the patient to be referred. Dermatology is therefore a useful skill in almost every field of medicine, as every interaction with a patient is an opportunity to spot such a lesion. Prior to my GP placement, I spent 2 weeks in a cardiology practice. As we were placing leads on someone in preparation for a stress test, the cardiologist motioned to me to look at the patient's back. "This reddish, inflamed spot, he whispered. This looks like a basal cell carcinoma." Thankfully, the patient was already aware.

GPs can do so much more than cardiologists. Of course, it isn't feasible to perform a total body skin check on everyone, not when they came for a different issue that needs to be addressed in 15 minutes. However, examining a specific mole takes 15 seconds at most, and every opportunity should be taken to look at skin. As the patient comes in and starts talking, their face is visible. This is convenient, as the face is a common site for skin cancer due to UV radiation exposure. Why don't you take a good look? As you approach the patient to put on the blood pressure cuff, you can quickly scan their forearm. As you stand next to the sitting patient, don't forget to look at any exposed scalp: skin cancer loves male pattern baldness. The patient is complaining of knee pain or an ankle sprain? Good, let's take this opportunity to look at their legs! And if the patient pulls up or remove their shirt for an abdominal, cardiac, pulmonary, or musculoskeletal exam, now is your time to quickly scan their abdomen, chest, and back. 15 seconds to save a life.

Doctors often miss melanoma not because they are unable to recognize it, but because they do not give themselves the chance to see it (3). As for total body skin examination, it should still be offered to high-risk people. These include individuals with a history of skin cancer, people with than 20 naevi on their arms, and patients with sun-damaged skin (4).

Dermoscopy is key

Dermatology can be daunting. A quick look in a book will reveal ominous terms such as seborrheic keratosis, angiokeratoma, blue naevus, rhomboidal structures… but it doesn't have to be complicated. To properly examine skin lesions, it is important to acquire a dermatoscope, as diagnosis is not always possible with the naked eye. As Dr. Seuss could say:

“Look at it!

Look at it!

Look at it NOW!

Looking at moles is key

But you have to know how.”

The first step is simply to determine whether a skin lesion is melanocytic or not. A melanocytic lesion will typically have a pigment network, though some may have unstructured brownish pigment areas. If unclear, assume that it is melanocytic.

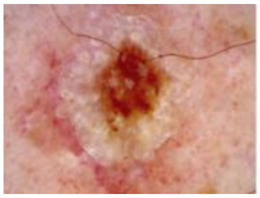
The second step is to determine whether it is benign or malignant. Malignant, non-melanocytic lesions account for 95% of skin cancer, and most are either basal cell carcinomas (BCC) or cutaneous squamous cell carcinomas (SCC). BCC is by far the most common, accounting for 80% of cases. Thankfully, they have a very low metastatic rate and excellent prognosis. The typical nodular form has a pearly appearance and raised edges visible with the naked eye, but a superficial BCC may appear as an erythematous scaly plaque, and a pigmented one may mimic a melanoma. This is where dermoscopy comes into play: if you see a maple-leaf structure or linear and branch-like telangiectasia, this is a BCC (7).

With the naked eye, SCC often appears ulcerated or scaly. It is rarely pigmented and tend to be painful and tender. The hallmark of SCC is keratinisation, so dermoscopy will show white structureless areas (8).

Now, how to diagnose a malignant melanoma? If the lesion is melanocytic, you can check for malignancy by applying the ABCDE rule (asymmetry, border, colour, diameter, evolution). However, it may be insufficient to uncover melanoma in situ, as asymmetry often becomes visible when the cancer has invaded the dermis (4). Once again, dermoscopy can save the day with the 3-point checklist. It has been designed to allow non-experts to detect melanomas with 3 dermoscopic criteria: asymmetry, atypical network and blue-white structures. If at least 2 criteria are present, the lesion should be removed or biopsied. This algorithm has high sensitivity for the diagnosis of melanoma (96%), even in the hands of non-experts (9).

Finally, let us note the importance of the ugly duckling sign. Patients may present with dozens of naevi, especially on their back, and it isn’t possible to examine them all. You should therefore focus on any mole that looks different from the rest, as this raises suspicion for melanoma (10).

Dermoscopy of pigmented BCC (7) with a maple-leaf structure and telangiectasia.



Dermoscopy of invasive SCC (11) with a prominent white structureless area.

Dermoscopy of malignant melanoma with the 3-point checklist (12). There is asymmetry in all axes, an atypical pigment network (circle), and blue-white structures (asterisks).

Suspicious lesion spotted. What now?

As a GP, you have 3 options when spotting a suspicious mole. The first one is to remove it yourself with minor surgery. This option can be used if the lesion is small and easy to remove, which is often the case. Despite spending only 2 weeks in the GP practice, I witnessed the removal of 4 BCCs and 1 melanoma. The patient would first be given local anaesthesia with subcutaneous lidocaine (and adrenaline if the lesion was not located on an extremity). The mole would then be excised with appropriate margins, followed by deep dermal suturing with an absorbable suture. Finally, superficial suturing would be performed with non-absorbable sutures and a modified Allgöwer-Donati technique to minimise scarring. A Mepilex dressing would be applied, and the patient told to come back after 2 weeks to remove the superficial sutures. By that time, we would have received the histopathological report.

2 things matter in such a report: diagnosis and margins. As BCC has a high risk of local recurrence, treatment is an elliptical excision with a 4-mm surgical margin, though it may not always be possible due to cosmetic and functional constraints on the face (13). The recommended margins for SCC excision is also 4 mm for low-risk lesions, and 6 mm for high-risk lesions (14). As for melanoma, the excision margins depend on Breslow's depth. For Breslow I (≤ 1.0 mm), the recommended margin is 1 cm. Starting from Breslow II, they reach up to 2 cm (15). "I only treat Breslow I, the GP told me. For 2 and above, you need a specialist."

The second option is to perform a punch biopsy. This is useful if the lesion is large, if diagnosis is unclear and the patient would like to avoid surgery, or if the mole is in a difficult location. This latter scenario happened during my placement, with a mole located in the concha of the ear. Had it been malignant, due to its location on cartilage, the patient would have lost his ear.

The third option is referral to dermatology. This can be done immediately if the need for specialist treatment is obvious (large melanoma, BCC located in the corner of the eye and requiring Mohs surgery, etc.), following biopsy results (our ear patient would have been referred if his mole had been malignant), or following excision (histopathology report revealing a melanoma that is Breslow II or above).

The issue of referrals

GPs shouldn't hesitate to refer patients when needed. However, it is equally important not to overwhelm an already saturated system with unnecessary referrals. As a 4th year medical student, I am in no position to evaluate the competence in dermatology of general practitioners, but according to the one I shadowed, his colleagues are prone to misdiagnosis. Looking at the literature, I found a Dutch study concluding that malignant skin tumours were poorly recognised by GPs. In 45% of cases, the referred lesions appeared to be benign (16). To improve referral triage, referral letters should be as detailed as possible (17).

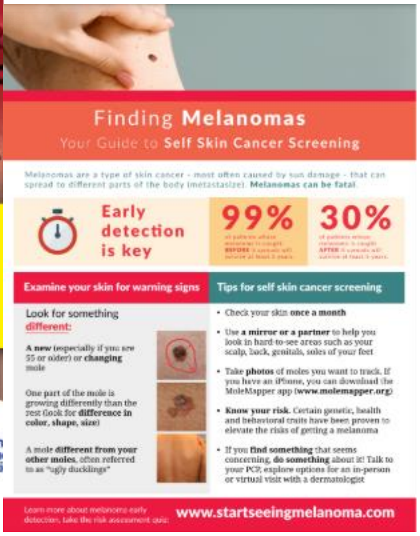
The importance of communication

As in every other field of medicine, the patient-doctor relationship is key in dermatology, with 3 aspects in particular. The first one is thoughtfulness. Being told that one may have skin cancer can be very distressful, so GPs need to balance the urgency of the diagnosis (or lack thereof) with the patient's circumstances. A woman in her 60s, being treated for breast cancer, came to the GP practice one day. She was very distressed due to her cancer diagnosis, and her anxiety was compounded by the fact that her mastectomy scar was red, swollen and discharging lymph. As the GP was taking samples to check for a possible infection, I noticed a very obvious BCC on the patient's nose. I kept silent and waited for the patient to leave before mentioning my observation to the doctor. "I saw it as well, he said, but now isn't the time for that. She's got enough on her plate already; the BCC can wait. Let's not worsen her anxiety by telling her about it."

The second one is persuasion. Denial is common in patients presenting with a suspicious mole. The fear of diagnosis may lead them to scratching the lesion before showing it to their GP, making it unrecognizable. A scratched mole with a scab cannot be properly examined, so the patient needs to come back at a later date. This may require considerable persuasion, as the patient may feel satisfied that they have shown their mole to the doctor. "I once had a patient who scratched a mole before coming in, the GP told me. I told him to come back, but he never did. When I saw him again, his melanoma (because that's what it was) was as big as a chestnut. It was too late to save him."

The last one is education. The best way for skin cancer to be diagnosed early is for patients to spot the lesion themselves, and realize the seriousness of their finding. Many patients with advanced melanomas report not to have gone to the doctor even if the lesion had been visible for months or years. Denial is one reason, but so are lack of awareness and popular misconceptions. A US survey showed that 20% of the participants believed that melanoma was no more serious than a regular mole (4). GPs are on the frontline when it comes to raising awareness and educating patients. Interventions can be as simple as having posters in the waiting room, and distributing booklets during the summer months. Both can be found on the website of the Irish Cancer Society (3), as well as on a number of other educational websites. The Oregon Health and Science University (OHSU) has even developed a business card that can be easily distributed (18).

Outdoor workers poster from the Irish Cancer Society (3)



Finding Melanomas

Your Guide to **Self Skin Cancer Screening**

Melanomas are a type of skin cancer - most often caused by sun damage - that can spread to different parts of the body (metastasize). **Melanomas can be fatal.**

Early detection is key

99%

30%

Examine your skin for warning signs

Look for something different:

A new (especially if you are 55 or older) or **changing** mole

One part of the mole is growing differently than the rest (look for **difference in color, shape, size**)

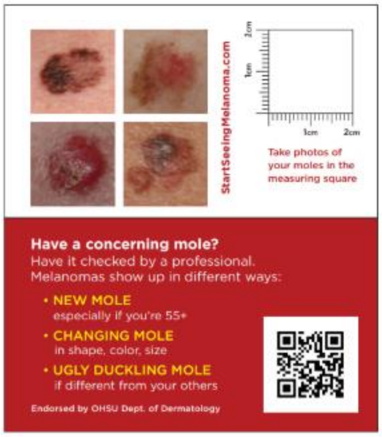
A mole **different from your other moles**, often referred to as "ugly ducklings"

Tips for self skin cancer screening

- Check your skin **once a month**
- Use **a mirror or a partner** to help you look in hard-to-see areas such as your scalp, back, genitals, soles of your feet
- Take **photos** of moles you want to track. If you have an iPhone, you can download the MoleMapper app (**www.molemapper.org**)
- **Know your risk.** Certain genetic, health and behavioral traits have been proven to elevate the risks of getting a melanoma
- If you **find something** that seems concerning, **do something** about it! Talk to your PCP, explore options for an in-person or virtual visit with a dermatologist

Learn more about melanoma early detection, take the risk assessment quiz: **www.startseeingmelanoma.com**

Melanoma early detection flyer from OHSU (18)



Take photos of your moles in the measuring square

Have a concerning mole?
Have it checked by a professional.
Melanomas show up in different ways:

- **NEW MOLE**
  especially if you're 55+
- **CHANGING MOLE**
  in shape, color, size
- **UGLY DUCKLING MOLE**
  if different from your others

Endorsed by OHSU Dept. of Dermatology

Melanoma early detection business card from OHSU (18)

It is also important to have discussions with high-risk patients. A low socio-economic status is associated with increased melanoma thickness and decreased survival (4). Risk is also dependent on skin type and sun exposure, as 9 out of every 10 cases of skin cancer are caused by UV rays (3). Outdoor workers are especially at risk, as well as people with skin types 1 and 2 on the Fitzpatrick scale. Skin cancer is especially associated with fair skin that burns easily, red or fair hair, moles or freckles, a sunburn history or a family history, all of which apply to the Irish population (19). I myself took a weekend trip to Portugal during the summer, forgetting to bring sunscreen. Flying back to Dublin, I was in good company: the plane was full to the brim with sunburnt Irish people. Like an army of well-cooked lobsters, we were all flying home. GPs should not only educate patients about skin cancer detection, but also about skin protection and sunscreen use.

I'd wear more sunscreen here and there,

And if your skin is very fair,

Please wear more sunscreen everywhere,

Or you will light up like a flare!

Interestingly, UV radiation seems to also have a short-term promotional effect on melanocytes, so the incidence of cutaneous melanoma is highest in summer and lowest in winter (20,21). This means that summer is the best time of the year to perform total body skin examination, and GPs should be especially careful with lobster-looking tourists.

Ackerman's dream

After having introduced the concept of "melanoma in situ", Ackerman hypothesized in 1985 that "no human being need die of malignant melanoma", as they could be diagnosed before invading the dermis (4). However, as the number of skin cancer is expected to double by 2040, people still die of melanoma every year due to lack of resources and education. The lack of dermatology services will not be solved overnight, but as a GP, you can make a difference. Taking a few seconds to look at a patient's arms, a few seconds to hang a poster in the waiting room, and a few seconds to hand out flyers or business cards could make the difference between life and death for a patient. If possible, you could even remove a suspicious lesion yourself, as several studies have shown that initial excision in primary care does not lead to poorer outcome (22,23). Let's make Ackerman's dream come true.

You're off to great places!

Today is your day!

One more life can be saved

So… get on your way!

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The Role of General Practice in Addressing Refugees’ Mental Health in Ireland

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On the 14th of October 2023, I attended a Palestinian vigil in Galway. Hundreds of people, including myself, heard stories of heartbreak and loss from Palestinian refugees. A young woman from the Gaza Strip spoke with the most power and pain in her voice. She lost countless of her loved ones that she stopped counting. Ever since migrating to Ireland, the sound of helicopters triggered her memories that she became hypervigilant around hospital areas. The current circumstances that a lot of refugees are disheartening. That was a condensed story of one single refugee.

Ireland, like many other countries, has seen a significant increase in refugee populations. On 24th February 2022, Russia started invading Ukraine. As of June 2023, around 84000 Ukrainians have arrived in Ireland as refugees[1]. Refugees face a unique set of experiences and challenges. They are predisposed to a lot of psychological distress and mental health issues[2]. This reminded me of my experience of being on a General Practice placement early this year in Bundoran, Co Donegal. During my GP placement, I sat through multiple consultations during ‘Ukrainian clinics’ where the practice will only see Ukrainian refugees on one day of the week. Consultations can range from a general health screening to specific chronic disease management. Consultations regarding mental health were frequent as well. I have the biggest admiration for those who can tell the kind of stories that refugees share (especially not in their first language).

Refugees were forcibly displaced due to war, persecution, or violent conflict. Most literature classifies challenges that they face in pre-migration, migration, and post-migration[3]. In pre-migration trauma, the most common cause of distress is separation or death of loved ones and deprivation of necessities such as water, food, and electricity. Migratory trauma causes physiological distress due to feeling unsafe, fear for the future, fear they will be killed during transit, and more. Finally, post-migration issues that they face are refugees are forced to learn their host country’s societal and cultural frameworks and are absorbed within the current context of the communities they live in[3]. Some of the causes of post-migration distress includes social isolation, discrimination, loss of community and family, loss of societal values, adjustment difficulties, underemployment, poverty, and more. Post-migration contributes to psychopathology seen in refugees. When unaddressed, every step of their struggle can lead to severe mental health issues, ranging from depression and anxiety to posttraumatic stress disorders. Hence, there is a huge importance in recognising both causative and protective factors that contributes to their mental health[3].

The integration of refugees in society is crucial in order to build social cohesion. Addressing refugees' mental health is a fundamental requirement for effective integration[4]. Who is usually the first person when refugees need contact with health services?

The Role of General Practice in Refugee Mental Health

Amongst the diverse role of a general practitioner, a crucial aspect of the job description is recognising and supporting mental health. After a mental health assessment, a general practitioner can decide to manage with medication, monitor the situation, refer to other services, or a combination of these options. General practitioners manage most mental health conditions without referral to secondary care agencies, but pharmacological treatment is common. In Ireland, mental health consults in general practice takes between one quarter and one third of appointments. Over 90% of mental health care takes place in a general practice setting[5].

General practitioners are also the first point of contact in health services for refugees. In my own experience during my placement, the doctor will conduct a full health screening that includes a head-to-toe examination, immunization, communicable disease screening, and mental health assessments. It was fortunate that the GP practice I was attached to have a Ukrainian clinic one day of the week. Initially, I thought it was not beneficial for me as a medical student to sit through the consultations as there are not much learning academically. However, on the first day of the clinic, I noticed how there was difference in healthcare needs and expectations by the refugees. For example, I learnt that some Ukrainians are prescribed with potassium iodide as a precautionary measure to prevent radiation from being absorbed by the thyroid gland, which can develop thyroid cancer. These weekly clinics was also to ensure a continuous and comprehensive care within the Ukrainian refugee community, which is crucial in improving overall outcome, identifying any refugees in need of mental health, and prevents escalation. During consultation they can freely discuss their concerns without any fear of judgement.

After a thorough scan through the internet, I was only able to find one document regarding refugees' care in primary care centres in Ireland. The Department of Primary Care, Health Service Executive West and the Department of General Practice, National University of Ireland, Galway, and the Galway Refugee Support Group have compiled a document called 'General Practice Care for Asylum Seekers and Refugees' in 2007. The document identified the need for an improvement in the provision of healthcare services to refugees and asylum seekers in Galway.[6] The guideline compromises of a few chapters that every general practitioner has to take in consideration when consulting refugee patients. Refugees have different health needs and expectations[6].

In order for general practitioners to support refugees' mental health, it is vital to review the fundamental elements in every consultation that is communication and management strategies.

One of the chapters in General Practice Care for Asylum Seekers and Refugees is about cultural competence. In healthcare settings, cultural competence entails the ability of systems to provide care to patients with diverse values, beliefs, and behaviours, including tailoring delivery to meet patients' social, cultural, and linguistic needs[7]. It is a crucial framework in understanding and providing support for refugees. Different cultures have different attitudes and beliefs towards illness, disease, and healthcare[6]. It is valuable to develop an approach to understanding a patient's beliefs rather than to provide care according to your own beliefs or indeed to presume a stereotype. Incorrect assumptions can be seen as disrespectful or can lead to non-compliance with advice or medication[6]. If a patient's cultural belief is that there is no illness without disease, they are unlikely to take medications when they are symptom free. A LEARN model, which is a guideline for culturally competent approach to patient care is stated in the document and a summary of the model is stated in Table 1 below[6]. Other approaches of cultural competence in primary care should be utilised as well[7]. Hence, a proper training in cultural competence can create a therapeutic environment that promotes trust and healing for refugees.

In addition, a trauma-informed approach is vital. Trauma-informed care is an approach that recognizes and responds to the widespread impact of trauma on individuals and communities[8]. The Substance Abuse and Mental Health Services Administration (SAMHSA) concept of a trauma-informed care believes that a program, organization, or system that is trauma-informed realizes the widespread impact of trauma and understands potential paths for recovery; recognizes the signs and symptoms of trauma in clients, families, staff, and others involved with the system; and responds by fully integrating knowledge about trauma into policies, procedures, and practices, and seeks to actively resist re-traumatization.' SAMHSA's principles of a trauma-informed care is summarized in Table 2 below[9]. These principles can be used across multiple settings. By taking this approach in consultation, GPs can recognize and elicit the impacts of trauma, whether pre-migration, transit, or post-migration, on refugees' mental health.

Furthermore, what creates a major communication barrier between refugee patients and general practitioners is language. The Voices of Syrians, which reports on the experiences of 153 Syrian refugees who arrived in Ireland between 2015-2019, describes "Irish healthcare quality is, on the whole, affected primarily by one concern, and that is language"[10]. In the General Practice Care for Asylum Seekers and Refugees, it is recommended that doctors reflect about how they communicate with patients who are limited in English[6]. It is no brainer that establishing an effective and good builds a trusting relationship between doctors and their patients and leads to positive health outcomes. There are several ways to communicate with patients that are limited in English. In practice, we most get by commonly with basic gestures, basic body languages, online translation application, and informal interpreters such as family member, and friends[6]. Otherwise, there are professional interpreter services that can speak to the patient at the practice or telephone call[6]. Thus, access to interpreters and translation services in healthcare settings lifts off the language barriers that often hinder effective communication, especially in a mental health consultation.

Other than communication focused strategies such as cultural competence and trauma-informed care, the key to addressing refugees' mental health lies in the concept that medical professional across different departments adopt: the Biopsychosocial Model. The patient-centred concept encompasses holistic management approaches that empowers refugees by helping them understand that their concerns are multifaceted, and that there is a myriad of interventions to tackle each component of the model. This strategy is widely used in both primary care and psychiatric settings[11]. It allows collaboration between general practitioners, mental health professionals, community support groups, and other multidisciplinary organisations. These three different components interact and have implications for the cause and treatment of various mental health issues[12]. For example, PTSD are usually the consequence of a traumatic event and can be worsen by genetic vulnerability, physical illness, and substance abuse (biological), low coping skills and resilience (psychological) and lack of education, family, and friends support (social). Therefore, a network of care can be established to tackle every single factor affecting the refugee's mental health[12]. A biopsychosocial approach allows comprehensive reviews, and referral to the psychiatrists, psychologists, or other support organization.

In Ireland, there are currently no national strategy that meets refugees and asylum seekers of their mental health needs in both fields of general practice and psychiatry[13]. There needs to be guidelines for that supports all aspects of refugees' healthcare, in keeping with the influx of refugees the country is facing. Any policy and interventions regarding refugees' mental health should be regularly evaluated for its effectiveness in both fields of general practice and psychiatry. On top of that, policies should be inclusive and consider all the social determinants of mental health, such as housing, employment, and education. Improving these aspects of refugees' lives can positively impact their mental health. Current strategies in supporting mental health of refugees in general practice settings includes cultural competency and trauma informed care training to improve communication and trust between patient and doctor, identifying and tackling language barriers by the use of informal interpreters and professional interpreter services, and treating patients holistically with the aid of the biopsychosocial model to increase collaboration to mental health services, support groups and other organizations.

What moved me to attempt this essay was that Saturday afternoon vigil in Galway. The impact of displacement leaves a huge hole in one's life. Mental health of refugees in Ireland is a complex and multifaceted issue that demands a holistic approach. General practice, as the cornerstone of healthcare for refugees, plays a pivotal role in providing culturally sensitive and trauma-informed care. Recognizing the struggles of refugees and challenges that general practitioner face can promote improvement of mental health outcomes. Ireland can create a supportive environment where refugees can heal, integrate, and contribute meaningfully to society. Through these initiatives, Ireland can enhance its societal tapestry by embracing diversity while fulfilling its moral obligation to refugees.

Table 1: *"LEARN" model for cultural competence.*[6]

Listen	Listen with sympathy and understanding to the patient's perception of the problem
Explain	Explain your perceptions of the problem and your strategy for treatment.
Acknowledge	Acknowledge and discuss the differences and similarities between these perceptions.
Recommend	Recommend treatment while remembering the patient's cultural parameters.
Negotiate	It is important to understand the patient's explanatory model so that medical treatment fits in their cultural framework.

Table 2: *Summary of Trauma-Informed Care Principles from Substance Abuse and Mental Health Services Administration* [9]

Safety	Throughout the organization, staff and the people they serve, whether children or adults, feel physically and psychologically safe; the physical setting is safe and interpersonal interactions promote a sense of safety. Understanding safety as defined by those served is a high priority.
Trustworthiness and Transparency	Organizational operations and decisions are conducted with transparency with the goal of

	building and maintaining trust with clients and family or who come to the organization for assistance members, among staff, and others involved in the organization
Peer Support	Peer support and mutual self-help are key vehicles for establishing safety and hope, building trust, enhancing collaboration, and utilizing their stories and lived experience to promote recovery and healing. The term "Peers" refers to individuals with lived experiences of trauma, or in the case of children this may be family members of children who have experienced traumatic events and are key caregivers in their recovery. Peers have also been referred to as "trauma survivors."
Collaboration and Mutuality	Importance is placed on partnering and the levelling of power differences between staff and clients and among organizational staff from clerical and housekeeping personnel to professional staff to administrators, demonstrating that healing happens in relationships and in the meaningful sharing of power and decision-making. The organization recognizes that everyone has a role to play in a trauma-informed approach. As one expert stated: "one does not have of traditional cultural connections; incorporates to be a therapist to be therapeutic."
Empowerment, Voice and Choice	Throughout the organization and among the clients served, individuals' strengths and experiences are recognized and built upon. The organization fosters a belief in the primacy of the people served, in resilience, and in the ability of individuals, organizations, and communities to heal and promote recovery from trauma. The organization understands that the experience of trauma may be a unifying aspect in the lives of those who run the organization, who provide the services, and/ or who come to the organization for assistance and support. As such, operations,

	workforce development and services are organized to foster empowerment for staff and clients alike. Organizations understand the importance of power differentials and ways in which clients, historically, have been diminished in voice and choice and are often recipients of coercive treatment. Clients are supported in shared decision-making, choice, and goal setting to determine the plan of action they need to heal and move forward. They are supported in cultivating self-advocacy skills. Staff are facilitators of recovery rather than controllers of recovery. Staff are empowered to do their work as well as possible by adequate organizational support. This is a parallel process as staff need to feel safe, as much as people receiving services.
Cultural, Historical, and Gender Issues	The organization actively moves past cultural stereotypes and biases (e.g. based on race, ethnicity, sexual orientation, age, religion, identity, geography, etc.); offers, access to gender responsive services; leverages the healing value of traditional cultural connections; incorporates policies, protocols, and processes that are responsive to the racial, ethnic and cultural needs of individuals served; and recognizes and addresses historical trauma.

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Time Flies

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This essay will discuss the fifteen minute consultation that is standard in most GP practices, and the associated challenges with it. It did not take me long to settle on this topic, which is highly pertinent to GP. While I wish to unashamedly tackle this challenge, I hope that ultimately this will be an optimistic piece. Literature on this topic in a broad sense was difficult to find, although there is literature available that focuses on individual aspects of this issue.

I will begin by asking who decides to see people in fifteen minutes? GPs. As a GP partner, you are the boss, and bosses up and down the country, and indeed throughout large parts of the Western world, have decided that 15 minutes is sufficient time. While searching “GP/Primary Care/Family Medicine fifteen minutes” on PubMed, multiple BMJ articles titled “Fifteen-Minute Consultation…” came up. The volume of these shows the ubiquity of fifteen minutes as a standard.

What factors persuaded GPs to use fifteen minute as the standard? Capacity is certainly one. Across the world, primary care is under-resourced(1). This results in increased pressure on GPs to see as many patients as possible, with resultant shorter time slots.

Less issues per consult is likely another. If you have more slots to see your patients, they will have a shorter wait for an appointment. They will thus be less inclined to arrive with a shopping list of ailments they wish to discuss. Fewer issues per consultation results in shorter consults, and greater satisfaction for GPs(2).

Money is another factor. The more patients you see, the more money you stand to make.

It is not wildly unrealistic. On a good day, it can be done.

The stars do have to align however. If it is a reasonably straightforward topic that you are familiar with, and the patient is both straightforward and reasonable, then you have a chance. Just like how, with the right conditions, an athlete can run one hundred metres in under ten seconds. Sometimes a GP can look up past notes, initiate the session, gather information, examine, formulate and share their plan, close the session, and write a note in fifteen minutes, all while providing a structure and building a rapport. Referrals can be done at another time (you are not Usain Bolt).

But life is what happens while you are making plans, and the stars do not always align. At the moment, I am a trainee on my first placement in a GP practice. Thus the stars rarely align. I regularly see things I am not familiar with, and thus any dreams of a fifteen minute consult evaporate as quickly as the patient says “rheumatological”. I must research the topic, finding out what history I must take, how to examine, is this something I should manage in primary care or should I be worried enough to send to ED. Often I will need to ask for a second opinion from another doctor in the practice, which, despite excellent support from my colleagues, takes more time.

Socrates provides us with neat fifteen minute slots for appointments. But individuals do not always fit into fifteen minute slots. Some consultations simply take longer.

The HSE have a useful and patient-friendly section regarding mental health on their website(3). When helping someone with a mental health issue, they advise giving people time. This holds true in a GP practice – not allowing someone the necessary time is as useful as not asking at all. As with every consult, you need to guide it – there are certain things you have to find out (e.g. suicidal ideation), and you can ask about these directly. But it is imperative that you give someone all the time they need to respond.

Discussion of the menopause also requires time. This is evident in how the ICGPs quick reference guide runs to a chunky twenty-eight pages(4). It is a thorough document, encompassing a vast array of topics such as signs and symptoms of menopause, HRT, troubleshooting, breast cancer, and indications for referral, amongst others. These all must be discussed, but the breadth of topics indicates the difficulty of condensing a menopause consult into fifteen minutes. If you know in advance the consultation will be about the menopause, you may find solutions to this. Some practices will advise the patient to return on two further occasions (for a total of three consults) to cover the menopause. Other practices run specific menopause clinics, when a practice nurse will go through everything in detail, before the patient is seen by a doctor. These each provide the menopause with the time it needs, without delaying subsequent patients. However, when a patient turns up for a routine appointment with symptoms that could be attributable to the menopause, it is necessary to outrule other conditions before discounting those symptoms. Are those night sweats menopausal, or from a malignancy? Distinguishing necessitates further questioning, which demands time.

“I just feel tired all the time”. The Oxford Handbook of General Practice advises a detailed history to differentiate between physical and psychological causes. A thorough exam will also be necessary, and bloods are often required to outrule organic causes(5). It does not matter if your shoes are on fire, you will not be getting through this consultation in fifteen minutes.

The GP setup of fifteen minute appointments ensures that A) we will see a lot of patients and B) we will see them quickly. This formula is optimised for maximising errors.

It should come as no surprise that we are more likely to make mistakes when we are rushing. This small (42 participants) RCT from 2016 demonstrated a decline in diagnostic performance with time pressure(6). However, as well as making mistakes, we are also more likely to cut corners, to dispense medications more freely, and to have a decline in our communication skills(5).

When we see a large volume of patients, we set ourselves up for decision fatigue. In this 2020 article published in the British Journal of General Practice, Moorhouse writes how doctors “have a finite amount of mental energy that we can expend on decision making”(7). This decision fatigue is borne out in this retrospective study of thirty-three primary care centres in the US(8). The study showed a significant decline in cancer screening tests for eligible patients as the day progressed. A 2019 cross-sectional study of 5603 GPs working in the US suggested that both decision fatigue and rushing results in higher rates of opioid prescribing(9). Another 2014 study of over 21,000 patients who presented to primary care with an acute respiratory infection found that antibiotic prescribing increased as the day progressed(10). It was hypothesised that “cumulative cognitive demand… may erode clinician’s abilities to resist making potentially inappropriate choices”. The authors attribute this to decision fatigue, but it is possible that other factors (e.g. general fatigue) are at play also.

Rushing and making mistakes negatively impacts the patient, but doctors suffer also. Doctors with faster consultation rates experience “Higher than average pressure scores”(5). This increased stress may be a result of consultation speed (as an independent variable), or it may be linked to the increase in mistakes caused by rushing.

The impact of making mistakes is clear – we enjoy our jobs less(11). As the authors of this 2023 book write, “Health care professionals experience profound psychological effects such as anger, guilt, inadequacy, depression, and suicide due to real or perceived errors”. And thus, we make ourselves what Albert Wu calls the “second victim”(12).

An important aspect of the therapeutic relationship is that the patient feels as though they are being listened to. This is more difficult to achieve when you have one eye on the clock. Listening to the patient is important for its own sake, as well as for the impact that it has on complaints. In this 2019 retrospective analysis of malpractice claims in the Netherlands, it was shown that at least 10% of the patients felt that their problems were not given due consideration(13). This 2008 study of 460 malpractice claims from the US showed that 34% of complaints were related to poor communication(14). It may be difficult to distinguish cause and effect in these scenarios. Is it due to a worse interpersonal relationship, with the patient more predisposed to make a complaint? Or does poor communication, with poor history-taking and resultant incorrect diagnosis, lead the patient to complain? Perhaps each factor is influential.

In order for each patient to feel heard, it is vital that we give each our full attention. Mindfulness is a popular buzzword currently, and is defined by the HSE as “the practice of paying attention to whatever is happening in the present moment and experiencing it without judgement”(15). That sounds like a perfect tool for a GP to use, and I know my own practice has certainly benefited from it. However it becomes more difficult to practice this skill as the day progresses. As stated previously, we tire as the day goes on. Thus it is physically more difficult to practice mindfulness. There are also more potential distractions as the weight of previous consults bears down upon you. The “what-ifs” and niggling doubts of earlier patients may intrude during your current consultation. This may lead to you not giving your current patient your full attention, thus adding them to the pile of your doubts after they have left.

Sometimes our own experiences can make pure mindfulness difficult. No GP is an island, and, subconsciously or not, we carry our own baggage into each consult. I was recently attempting to reassure a young patient that their chest pain was unlikely to be cardiac in nature, as “those conditions are rare in the young”. I then lost the next thirty seconds of the consult, as I was clambering out of the rabbit hole I had fallen down by uttering those words.

The previous paragraphs have highlighted some of the difficulties of the fifteen minute consultation model. However this is the model most of us will work with for the rest of our careers. So rather than despairing about our limited time, how may we come to accept it?

The enemy of Good is Better, and the enemy of each is Perfect. There are many variables in the job of a GP, and things will not always run smoothly. Granting ourselves permission to be imperfect is important. There will be days when you run late. That is ok. There will always be tasks outstanding. That is ok. Both are inherent parts of general practice. If we allow ourselves the breathing room of not having to attain constant perfection, we our less likely to become burnt out. This 2001 study was explicit when it indicated that those “who demand perfection and control in themselves and others create unrealistic demands that cannot be met in the real world”, with resultant burnout(16). While both the setting (hospital) and the cohort (nurses) are different, it may be extrapolated that similar results can be found among GPs.

As mentioned previously, mindfulness is essential as a GP. I have mentioned the challenges to mindfulness, and therefore it is important that we practise this skill often, not exclusively when we need it. In this systematic review of RCTs from 2016, it was shown that mindfulness training resulted in decreased levels of burnout among healthcare professionals(17). In another systematic review and meta analysis from 2017, it was shown that duration of practice correlates with benefits obtained(18). Like with physical training, we get better the more we practice. It is thus less effort to listen mindfully in our consultations, and we will not tire as fast. Making a habit of practising mindfulness thus benefits us two-fold – decreased levels of burnout, and easier to listen mindfully in our consultations.

I recently attended a talk from an Irish solider in the Army Ranger Wing (part of the Irish special forces). He had been involved in the evacuation of Irish citizens from Kabul after the Taliban seized power. Surrounded by utter chaos, he focused on “controlling the controllables” in order to carry out his difficult task. This attitude can benefit those of us involved in healthcare also. This 2022 study of 73 oncologists showed that sense of internal locus of control is associated with decreased burnout and stress(19). Again, we must extrapolate these findings (being neither oncologists nor Rangers), but this is likely a beneficial attitude to cultivate within outselves.

Things can always be better. While it is admirable to continually seek to improve (this is why we do audits), we must also have a level of acceptance for the way things are. In this regard, we should borrow from the Stoic philosophers, and strive to do the best we can with what we have(20).

The days of a single-doctor GP practice are largely in the past, with multi-doctor centres becoming the norm. These bring the possibility of seeking support from colleagues, as well as the opportunity to aid them. In this study from 2019, several factors were thought to influence mental health in the workplace; among them level of workplace social support(21). The kind gesture of aiding a colleague will improve mental health in the workplace. It will also one day be your turn to fall behind, and you will then be grateful for the culture of assistance you have helped to cultivate.

There are many reasons why I prefer working in the community to working in a hospital. However working as a GP is not an easy job. Completing a consult in 15 minutes is possible, but can be challenging. Some consults simply cannot be done in that time. Rushing through patients is damaging both for the patient and for ourselves. It is important for patients to feel listened to, which may be hindered by clock-watching, as well as our ability to mindfully engage with them weakening as the day progresses.

These are the facts of the job. But armed with this knowledge, we can plan for them. We can accept that we are imperfect, and that sometimes we run late. We can practice mindfulness, so that we can optimise the limited time we have and protect ourselves from burnout. We can focus mainly on that which is within our control. We can aid our colleagues, helping them when they fall victim to the clock, and cultivating a positive work environment simultaneously.

We can do the best work we can in a limited time, and take pride in that work.

I believe that the difficulties of 15-minute consultations would be a rich area for further research, and I am excited to see what novel solutions arise from this work.

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2024

Winner of the Sheppard Memorial essay competition 2024, Undergraduate category

The evidence base supporting the transition from SABA monotherapy to ICS / formoterol reliever therapy in mild / moderate asthma

***Author*:** **Joseph Mathew Kulathinal, Undergraduate, GEMS 2 RCSI**

Introduction

Prior to medical school, I knew several friends and family members with asthma, but I did not understand the burden it can have to an individual’s daily life. This was the case until I had the opportunity to undertake a summer internship at the Medical Research Institute in New Zealand. While assisting in clinical research investigating mild and moderate asthma, I learnt about the significant burden of asthma morbidity. As I gained a deeper understanding of the current literature for the management of asthma, I found that there had been a recent significant change in the prescribing practices of New Zealand following updated international guidance, which has been associated with a positive impact in asthma outcomes(1). This resulted in a new-found interest in exploring the management of asthma in general practice within Ireland, where I am currently studying medicine.

Asthma is a chronic inflammatory respiratory disease affecting an estimated 300 million people worldwide(2). The severity of asthma is defined by the level of treatment an individual is currently receiving for their asthma. The most common group with asthma have ‘mild-moderate’ asthma, representing 50 – 75% of all asthma patients(3). Such a prevalent condition presents as a significant burden on healthcare systems as around 15% of these patients experience a severe asthma attack each year, despite being labelled as ‘mild-moderate’ asthma. These attacks account for up to 40% of emergency department treatment for asthma each year(3). Exacerbations can range from mild attacks, affecting quality of life and time off school, work and home life, to severe, potentially life-threatening episodes(4).

In Ireland, an estimated 890,000 people are diagnosed with asthma at some stage in their life, affecting 1 in 10 children and 1 in 13 adults. Asthma is also responsible for approximately 8,000 hospital admissions each year(5). Given the morbidity associated with asthma attacks, reducing these episodes are a principal goal of treatment and a priority for asthma treatment in

Ireland. The most recent iteration of Irish College of Practitioners (ICGP) asthma guidelines emphasise the use of inhaled corticosteroids (ICS) as the first-line treatment for asthma management(6), aligning with the Global Initiative for Asthma (GINA) guidelines(2) and the widespread issue of short-acting beta2-agonist (SABA) overuse.

This essay details the current evidence base and guideline recommendations for treating 'mild-moderate' asthma and explores whether there is an implementation gap to address between current general practice in Ireland and the changing asthma guidelines.

Paradigm shift in asthma inhaler reliever therapy in mild-moderate asthma

In the 2019 update of the GINA international asthma guidelines, there was a fundamental change in the recommendation for the management of mild-moderate asthma, representing a significant shift from the previous 40+ years of clinical practice(7). The GINA guidelines recommend a stepwise approach to asthma management; Step 1 recommends treatment for patients with mild asthma up to Step 5, where patients are recommended to be under respiratory specialist care and receive higher levels of therapy. Step 1, treatment prior to 2019, recommended SABA reliever monotherapy, with ICS-containing therapy being the core component of treatment at Steps 2 and beyond. However, in the 2019 update, GINA recommended that all patients with asthma should be treated with ICS, irrespective of severity, and that no one should be managed with a SABA inhaler alone.

This recommendation was based on evidence from randomised control trials (RCT) which showed that patients with mild, infrequent asthma have a higher risk of severe exacerbations, attenuated through the use of ICS(8) in tandem with the body of evidence detailing the harms of SABA monotherapy. For example, 'The National Review of Asthma Deaths' report, "Why asthma kills", was commissioned to examine the circumstances of all asthma deaths in the United Kingdom between February 2012 and January 2013. This report provided an insight into the risk of SABA monotherapy and risk of mild-moderate asthma(7). It was reported that 9% of asthma deaths were in people with mild asthma treated with SABA monotherapy. It was also found that 39% of asthma deaths were associated with significant SABA overuse (using more than one SABA inhaler a month), and that a significant proportion of patients had poor adherence to maintenance ICS, when prescribed. Furthermore, we now know even low-dose ICS is effective at reducing the risk of asthma death(9), and that SABA monotherapy is associated with worse asthma outcomes(10).

A further issue highlighted and addressed by the 2019 update is the issue of adherence to maintenance ICS. In clinical practice, adherence to ICS-containing maintenance inhalers is known to be poor(2), and promoting it is key to reducing asthma morbidity and improving asthma outcomes(11). A solution to this, and another fundamental change to the recommended management of asthma therapy, is that the 2019 GINA guidelines recommended ICS/formoterol, a combination inhaler of ICS (either budesonide or beclomethasone dipropionate) and the fast-onset, long-acting beta2-agonist (LABA), formoterol, as the preferred reliever therapy for asthma at all asthma steps(7). This is a practical solution to issues of ICS adherence, as people who become non-adherent to maintenance ICS will still receive ICS whenever they use their reliever inhaler, removing the possibility of SABA monotherapy. ICS/formoterol reliever therapy also allows the ICS dose to be titrated through reliever inhaler use, which can help titrate a person's ICS dose on current symptoms, which may be related to variations in ICS requirements over time.

Evidence base for ICS-formoterol as a reliever therapy

The recommendation for using ICS/formoterol (such as budesonide/formoterol) as reliever therapy stems from RCTs that have shown that budesonide/formoterol inhalers have a greater efficacy than SABA reliever therapy. In two parallel, phase III, double-blind RCTs, SYGMA 1 and SYGMA 2, the efficacy of budesonide/formoterol was evaluated(12,13). These studies compared budesonide/formoterol reliever therapy to SABA monotherapy and maintenance ICS plus SABA reliever therapy. The results from the SYGMA 1 study showed that budesonide/formoterol was more effective in reducing asthma exacerbations and achieving asthma control compared to the patients undergoing SABA monotherapy (64% lower rate of severe exacerbations versus SABA, 14% more likely to result in well-controlled asthma). The SYGMA 2 study found comparable rates of severe exacerbations with budesonide/formoterol reliever therapy versus ICS plus SABA therapy (annualised rate of severe exacerbations 0.11 for ICS/formoterol versus 0.12 for maintenance ICS plus SABA), however this was achieved with approximately 25% of the total ICS dose for budesonide/formoterol versus maintenance ICS plus SABA.

The Medical Research Institute of New Zealand (MRINZ) led two further large RCTs of budesonide/formoterol versus SABA reliever therapy and/or maintenance ICS plus SABA therapy(14,15). These were both open-label RCTs, and they supported the findings of the SYGMA 1 and 2 studies. Novel START(14) compared budesonide/formoterol reliever therapy to as-needed SABA and maintenance budesonide plus as-needed SABA. It was reported that budesonide/formoterol reduced exacerbation rates by around 50% versus SABA monotherapy and was comparable to budesonide plus as-needed SABA despite a significantly lower total ICS dose. The PRACTICAL study(15) compared budesonide/formoterol reliever therapy to maintenance budesonide plus SABA, and found that budesonide/formoterol reduced the number of severe exacerbations per patient per year by around 30% versus maintenance budesonide plus SABA.

Meta-analysis of the SYGMA 1, 2, Novel START and PRACTICAL studies reported ICS/LABA reliever therapy reduces severe asthma exacerbations by more than 50% and is at least as effective as maintenance ICS plus SABA therapy(16). A separate meta-analysis of these studies found that asthma control, as assessed by the Asthma Control Questionnaire-5, is marginally worse for those taking budesonide/formoterol reliever inhalers versus maintenance ICS plus

SABA (difference 0.12, 95% CI 0.09-0.14), however this is below the minimally clinically important difference of this questionnaire, which is a change of 0.5(17). These findings must also be interpreted in the context that adherence to maintenance ICS is often much higher in an RCT setting (often exceeding 80%) than what is seen in usual clinical practice.

Patient satisfaction and preference was assessed in a sub-group of the participants in the PRACTICAL study who were asked to complete a survey at the completion of the study. The results showed a high level of satisfaction amongst patients for budesonide/formoterol reliever therapy, specifically in terms of inhaler effectiveness, frequency of use and speed of onset relief compared to maintenance budesonide and a separate SABA inhaler(18).

Translating research into clinical practice in Ireland

Asthma, a common medical condition, is predominantly managed in primary practice. The general practitioner (GP) plays a vital role in delivering care for asthma in Ireland, serving as the primary clinician responsible for the diagnosis, management and onwards referrals for asthma patients(19). Therefore, the GP is best placed to adopt the latest evidenced-based guidance into their practice to deliver personalised care to their patients. Given the morbidity associated with asthma, it remains an absolute priority that optimal asthma management is implemented into practice.

There is no direct evidence of the impact the 2020 update to the ICGP asthma guidelines had on Irish clinical practice. However, it is reported that in 2019, SABA prescriptions made up over half of the total number of inhalers prescribed(20). Furthermore, the Irish Thoracic Society (ITS) completed a 10-year longitudinal study analysing trends in national respiratory inhaler usage patterns from 2012 to 2023. This study reported that there was a 34% increase in respiratory inhaler market volume over the 10 years in Ireland, with salbutamol being the most common inhaler prescribed, and the trend for salbutamol prescription had risen between 2019 and 2023(21). The ITS patterns study also showed a 69% increase in ICS/formoterol with a noted upwards inflection in prescribing since 2020, suggesting an attempt at translation of the guidelines into clinical practice. It is important to note that this inhaler usage data considers all indications for the prescriptions, including patients with COPD as well as asthma patients. Data specific to the dispensing patterns of asthma medication is only available from 2017 in the Asthma Society of Ireland 2019 report(22). Although this data predates the 2020 guideline update, it underscores the widespread use of SABA in Ireland and highlights the significant challenge that the updated asthma guidelines aim to address—eliminating SABA monotherapy in asthma management.

There are several barriers to the uptake of ICS/formoterol use in Ireland. These include entrenched practice from decades of SABA use for both clinicians and patients. There may be a concern over the efficacy of ICS/formoterol, as it is not evidenced for use in acute asthma, where SABA remains the bronchodilator of choice for the emergency treatment of acute attacks. An assumption can be made, based on the evidence of number of prescribed inhalers that there may not be widespread knowledge amongst General Practitioners (GPs) that the recommendations for clinical practice have changed, particularly as ICS/formoterol is not licensed as a reliever-only therapy in Ireland and therefore use as such is considered ‘off label’. However, these barriers could be addressed by educating GPs and Irish asthmatic patients about the evidence base that supports the use budesonide-formoterol for reliever therapy. This would then allow for a successful translation of clinical trial evidence into clinical practice, resulting in optimal care for asthma within general practice in Ireland. This, in theory, would translate into an improvement in asthma control and a reduction in primary and secondary care attendances for asthma attacks. In New Zealand, where there has been a >100% increase in budesonide/formoterol use since December 2019, they have observed a 17% reduction in hospitalisations due to asthma(1). These results can be used to infer what the outcomes could be in Ireland if ICS/formoterol was implemented more effectively as a reliever treatment regime.

Conclusion

Meta-analysis of large RCTs supports ICS/formoterol as the preferred reliever inhaler for patients with mild and mild-moderate asthma and current Irish practice guidelines advocates for its use in clinical practice in Ireland. This evidence-based treatment reduces asthma exacerbations and has a high level of patient satisfaction for patients who use this therapy. Early data shows that a transition to ICS/formoterol reliever therapy may have a real-world impact in hospital discharges for asthma.

In Ireland, provisional data suggests a slow transition to guideline suggested therapy with ongoing high levels of SABA use. GPs are best placed to deliver the transition to ICS/formoterol for asthma patients in Ireland. Transitioning to ICS/formoterol ensures patients with mild-moderate asthma receive the latest evidenced based care which may help to reduce the burden of asthma and improve health outcomes across the country.

A special thank you to Dr Jon Noble and Prof Richard Beasley for the inspiration to write this essay

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The Role of General Practitioners in Managing Mental Health in Ireland: A Reflective Analysis

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Introduction

In Ireland, General Practitioners (GPs) play a pivotal role in the healthcare system, serving as the first point of contact for patients across a broad spectrum of health concerns. Among these, mental health issues have gained prominence due to their rising prevalence and the profound impact they have on individuals and communities. As gatekeepers to the healthcare system, GPs are often tasked with identifying, managing, and coordinating care for patients with mental health conditions. This essay offers a reflective analysis of the evolving role of GPs in managing mental health in Ireland, drawing on relevant literature and personal insights to explore the challenges, opportunities, and future directions in this crucial area of general practice.

Effective mental health management in primary care involves early identification, integrated care and ongoing support.

Primary care often serves as the first point of contact for patients with both physical and mental health concerns, allowing for a holistic approach to healthcare. Integrating mental health services into primary care can improve early detection and treatment of conditions like depression and anxiety. Primary care providers should screen for mental health conditions regularly, offer brief interventions, coordinate with mental health specialists and provide patient education. Prioritizing a patient-centred approach ensures timely care, reduces stigma and promotes overall well-being.

The Mental Health Landscape in Ireland

Mental health issues are a significant concern in Ireland, with depression, anxiety, and stress-related disorders being among the most common conditions encountered in primary care. According to the Healthy Ireland Survey 2021, nearly one in five people in Ireland experience some form of mental health problem each year. The COVID-19 pandemic has further exacerbated these issues, with reports indicating increased levels of anxiety, depression, and loneliness across the population.

Historically, mental health care in Ireland was largely institutional, with patients often receiving treatment in specialized psychiatric hospitals. However, the de-institutionalization movement in the latter half of the 20th century led to a shift towards community-based care, placing greater responsibility on primary care providers, particularly GPs, to manage mental health conditions. Today, GPs are

expected to provide comprehensive care for patients with mild to moderate mental health issues, making timely referrals to specialist services when necessary. This shift has not only expanded the scope of general practice but has also introduced new challenges and complexities in the management of mental health.

Challenges Faced by GPs in Mental Health Management

The role of GPs in managing mental health is fraught with challenges. One of the most significant is the issue of time constraints. Consultations in general practice are typically short, often lasting 10 to 15 minutes. This limited time can make it difficult for GPs to adequately assess and address mental health issues, which often require a more in-depth exploration of a patient's history, symptoms, and personal circumstances.

Moreover, there is still a significant stigma associated with mental health in Ireland, which can hinder patients from openly discussing their symptoms with their GP. This stigma not only affects patients but can also influence the attitudes of healthcare professionals, potentially leading to underdiagnosis or mismanagement of mental health conditions. Additionally, the lack of resources and support services in some areas, particularly in rural regions, can limit the options available to GPs for managing patients with more complex mental health needs.

A study by O'Regan et al. (2019) highlighted the strain placed on GPs due to the increasing demand for mental health services and the inadequacy of specialist support. GPs often find themselves managing patients who would benefit from more specialized care, but due to long waiting times and limited access to mental health services, they are left to provide ongoing care with minimal support. This situation can lead to feelings of frustration and burnout among GPs, further complicating their ability to provide effective mental health care.

Literature Review

The role of GPs in mental health care has been the subject of considerable research, with studies highlighting both the potential and the limitations of primary care in this context. One key area of focus has been the effectiveness of GP-led interventions for mental health conditions. For example, a systematic review by Archer et al. (2012) found that collaborative care models, where GPs work closely with mental health specialists, can significantly improve outcomes for patients with depression and anxiety. These models typically involve regular follow-ups, treatment adjustments, and the use of evidence-based guidelines, all of which contribute to better patient outcomes.

However, the implementation of such models in Ireland has been limited, with many GPs working in isolation without the support of a multidisciplinary team. A survey conducted by Collins et al. (2018) found that while GPs are generally confident in

diagnosing common mental health conditions, they often feel less equipped to manage them, particularly in the absence of specialist support. The survey also revealed that GPs are concerned about the impact of their mental health workload on their overall capacity to provide care, with many expressing the need for additional training and resources to improve their ability to manage mental health conditions effectively.

The literature also underscores the importance of early intervention in mental health care, with GPs playing a crucial role in the early identification and management of mental health issues. A study by McGorry et al. (2007) emphasized the potential for GPs to prevent the progression of mental health conditions by intervening at an early stage. However, this potential is often hindered by challenges, including time constraints, stigma, and lack of resources.

Reflective Analysis: Personal Insights and Experiences

Reflecting on the role of GPs in managing mental health in Ireland, while GPs are well-positioned to address mental health issues, they are often hampered by systemic barriers. From my own experiences and observations in general practice, I have seen the profound impact that mental health conditions can have on patients, as well as the crucial role that GPs play in providing support and guidance.

One of the most striking aspects of mental health management in general practice is the complexity of the cases that GPs encounter. Unlike physical health issues, mental health conditions often involve a complex interplay of biological, psychological, and social factors. This complexity requires a holistic approach to care, where GPs must not only address the symptoms but also consider the broader context of the patient's life, including their family dynamics, work situation, and social environment.

In my experience, building a strong therapeutic relationship with patients is key to effective mental health care. Patients are more likely to open about their mental health issues if they feel that their GP is approachable, empathetic, and genuinely interested in their well-being. This relationship-building takes time and effort, but it is essential for fostering trust and encouraging patients to seek help early.

Another important aspect of mental health management in general practice is the need for ongoing support and follow-up. Mental health conditions often require long-term management, and GPs must be prepared to provide regular check-ins and adjustments to treatment plans. This ongoing care can be challenging, particularly in a busy general practice setting, but it is crucial for ensuring that patients receive the support they need to manage their condition effectively.

Future Directions and Policy Recommendations

Looking to the future, there are several steps that can be taken to enhance the role of GPs in managing mental health in Ireland. First and foremost, there is a need for greater investment in mental health services, including the expansion of specialist support and the implementation of collaborative care models. By providing GPs with access to multidisciplinary teams, including mental health specialists, social workers, and counselors, the burden on GPs can be reduced, and patient outcomes can be improved.

Additionally, there is a need for ongoing professional development and training for GPs in mental health. This training should focus not only on the clinical aspects of mental health care but also on communication skills, cultural competence, and self-care strategies for GPs themselves. By equipping GPs with the knowledge and skills they need to manage mental health conditions effectively, we can improve the overall quality of care provided in primary care settings.

Finally, addressing the stigma associated with mental health is essential for improving access to care. Public health campaigns aimed at reducing stigma and encouraging help-seeking behavior can play a crucial role in changing attitudes and making it easier for patients to discuss their mental health concerns with their GP.

Conclusion

In conclusion, the role of GPs in managing mental health in Ireland is both challenging and essential. While GPs are uniquely positioned to provide early intervention and ongoing support for patients with mental health conditions, they are often constrained by systemic barriers, including time constraints, stigma, and limited resources. By addressing these challenges through policy changes, increased investment in mental health services, and ongoing professional development, we can enhance the capacity of GPs to provide high-quality mental health care and improve outcomes for patients across Ireland. The future of mental health care in general practice is promising, but it requires a concerted effort from policymakers, healthcare providers, and the community to realize its full potential.

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Pain management in outpatient gynecological procedures

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In medical school, you may have been told that the cervix has no nerves in it, but there's more to the story. Obstetrics and Gynecology has a complex history with pain management. Women's pain has often been dismissed as hysteria (e.g., menstruation, endometriosis) or glorified as virtuous (e.g., childbirth). Recent evidence shows that women frequently endure moderate to severe pain during routine gynecologic procedures. This pain can be a significant barrier to optimal healthcare.

For instance, the IUD, which is the safest and most effective method of birth control, is underutilized due to the fear of pain during and after the procedure. The American College of Obstetricians and Gynecologists (ACOG) acknowledges that pain is a factor in the decreased provider willingness to recommend IUD placement in adolescents and nulliparous women. However, current ACOG guidelines, last updated in 2017, do not recommend pain control during in-office procedures, including IUD placements. While early research was inconclusive, recent evidence supports safe, effective, and efficient methods of pain control during IUD placement. I have observed this lack of pain management across multiple clinics, procedures, and patients. Providers often preface procedures with phrases like "you'll feel mild discomfort" or "you may feel some cramping," only for women to experience severe pain, similar to what thousands of women echo in their experiences shared on social media app TikTok. Pain control or sedation was available in many clinics but was often not offered to patients; only those who knew to ask for it received it.

Equally concerning is the absence of medical education on this topic. This gap perpetuates the historical silencing of women's pain and leaves medical students ill-equipped to address it. Students can be a powerful force for change. They can advocate for curriculum revisions, stay updated on the latest research on analgesia, understand why providers are not using it, and learn what patients need. Additionally, students can spend more time with patients post-procedure to inquire about their experiences, offer support, and gather insights to improve care for future patients.

But how is pain perceived in the female reproductive system? Let’s take a moment to briefly review the innervation of the area: The innervation of the female reproductive system is multifaceted, involving both autonomic and somatic components. Sympathetic innervation arises from the thoracolumbar spinal segments (T10-L2), travels via the hypogastric nerve to the inferior hypogastric plexus, and innervates the uterus, cervix, and upper vagina, mediating vasoconstriction and uterine contractions. Parasympathetic fibers from the sacral spinal segments (S2-S4) reach these structures through the pelvic splanchnic nerves, facilitating vasodilation and uterine relaxation. The pudendal nerve (S2-S4) provides sensory and motor innervation to the lower vagina, perineum, and external genitalia, while the ilioinguinal and genitofemoral nerves supply sensory fibers to the mons pubis and labia majora. The ovarian plexus, derived from the renal and aortic plexuses, innervates the ovaries, modulating blood flow and ovarian function.

It turns out there are actually lots of nerves in the female reproductive system. But what factors are associated with increased pain perception during office gynecologic procedures? Recent studies have identified several factors associated with increased pain perception during office gynecologic procedures. Many women experience moderate to severe pain during these procedures, often describing it as sharp, cramping, or intense discomfort with many women experiencing light headedness and severe bleeding immediately after an invasive procedure. This pain perception can be influenced by factors such as anxiety, individual pain thresholds, and previous negative experiences with gynecological procedures. Women who have never given birth vaginally often report higher pain levels compared to those who have had a vaginal delivery due to the cervix being less accustomed to dilation . A history of dysmenorrhea (painful menstruation), dyspareunia (pain during intercourse), or previous painful gynecologic procedures also contributes to higher pain perception . Anxiety and heightened anticipation of pain significantly exacerbate the discomfort experienced during these procedures . Additionally, individual pain thresholds and psychological factors play crucial roles; women with a high baseline level of anxiety or a previous traumatic experience with similar procedures are more likely to report higher pain levels . Understanding these factors helps healthcare providers better manage pain and improve patient comfort during outpatient gynecological procedures.

So pain during these procedures is clearly a thing, and women frequently express frustration over the lack of adequate pain management. The psychological impact, including anticipatory anxiety and fear, can exacerbate the physical sensation of pain, highlighting the need for better pain management strategies and more compassionate communication from healthcare providers. What should we be doing about this issue?

Reducing pain during office gynecologic procedures is crucial for enhancing patient comfort and satisfaction and preventing the pain starts before the procedure. A doctor should take a detailed medical history, focusing on menstrual cycles, sexual history, past procedures, and previous pelvic pain episodes. The patient should describe the pain's onset, intensity, duration, and any alleviating or exacerbating factors, while psychological factors like anxiety should also be assessed. A thorough pelvic exam and possibly a transvaginal ultrasound can help identify any physical causes such as fibroids or cysts. Pain should be quantified using validated scales, and its impact on daily life evaluated. A multidisciplinary approach, including referrals to specialists and providing psychological support, is crucial. Pre-procedure counseling and offering appropriate analgesia or anesthesia tailored to the patient's needs can help manage pain effectively . Often women who have had significant birth trauma or sexual trauma, big prior surgery, or who have low back/hip pain will have pelvic muscle pain and tenderness on palpation. That may then provoke vaginismus or pain with exams. In such patients it is often useful to perform a gentle 1 finger digital exam to assess for this pain before putting a speculum in and causing pain. Racial and ethnic differences significantly impact women’s perceptions of pain, even after educational interventions. Continuous education is essential to prevent the re-emergence of psychological barriers and past triggers. Further research into how perceived pain affects medically underserved women will help improve adherence to cervical cancer screening guidelines among this population.

Pharmacological therapies are also available to patients. Anesthetic and analgesic methods reported in literature for outpatient hysteroscopy include oral and intravenous analgesia; nonopioid analgesics such as nonsteroidal anti-inflammatory drugs (NSAIDs) or acetominophen opioid analgesics; intrauterine, paracervical, transcervical, or uterosacral local anesthetics; and spray, gel, and cream topical anesthetics. NSAIDs are systemic analgesics that decrease uterine activity and pain by inhibiting cyclooxygenase and reducing circulating prostaglandins. They are effective in decreasing pain in some gynecologic procedures, especially in the postsurgical period. They include naproxen, diclofenac, ibuprofen, and ketorolac.

Other analgesic or anesthetic methods may be considered, such as local anesthesia. Only local anesthetics provide a significant reduction in the mean pain scores during and 30 minutes after the procedure. They include paracervical, intracervical, transcervical, or uterosacral block and topical application in spray, cream, or gel form. The British Medical Journal meta-analysis by Cooper et al. found that intracervical and paracervical injections of local anesthetic significantly reduced pain in women undergoing outpatient hysteroscopy, whereas transcervical and topical application did not. Paracervical injection was significantly superior to the other anesthetic methods. They also concluded that local anesthetics did not have a significant effect on the incidence of vasovagal episodes. Munro and Brooks' review of local anesthesia for office hysteroscopy also supports that a consistent positive anesthetic effect is only demonstrated with paracervical anesthesia.

At present, injectable local anesthetics, particularly paracervical infiltration, are the methods that seem more effective, according to the revised literature. Other local anesthetics via topical or intrauterine route seem to be ineffective. That said, an adequate selection of local anesthetic is important to control pain during the procedure and avoid toxicity.

Non-pharmacological therapy also exists for patients. Ensuring patient comfort through proper positioning and providing psychological support with reassurance and empathy further enhances pain management strategies. These approaches are supported by research and guidelines aimed at improving patient experience and outcomes during gynecologic procedures, emphasizing the importance of personalized care to optimize pain management.

Other techniques such as distraction methods (e.g., music, guided imagery), breathing exercises, and patient education about the procedure can also significantly alleviate anxiety and pain. Employing gentle, slow procedural techniques during speculum insertion or biopsy helps minimize discomfort. Nonpharmacological methods could also be useful in reducing hysteroscopy-related pain, such as a ‘no-touch’ approach with vaginoscopy and Mini hysteroscopes, reducing waiting time before hysteroscopy, and the use of music during the procedure to reduce anxiety. Risk and protective factors of suffering pain during outpatient hysteroscopy are important for identifying patients who are susceptible to receiving anesthesia particularly those with certain risk factors of menopause, nulliparity, dysmenorrhea, and a longer time of procedure.

Key takeaway messages include that women frequently endure significant pain during routine gynecologic procedures which can be a barrier to healthcare. Reducing pain during office gynecologic procedures is essential for improving patient comfort, satisfaction, and outcomes. This involves pre-procedural assessment and personalized pain management strategies and identifying patients at higher risk for pain is essential. Common risk factors include menopause, nulliparity, dysmenorrhea, or longer procedure times. Effective pain management strategies include: pharmacological options including NSAIDs, local anesthesia and topical anesthesia, and non-pharmacological methods such as patient positioning, gentle technique, distraction and psychological support

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The Evolving Role of General Practice in Ireland: Addressing Public Health Challenges Through Innovation, Technology, and Preventative Care

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Introduction

The field of general practice in Ireland is experiencing a notable transformation as it confronts detailed public health challenges. The post-COVID context has enhanced the focus on mental health, with the pandemic's enforced separation leading to heightened levels of anxiety, depression, and loneliness. During the lockdown periods, individuals were isolated from essential social supports, and this, combined with economic pressures and uncertainties, has had an important impact on the mental health of many. It has become increasingly important to incorporate the biopsychosocial model into daily care, recognizing that a person's health encompasses not only medical aspects but also their psychological well-being and social circumstances.

However, mental health issues can often mask the existence of serious physical health problems. For example, numerous women visit general practitioners (GPs) reporting chest pains or symptoms resembling a heart attack, only to be misdiagnosed as experiencing panic attacks. This error can postpone the identification of actual cardiac conditions, putting patients at considerable risk. The distinction between mental and physical symptoms frequently blurs, creating challenges for GPs, who must quickly identify the root cause of a patient's distress within a limited 15-minute consultation. The necessity to manage mental, physical, and social concerns in such a restricted timeframe greatly heightens the potential for mistakes.

At the same time, chronic illnesses, particularly among Ireland's elderly population, represent a daily concern for most GPs. Older patients commonly present with long-standing conditions such as diabetes, asthma, and heart disease, necessitating careful management of both their physical well-being and the psychological effects of living with a chronic condition. Nonetheless, socio-economic challenges can severely impact the quality of care delivered. Financial limitations often result in patients failing to comply with treatment protocols, leading to potentially life-threatening outcomes. For instance, individuals with asthma might delay or ration their medications due to financial issues, increasing their risk of severe asthma attacks or hospitalization. Lower-income patients frequently face the difficult decision of whether to prioritize medication costs or other essential expenses, making consistent adherence to treatment plans challenging.

Compounding this issue is the limited time allotted for each patient visit. Within a span of just 15 minutes, a GP is tasked with gathering a thorough medical history, evaluating the present symptoms, examining underlying psychological and social stressors, establishing a diagnosis, and recommending treatment options. This short timeframe can be overwhelming for both doctors and patients, leaving minimal opportunity to thoroughly address all issues. The possibility of misdiagnosis, inadequate treatment, or overlooking critical details looms large in such a restricted setting.

This essay seeks to investigate how Irish general practice can tackle these challenges by optimizing the diagnostic and treatment process.

Technology in General Practice

Technology has made major advancements in general practice, especially with telemedicine and AI, transforming the way healthcare is delivered. Telemedicine provides a convenient option for many patients, enabling them to have consultations from their homes without needing to travel or endure long waits at clinics. This is particularly beneficial for patients with chronic conditions or those living in rural areas where healthcare access is limited. Nevertheless, telemedicine comes with limitations, especially for hands-on care, as procedures like blood tests, physical examinations, and sample collections cannot be performed virtually. This emphasizes the necessity of in-person visits for thorough assessments, creating challenges when it comes to handling more complex or urgent health issues.

The task of reconciling the ease of telemedicine with the requirement for face-to-face care is intensified by the prevalent long wait times at general practices. Today's busy for a GP appointment can be extremely frustrating and time-consuming. One viable solution to alleviate wait times and enhance care efficiency involves having a nurse assist in the initial phases of gathering medical history. By allowing patients to answer fundamental medical questions with a nurse prior to their GP appointment, doctors can review this information in advance, assisting more focused and relevant discussions during the actual consultation. This approach not only conserves time but also allows GPs to ask more targeted questions, resulting in quicker diagnoses and improved patient outcomes.

AI has the potential to considerably improve patient care in general practice by incorporating personalized and data-driven interactions. One of AI's most promising features is its capacity to move beyond generic inquiries and engage in personalized conversations that hinge on a patient’s medical history. By analyzing past interactions with healthcare providers, prior diagnoses, and results from previous tests, AI systems can create a more personalized and meaningful experience for each patient. Rather than merely following a standard question set, AI could consider the individual’s unique medical background and pose specific questions that address ongoing health issues or conditions that require closer attention.

For example, if a patient has a record of hypertension, AI could ask about their blood pressure readings since their last appointment, any dietary or exercise changes, or symptoms like headaches or dizziness. Likewise, if recent blood tests showed high cholesterol or abnormal liver function, AI could inquire about how the patient has been feeling regarding these results, whether they have implemented advised lifestyle changes, or if they have experienced any new symptoms. This method would render the interaction more personal and relevant by focusing on the patient’s specific health conditions instead of relying on a one-size-fits-all questionnaire.

This personalized strategy not only enriches the depth and relevance of initial data gathering but also aids GPs in prioritizing critical issues more efficiently. By having AI distill important elements from the patient’s medical history alongside current symptoms and trends, GPs could enter consultations equipped with a comprehensive overview. This enables doctors to engage immediately in focused, diagnostic-driven discussions with patients, saving time and minimizing the risk of overlooking critical details. Besides, it eases the cognitive burden on GPs, who often need to navigate extensive patient files during consultations, thus allowing them to dedicate more attention to clinical decision-making.

Furthermore, AI could also assess the patient’s emotional and mental wellness through subtle hints in their responses, raising questions about stress, anxiety, or other psychological factors that could affect their physical health. By collecting this information, the AI system could identify potential mental health issues that might otherwise remain unaddressed during a brief consultation. This ensures that care is personalized and comprehensive, encompassing both physical and mental health aspects.

The incorporation of AI into general practice could revolutionize GP-patient interactions, making processes more efficient and meaningful while preserving the personal touch essential for effective healthcare. By automating routine data collection and history-taking tasks, AI would free up critical time for GPs to concentrate on important decision-making, finally enhancing the quality of care and improving patient outcomes.

Preventative Medicine

In addition to the technological advancements that are changing general practice, it is also important to emphasize the significance of preventative medicine in alleviating the burden of chronic diseases. As the prevalence of conditions such as hypertension, diabetes, and cardiovascular disease increases—particularly among older patients—prevention and early intervention become essential in managing these health challenges. Unfortunately, many general practitioners tend to neglect preventative strategies for older patients, often believing that modifying established lifestyle habits is too difficult or that age diminishes the relevance of these interventions. Regardless of a patient's age, providing lifestyle medicine and preventative options can greatly enhance their quality of life and health results, even if the improvements are gradual.

General practitioners should consistently incorporate preventative medicine into their daily practice by promoting lifestyle changes customized to each patient's needs. An essential part of this process is making sure that patients completely understand the reasons behind these changes and their roles in implementing them. Non-compliance frequently occurs when patients do not grasp the significance of lifestyle modifications or feel overwhelmed by the perceived effort involved. To address this issue, it is critical for general practitioners to have open discussions with patients, clarifying not just the advantages of diet, exercise, and other preventative measures but also their long-term effects on health. When patients agree and comprehend the logic behind these recommendations, they are more likely to follow the advice and achieve meaningful results.

An effective strategy is to collaborate with nutritionists who can design individualized dietary plans based on a patient's specific health conditions, such as managing cholesterol, controlling diabetes, or achieving a healthy weight. In the fast-paced environment we live in, convenience often hinders making substantial dietary changes. Many patients, particularly those with busy lifestyles or limited mobility, may find it challenging to consistently prepare healthy meals. To help with this, general practitioners could assist patients in connecting with meal delivery services or caterers that specialize in providing nutritious, condition-specific meals directly to their homes. This would eliminate an important barrier to adhering to dietary recommendations, making it simpler for patients to act on the nutritional guidance they receive.

Likewise, discussions about physical activity should be emphasized as a foundational component of preventative medicine. Exercise can considerably lower the risk of chronic diseases, enhance mental health, and improve overall well-being. For older patients, this may include low-impact activities like walking, swimming, or yoga, which can be easily incorporated into their daily lives. It is important to customize exercise suggestions based on the patient's capabilities and health status while providing consistent encouragement and support.

Smoking cessation and addressing alcohol dependency are two additional critical areas of preventative care that general practitioners must discuss with their patients. Smoking remains one of the top causes of preventable deaths, and patients who smoke should be motivated to participate in workshops or support groups aimed at assisting them in quitting. Similarly, alcohol dependency requires urgent attention, as excessive alcohol intake can lead to liver disease, mental health concerns, and other serious health issues. Providing patients with access to counseling, support groups, or treatment programs for alcohol dependency can enable them to take charge of their health.

By embedding these preventative strategies into routine practice, general practitioners can help diminish the impact of chronic diseases and enhance patient outcomes. Preventative medicine should not be considered a secondary option but rather as a fundamental aspect of comprehensive patient care, offering tangible benefits even to older individuals who may feel entrenched in their lifestyles.

Addressing Mental Health

As the mental health crisis continues to escalate, general practitioners (GPs) play an essential role in addressing these challenges within the community. Mental health issues, which can include stress, anxiety, trauma, and suicidal thoughts, are increasingly common across all age groups, not limited to younger populations. This necessitates that GPs remain alert in identifying these concerns, despite their limited time with each patient. With consultations typically lasting around 15 minutes, it can be challenging to explore a patient’s emotional well-being in depth, yet recognizing even subtle signs of distress or mental health issues is critical. Often, it is through simple observations—such as a patient’s tone, body language, or brief comments about sleep issues or low energy—that GPs can identify underlying mental health concerns. Integrating mental health training for GPs is essential to enhance their capability to detect, manage, and discuss issues related to stress, trauma, or suicidal ideation. A well-trained GP can ask pertinent questions from the outset, initiate important discussions, and offer the patient both emotional support and practical advice. This is particularly important for older patients, who may not voice their difficulties as openly as younger individuals, yet are equally susceptible to depression or anxiety, especially when facing chronic health conditions or feelings of loneliness. For GPs, providing mental health care goes beyond making referrals; it involves building trust and establishing a safe environment for patients to express their feelings.

However, the management of mental health is not limited to detection. Given the complex nature of mental health issues, treatment often necessitates multiple appointments, referrals to specialists, and follow-ups that can overwhelm patients. Balancing these appointments with their daily responsibilities—particularly when mental health challenges impact motivation and functioning—can lead to missed appointments or difficulties complying with treatment. In this context, innovations such as telemedicine can play a essential role in making mental health care more accessible. Telehealth services enable patients to attend counseling or psychiatric appointments from the comfort of their own homes, minimizing barriers related to time and travel. This increased accessibility is especially advantageous for individuals in rural areas, those with mobility challenges, or patients who experience severe anxiety about attending in-person sessions.

The development of a mental health treatment plan should be a collaborative effort between the GP and the patient. It is essential that patients feel enabled in deciding how they wish to approach their mental health, as a sense of control is a key element for successful treatment. This is particularly relevant for younger patients, who may be more resistant to conventional therapy or medication and require that their concerns and preferences be carefully considered. Making sure that patients comprehend the available options—and articulating these choices clearly or involving someone who can—is critical.

Eventually, GPs are uniquely positioned to support mental health across all age demographics, from identifying early warning signs to providing a patient-centered approach in treatment. By incorporating mental health training, using technology to improve accessibility, and encouraging patient enablement, GPs can more effectively handle the complexities of mental health within contemporary healthcare by creating an environment where patients feel valued, supported, and actively engaged in their care.

Health Inequities

The mental health crisis and the burden of chronic diseases in general practice emphasize an urgent issue: health inequities in Ireland. While advancements like telemedicine and artificial intelligence present hopeful solutions, it is essential to acknowledge that not all patients benefit equally from these developments. Disparities in health, particularly in underserved communities and rural areas, continue to pose substantial obstacles to quality healthcare. Many individuals residing in these locations face challenges such as limited access to healthcare facilities, extended wait times for appointments, and difficulties in reaching specialist care. Nevertheless, the growth of telemedicine holds promise for narrowing these gaps, allowing rural patients to more easily consult GPs, mental health professionals, and receive follow-up care without the necessity of travel. By delivering care directly to patients' homes, telemedicine could mitigate healthcare disparities, particularly for those who struggle to visit their GP consistently.

However, technology alone is insufficient to address the entrenched inequities faced by certain communities, including Ireland's Traveler population and immigrant groups, who frequently encounter notable obstacles in accessing healthcare. The Traveler community, specifically, suffers from poorer health outcomes and reduced life expectancy compared to the broader population, largely due to widespread discrimination, distrust in medical institutions, and socio-economic difficulties. It is essential for healthcare providers to cultivate trust and actively engage with these communities to comprehend their distinct needs. Immigrants also confront barriers such as language differences, cultural misunderstandings, and unfamiliarity with the Irish healthcare system. Language obstacles can be especially challenging in healthcare contexts, where misunderstandings may result in misdiagnosis, non-adherence to treatment, and negative health consequences.

To tackle these inequities, healthcare professionals must adopt a proactive stance. One effective approach is to guarantee that GPs and healthcare staff undergo cultural competence training, enabling them to better understand and meet the needs of diverse populations. For patients experiencing language barriers, clinics could set up translation services or employ bilingual staff to enhance communication clarity. This initiative would promote a comprehensive environment where patients feel recognized and respected, essential elements for building trust and enhancing adherence to treatment plans.

Another viable solution involves delivering healthcare to underserved populations through community outreach programs. Mobile clinics, for instance, could travel to rural areas and Traveler communities, providing essential services such as vaccinations, check-ups, and screenings that patients might otherwise overlook due to accessibility concerns. For immigrant groups, forging partnerships with community organizations could aid in integrating healthcare education and services, ensuring these patients are knowledgeable about their rights and available resources within the healthcare system.

As healthcare professionals, we bear the responsibility to advocate for equitable care, acknowledging that every patient, irrespective of background or location, deserves the same standard of treatment. These initiatives must be persistent and woven into everyday practice, making sure that no patient is overlooked in a healthcare system designed to promote well-being for all.

Conclusion

General practice in Ireland offers a unique chance to tackle major public health challenges by strategically combining technology, innovative practices, and a strong focus on patient-centered care. As we deal with the complexities of chronic illnesses, mental health issues, and healthcare disparities, it is evident that the future of general practice must be based on a comprehensive approach that prioritizes the individual needs and experiences of patients. By using the benefits of telemedicine, AI, and preventive care, we can improve care delivery, increase accessibility, and enable patients to take an active part in their health.

Imagining a future where technology and personalized care work together effectively involves building a strong support system for both general practitioners (GPs) and patients. This could include AI-driven assessments before appointments that consider patients' past interactions, medical histories, and current issues, enabling GPs to have more targeted and meaningful discussions during consultations. Besides, incorporating lifestyle medicine and preventive strategies into everyday practice will help GPs manage chronic conditions effectively while promoting an understanding of health maintenance among older patients and underserved communities.

Equally essential is our dedication to addressing health inequities experienced by marginalized groups, such as the Traveler community and immigrants. By improving cultural competence among healthcare providers, offering language assistance, and broadening outreach through mobile clinics and community partnerships, we can ensure that every patient receives quality care that respects their individual circumstances and needs.

Eventually, the vision for the future of general practice is the smooth integration of technological advancements with compassionate, comprehensive care. As we adopt these innovations, we must remain committed to preserving the human connection in healthcare, making sure that every patient feels valued and understood. By doing this, we can change general practice into a model of excellence—one that not only addresses today's immediate health challenges but also enables patients to thrive in the long run, encouraging healthier communities and a more equitable healthcare system for everyone.

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“So, Where Are You From?”: Health Inequity in General Practice

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“So, where are you from?”: a colloquial icebreaker, yet the answer bears massive implications for health outcome. Health inequities are systematic differences in health outcomes arising from the social conditions in which people live, and the figures are striking. (1) Education and employment have a significant influence, with life expectancy at birth in Ireland climbing 6.1 years higher for male professionals and 5 years higher for female professionals than their unskilled counterparts. Ethnic minorities constitute some of the most marginalised in our society, with mortality rates among Traveller males rising 3.7 times higher than the general male population and among Traveller women, 3 times higher. (2) Over the past 2 years, Ukrainian refugees in Ireland have faced myriad challenges in obtaining healthcare access as a minority group, a battle I witnessed first-hand during a two-week placement in a Dublin GP surgery.

O.T. is a 67-year-old female Ukrainian refugee on the GMS scheme who visited the GP for a review of cardiology investigations, with angina as her main presenting complaint. Her refugee status, lack of stable housing (she is currently residing in a hotel), female gender, lack of employment and lack of social safety network comprise various health inequalities in this patient’s life.

These inequalities have contributed to a state of great uncertainty for the patient: she asks, “When can we go home? Will Ukraine be taken over by the Russian forces? When will there be peace?” There is no way of knowing; all she can do is wait. Her family remain in Ukraine, and she worries constantly for their safety. Bombs and air raids are daily occurences. “What has been the biggest change in moving to Dublin?” I asked. “The silence.”

Adjusting to the healthcare system in Ireland is another major challenge, with lack of English and lengthy wait lists constituting her main access barriers. The patient has limited financial resources: Ukrainian refugees in Ireland are to have welfare allowances cut from €232 per week to €38.80, under a new governmental plan. (3) The patient describes great frustration in being unable to obtain rapid relief from her angina symptoms and appropriate cardiology investigations, instead barricaded by continuous referrals and wait lists. The Ukrainian healthacre service offers much more rapid investigations, albeit at an increased cost. (4)

The patient's angina has progressively worsened due to referrals and delays, and her worsening eyesight remained unattended for months due to her lack of awareness of the optician services available and unfamiliarity with the Irish health system. These healthcare issues have exacerbated her high baseline anxiety levels attributable to the ongoing tension in her native city and uncertainty surrounding her circumstances here in Ireland.

In order to build a sustainable future, this patient requires more rapid healthcare access and financial support (e.g. increased welfare allowance), a professional interpreter, stable accomodation (e.g. an apartment) and professional support to deal with the mental strain of her situation. In the short term, she can avail of the available resources to support migrant healthcare needs, including HSE Social Inclusion Services, HSE Multilungual Health Information, HSE Vaccination Programs, Migrant Rights Centre Ireland (MCRI), Nasc, the Migrant and Refugee Rights Centre, Spirasi, the Irish Refugee Council, Cairde, Doctors of the World Ireland (DOTW), Mind the Gap Project (Migrant Mental Health), and MyMind services. (5)

The ongoing war between Ukraine and Russia remains in the hands of unstable political powers, and dramatic measures will be needed to negotiate peace between the two parties. However, taking a broader perspective, over 281 million people worldwide are counted as international migrants (6), and migration is recognised as a social determinant of health that can have significant impact on education, employment, social protection and housing. The Central Statistics Office estimates that there were 104,870 arrivals from Ukraine in Ireland by 4 February 2024. (7) The EU Temporary Protection Derivative offers welcome service provisions and accessibility for Ukrainian refugees, however these are short term measures that fail to accommodate the possibility of continued displacement. (8) Changing government policy with a long-term view to enhance sustainable migrant labour market integration, education access and housing stability can have hugely beneficial impacts for both migrant health and the host country's economy.

The UN Migration Agency (IOM) studied data from 84 countries and found that in 37% of the countries, access to health service was dependent on migrants' legal status. (9) Furthermore, there is scarcely any official data available on migration and health, with marginal funding granted towards research on international migration health, especially from low-income countries. (10) National authorities must include migratory status in data collection and analysis to enhance migrant representation and visibility. Beyond data collection, measures are needed to directly enhance migrant healthcare access (such as the Thailand voluntary migrant-paid premium) (11) and transition from temporary humanitarian assistance to long-term integration measures, such as the exemplary Ugandan education, healthcare and employment refugee support that address hugely influential social determinants of health. (12) In Ireland, this means ending the system of Direct Provision, moving into preparatory rather than "ad hoc" policy systems, further engagement with the EU Commission and broadening the tax base to address financial inequality and the ever-rising Gini Coefficient. (13)

However, Ukrainian refugees are far from comprising the only minority group struggling to obtain healthcare access. The Romani people originated in northwestern India, migrating through Europe and eventually into Ireland in the 16th century. The 2022 census shows that there are at least 16,000 Roma individuals in Ireland, upholding their unique identity and cultural values. (2) The Roma clinic at my inner GP placement was established to cater for the specific needs of this population. Many of these patients are registered on both the Romanian and Irish healthcare system, which leads to challenges in prescribing, referrals and continuity of care. The Roma community continue to face high levels of racism and discrimination, leading to mistrust in the healthcare system and difficulties accessing medical cards and GP care. Other healthcare issues include language barriers, poor maternal and mental health, high prevalence of diabetes and significant smoking addiction. The Roma Clinic has had a remarkable impact on the health of the Romani community in Tallaght, with similar initiatives set up in Monaghan, Dundalk, Wexford, Waterford, and Tipperary. Nationwide expansion of these initatives is essential, ultimately aiming to incorporate the Roma community into mainstream general practice.

Incorporation of these minority groups into mainstream services is just one small step on a long road to health equity. Massive structural renovations are needed at a governmental level in Ireland's deeply flawed healthcare system. Most health expenditure is government-financed (77% in 2023), with voluntary health contributions (mainly private health insurance) comprising 12% and household payments 11%, with little annual variation. There was an overall increase of 6.9% in healthcare expenditure in 2023 compared to 2022 (14), with approximately 0.004 doctors per population head (OECD average 3.7) in 2023. (15) Unfortunately, Ireland is the only country in Western Europe without universal primary care coverage (16), continually ranking worst in Europe for accessibility. (17) About 20% of the population has neither private health insurance nor a medical card (18), and the European Health interview Survey (EHIS) shows that unmet need for prescribed medicines is about twice the EU average and disproportionately affects those with the least education. (19) These entrenched socioeconomic difficulties are reflected in the numerical demographics of GP practice populations and surrounding areas. The Dublin GP practice I attended comprised 3, 276 General Medical Scheme (GMS) (67%) and 1,626 active private (33%) patients, with a 55% female and 45% male distribution. The surrounding area of 45,566 residents comprised 50.6% females, 49.4% males; 80% White Irish ethnicity; 51.5% in "very good" general health, 21.5% have disability, 13.6% report smoking; 50% of population falls below average HP index (deprivation level); 28% reached 3rd level education, 23.7% stopped education at secondary level; 60.4% are employed, 9.6% are in professional occupations; 8,454 family units, 61.2% are couples with children aged under 15, 12.4% are single parents with children aged under 15 according to the 2022 census (20); with a high prevalence of asthma/COPD, CV disease, T2DM, dyslexia, autism, ADHD, mental health disorders and addiction issues in the area, illustrating the adverse health outcomes associated with social deprivation.

My second GP placement in Co. Clare offered a stark contrast to Dublin, providing me with a valuable window of insight into medical access in rural areas, where rapid provision of care is not always straightforward. Rural Ireland faces many obstacles to healthcare access, including transportation issues, higher rates of part-time employment, healthcare stigma, lower median incomes, an older population and higher poverty rates than the national average. The practice population itself comprised 85% GMS patients, 15% private, with a 60:40 female: male ratio. The surrounding area of West Clare hosts a population of 76,897: 51.2% F, 48.8% M, 80.5% White Irish ethnicity, 50.5% in “very good” general health, 21.4% with a disability, 50% of population falls below average HP index (deprivation level), 32.7 % reached 3rd level education, 27.9% stopped education at secondary level, 58.6% are employed, 11.1% are in professional occupations; 13,037 family units, 34.7% are couples with children aged under 15 and 9.8% are single parents with children aged under 15, according to the 2022 census (21), with a high prevalence of heart disease, stroke, diabetes, respiratory diseases, and fungal infections. Once again, changes are needed at a governmental level to tackle the social determinants of these health issues, e.g. increased investment in the Community and Voluntary sector, the National Social Enterprise Strategy and programmes such as SICAP (the Social Inclusion and Community Activation Programme). (22)

Among the many differences I noticed in the health equity issues of the rural and urban GP surgeries, I was especially struck by the lack of any major benzodiazepine (BDZ) problems in Clare compared to the widespread, debilitating BDZ addiction issues in Dublin. BDZ are CNS depressants renowned for their sedative, hypnotic, anxiolytic, anticonvulsant, and muscle relaxant properties. (23) Although initially used first line in the treatment of anxiety disorders, insomnia and seizures, these drugs have gained notoriety for the high levels of dependence, tolerance and addiction associated with their use, especially prevalent in areas of deprivation. (24, 25) In Ireland, the odds ratio (OR) of receiving diazepam in most vs least-deprived areas (according to the 2002 Small Area Health Research Unit (SAHRU) deprivation index) was 1.21 in 2006 (95% CI 1.15-1.27), with a higher prevalence among females. (26)

My inner GP practice was located in a socially deprived Dublin area that struggles significantly with drug addiction. Our GP described BDZ as “ubiquitous” in the community, making it incredibly difficult to combat addiction and dependence. In contrast, my outer GP practice in rural Co. Clare has no major issues with BDZ, illustrating how BDZ prevalence and access within the community lies at the heart of the issue. The Tallaght GPs aim to avoid initiating BDZ unless absolutely necessary, and in those cases to use long-acting BDZ e.g. diazepam, which carry a significantly lower risk of dependence than shorter-acting BDZ. However, avoiding initiation is “the easy part”: poor BDZ visibility and lack of BDZ stabilisation facilities in the community puts a heavy burden on GPs to play the “long game” in combating BDZ addiction. Tallaght Addiction Services are a valuable resource, but underfunded and often reached at a late stage in the period of abuse, making full recovery a monumental challenge. These issues are often intergenerational, destroying the futures of disadvantaged children. Community detoxification factilities are hugely beneficial in combatting long-term addiction, however the crucial step is intervening early in life, before dependence takes hold. The most valuable weapon a GP can wield? Years of trust building and rapport with patients. Motivational interviewing strategies are often the cornerstone of the BDZ battle.

We met one such longstanding BDZ-user on a house visit: a patient who had been exposed to BDZ in his youth and is now bed-bound with multimorbidities, including morbid obesity. He is prescribed a host of CNS depressant medications including triazolam, diazepam, tapentadol, pregabalin, cetirizine, and sertraline, yet continues to request "more anti-anxiety medication" on every visit. The diazepam was a recent replacement for alprazolam, yet this small swap from a short to a long-acting BDZ is just one step on a seemingly insurmountable journey to full recovery. This case illustrates the calamitous consequences of adverse childhood social conditions and early exposure to drugs. Local initiatives, such as the "Books Are Good for You" programme at a local primary school, are fostering a wonderful enthusiasm for learning and education in local children: an inspiring illustration of the lifelong health impact arising from early intervention in areas of social deprivation.

Another topical General Practice phenomenon largely influenced by social determinants of health? Vaccine hesitancy. The General Practice offers vaccines opportunistically, and many also organise annual influenza/pneumococcal and biannual COVID-19 vaccine clinics. GP surgeries face many obstacles in immunisation, most notably with vaccine hesitancy in areas of social deprivation. The WHO places vaccine hesitancy among the top 10 global health threats. Many patients fall prey to vaccine conspiracies propagated by social media, e.g. the false claims of a causal link between the MMR vaccine and autism, a hesitancy exacerbated by the anti-vaccine activism that gained a foothold during the COVID-19 pandemic. (27) In addition, GP attendance issues in areas of social deprivation leads to lower vaccination rates. However, immunisation is an essential component of population health protection, and GPs must use motivational interviewing strategies and patient education to combat vaccine hesitancy and implement opportunistic immunisation where appropriate.

Vaccine hesitancy, BDZ addiction, poverty, unemployment, marginalisation of ethnic minorities such as Ukrainian refugees and the Roma community… the plethora of social issues I have encountered on my GP placements are merely the tip of the health inequity iceberg. Every little step makes a massive difference, with the "Books are Good for You" initiative illustrating the monumental impact on a child's prospects that even a few hours of intervention can have. However, change is needed at every step of the social ladder. There is an urgent call for massive governmental reform to target the structural barriers lying at the heart of health inequity in General Practice. Increased funding is needed in the community and voluntary sector, along with broadening of the tax base, nationwide expansion of the Roma clinic services, increased visibility for migrants in data collection and political campaigns, ending of Direct Provision, and ultimate restructuring of the healthcare system. The aim? To narrow the Gini coefficient, enhance sustainable migrant labour market integration, education access and housing stability, and eventually to achieve universal primary care coverage.

In the words of Martin Luther King Jr.:

"Of all the forms of inequality, injustice in healthcare is the most shocking and inhumane."

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The Art of Negotiation for General Practitioners: Strategies for Successful Patient Interactions & Improved Work-Life

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Introduction to Negotiation in General Practice

Have you ever left a conversation with a patient or colleague feeling you might have said or done the wrong thing? These moments are common for General Practitioners (GPs), where effective communication is key to patient care.

Our Role as General Practitioners

As GPs, our responsibilities extend beyond diagnosing and treating illnesses.

We serve as the primary contact for patients, guiding them through their healthcare journeys and addressing their concerns. This role involves educating patients, supporting them through challenging diagnoses, advocating for their needs, and sometimes presenting options they may initially reject. Each of these tasks carries the potential for conflict.

Beyond the clinic, GPs navigate a complex web of responsibilities: managing practice operations, negotiating with suppliers, and collaborating with multidisciplinary teams. These roles demand the ability to handle not only clinical challenges, but also interpersonal dynamics.

So how might we as GPs navigate these complex situations effectively?

Negotiation: The Skill Deficit in Healthcare

Medical education for GPs has traditionally focused on developing clinical competence, honing diagnostic skills, and refining communication abilities.

While communication skills are essential, they do not fully equip us to manage nuanced disagreements and conflicts (Berlin and Lexa, 2007). The reality is that excellent communication doesn't always prevent misunderstandings or align expectations. The skill of negotiation, which is the understanding of how to reach mutually beneficial agreements, is often overlooked; highlighting a skill deficit for clinicians (Clay-Williams et al., 2018, Pan et al., 2017, Berlin and Lexa, 2007). Current evidence suggests that our medical education does not provide training in this area (Berlin and Lexa, 2007, Simone et al., 2020).

I view negotiation as the next skill set to learn after communication skills to navigate complex situations effective. It's about fostering understanding and finding a shared path forward, even when perspectives diverge.

Demystifying Negotiation Skills in Healthcare & General Practice

One challenge for GPs is a lack of negotiation resources relevant to the complexities of daily practice.

The language and scenarios often found in negotiation resources can feel out of place in the clinical setting. However, by adapting core negotiation principles, a framework can be built for success in clinical and non-clinical interactions. Learning from other industries, where negotiation plays a pivotal role, can provide fresh perspectives and strategies. Drawing inspiration from Chris Voss, a former International FBI negotiator, and his book "Never Split the Difference". GPs can employ techniques like calibrated questions, emotional labelling, and tactical empathy within their clinical practice.

By borrowing effective negotiation strategies from fields outside healthcare, GPs can enhance their ability to navigate complex clinical and non-clinical interactions to arrive at collaborative solutions; reducing conflict, improving patient compliance, and navigating the delicate balance of providing guidance while respecting autonomy.

Ethical Considerations

Applying negotiation strategies in healthcare raises ethical concerns (Pan et al., 2017). There's an inherent power dynamic between a General Practitioner and their patient. Our knowledge and expertise can unintentionally exert pressure, leading to agreement without true understanding. Maintaining ethical standards means focusing on patient autonomy, ensuring they feel involved in their care decisions.

By differentiating clinical and non-clinical negotiations, we can establish clear guidelines for ethical interactions. For example, while it's appropriate to use more assertive tactics when negotiating contracts; clinical conversations demand a gentler, patient-centred approach.

General Practitioner's Negotiation Framework

Strategies for Clinical & Non-Clinical Interactions

Mirroring - Isopraxism

"Mirroring" or Isopraxism, is the imitation of gestures, movements or speech patterns to build rapport and relationships.

This step is a process of discovery in which negotiators should never make assumptions and remain open to surprises. The goal is to identify what your counterpart actually needs and get them feeling safe enough to talk about what they want. As a result, this step builds from communication skills GPs and clinicians are taught in medical school. Specifically, by creating trust and safety for a real conversation, making it about the other people and ensuring they feel heard.

Key Techniques for GPs:

- **Tone of voice** - Keep a calm and slow voice with downward inflection to make a point, creating an aura of sense of authority without triggering defensiveness in your counterpart. The key here is to relax and smile while you're talking. Avoid an assertive tone as this may cause pushback.
- **Repetition** - Repeat the last three words or the critical one to three words of what your counterpart has just said and most importantly, ***remain silent***. This makes them feel they have been listened to and encourages them to continue talking to elaborate on a point they have made.

How this looks in practice:

1. Calm soothing voice
2. Start with "I'm sorry …"
3. Mirror
4. Silence. Wait at least four seconds, to allow your counterpart reflect
5. Repeat.
6.

Example: ***Context*** - *A patient is hesitant about a recommended treatment.*

Doctor: *(using a calm, soothing tone) "I'm sorry to hear you're uncertain about this treatment. What is it that concerns you?"*

Patient: *"I'm worried it won't work and that I'll have side-effects."*

Doctor: *(mirroring) "Won't work and side-effects?"*

(Silence for at least four seconds to let the patient reflect.)

Patient: *"Exactly. I just don't want to feel worse than I already do."*

Doctor: *(mirroring again) "You don't want to feel worse than you do now?"*

(Another pause)

***Doctor**: "I understand. Let's address your concerns.*

Label their pain

In the healthcare environment, conversations can be emotionally charged leading to conflict, regardless if you are the patient, family member, or a healthcare professional.

Labelling is a method of validating someone's emotion by acknowledging it. In the context of General Practice, this involves acknowledging fears, frustrations, or hopes that may not be directly stated. This builds trust as it demonstrates you are listening and understanding them. It provides you with an opportunity to get close to a patient or colleague without asking about external factors you know nothing about.

<u>Techniques for GPs:</u>

- **Recognition**: Correctly identifying the person's emotional state, either positive or negative
- **Neutral Phrasing**: Use neutral statements such as "It seems like…", "It sounds like…", or "It looks like…". Avoid using the word "I" as it may raise the person's guard.
- **Allow Silence** - The last and most important part of labelling is to be silent and listen

The use of positive labels can help reinforce or encourage a positive perception; however negative labels can diffuse tensions. During this process, you may incorrectly label an emotion. If they disagree with the label, that's okay. You can always step back and say, "I didn't say that was what it was. I just said it seems like that."

In Practice: During discussions about chronic illness management, a GP might say, "It sounds like you're feeling overwhelmed with these treatment options," providing a safe space for the patient to articulate their concerns.

Trigger Positive Affirmation

In negotiations, the most valuable response you can receive is "That's right."

These words, or a similar positive affirmation, indicate that the other person feels genuinely understood. This reaction shows that you've captured their feelings accurately, paving the way for mental and behavioural change. It's a foundation for true collaboration, where the other person experiences a subtle yet impactful shift in perspective, feeling heard and validated.

However, if you hear "You're right, doctor," it's often a sign of compliance rather than genuine agreement. This type of response suggests the person is conceding without conviction, possibly as a way to exit the conversation.

To gain authentic buy-in, active listening is crucial, followed by a concise summary of the conversation. This process builds trust and solidifies the patient's understanding of the discussion.

Tools for GPs:

- **Effective Pauses**: Use intentional silence to give patients time to think and process.
- **Minimal Encouragers**: Employ short verbal cues like "yes," "I see," or "go on" to show you're actively listening without interrupting.
- **Mirroring**: Subtly reflect the patient's words, tone, or body language. This creates a sense of comfort and understanding, making the patient feel you're in sync with them.
- **Paraphrasing**: Restate the patient's words in your own language to confirm comprehension and clarify the discussion. This not only validates their thoughts but also helps you both stay on the same page.
  Example: After listening to a patient's concerns about starting medication, you could say, "So what I'm hearing is that you're worried about potential side effects affecting your daily routine."
-

The culmination of these techniques should lead to a summary statement that integrates tools like labelling and paraphrasing. This triggers the "That's right" response, signifying genuine agreement and a readiness to move forward in the negotiation.

Reframe the Conversation

Successful negotiation hinges on guiding your counterpart to explore solutions collaboratively. This can be achieved effectively through calibrated, open-ended questions that reframe the conversation in a constructive manner.
Calibrated questions are designed to invite dialogue rather than demand responses. They diffuse potential conflict by steering clear of confrontational statements or rigid requests. Instead of coming across as pushy, these questions encourage reflection and exploration. These questions are not about getting a quick agreement; they are about understanding the patient's perspective, which is crucial for GPs. Avoid questions starting with closed-ended verbs like "can" or "do," which lead to simple yes-or-no responses. Instead, focus on "what" and "how" - questions that open up the conversation.

Techniques to Reframe Conversations:

- **Shift Focus with 'What' and 'How'**: These questions allow you to dig deeper without making patients feel defensive. In practice, try, "How do you feel about the current care plan?" instead of, "Are you following the care plan?" The former invites discussion; the latter can sound accusatory.

- **Gather Information and Build Rapport**: Calibrated questions aren't just about problem-solving; they're about relationship-building. A question like, "How can we make this treatment fit better with your daily routine?" makes the patient a partner in their care rather than a passive participant.
- **Remain Composed and Redirect**: Negotiation isn't always smooth. If faced with resistance, take a breath before responding. Ask a thoughtful, calibrated question to steer the conversation back: "What do you think would make this work better for you?"

Sample questions to Foster Collaboration:

- What about this situation matters most to you?
- What steps do you think we should take next?
- How might we approach this effectively from your perspective?
- How did we arrive at this point?

By framing conversations constructively, we encourage active participation, leading to better outcomes and stronger relationships.

Achieving Buy-in: Beyond Agreement to Implementation

In healthcare, negotiation isn't just about hearing a "yes", it's about securing genuine commitment. For GPs, achieving buy-in means guiding patients from agreement to meaningful action.

Moving from agreement to implementation begins with clarity. Asking "how" questions clarifies roles and sets expectations. This ensures that potential barriers are addressed early.

Recognising non-commitment is crucial. If a patient says, "I'll try," it may signal doubt. Use calibrated questions to dig deeper. For instance, if a patient hesitates about a follow-up appointment, ask, "What would make it easier for you to attend?". This keeps the conversation productive.

Techniques for Effective Implementation

- **Clarify with 'How' Questions**: Use "how" questions to shift from abstract goals to concrete plans.
- **Notice Non-verbal Signals**: Watch for discrepancies between words and body language. If you sense hesitation, address it directly: "It seems like you are unsure, what concerns do you have?"
- **Utilise the Rule of Three**: Reinforce the plan by asking three variations of a commitment. For example, "How will you start?" followed by, "What's the biggest challenge?" and ending with, "What's your first step after today?"

- **Mind Pronouns and Responsibility**: Encourage ownership by focusing on patient-driven language like “I will” rather than “you should.”
- **Navigating 'No' Situations**: Rejecting a patient’s request without alienating them is key. If they insist on an unnecessary test, respond with, “How would this test impact your care?” and, if needed, “What alternatives might work better?”

Practical Examples for GPs

- To explore lifestyle changes, ask, “How do you see this fitting with your current habits?”
- In managing chronic conditions, prompt with, “What’s one small change you can start today?”
- In a team discussion, if you disagree, guide with, “What’s our fallback if we don’t see results?”
-

Buy-in is the start of a shared journey. By fostering clarity, addressing doubts, and reinforcing commitments, GPs can ensure that negotiations lead to real, positive change.

Strategies for Non-Clinical Interactions

The Mastery of No

Mastering the word "no" is essential for effective negotiation. In healthcare, understanding and using "no" strategically can lead to clearer and more meaningful outcomes.

While a “yes” can mean many things, “no” is clear and definitive. GPs can use “no” as a gateway to deeper discussion. When a staff member asks to alter their shift pattern, a reflexive “no” can help establish boundaries before collaboratively seeking a solution.

Not all “yes” answers are genuine. A “counterfeit yes” is often a tactic to end a discussion, a “confirmation yes” is automatic and lacks substance, while a “commitment yes” leads to real change. Discerning these differences allows GPs to move beyond superficial agreement and get to the root of the issue.

- **Counterfeit Yes**: A staff member agrees to follow a new protocol, but their behaviour doesn’t change - revealing a false commitment.
- **Confirmation Yes**: A reflexive “yes” to attending a meeting, but the person has no intention of showing up.
- **Commitment Yes**: A true “yes” that results in actions, such as adopting a new scheduling system after proper discussion.

Strategies for 'No' Negotiations

- **Force a 'No' for Clarity**: If a vendor or colleague is evasive, asking a question that invites "no" can prompt them to clarify. For example, "Would it be unreasonable to ask for an update by Friday?" encourages an honest answer.
- **Solution-Based Questions**: Pair "no" questions with constructive follow-ups. Questions like, "What would you need to make this work?" guide the discussion toward solutions, opening up a clearer path forward.
- **Mislabelling to Elicit a Response**: If a colleague seems disengaged, intentionally mislabelling their perspective, such as saying, "It sounds like you don't think this project can succeed," may trigger them to correct you, leading to a more open dialogue.
- **Ask About Barriers**: Use "no" to address challenges directly. Questions like, "What's holding you back from committing to this plan?" can reveal hidden concerns, making resolution easier.

The Power of Fairness

Effective negotiation transcends mere agreement; it is essential that the agreed-upon outcomes can be successfully realised and fair.

Fairness is a central pillar in effective negotiations, especially within the healthcare sector. Whether you are dealing with colleagues, patients, or stakeholders, cultivating a reputation for fairness can facilitate better agreements and outcomes. Understanding the emotional drivers involved can help tailor discussions that resonate, creating leverage and encouraging collaboration. Below are some techniques to navigate fairness-based negotiations effectively.

Techniques to implement for a fair negotiation

- **Anchor Their Emotions**
  Empathy is a powerful tool, especially in healthcare negotiations. Start with an "accusation audit"—acknowledge the other party's concerns and fears. For example, if a GP is negotiating with a hospital administrator about a new referral system, might start with, "I understand you might worry that this new system could place extra pressure on your team, especially with current resource limitations." Addressing their anxieties upfront frames the discussion constructively and highlights potential losses, like delayed patient care, if the agreement fails.
- **Let Them Go First**
  Encourage the other party to make the first move in negotiations, whether it's about treatment plans or resource allocation. This strategy can reveal unexpectedly favourable conditions or lead to insights you hadn't considered.
- **Establish a Range**
  Rather than providing fixed figures, offer a range based on comparable benchmarks

such as "Other practices have seen budget increases between 10-15% for similar initiatives." This approach softens the stance and encourages the other party to engage with higher-end possibilities.

- **Pivot to Non-Monetary Terms**
  Shift the conversation to non-financial aspects that benefit both sides such as leave or out-of-hours for example. These non-monetary options might hold more value for the other party, leading to a favourable agreement without compromising your key objectives.
- **Use Odd Numbers**
  When discussing figures, such as contract fees or budget allocations, opt for specific, non-rounded numbers like €7,248. Odd numbers suggest careful calculation, making the offer feel more credible and less open to negotiation compared to rounded figures, which can seem arbitrary.

Strategies for Salary Negotiation in Healthcare

- **Be Pleasantly Persistent**
  Focus on non-salary terms like mentorship or flexible work arrangements. This empathetic approach encourages a dialogue that's about more than just money, revealing broader possibilities.
- **Define Success Metrics**
  Outline what success looks like in your role linked to measurable outcomes, such as improved patient care or efficiency gains. This not only aids in salary negotiations but sets a framework for future opportunities.

By understanding the emotional underpinnings of fairness, you can guide discussions toward solutions that feel equitable to all parties, while maintaining focus on your objectives.

Limitations

While negotiation is a valuable tool for fostering mutual understanding and reaching agreements, it does have its limitations in healthcare.

Not every situation is conducive to negotiation, as this may prolong decision-making, leading to delays in treatment, which might not be feasible in critical or time-sensitive scenarios. Additionally, negotiations can be challenging when patients or colleagues have entrenched beliefs, making it difficult to reach a consensus. It's also possible that negotiation might give the impression of compromising on the best medical advice, leading to decisions that prioritise agreement over optimal care.

Therefore, while negotiation can enhance communication and patient compliance, it must be balanced with clinical judgement, ethical considerations, and the need for timely action.

Conclusion: Navigating Negotiation in General Practice

Negotiation for GPs is about more than reaching agreements, it's about understanding, empathy, and shared decision-making. Effective negotiation skills enhance patient care, foster better professional relationships, and streamline the complexities of practice management. These are the skills needed to navigate the intricate world of general practice effectively, ultimately benefiting both our patients and our professional practice.

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Words Can Heal – But Only If They Can Be Understood:

Translation Services in Primary Care in Ireland

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Access to healthcare is a fundamental human right, which is protected within the Convention for the Protection of Human Rights and Fundamental Freedoms [1]. However, several studies have documented many of the barriers faced by ethnic minorities or immigrants when accessing healthcare [2-4]. Ireland is becoming an increasingly diverse nation, with large numbers of inward migration. The adaptation of service delivery to meet the needs of residents of this country is central to the provision of excellent healthcare. The Irish healthcare system has not been designed or adequately resourced for such diversity and unprecedented challenges regarding a linguistically and culturally diverse patient cohort are now faced every day in general practice.

Formal Translator Services in GP

The population of Ireland is becoming increasingly multicultural every year, with an influx of asylum seekers, refugees, and ethnic minority groups. Following the existing direct provision system, many of these individuals are placed into state accommodation within lower socio-economic and underserviced areas. Caring for these new patients presents many challenges in the community, not least the sheer number of new languages spoken[5]. According to the 2022 Irish Census, 635,000 people in Ireland identify as Non-Irish, with 13% of those who do not speak English within the home indicating that they do not speak English well, or at all. The Census also estimated that 182 languages are currently spoken across the country [6].

The importance of non-paternalistic, patient centred care within general practice cannot be overstated. One should question how this model of care could ever be practiced or targeted to such a diverse population without an appropriate and efficient translator service available. Ireland has no professional interpreters that are directly provided to those in the GP setting, or any professional accreditation or formal training requirements for medical interpreters[5]. The HSE document *On Speaking Terms: Good practice guidelines for HSE Staff in the Provision of Interpreting Services* currently places the onus onto the GP practice itself stating "your organisation should check if the interpreters you are using have relevant qualifications". Interestingly, the very same document acknowledges that the HSE has a legal duty to provide this service under the Equal Status Act (2000) which prohibits discrimination based on race[7]. At present, interpreter funding is available on a case-by-case basis for GPs via their individual CHO office to access commercial interpreting services for face to face or telephone interpreting services[5]. However, confidence in accessing renumeration from regional health authorities is low in practices not regularly utilising these translation services [8].

It is important to note that Irish, and European, primary care settings often rely on informal translations by family members, even when said family members do not act in a caregiving role. This includes young children translating for their parents which can have implications for the quality of care received, risk stratification and patient confidentiality [9]. A systematic review of 28 articles by Karliner *et.al* concluded that in the US, the use of professional interpreters over ad hoc interpreters is associated with improved clinical care that approaches the quality of care available for patients without language barriers. However, it is crucial to highlight the absence of standardised measurements or quantification tools for determining a patients' need for a translator, patient proficiency in the translated language and the level of training obtained by translators in each study [10]. MacFarlane *et. al* documented instances in Galway where some immigrants had to rely on friends, who themselves had limited proficiency in English, to accompany them to medical appointments in the hope that together they may be able to communicate with the doctor. MacFarlane *et. al* concluded that there is a strong preference for the provision of a professional translation service within general practice surgeries but conversely, acknowledged the potential benefits of having a trusted family member or friend act as a translator [8].

The *Second National Intercultural Health Strategy, 2018-2023* provides a comprehensive strategy for tackling the specific challenges faced by health service users from diverse ethnic backgrounds, incorporating direct input from migrant communities. It establishes five main goals, one of which is to "enhance accessibility of services to service users from diverse ethnic, cultural and religious backgrounds" including a strategic objective to develop a model for interpreting provision across the HSE[11]. Unfortunately, many of the goals of this strategy remain unmet, in part due to the disruptions of the Covid-19 pandemic. Aside from these intercultural health strategies, there are no other regular or structured processes to allow migrants to voice their opinions or become involved in national healthcare decision making.

The Impact on Informal Carers

It is reported that approximately 12% of the population of Europe are carers, either formal or informal[12]. The economic value of informal carers in the UK has been valued as higher than the entire annual expenditure of the NHS[12]. Difficulties in communication with carers are highlighted throughout the literature including feeling condescended to, use of medical jargon, inconsistency of information and language barriers[3, 12, 13]. Continuity and reliability of service delivery must be a priority in the interactions between informal carers and formal services, and improving communication in the cross-cultural setting in primary care is key to this[5].

The importance of parent engagement in the treatment of children with disabilities is well established. Research has shown that attendance alone of the parent is not enough for treatment success and that parent participation and engagement is critical[13]. This becomes very difficult for the parent who does not have proficiency in English. Many other barriers also exist for immigrant parents such as confidence in healthcare professionals, religious and cultural differences, education levels and financial security. These barriers all contribute to lower engagement levels in their child's treatment and can result in poorer treatment outcomes[13]. In 2007, Staudt developed a framework to explain immigrant parent engagement in the care of the at-risk child[14]. The five main components of this framework are very relevant to primary care practice in Ireland today:

1. Treatment acceptability
2. Daily stresses
3. Therapeutic alliance
4. External barriers to treatment (including language barriers)
5. Cognitions and beliefs about treatment[14]

Although useful, this framework does not consider all aspects involved in the role of the immigrant parent as a carer, especially of teenagers and young adults with disabilities. Further complexities such as the onset of negative emotions, societal pressures and physiological changes occurring in adolescence must be carefully considered. Teenagers reliant on their parents with limited proficiency in English must first speak through their parent, who then speaks through the translator, who then divulges the individual's medical information to the doctor in a language the patient cannot fully understand. This process can be disempowering and lead to feelings of shame[15], which in turn hinder the encouragement and development of healthcare autonomy in the young person. Shame has been defined as a "negative emotion that arises when one is seen and judged by others to be flawed in some crucial way" and is associated with further reduced healthcare engagement[16]. Issues of confidentiality continue to arise for the young adult, such as when information can and should be given to the carer[12]. This potential invasion of privacy is challenging to navigate for individuals with no other means of communicating with healthcare professionals. This is an area that is under researched and warrants further discussion.

Encouraging Positive Engagement with Translation Services

There is a well-documented and researched gap between the development of evidence-based guidelines and the implementation of such guidelines into clinical practice[17]. The RESTORE study by MacFarlane *et. al* researched the utilisation of normalisation process theory (NPT) and participatory learning and action (PLA) to investigate how best to integrate new guidelines into routine practice, specifically guidelines concerning cross-cultural communication and use of translators in European countries[18]. PLA allows interested stakeholders, such as GPs, healthcare providers, immigrants and translators, to method-act scenarios that may arise and to plan together for positive action. Importantly, the RESTORE study noted the significance of involving migrant stakeholders in this research and the value of the fresh perspectives brought to the implementation processes [19].

A follow up study 3 years later confirmed lasting impacts from participation in RESTORE, including positive changes in attitude towards consultations with migrants as well as a sustained sense of empowerment amongst migrants when accessing healthcare [17]. However, Irish participants noted that although participating doctors knew accessing trained interpreters was often the correct step, adequate resources were not being provided by the health service to do so. Despite increased knowledge of issues faced by migrants and more proactive steps taken at the reception desk to improve communication, this fundamental lack of resources meant there had been no consistent change in clinical practice during consultations [17]. This underscores the necessity for the development of a nation-wide translation service for healthcare, which ensures accessibility and professionalism for every service user.

To provide appropriate care for patients with limited proficiency in English, and to develop truly collaborative relationships between carers and healthcare professionals, mechanisms to accurately translate consultations are imperative. General practice in Ireland requires the urgent development of accessible, appropriately trained translator services to provide adequate and standardised care across communities. Changes are required at government and HSE level to achieve this, and to ensure that the wants and needs of these patients are not ignored. This is a cohort of patients for whom self-advocacy is challenging and we must ensure that we collectively strive to offer equitable healthcare to all those who require it.

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A Discussion on Utilising PILs to Promote Health Equity in General Practice

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Autonomy is one of the four key principles that underlie medical ethics and healthcare provision. Autonomy has many aspects including the right to control over one's life (Quinn and Smith,1987) and the right to decide or freedom of choice (Otte and Allen,1987) (1). For patients to exercise autonomy, they must fully understand their health conditions. Comprehensive knowledge of biological processes enables patients to make informed decisions regarding prevention and treatment. General practice offers an ideal environment for patient education, which is particularly vital for individuals from lower socioeconomic backgrounds, ensuring equal access to autonomy in healthcare. The question is whether general practitioners (GPs) are fully addressing this potential health inequity and what resources could support them.

Earlier this year, I volunteered at a women's addiction rehabilitation day service in Dublin to provide education on COPD. The participants were highly engaged, asking insightful questions—some I hadn't anticipated, and others that highlighted a surprising gap in their knowledge, such as the link between smoking, breathlessness, and COPD. Their enthusiasm was evident as they took detailed notes and eagerly interrupted to clarify the meaning of some statements. It was obvious no one had explained anything about their condition before despite many of their COPD being very advanced. Education on their health status had not been a priority and they were suffering the consequences. All of them still smoked, and many did not take their medications as they were not aware of the benefits. They explained they felt more empowered afterward and were extremely grateful for even that short session. I left wishing I could contribute further.

The Inverse Care Law developed by Dr. Julian Tudor Harte states that the "availability of good medical care tends to vary inversely with the need for it in the population served".(2)In this context, populations of lower socioeconomic status often experience poorer health outcomes, yet interventions designed to increase their knowledge and understanding of their health may not be accessible to them for example they may be at a too high reading level. GPs need to recognize this disparity and actively provide resources to address and mitigate these health inequities, especially when they consider the demographic of their practice.

The WHO emphasises that a well-functioning health system must provide equitable access to people-centred care.(3) Similarly, the Healthy Ireland Strategy 2013-2025's goal 2 is to reduce health inequities. They hope to achieve this by reducing the gap in premature mortality, increasing healthy life expectancy at age 65, reducing the low birth rates, and increasing the proportion of children reaching a good level of development at age 5(4). Patient education is a cost-effective, efficient, and impactful way to achieve these aspirations, enhancing both the healthcare system in Ireland and the delivery of a more efficient, holistic GP service.

Many factors contribute to inequalities in health outcomes, such as poor access to healthcare, suboptimal living conditions, and lack of a stable home. Specifically, we can see how inequalities impact people's health in Ireland. Life expectancy is 84.4 in the most advantaged areas for men and 79.4 in the most disadvantaged areas for men. There is a 4.5-year difference for women.(5)Chronic disease rates in low socioeconomic status are 47% compared to 23% of the general population.(6) 5,400 deaths could be prevented a year if social inequalities were reduced.(7)19% of unemployed people reported having unmet healthcare needs compared to 12% in employment in the last 12 months (8). As a society, there needs to be changes to reduce these inequalities and health inequities. One way to do this is to provide inclusive health education.

Inclusion Health, a recently developed service at St. James Hospital, is the first of its kind globally. It is designed to address the complex and unique health needs that marginalized populations have. Marginalised populations include the homeless, people affected by drug use, refugees, and the traveller population. This innovative approach highlights that healthcare interventions for excluded populations need to be tailored as their health challenges are different from the general population. Applying this idea to general practice can also help reduce health inequities experienced by these populations. One way to adapt general practice to this idea is to tailor patient information leaflets (PILs).

The use of ED by homeless populations is just not for alcohol withdrawal, dependence, or intoxication but also for flares of chronic conditions that are poorly controlled(9).In a study of Dublin's homeless population of 2008, only 18% of those with asthma were on respiratory medication and 50% of those with epilepsy were on antiepileptic medication. (10). Despite representing 0.4% of the catchment population of Dublin Hospital St James they represent 6% of ED attendances(11).In 2015 89% had a diagnosed physical or mental health condition(12).

In the AITHS and Lifeway studies 49.6% and 62.6% of travellers in ROI and NI respectively report difficulty reading the instructions on prescription medications. Only 71.2% (ROI) and 64.7% (NI)can read and fill out forms -13.9 % (ROI) and 23.2%(NI) with difficulty. Male life expectancy is 15 years less and females 11 years less compared to the general population. This report indicated that the use of GP services by the GP community was “patchy” due to physicians not explaining conditions or treatments in a way they could understand, that it became a physician-centred consultation(13). Educating these

populations who are suffering the worst health outcomes in Ireland will not only greatly benefit their health but also enhance their relationship with the HSE.
The general practice is a unique setting in healthcare as it is not only the first contact of the HSE but also plays a crucial role in the continuity of care. According to the Healthy Ireland Summary report, patients visit their GP on average 4.5 times a year, thus, it is natural for them to build a relationship with their GP, creating a strong patient-doctor relationship.(14) There are many other principles of general practice including preventative care, patient-centred medicine, and reducing socioeconomic disadvantage.(15).These principles can be enhanced through the provision of health education.

General practices are under immense pressure in the HSE with 21.4 million GP consultations annually, each lasting an average of 13.7 minutes. (16) GPs are tasked with addressing patients' concerns. To add comprehensive patient education may seem unrealistic, however, it will be beneficial in the long term. Fortunately, there are resources available to support GPs in providing patient education without significantly extending consultation times. One study showed that 48.8% and 26.8% of healthcare professionals (HCPs) find that patient education is always or usually important in ambulatory settings. However, 42.2% reported limited time for adequate patient education in these settings.(17)The use of PILs will be able to bridge this gap.

Shared decision-making is another key aspect of general practice, but this requires a certain degree of health literacy for effective communication between the GP and patient.(18)A key distinction between hospital care and general practice lies in the approach to shared decision-making. In hospitals, it is not uncommon to encounter patients left overwhelmed after ward round, inundated with medical jargon and complex concepts, their confusion evident as they hesitate to question a doctor who is already moving on to the next patient This scenario contrasts sharply with general practice, where patients often arrive with a list of concerns, eager to discuss their thoughts and seek the doctor's professional opinion. These contrasting images highlight the unique opportunity GPs have to enhance patients' health literacy.

Health literacy is “ defined as the ability of an individual to obtain and translate knowledge and information to maintain and improve health in a way that is appropriate to the individual and system contexts”(19). The benefits of improved health literacy are that patients would be more equipped to prevent disease (or disease progression), make more informed medical decisions, and be able to manage their conditions better. Additionally, improved health literacy can enhance patients' mental well-being by increasing their sense of control over their health. A 2011 study showed that low health literacy was associated with increased use of emergency care, greater hospitalizations, less ability to take medicines appropriately, inability to interpret labels and health messages, and in the cases of the elderly poor overall health status and higher mortality rates.(20).In addition, another study found it was linked to poor medication adherence, poorer healthcare interactions, and low levels of preventative health service utilization.(21)

Improved health literacy will have a significant beneficial impact on general practices. Patient education in COPD patients following a 12-month follow-up showed they had an 85% reduced need for GP consultations, reduced need for reliever medication from 290 to 125 DDD, and improved satisfaction with the overall handling of disease at GP. This resulted in improved patient outcomes and reduced costs as a result of the intervention.(22). Numerous studies have underscored the benefits of patient education. A systematic review of patient education for maternal health found that 38 of the 55 studies found significant positive impacts including an 83.3% increase in knowledge, 73.7% emotional benefits, and behavioural changes of 60.6%. This study found that videos found the highest rate of positive outcomes in patients, but online or physical articles are the most cost-efficient educational resource.(23)

Not only will an improvement of the population's health literacy have a benefit individually, but also economic benefits. A 2022 study on education intervention for patients with type 2 diabetes emphasized that all types of educational interventions are likely to be cost-effective.(24)One literature review concluded that 82% of studies found patient education programs to be an effective way to reduce costs and have a positive economic impact. This is due to fewer visits to the GP and reduced loss of production.(25)

Patient information leaflets (PIL) have been developed to help GPs meet their goals of patient education while performing their other roles. Dixon-Woods describes that not only are PILs for improving patients' understanding biomedically and help in terms of communication but also for patient empowerment.(26) It is commonplace in a waiting room for patients to be surrounded by PIL and posters on various medical conditions, and at the end of a GP consultation to be handed one. A French study concluded that the provision of PILs improved patients satisfaction with healthcare, and reduced the need for consultations for the same pathology. (27)One Belgian study emphasized the impact of these PILs. 94% of respondents stated they read the PILs, 45% took the leaflets home, 19% of respondents reportedly discussed the content of the leaflets with their physician and 26% indicated that leaflets allowed them to ask fewer questions of their physician. This indicates that when provided PILs are used and can help support consultations with GPs. Of course, they should not replace the consultation but provide enhancement of their effectiveness. Many patients are overwhelmed with all the information they receive in the consultation and may find it hard to properly think of questions or retain all the information, PILs could help with this. (28). However, although PILs are beneficial to the general population as evidenced above, are they excluding a proportion of the population?

Health literacy is reported to follow a social gradient, with those of a lower socioeconomic status or low education levels having limited health literacy.(29) Ireland is found to have inadequate health literacy rate of 40%.(29)WHO describes health literacy as crucial for attaining the social, economic, and environmental goals of the 2030 agenda for social development.(30) Evidence from a national population survey concluded that improvement in health literacy may reduce chronic disease prevalence, reduce smoking levels, and result in fewer hospital visits. The impact would be most evident in lower socioeconomic groups thus bridging the gap in health inequities.(31)

Research into the spread of online misinformation is growing, particularly as internet usage rises and patients increasingly seek to understand their conditions. While turning to the internet is expected, not all sources are trustworthy. Patients must be empowered with accurate information. A study of articles shared on popular social media platforms in genitourinary malignancies found that 70% of articles on prostate cancer were inaccurate or misleading, and 30% of kidney cancer articles. It also found that inaccurate articles were 28 more times likely to be shared than factual ones.(32) When patients are fearful or uncertain, they often turn to the internet, making them more susceptible to misinformation, which can be difficult to correct once accepted(33). Also, there is an inverse correlation between education levels and acceptance of misinformation, as education decreases, misinformation acceptance increases.(34)Thus general practices must provide the reliable information they need.

As previously established, most patient interactions occur within primary care, making it imperative that resources in this setting are inclusive of the general population, especially the disadvantaged. A study conducted in Stoke-on-Trent, an area of lower SES, analysed 345 PILs from 17 general practices based on literacy skills of the area and using Flesh and Flesch-Kincaid reading scores, 43% were at a level too complex for the general population, and only 24% were written at a level recommended for written health materials.(35).In addition, this study looked at the content of the PILs. Rudd (2007) suggested a framework encompassing five key areas that health reading materials should cover to effectively promote health.(36).While all the PILs covered one of these areas nearly half (48%)were concerned with system navigation while 10% were with health care and management and 5% with health promotion. This is a serious gap as excluded groups particularly need education materials that promote health literacy and understanding.

Another study of information leaflets provided in general practices in Wessex on hay fever found that all 38 leaflets identified required at least secondary education(SMOG score equal or greater than 0)and less than half contained information on the full range of management and treatment options.(37)One study focused on the suitability and readability of educational print resources related to physical activity and found that 30% of the 66 resources assessed were not suitable for the general population. The average reading grade level needed for these resources was 10th grade despite Doak et al recommending a 6th-grade level for educational resources.(38)

Readability scores exist to help assess the level of education needed to understand written texts. Many different ones exist including the Flesch Kincaid score. This is the most well-known and most used in assessing health information with 57.42% of 272 articles using this readability scale. However, it is concerned with sentence length and the number of syllables per sentence and thus it may not be suited for assessing health information leaflets as it overestimates readability. This paper recommends the SMOG formulae for healthcare content. It is assessed on the number of polysyllabic words in a text and the number of sentences. This paper further highlights how choosing universally applicable readability formulas will allow the easier assessment of PILs in terms of understandability and therefore help GPs choose which should be shown in their practice.(39)

Readability is an important consideration for PILs, but visual learning should also be considered, as some individuals, especially disadvantaged ones, may comprehend information better through images. One study compared two brochures, one with simple information in bullet points and another with more complex text accompanied by illustrations, and found that 61% of poor readers preferred the illustrated one (40). One systematic review emphasizes the need for standardization of PILs to maximise their effectiveness. This review provides a checklist to achieve this including simple vocabulary, encouraging patient interaction through questions, and avoiding small font size, all of which will help those with low health literacy.(41)

PILs must be tailored to address the specific needs of disadvantaged populations. While current PILs in general practice often focus on common conditions like COPD, diabetes, and asthma, which certainly affect marginalized groups, these populations may also require more foundational health education. For instance, a leaflet may explain the benefits of metformin for diabetes, but some patients may lack a basic understanding of the pancreas, the nature of their condition, or the reasons for monitoring their sugar intake. It is essential to develop PILs that consider these knowledge gaps and provide more accessible, comprehensive explanations. When adapting PILs for lower socioeconomic groups, it is essential to account for the unique challenges they face, such as limited time, food insecurity, caregiving responsibilities, and the lack of basic health knowledge.

Members of marginalized populations may face financial barriers that prevent them from accessing GP services, as well as challenges in taking time off work or caregiving for appointments. Therefore, outreach efforts are essential to ensure they receive the education and care they need. Knowing that healthcare providers are actively reaching out can help build trust within communities, such as the travelling community. General practice consults can cost between 60-80 euros for non-GMS card holders. 1 in 4 patients are deterred from accessing

GP services due to financial reasons. (42).It is important that these populations are not missing beneficial patient education. Educational materials can be disseminated via a patient portal or for those with limited access to technology (which is very common in disadvantaged groups) they can be mailed.(17)

There is also the issue of language barriers. In 2022 751,507 people spoke a language other than English or Irish at home, an increase of 23% from 2016 (43) .More patients accessing the general practice need translators, this is a huge barrier to patient education. Patient leaflets on the HSE website for healthcare-associated infections have only been translated into Irish, French, Polish, and Russian. This means many people may be missing out on important health information, that the general population has access to.

To truly reduce health inequities there needs to be a focus on alleviating poverty and deprivation(44).In addition, harm reduction strategies such as safe injection site programs, expanded screening efforts, and reducing societal prejudice, are essential. Efforts to increase school retention rates of children in school, lower the percentage of individuals at risk of poverty, and increase self-reported well-being across socioeconomic groups as suggested by the Healthy Ireland Strategy will also have benefits(4). In the interim, providing tailored PIL can improve health literacy, thereby enhancing health outcomes and fostering empowerment in lower socioeconomic groups.

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‘My Granny’s Hip’

***Author*: Sinéad Kelly, Undergraduate, 4th year TCD**

I am as old as my Granny’s hip.

Five-year-old me did not quite understand what this meant. My anatomical knowledge was understandably lacking, but it sounded like something incredibly important, other than my arrival into the world, also happened on the 11th of March 1996. A different kind of birth; a rebirth. A burst of life into her new world, my Granny would reclaim her mobility, bouncing up the stairs without grimacing in agony and getting back into her 1987 Renault Cleo to drive three miles into the village for her morning messages. With a newfound freedom in unchartered retirement territory, my Granny broke free from an anchor stuck in shallow waters.

“You were born the same day as your Granny got her new hip,” echoed throughout my childhood annually on my birthday and the ‘hip anniversaries.’ I could not comprehend why a hip was being celebrated as much as my birthday was. To be honest, the hip stole my thunder. Granny had her own birthday, why does her hip also get one? What was so great about a hip? What even is a hip? As the youngest of five children, I was selfish and obsessed with the righteousness of all things, especially birthday celebrations; how many slices of cake everyone dared ingest, the number of glasses of unallowed fizzy drinks were had, how many people attended each birthday party. The idea that Granny had two birthday celebrations each year was unfathomable.

“If Granny’s hip can’t even eat, why do we have two cakes every birthday Mam?” I scoffed one year as my birthday drew to a close and I preemptively mourned the 364 non-birthday days to come. She didn’t like that one.

“Don’t be so bitter Sinéad, that hip saved Granny’s life,” said Mam.

“Saved her life? ‘How can a hip save a life? The hip isn’t superman, Mam, or like Cú Chulainn or even St. Brigid.” They were lifesavers. My mind dashed to my brother’s Superman comics.

Superman was stopping wars, tackling white supremacy, and even saving cats from trees on his way home from lifesaving. Cú Chulainn held the wretched Queen Maeve back from the North's invasion and St Brigid seemed to be the best of them all; curing the ill and feeding the poor. Muinteoir Pól had told us as much. Were they not the only lifesavers? How, on god's earth, a body part could, even in part, emulate the lifesaving capabilities of these legends, was beyond me.

Granny would bring me for a walk to the playground telling me that, without the hip, we wouldn't be able to take our weekly excursions to the local park. That without the hip, she wouldn't be able to bring me for a 99 on a hot summer's day. Without the hip, she wouldn't be able to go and get my birthday present in Blanch. This led me to think of all the other things that Granny might not be able to do for me if it weren't for her hip. She couldn't collect me from school when I wasn't feeling well. Or bring me to my brother's football matches (which I adored attending) or even come and visit us every Sunday accompanied by an assortment of *Dairy Milk* chocolate in her glove compartment. Each Sunday, we'd scurry out to see what bars she had brought that week, careful to make a speedy dash for it to avoid being left with the absolutely disgusting *Turkish Delight*. And there began my change of heart for the little hip. Maybe, just maybe, the hip wasn't as much of a villain as I had painted it as, and was in fact a force for good. Perhaps this intrinsic link with Granny, that only I shared with her, was more of a superpower than an infringement. Perchance, it made me just even a tiny, littly, wincy bit special. Although I had fully accepted my role as youngest child at this point, shouting the loudest and making sure everyone knew how I was feeling at all times, I didn't think all twenty eight other grandchildren would be too pleased about my superior connection with Granny. Smugly, I kept it to myself.

Granny recalled the surgery in Cappagh Hospital; setting a Sweeney Todd-esque scene where she told me she remained awake for the entire surgery, as the doctor in a peculiar tortoise-emblazoned hat, blared classical music to drown out the drills in the background. "He was a sight for sore eyes," swooned Granny, while she reported that this simple fact got her through the entire operation. I feel she was surely given some mad medication, even Granny isn't that strong. A new hip. It is a peculiar thought as a child. The idea of impermanence bewildered me. The idea that your perfectly functioning body would one day require changing or fixing was sincerely mind-boggling. I imagined the whole process to be similar to my hours spent moulding play-doh into stick people, manipulating some gooey textures and filling holes where they needed to be filled. I liked play-doh, but I didn't much fancy the idea of Granny having drills and doctors and loud noises surrounding her while they moulded her hip. She created such a vivid scene, I can still picture her sitting at the kitchen table yapping through the ordeal as if she were talking about someone elses’ experience. My Granny was so brave.

It was generally easier as a child to consider immediate effects on oneself than greater conceptual things like sickness, especially family members being sick. Everything needed to stay the same. Noone was going to age and noone was going to get sick. That was how it went, I was sure of it. I began to hate all my older relatives talking about anything to do with sickness, or aging. I did not want any change - I was in denial. Couldn’t they just go and get a new hip? It seemed to work for Granny!

“You’ll understand it more when you’re older” Mam said to me whenever I would quiz her about the long and boring adult conversations I would have to endure. Being the youngest child in a large family was great in lots of ways, you got the tired relaxed version of your parents and lots of grace when it came to rules. But, then there was the house visits, accompanying my mother visiting older relatives. Don’t get me wrong, there was lots of biscuits, but there was also lots of boring conversations about who died and when and how they died and how their family were. I didn’t think I’d ever understand that, even if getting older was going to happen.

Like most children considering the idea of illness and getting older, I was petrified of what that looked like. As far as I could recall, hushed tones, serious faces and cold body language only ever followed talk of people getting sick. I had bad feelings when people talked about illness, my stomach would turn and I would feel sad, as if something bad was about to happen to me. When I was four years old, I had my first encounter with death while accompanying Mam at her uncle’s funeral.

“He’s your great-uncle, that’s why we are going” Mam said.

“I never even knew him Mam, what was so great about him?” I retorted. I had big intentions for that day that were now being scuppered by plans to go to a funeral. Amy, my best friend, had invited me over to see her new baby. Not only did I think it was dreadfully unfair that I could not have my own little baby (notwithstanding my pleas with Mam) but now I had to miss my opportunity to convince Mam to get a new little baby and I had to go somewhere far away where I knew noone. On arrival to the funeral home, I recall feeling the cold air in the room, hearing the stifled sniffles and seeing the tears streaming down everyone's face. I was very confused and I couldn't quite capture why everyone was so upset and morose.

"Mam, why is everyone crying? Sure, is he not the lucky one that the holy ghost has taken him up to God?" I articulated as much to Mam and, apparently, the quiet room of mourners, not quite mastering a whisper. The room exploded in high-pitched laughter. My naivete and a surplus of time spent with my religious grandparents demonstrated their hold on me at this point to my mortified mother as she turned purple, shushing me with her hands, eyes and her lips.

Accompanying me through to adulthood, the bones of this empathy has felt it's way through adolescence and permanently burrowed its way to a permanent place at the forefront of my being as an adult. The lifesaving hip etched a permanent carving in my mind, and I would think about it almost weekly as I flipped through the options on the CAO. A chemist, a baker, a doctor, a nurse, a radiation therapist, a teacher. No, no, no, a nurse, NO, a doctor. How could I be as effective as Granny's hip? Not to save a life like St. Brigid, but to be impactful? This concept of 'lifesaving' took a hold on me. Is anyone saving anyone's life or are people more impacted by things like a hip or a friendly dog? I wondered as a seventeen-year-old, not studying for my leaving cert when I should have been, but lying on my bed constructing long, tangential answers to life's moral questions.

Crowned a lifesaver by Granny, the hip was the protagonist of her later life. So, who really were these 'lifesavers'? Was it the legends of old? Nurses? Doctors? Firemen? Or was it total hip replacements that were the true lifesavers? As I lay on my bed wondering what to do with my life, it dawned on me that it wasn't really any of those single entities that ultimately save a life, but more the sum of all their parts. The hip facilitated a whole new lease of life for Granny and enabled her to reconnect where she felt disconnected. My glamorous vision of lifesaving - rescuing people from buildings or preventing warfare - were just that, glamourised tales. Connection is the real lifesaver, I concluded. Connection is what really matters. Granny's joint, replaced artifically with means of superior surgical connection, allowed her to move forward, to pivot and to rotate her movements in a manner that she could decide herself. She was the master of her own connections from that point forward, but she was given the means to do so with the help of a seemingly handsome anaesthetist in Cappagh Hospital.

A facilitator of connection. I could do that. That seemed really cool. I preferred that turn of phrase to “I’m doing medicine in Trinity”.

“Wow Sinéad, you’re doing medicine! … in Trinity!”

“Top points, you must want to be a doctor do you?”

“You must be a genius are ya? Jees you’ll be set for life”

The comments flooded in on the day of CAO offers and I’d somehow succeeded in getting medicine. I didn’t like the attention, but it felt like a tenuous link to bring everyone along with me, to tell them about the hip and the connection and how Granny’s tenacity had brought me to this place. It was sad thinking about it, how Granny might have been on that day, if she would have been proud of me or made some inappropriate joke but she had died six months before this point. Fondly, I recalled our last few days with her and her final words to me; “Sure I’m the hip Granny, aren’t I?” she sniggered, humourous, even on her death bed.

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How Far Do You Have To Go?

Author: Dorse K, Undergraduate, 1st year University of Limerick

It's been an hour and a half since I turned the car around to come to this walk-in clinic. The sharp pains on my right side were getting too frequent and too sharp. I'm hoping my friend understand why I never made it. This clinic is larger than my family doctor's office. Staff includes nurses and a triage section. I noticed the ultrasound signs and the laboratory. I'm an impressed patient.

Another half an hour pass. The doctor comes in. He is young. I'm trying to estimate how long ago he graduated. I should stop doing that. He looks tired. I feel for him: what time is it? 8:30, 9 pm? and he has 1.5 hour more to go. And he must chart afterwards as well. Poor thing! How many times did he listen to patients history today? How many times did he try to conceal the fading focus in his eyes? I'll try not to ramble on, so I don't tire him any further. Afterall, I'm just another female patient presenting with pelvic pain. I don't expect him to know women understand the difference between cramps and sharp pain.

"So, you've been having sharp pains in your one side?"

"Yes, sometimes right, sometimes left. Mainly on the right".

"How would you rate it on the scale 1-10?"

"It was very bad last time. Maybe an 8".

After a few more brief questions, the GP writes for a urine test, blood work and a vaginal swap. He asks me to change and immediately leaves the room.

I stand there, alone, confused and frozen, not knowing what to do. What examination? Vaginal what? Is it going to happen? I must be professional. This is routine for everyone. I know I might be a special case here, and if this is the way it is supposed to happen, then it will.

I bounce between being calm and getting anxious. I try to subdue my emotions, but I also feel sad. Sad, as I didn't have a chance to tell him that I'm not sure how far he can go, and that I'm worried about the consequences of this swap. He just left. Was he thinking about STDs? He didn't even consider the possibility that some of his hypotheses may be irrelevant to my case. He assumed I'm just like any mid-20-year-old.

I feel silenced, misunderstood, not heard to, not seen and rubbed off my dignity a little. How would I bring this up now? With my legs up? I feel I'm put into a situation and it's my own fault to not have avoided it prior to coming to this clinic. I'm questioning my life choices now: could have had a boyfriend in my undergrad years. I should have lived more. But who had the time?! I was always focused on grades and how to get into medical school.

I accept my fate and climb the bed. My whole body is in shock of what I have just accepted, and my mind is too embarrassed to challenge it. Embarrassment of being raised in a different culture, different values and being too focused on studying and not living as much.

The doctor comes in with a female nurse. Great! Another person to be humiliated in front of. I know she's there to assist with the examination, but my mind is relieved and angry at the same time. Relieved that there is a female figure, but angry that someone else is to witness my misery. She's probably my age too. Wonderful – she will certainly judge me. She will think I'm a backwards girl from a country she does not know much about. Seeing a parallel of herself in me, she will be probably count her lucky stars that she grew up in this country. 'it's not what you think!' I want to yell. I feel my cheeks are getting warmer. None of them hear the cries in my brain. I don't even want to cry, merely to disappear. Why did I even come tonight? Could have been with my friends! We could be having tea together right now. Sharp pains could be serious, I remind myself. It had to be done.

I suddenly wonder, how is my face looking? Do they not see me? If only they took a good look at my facial expression, they would surely be able to tell. They're both facing away from me, preparing something on the counter.

All these thoughts in the matter of seconds. He comes closer to the other end of the bed. I feel bad for him too. "I'm embarrassed for both of us, doctor! I'm so sorry!" Another cry nobody hears.

The nurse is standing near my head; she asks me to open my legs and as the doctor is about to sit down at the end of the bed, I finally utter out the least embarrassing phrase I could think of:

"I'm not sure if we can do that, though"

"Are you concerned about something?"

"I'm not sure how far you can go, actually."

I'm hoping if not my words, at least my eyes may have given it away.

The nurse is confused. The swap in her hand in lingering in the air. We resemble a two-man show on a theatre stage as we think to recall our unprepared lines, carefully uttering each word to not ruin the context nor break the invisible fragility of the situation. Our one member of the audience is sitting on his stool near my legs, trying to make sense of this confusing conversation, implications of which are very relevant to him. He is doing a fantastic job at not letting his confusion intervene with how the scene unfolds.

Silence.

A few seconds pass by.

I’m holding my breath unconsciously.

“Have you not had sex yet?”

I’m grateful to her brain.

“No.”

Finally.

I detect the slightly raised eyebrows, but I’ve done my part. The stage is yours, madam.

Our roles are swapped: now she does not know what to say or how to react. I know she knows my age. I wish she knew this is embarrassing for me too.

They exchange a look. Now would be a good time to find a hole in the ground to disappear into. Some theatre stages have one.

“In that case, we will ask you to do it yourself.”

The nurse shows me the washroom and asks me to bring the swap back and leaves. The doctor has already jumped out of the room. Good call. Save yourself.

I feel this will not be an accurate swap test but that does not matter. I fly off the bed. I had never missed my undergarments this much.

***

It has been more than a year since the walk-in clinic, but the pain has been back for a few weeks. I was hoping I would not have to, but I finally visited the doctor. My family doctor ordered an urgent ultrasound, and I was lucky to get an appointment in less than 2 weeks.

I’m happy for this wait to be over. I like ultrasounds, and I know I have drunk enough water. I’m already thinking about what to eat afterwards. Maybe a breakfast bagel at the cafeteria?

The appointment is going well. She is a lovely technician, and I can see she is trying to be delicate with her movements. I feel very relaxed, and am ready to get up, right before she says:

“Now, we will do the vaginal ultrasound”.

Suddenly, all the joy for that breakfast bagel vanishes ruthlessly.

“Sorry, for what?”

“The doctor has ordered a vaginal ultrasound for you. We won’t go very high up, but it might be a little uncomfortable at first”.

Freezing.

I’m sure my family doctor did not tell me anything about a vaginal ultrasound.

“Um… How far do you have to go?”

“Well, we have to go a little bit, did you have any concerns?”

She observes my face.

I have experience now. I can show the problem with my face, even if I have not gained the courage to say it out loud.

“Have you not had sexual intercourse?”

“No.”

This time it takes much less for someone to figure it out. I’m no longer an awkward-conversation-virgin.

The technician’s years of training in professionalism was not enough to for the hypervigilant and embarrassed me to catch the slightly turned up eyebrows.

“No worries, I will let your doctor know that we didn’t do this part. She will be in contact with you regarding the results.”

“Thank you.”

Once more, I walk away feeling like a failure. A failure to assimilate into this culture. A failure to understand values and norms. Back home, this question, this type of ultrasound, most probably would not have been ordered for me unless I prompted it. Ultrasound orders, swaps and assumptions are different. Everything is defaulted differently. I wouldn’t be a failure. I would be an independent girl who does everything alone without the help of a boyfriend.

I tuck myself into the washroom. I don’t have much appetite for the bagel anymore.

***

The two encounters above describe the experiences of a Middle Eastern young lady in her mid-twenties who sought healthcare in Canada. She presented with lower right abdominal pain. Both encounters with the GP as well as the ultrasound technician caused her anxiety due to the stigma around having an intact hymen which she perceived as a lack of cultural assimilation in the host country. This anxiety was compounded by the initial GP not raising the possibility of having an intact hymen and lack of clarification by the healthcare providers' regarding the subsequent tests and vaginal ultrasound. This raises the question of whether the situation could have been mitigated if not entirely avoided, had the initial history taking included the question of ever being sexually active. Moreover, informing the patient in the diagnostic process and ensuring her comfort with having a vaginal ultrasound could have clarified the situation and reduced patient anxiety.

While these steps might seem negligent, they could have a deep impact on immigrant populations, in how they seek healthcare services, the trust and safety felt in their interactions with their healthcare providers and how these interactions can affect their sense of belonging to the host country. While these encounters had taken place in Canada, the implications of them were deemed relevant to Irish healthcare services.

It is unrealistic to expect all healthcare providers to be competent in all the cultures they will encounter. This may be even more difficult in countries with high rates of immigration. However, it may be worth while to build knowledge when having sensitive conversations or ordering tests that may cause anxiety for patients. Culture does not appear in a physical inspection or bloodwork yet affects the patient's overall wellbeing, their perception of health and how they respond to healthcare services. Therefore, it's important to leave room for the things we do not see as well as for how they affect what we do see.

It may only be a handful of patients a year but ask the question. Ask the sensitive questions that can save the patient much anxiety and offer clarification. It is also advantageous to the physician, as the pieces of information could change the course of treatment and help rule out hypotheses in the diagnosis. Even if renders to be without contribution to the diagnosis, it illustrates understanding, care, respect and for the patient on the receiving end, it can mean they are in a safe space.

With Ireland being a country with a large immigration population, immigrants' utilization of the Irish healthcare system is inevitable. The immigrant population in Ireland increased to the significant number of 98,700 in 12 months prior to April 2024 (Central Statistics Office). Among them, 86,800 individuals were citizens from other countries other than EU and UK (Central Statistics Office). The increase in the immigrant population raises the question; how can general practitioners in Ireland enhance their consultation interactions with immigrant patients to better meet their needs? Cultural competency might be one solution.

Barlow et al. suggest that there is a lower use of healthcare by non-native individuals who are born outside UK and are living in Ireland relative to the native Irish population, which may be due to different approaches to healthcare utilisation or obstacles to healthcare utilisation (Barlow et al., 2022). One of the obstacles in accessing healthcare among immigrants is cultural barrier (Rade, et al. 2018). For instance, barriers to access healthcare services in migrants from Sub-Saharan Africa and Southeast Asia living in high income countries were stigma, cost, having difficulty navigating the Irish healthcare system and lack of cultural competency (Rade, et al. 2018). While there are differences in each immigrant population as well as the host country, these factors can be considered when discussing such healthcare barriers for immigrants in Ireland. Similary, in a study regarding patient mobility in Ireland, Migge et al. point to immigrants' feelings of unease about local care providers as a result of (perceived) social, cultural, religious and linguistic differences, which are increased in moments of vulnerability (Migge et al. 2011). Whether these differences are perceived or not, the resulting unease remains can have negative effects on immigrants' health.

While it might seem that cultural differences might hinder a patient from seeking care from a physician outside their culture, the very same difference can be useful in receiving sexual health consultations. For instance, there is a preference in Middle Eastern immigrant women in the United States to seek sexual health advice from non-community members (Khazanji et al., 2023). A reason for this preference is the lack of perceived judgement in these interactions compared to interactions with physicians from Middle Eastern physicians (Khazanji et al., 2023). Understanding this preference along with enhancing cultural competencies among Irish healthcare providers could be of value for reducing healthcare inequities for immigrants in Ireland.

There is much to be studied about the barriers immigrants face in receiving healthcare services; nonetheless, the advantages of cultural competency cannot be ignored. With an increased immigrant population, Irish healthcare providers can benefit from the deeper understanding that comes with this skill and aim to better tailor their services to enhance healthcare outcomes for the immigrants.

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