Royal College of General Practitioners

Sheppard Memorial Essays 2020

Contents

A changed life on our planet

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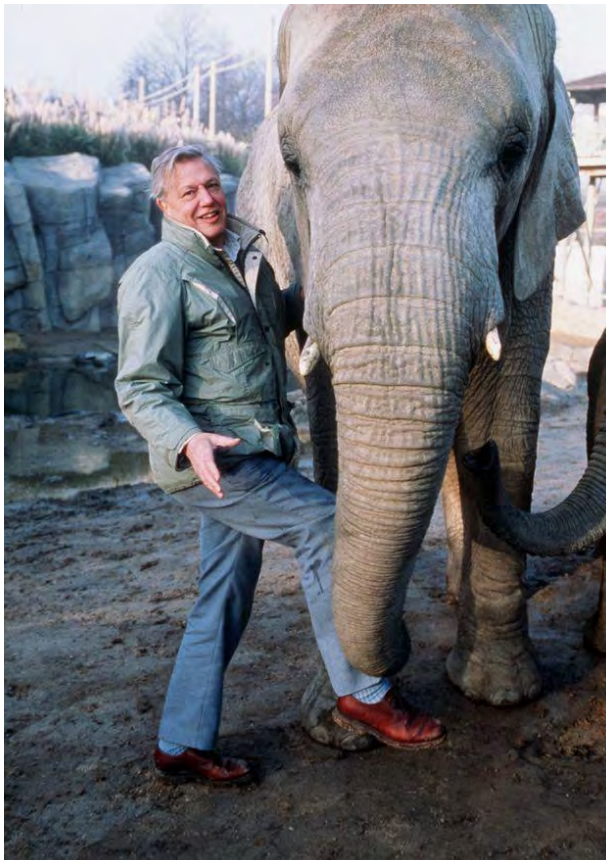
“The question is, are we happy to suppose that our grandchildren may never be able to see an elephant except in a picture book?

Many individuals are doing what they can. But real success can only come if there is a change in our societies and in our economics and in our politics.”

David Attenborough



What do a British broadcaster and this friendly looking elephant have to do with Irish General Practice? Absolutely everything. David Attenborough’s above quote has more resonance for society at this minute than at any stage in our history. The recent release of the film *A Life on Our Planet* has charted the catastrophic decline in biodiversity, the relentless increase in world population and the undeniable impact of climate change in Attenborough’s long and unique career. A filmmaker in my pre-medicine life, I was struck by the visceral power of this new documentary to lay bare the total crisis unfolding for all humanity.

2020 has heralded a sea-change in the way the world functions, radically challenging our preconceived notions about what can be achieved and in what timescale. On a personal level, it has caused many of us to re-evaluate daily routines we had always taken for granted, our ways of working, commuting, and consuming that had previously seemed unchangeable. Coronavirus has changed all of it.

In the last few months, much of how we practice has changed or at least been thoroughly examined to see if it is still fit for purpose in the current COVID era. This has been similarly reflected in other areas of society. Office workers, now working from home, are reconsidering their long daily commutes and wondering if they could live somewhere cheaper, closer to family or completely remote instead.

As general practitioners, COVID has increased our workloads and required resilience in the face of significant uncertainty but it has also done something far more valuable for many of us. It has stripped away the ‘busy work’ that had been occupying much of our headspace prior to this year. Throughout the years of increasing paperwork, new technology adaptations, rising litigation, increased patient expectations and diminishing time available for consultations, we had become less reflective practitioners. We had frequently felt forced to accept the various roles thrust upon us by outside forces, financial imperatives, and patient preferences for care.

COVID has forced a rethink of what are our core priorities, both as individual practitioners and as a profession and to redirect our efforts to higher importance areas. It has required many of us to look at our goals with a more critical eye. It has also stripped away the treats or escapes (holidays/team sports/dinners out) that for some were making the ‘day job’ bearable.

It has forced us to ask questions that habit and routine had long buried. Many of our colleagues have reconsidered their own personal risks due to age, caring roles at home or personal health, and stepped farther back from face to face-patient contact. COVID has forced a fundamental reevaluation of what is important. It has made us more aware of our own responsibilities in terms of protecting our staff, advocating for the vulnerable, increased recognition that some health systems are not fit for purpose, and exposed other fault lines that have long been creaking.

It has sped up the implementation of long sought innovations such as electronic prescribing, telemedicine and mass vaccination programmes. It has made us more aware of the limitations of telephone consultations, and cautious of the increased uncertainty this leaves at the door of general practice.

It has turned our minds to logistics, PPE procurement and supply issues, respiratory hubs, car park flu clinics, trial runs for delivery of a potential COVID vaccine which will be required on a scale never previously imagined or delivered. We have encountered many difficulties of stock shortages and bureaucracy that we have had to overcome. It has been a testing year, but not always a trying one.

Guidelines have been updated, and revised again, in hours and days, rather than months and years. Changes that committees and boards have debated for years, have appeared, through sheer force of will, necessity and effort, overnight. Self-confessed luddites have embraced video consultations and other alternatives to the face-to-face consultation where necessary. Thousands of us have tuned into regular webinars and updates to ensure we are prepared for what is coming and to ensure that we can serve our patients as well as possible. We've adapted quickly. COVID has forced us out of our silos, pushed our individual concerns into a collective, a united front. We can capitalize on this now.

This year has shown us, in short, that quick, radical change is possible. That general practice is more adaptable than anyone could have thought. It is now clear that GPs can be the leaders and drivers of systems change, of change in our communities and of benefit for our environment.

2020 has made me more optimistic. No longer can we be resigned to our fate as inheritors of a climate crisis, too unwieldy and intimidating for a single generation to tackle. We must take heart and inspiration from the past few months. They have shown the power of humanity to change itself completely; its behaviours, its processes, and even its priorities, when required.

There used to be a sense of helplessness when reading headlines and articles about Ireland missing its carbon reduction targets, mounting biodiversity loss or the extinction of another species. No more. I have been inspired by what a coordinated group of thousands of doctors can do when motivated and galvanized to do so. I have been impressed by individual colleagues who have pushed through initiatives to protect the homeless during this crisis, improved access to domestic violence services and advocated for those currently housed in direct provision.

These goals were not achieved easily. They required intense work, cooperation and compromise. We must now apply that same spirit to tackling climate change. Many of us have experience treating asylum seekers and refugees and are aware of the unique needs and vulnerabilities of this patient cohort. It is also likely that many of us throughout our careers will find ourselves best placed to be the advocates for these often voiceless people.

The UN Refugee Agency (UNHCR) has identified that climate change is a leading threat to the food and water security of hundreds of millions of people around the world. [1] New displacement patterns and conflict over diminishing natural resources will likely vastly increase the future number of refugees seeking protection in Europe. It's estimated that over the past decade 20 million persons per year have been displaced due to environmental catastrophe in their home environment. [2] If we are truly advocates for the voiceless, we will apply the principles of preventative medicine and ensure that we do everything within our power to ensure that the worst effects of climate change are averted.

2020's extreme weather events such as the large-scale infernos that tore through western America and huge swathes of Australia shocked the world by their scale. Initial estimates of 1 billion wild animals killed in the Australian infernos were soon revised upwards to likely closer to 3 billion terrestrial vertebrates by Professor Chris Dickman of the University of Sydney. News reports with emotive photos of burnt koalas played alongside reports of missing firefighters across T.V. channels worldwide for weeks. These mass destructive events are expected to become more commonplace as global temperatures increase. [3]

Besides the long-term impacts on biodiversity, habitat destruction and casualties for rare wildlife, these events have immediate health effects for humans far beyond the initial fire casualties. During the height of the Australian bushfires, Rozelle, a western suburb of Sydney, recorded an air quality index (AQI) level of 2552, 12 times the 'hazardous' level on the AQI scale leading to a sharp increase in hospitalizations and exacerbations of respiratory illnesses. [4] As these events become more commonplace, the human health impact in the medium and long term will become more pronounced.

When faced with the daunting scale of events like this, we ask what can we do as individuals? Firstly, we need to feel the same urgency to contribute as we did when Coronavirus cases first began presenting in Ireland. A rigorous combination of prosaic, everyday steps to make sure that our own practices are as green as they can be, while setting an example in our own community as well as advocating stridently for more sustainable practices in all areas of society. This will require significant commitment and consistent effort, but it will be done knowing that there will be long-term benefits for all of our patients, but particularly for the most vulnerable. We should be asking ourselves daily what we are doing to combat climate change.

This begins with keeping an eye on waste management in our own prescribing practice – for example with inhalers, many have a significantly higher carbon footprint than others and this is not something which is currently factored into routine prescribing practice. NICE has developed a shared patient decision aid tool that factors in greener prescribing practice for appropriate patients. [5] Increased medication reviews would facilitate more deprescribing, particularly through better integration with community/practice pharmacists that could aid GPs in identifying potential candidates for deprescribing – reducing waste as well as potential harm.

Taking greater ownership of the buildings and spaces we work in – COVID made us more aware of the utility of ventilation and open spaces, now is the time to be insulating older buildings thereby reducing our own costs, but also reducing our carbon footprint as a business. Ensuring that the waste produced in the practice is separated well, that each employee is aware of the recycling and composting policies in the practice and buys into the utility of these. Looking at the space around the practice, is there space for increased biodiversity? Bee- friendly plants might brighten up a car park or a window box outside.

In waiting areas, perhaps some of the messaging could be climate focused? Encouraging small changes in each patient's routine which might improve the environment for all? Posters promoting commuting on foot or by bicycle rather than by car may be appropriate depending on the practice location. If no safe cycleway exists near the practice, why not lobby for one at local government level? Your voice as a GP advocating for patient health may get more traction in such a debate.

At a local and national level, GPs should be influencing policy where it pertains to patient health. As we are all aware of the social determinants of ill-health and the inverse care law's effects on our more vulnerable patient populations, it is our duty to advocate in their interests. These needs frequently align with actions on climate change. Improved air quality affects outcomes for those living and working in the inner city more so than for those in the countryside. Due to the increased prevalence of COPD in lower socio-economic groups, these populations are likely to benefit from fewer exacerbations if emissions from solid fuels and transport are diminished.

Becoming an advocate for local biodiversity could work particularly well for those in a rural practice. Awareness of unique local environments could be highlighted in the practice or given as examples of interesting, manageable walks to keep older patients active. The health benefits of getting out in nature have become even more obvious in 2020 with restrictions frequently forcing people to look locally for amenities. With restrictions on our freedom of movement and ability to holiday abroad, many have been searching out respite from the pressures of work and family life in nature. The mental health benefits of getting out into nature have been well documented, but nature prescribing by GPs has started in a more formal way in the UK. GPs in Shetland involved in a pilot scheme cite the benefits of outdoor exercise, increased connection with nature, reduction in blood pressure and reduced anxiety symptoms as outcomes of their project prescribing nature walks to their patients. [6]

In Dublin, the massive expansion of cycling infrastructure during lockdown seemed to baffle even ardent cycling campaigners. They were amazed at the speed that the solutions they had been campaigning for for decades had materialized overnight. However, this has yet to be translated nationally and the benefits of cycling where safe infrastructure have been instituted has not been apparent to all. As GPs, it is in our patients' interests to have access to safe, extensive cycle networks up and down the country and it is our duty to advocate for the continued expansion and retention of these programmes beyond the COVID crisis.

Air pollution reduction following lockdowns, a by-product of reduced commute times for huge numbers has been most evident in our cities and towns. For many people it has left them with more usable hours in the day, on top of reduced stress from dealing with delays and long traffic jams. If this work from home strategy could be sustained, and air pollution in our cities and towns reduced permanently, lung health could be transformed in Ireland forever. In one step that could be nearly as dramatic as the smoking ban, considered radical at the time, we could reduce our high incidence of respiratory disease dramatically.

Progress is being made, seemingly at a glacial pace, but it is picking up speed. The Climate Action and Low Carbon Development (Amendment) Bill Ireland 2020 commits Ireland to moving to a carbon neutral economy by 2050. [7] Although there are significant omissions to this bill, notably in the domains of agriculture and healthcare, it is a declaration of intent. The European Parliament instituted a ban on single use plastics by 2021 and plans to introduce further legislation in the coming years to further promote the circular economy. [8] These are positive steps, but there is much, much more still to be done.

Coronavirus has shown us that there are no real excuses for resisting necessary change. Faced with a threat to our very survival, we adapted and met it head on. An even bigger, but more insidious existential threat is now facing us down, but never before has the path ahead been so clear. There is absolutely no room for complacency, only action.

In her 2018 TED talk, Swedish teenage climate activist Greta Thunberg said,

"Once we start to act, hope is everywhere."

Now all GPs have to do is lead the charge.

References

[1] United Nations High Commissioner for Refugees – Environment, Disasters & Climate Change *https://www.unhcr.org/climate-change-and-disasters.html*

[2] Oxfam, *Forced from home: climate-fuelled displacement*, published 2 December 2019 Policy papers, based on data from the Internal Displacement Monitoring Centre.

[3] Professor Chris Dickman, Reports of terrestrial wildlife destruction. Published 28/7/20 https://thenewdaily.com.au/life/science/environment/2020/07/28/bushfire-2020-animal-toll/

[4] Dockrill, Peter, 11 December 2019, *Fires in Australia just pushed Sydney's air quality 12 times above 'Hazardous' levels.* Science Alert.

[5] NICE Guideline NG 80 8th April 2019 Inhalers for asthma – Patient decision aid. https://www.nice.org.uk/news/article/nice-encourages-use-of-greener-asthma-inhalers

[6] Shetland NHS GP Nature Prescribing Project, *https://www.rspb.org.uk/about-the-rspb/about-us/media-centre/press-releases/nature-prescribed-to-help-health/*

[7] Climate Action and Low Carbon Development (Amendment) Bill 2020, Published Department of the Environment, Climate and Communications, 7th October 2020. Accessed 1st November 2020. *https://www.gov.ie/en/publication/984d2-climate-action-and-low-carbon-development-amendment-bill-2020/*

[8] EU Parliament Press Release *https://www.europarl.europa.eu/news/en/press-room/20190321IPR32111/parliament-seals-ban-on-throwaway-plastics-by-2020*

The Art of Science: Reflections of a GP Registrar

Author: Dr Joe Ryan, postgraduate medical doctor Cork GP Training scheme

I was nervous starting my GP registrar year. I had looked up various links and advice on the ICGP website and also sought out the advice of previous registrars to try and get a grasp of what I was facing. I also visited the practice twice before the rotation began to introduce myself and get to know the system and day to day running of the practice. While all the advice and help I received was useful, I found myself overwhlemed at how different it was from my previous hospital rotations. It was an assault on the senses. I found myself alone in a room with my name on the door, facing a screen, a newly purchased diary, an incredible amount of new pens and a phone. Of course the entire landscape of General Practice has been changed due to Covid 19 but it wasn’t until that first day I realised this, as I swiveled smugly in my chair, filled with a mix of delight and terror that I began asking ‘where are all the patients?’

The first few months have been very enjoyable. I don’t know of any other profession where you get such a deep sense of job satisfaction while at the same time battling constant imposter syndrome. Then again, I haven’t tried too many other jobs. As I’m learning more about the role of a GP and the potential impact we have on our patients’ day to day lives, I’m constantly reminded of the very first sentence of the very first lecture we received in medical school. It was given by the Dean of Medicine and he began by stating that ‘medicine is the art of science.’ Despite my hangover, I remember being instantly engaged and almost forgetting completely the nerves and excitement I was feeling understandably anxious at the prospect of starting medical school. He was a Paediatrician by trade and told us a story of a challenging case he had where he couldn’t get the patient or their family on board with a diagnosis and treatment plan. He had followed the guidelines and expertise as best he could but it wasn’t until he got to know the patient and their background that he began to see a change in their relationship and a ‘buy in’ to a treatment plan he was suggesting. He highlighted to us, even at that early stage of our study and potential careers, that what may be important to us, may not be what the patient perceives as important. His belief was the ability to find that balance was the art of science.

Now, that mantra is easier said than done when you’re three behind by 10 am and there’s already two urgent walk-ins on your screen. Perhaps I shouldn’t be revealing this at this early impressionable point of my career but I already have ‘heartsink’ patients and unfortunately more often than not they are the names that have a habit of popping up on your screen at the end of your day. All the communication skills seminars and reflective practice in the world can't stop or even lessen that feeling. The best bit of advice I've been given so far is to 'not take it home with you.' Whether it's a difficult consultation, an abnormal blood test or even worry about a patient, try to deal and reflect with what's in front of you.

Initially, one of the biggest challenges I found was the increase in telephone consultations that are occurring due to the Covid 19 pandemic. As a first-time registrar starting work in a town and area, I wasn't familiar with I found it hard to get a sense of the community and its inhabitants. It was difficult to engage and develop relationships with the patents over the phone. There are of course perks to this way of working though. The complete anonymity it allowed me when going out for lunch was interesting as all anyone knew was my voice. This has led to more than a few strange looks at the checkout tills of the local supermarket as I'm being sized up by the cashier who's trying to 'place the voice.' I've also noticed that you can be a bit more direct on the phone. I suppose the fact you don't have the patient in front of you and therefore can't pick up on non-verbal cues means that the line of questioning needs to be direct. In those first few weeks I found myself bringing nearly everybody in for an examination. This was mainly due to the fact that I didn't know the patient or their background but also because I found myself becoming frustrated if I couldn't get a sense of the patient and what their expectations were over the phone. The majority of subsequent examinations that arose from these consultations were simply to 'eyeball' the patient and ensure they could walk, talk, sleep, pee and poo. If I didn't feel the need to bring a patient in then you can guarantee they were safety netted to within an inch of their lives, with a delayed script for antibiotics thrown in too, just in case.

I realised I was beginning to be accepted in the community when I was being 'sussed out.' As sure as you could rely on Marty Morrissey's dulcet tones to lustfully describe another summer of hurling, I could predict the onslaught of questions I would get, usually directed at me between deep breaths. I found myself having to tailor my clinical examination accordingly. The questions seemed innocent but were always more than idle chit chat. More probing and far from the open questions we are taught in communication skills seminars. Questions ranging from 'who are you now?' or my favourite 'who do you belong to?' left me in no doubt that the patient was sizing me up and on many occasions my reply would determine our future encounters. It was finding a common ground, a sporting memory, a link to the old days that I have subsequently found invaluable, particularly with the increase in phone consultations during this Covid 19 pandemic.

As with everything with GP life there has to be a degree of compromise, allowing a more holistic approach for long term benefits (that's the hope anyway).

There is a delicate balance between what you, the clinician, wants and what the patient's expectations are. It's made easier if there's a trust or some degree of a relationship there already. You may not agree with the outcome, but a concession in some areas now may lead to a gain in other areas in the future. It also goes some way to ensuring that the patient actually comes back to you as they sense that you appreciate their point of view. It's something that I'm finding challenging. We are taught about ICE (ideas, concerns and expectations) in communication teaching sessions. Phrases like 'ICE them' have a very different meaning to me now then in college when it essentially meant downing an alcoholic beverage of your choice. However, as with a lot of aspects of teaching, things are more nuanced in the real world. You need to choose your battles when dropping ICE into a consult. Asking an elderly bachelor farmer 'and have you any idea as to what's going on?' could be interpreted as I'm asking because I haven't a clue. I've been on the receiving end of those death stares and awkward silences which have on more than one occasion led me to sheepishly dispensing unnecessary antibiotics just to make both of us feel like I've done something.

As I'm continually being exposed to more patients and a variety of presentations, I'm learning the tricks of the trade. Knowing that if in a sticky diagnostic dilemma, the trusty urinalysis can buy you valuable time as you frantically google image the anatomy of the intrinsic muscles of the hand or even accepting that you can't expect to assess, ICE, diagnose, initiate management and offer lifestyle, housing, legal, tax, counselling, marriage advice to every patient in a ten minute timeframe. Watchful waiting and the crazy, new age idea of 'rest' are becoming more integral to me in my practice as I'm gaining more experience. I recommend that the above be taken with a pinch of salt or whatever seasoning you're partial to (obviously being mindful of your cholesterol) and I do appreciate that the demands placed on a GP are representative of broader societal issues and attitudes of entitlement that seem to be prevailing currently.

While the practice of medicine and specifically General Practice may have changed completely in the last few months, my experience so far in this brave new world is that you can't beat the personal touch. Whether it's asking after a patient's relative before you try to change a medication or knowing that the local parish Priest says a quick mass on a Saturday morning so the regular patrons of the weekend walk in clinic will be earlier than usual. These nuggets of local, word of mouth knowledge can be just as important as evidence-based medicine in the management of patients in a community setting. While the terms 'evidence based' and 'guidelines' are at the core of our teaching, I think it's the ability to integrate that evidence into what you know about the patient on a personal level and recognising their expectations is essential in dealing with patients in a community setting. It's the art of General Practice.

Integrating Palliative Care into General Practise

Author: Brian Li, undergraduate medical student, Royal College of Surgeons of Ireland

Background

I watched from across the autopsy table as the pathology resident completed the evisceration of our recently deceased patient; so recent in fact, that the body was still warm when it arrived. In one motion, he slid all the internal organs onto a steel tray. We sifted through the tissue, trying to locate the tumors indicated by the patient's radiology reports. As the resident laid out several sections of the liver, he turned to me and asked, "So, you knew him?"

I remember Mr. S sitting in his room, watching his face light up when I informed him that he had an opportunity to donate his body to the hospital. He was elated at the idea of making a contribution that would directly benefit the study of cancer, a disease that had affected both him and several close family members. He signed up immediately. I regularly met with Mr. S in his hospital room, usually accompanied by his wife. We often swapped book recommendations and stories of memorable vacations. Mr. S, with what limited time he had left, always displayed warmth, sincerity, and eagerness for conversation.

I met Mr. S many years ago at the Princess Margaret Cancer Center in Toronto, Canada, where I was employed as the coordinator for the Rapid Autopsy Program. It was a special program designed to allow terminal cancer patients to donate their tissue to research. The "rapid" part of the name was due to the fact that their autopsies would typically occur on the same day of their death. This accelerated process minimized tissue degradation and maximized quality for laboratory analyses. Though I remember the excitement of working in the autopsy suite, most of my time was spent in the palliative care department where I had a front row seat watching palliative care in action. I would later begin volunteering at Kensington Hospice where my interest in palliative care was further cultivated through my interactions with the residents, nurses, and most importantly, the general practitioners.

Introduction

It is universally accepted and understood that as we grow older, we accumulate more advanced chronic conditions. There may come a time when we decide to shift our priorities from curing our conditions to managing our symptoms so that we can continue to live our lives as fully as possible. In the face of life-threatening illnesses, palliative care focuses on eliminating suffering, improving quality of life, and addressing the physical, psychosocial, and spiritual needs of patients and their families. The evidence in support of palliative care, thus far, has been promising, particularly investigations on the benefits of early palliative care. Studies have suggested that early intervention is associated with improved quality of life, better mood, and in some cases, even longer survival (Temel, 2010; Zimmermann, 2014; Haun, 2017).

During its 134th session on December 20, 2013, the World Health Organization released a report advocating for palliative care as a human right and calling for governments to further its integration into current national health care systems (World Health Organization, 2014). This is especially pertinent considering many nations' rapidly aging population and emerging reports suggesting that the demands for end-of-life and hospice care are already strained (Lupu, 2018). Projections in the United States estimate that the number of hospice and palliative medicine fellows trained each year (approximately 325 fellows) would need to double by the year 2030 in order to satisfy future demands (Lupu, 2018).

Ireland is no exception. A study reported that 80% of all deaths occurring in Ireland between 2007 to 2011 were due to conditions associated with palliative care needs, signalling to policy makers that there is a need for more funding and resource allocation (Kane, 2015). In addition to medical advancements extending the average life expectancy, this imminent "silver tsunami" will ultimately fall into the hands of primary care providers. According to the Irish College of General Practitioners (ICGP) 2017 survey study, there are approximately 20 million visits to the general practitioner (GP) in Ireland each year. Of these visits, 80% are patients suffering from chronic diseases, with 40% of these patients being over the age of 50 (Jennings, 2014; Mansfield 2017). Although palliative care specialists work exclusively with palliative patients, it is likely that GPs are exposed to a greater proportion of patients in the community who require palliative services. This paper summarizes GPs' current practises in relation to palliative care and examines educational infrastructure that supports palliative care training for current and future GPs.

Current Palliative Care Practises within General Practise

The concept of palliative care as a medical specialty and training scheme is relatively new, but its practise is not. GPs are not only responsible for diagnosis and treatment, but also for health promotion, illness prevention, specialist coordination, and family support. Above all, this occurs over a longstanding relationship built over many years of trust and familiarity, which allows GPs to care for patients in the context of their unique cultures and communities. This framework of care closely mirrors the core tenets of palliative care which aim to minimize suffering, improve quality of life, and provide holistic management based on patients' specific beliefs and priorities.

Therefore, it is no surprise to find many GPs already practising community palliative care, especially since they may be the most ideal health care provider to do so. Approximately 33% of ten thousand recertifying American GPs in 2013 reported providing palliative care in home visits, nursing homes, and hospices (Ankuda, 2017). As it turns out, GPs place a great deal of value on this aspect of their practise (Mitchell, 2002). A national survey study conducted in the UK, which sought to investigate GPs' impressions on providing community end-of-life care, reported that 97% of 516 total GP responses expressed the importance of GP involvement in end-of-life care (Mitchell, 2016). An updated study on Dutch GPs found that 60% of participants were personally available via phone to their palliative patients outside of office hours and made house calls when necessary (Plat, 2018). It is imperative to further empower GPs to continue providing this service, as the specialist palliative care field continues to grow. However, this does not imply that GP palliative care services can recede once specialist services have adequately grown in labour force and infrastructure.

A perspective piece published in the New England Journal of Medicine, proposing a sustainable model for palliative services, commented on the importance of both primary care and specialist care providers working harmoniously (Quill, 2013). With so many patients requiring support for chronic illnesses (Ireland included, as per ICGP's 2017 survey data), it is expected that they will require care from both sources. Efforts should be made to dispel the idea that general practise and palliative care are two separate entities, lest future GPs begin to believe that basic symptom management and psychosocial support is better delegated to specialists (Quill, 2013).

Palliative Care Education Prior to and During General Practise

Current medical curriculums must continue to improve, both in theory and in practise, on the topic of end-of-life care. Exposure to the management of palliative care patients up to the point of their death almost never occurs during medical school (Dowling, 2005). Medical students who earn their degree and decide to pursue general practise unsurprisingly find themselves lacking in core end-of-life clinical skills. For instance, Irish final year GP registrars felt substantially less confident in topics such as stoma management, wound care, and syringe drivers, as well as counselling patients on bereavement and euthanasia (Dowling, 2005). Fortunately, studies have shown steady improvements in medical education in relation to end-of-life care, by lecturing on specific topics such as attitudes to death and dying, communication skills, and pain management (Fitzpatrick, 2017). Undergraduate medical curriculums should also incorporate more direct end-of-life or hospice clinical experience to foster attitudinal learning in addition to clinical knowledge (McMahon, 2019).

GP training schemes, that aim to embolden palliative care engagement, need to be cognizant of unintentionally discouraging GP trainees from incorporating palliative care into their practise. One study hypothesized that this dissonance may be a result of trainees undergoing rotations that are taught primarily by specialists, which may give the impression that palliative care is best managed by those specialists (Mahtani, 2015). Compounded with inadequate clinical skills and experience, trainees may feel even more inclined to simply refer future patients to specialist care. GP registrars would appear to benefit much more from palliative care rotations whereby the instructors are also GPs who have learned to incorporate palliative care services into their practise. This would have the added bonus of trainees gaining valuable insight into the logistical aspects, such as funding, on-call systems, and home visits (Mahtani, 2015).

Current Irish GPs consider palliative care to be within the top five most important in a list of 35 continuing professional development topics offered to GPs, along with management of common chronic conditions, elderly medicine, communication skills, and pre-hospital emergency care (Maher, 2017). Palliative care training for GPs not only enhances their skillset, but also provides them with the confidence to engage in home visits (Mahtani, 2015). This is particularly important since studies have demonstrated that most people who are dying wish to do so at home (Gomes, 2008).

In line with the evidence supporting the benefits of early palliative intervention, GPs are obliged to initiate end-of-life conversations. Sufficient pain and symptom management, knowledge acquisition, and overall patient satisfaction are all contingent on effective communication skills. Equally important though, are the range of topics that GPs discuss with patients. A retrospective survey study found that although most GPs will review diagnosis and physical complaints, other topics such as spiritual, existential, or socal problems are neglected. In some countries, pertinent topics such as the incurability of disease, life expectancy, and options for palliative treatment were discussed in fewer than 50% of patients (Evans, 2014). Even more concerningly, patient factors such as old age, those with a non-cancer diagnosis, and those with dementia, were all factors contributing to fewer discussions (Evans, 2014).

One study investigated the effects of GP training schemes to help appropriately select palliative care candidates (Thoonsen, 2019). A randomized control trial comparing GPs with or without training on the use of the “RADboud university medical centre indicators for Palliative Care needs (RADPAC)" demonstrated significantly improved ability to identify patients who required palliative care (p=0.046). Trained GPs were also significantly more likely to explore at least 3 or more dimensions of care such as social, psychological, financial, or spiritual (p=0.024) (Thoonsen, 2019). The Supportive and Palliative Care Indicators Tool (SPICT) has also demonstrated its clinical utility, distinguishing itself from other clinical tools as being the most validated, simplistic, and comprehensive tool for GPs in identifying palliative care needs (Maas, 2013; Harney, 2020). Finally, though not specifically designed for GPs, the 8-week, home-study course entitled the "European Certificate in Essential Palliative Care" has demonstrated its ability to improve any health care providers' management skills in palliative care (Reed, 2017).

Future Directions and Conclusions

The topic of end-of-life care has grown more and more pervasive in recent years. In the face of the COVID-19 pandemic, nursing homes and their palliative measures became a serious concern, particularly in countries that were unable to contain the rates of infection. All nursing home residents were suddenly faced with the challenge of banned visitations, which left the rest of us agonizing over how to comfort our loved ones at the final stages of their life without our physical presence. On September 15, 2020, the Dying with Dignity Bill completed the Second Stage of the Dáil Éireann by an 81 to 71 vote (Oireachtas, 2020). This Bill allows individuals over the age of 18 with a terminal illness to seek assistance in dying, bringing Ireland closer to the likes of Canada, Switzerlands, Belgium, and the Netherlands where assisted dying is legal.

The need for investment in palliative care training, at both the GP level and student level is paramount. Current GPs must be comfortable navigating the healthcare system and be allocated resources to confidently manage administrative and clinical aspects of providing palliative care. Furthermore, medical education would benefit from amendments focused on providing medical students and junior registrars with the appropriate skills and experiences for managing future end-of-life patients. In the same way that medical students study antenatal care and bear witness to the start of a life during an obstetrics rotation, so too should our future medical professionals learn about palliative care and play a role in the end of a life.

We all have the right to die with dignity. The desire to achieve this right for all is ubiquitous in the medical field. The future lies in bringing together primary care physicians, palliative care specialists, patients, and policy makers to lay down the foundation for standardized, high quality, end-of-life care so that we may all benefit from those reforms when our time finally comes.

References

Ankuda, C. K., Jetty, A., Bazemore, A., & Petterson, S. (2017). Provision of palliative care services by family physicians is common. *The Journal of the American Board of Family Medicine*, 30(2), 255-257.

Dowling, S., Leary, A., & Broomfield, D. (2005). Education in palliative care: a questionnaire survey of Irish general practitioner trainees. Education for Primary Care, 16(1), 42-50.

Evans, N., Costantini, M., Pasman, H. R., Van den Block, L., Donker, G. A., Miccinesi, G., ... & Deliens, L. (2014). End-of-life communication: a retrospective survey of representative general practitioner networks in four countries. Journal of pain and symptom management, 47(3), 604-619.

Fitzpatrick, D., Heah, R., Patten, S., & Ward, H. (2017). Palliative care in undergraduate medical education—how far have we come?. American Journal of Hospice and Palliative Medicine®, 34(8), 762-773.

Gomes, B., & Higginson, I. J. (2008). Where people die (1974—2030): past trends, future projections and implications for care. Palliative medicine, 22(1), 33-41.

Harney, M. (2020). The Role of the general practitioner in palliative care. Malta Medical School Gazette, 4(1), 83-95.

Haun, M. W., Estel, S., Rücker, G., Friederich, H. C., Villalobos, M., Thomas, M., & Hartmann, M. (2017). Early palliative care for adults with advanced cancer. Cochrane Database of Systematic Reviews, (6).

Jennings, S. (2014) Preventing Chronic Disease: Defining the Problem. Report from the Prevention of Chronic Disease Programme. *Health Service Executive (HSE)*. [Internet: cited November 2020]

Kane, P. M., Daveson, B. A., Ryan, K., McQuillan, R., Higginson, I. J., & Murtagh, F. E. (2015). The need for palliative care in Ireland: a population-based estimate of palliative care using routine mortality data, inclusive of nonmalignant conditions. Journal of pain and symptom management, 49(4), 726-733.

Lupu, D., Quigley, L., Mehfoud, N., & Salsberg, E. S. (2018). The growing demand for hospice and palliative medicine physicians: will the supply keep up?. Journal of pain and symptom management, 55(4), 1216-1223.

Maas, E. A. T., Murray, S. A., Engels, Y., & Campbell, C. (2013). What tools are available to identify patients with palliative care needs in primary care: a systematic literature review and survey of European practice. BMJ supportive & palliative care, 3(4), 444-451.

Maher, B., O'Neill, R., Faruqui, A., Bergin, C., Horgan, M., Bennett, D., & O'Tuathaigh, C. M. P. (2018). Survey of Irish general practitioners' preferences for continuing professional development. Education for Primary Care, 29(1), 13-21.

Mahtani, R., Kurahashi, A. M., Buchman, S., Webster, F., Husain, A., & Goldman, R. (2015). Are family medicine residents adequately trained to deliver palliative care?. Canadian Family Physician, 61(12), e577-e582.

Mansfield, G., Collins, C., Pericin, I., Larkin, J., & Foy, F. (2017). Is the face of Irish general practise changing? A survey of GP trainees and recent GP graduates 2017. *Irish College of General Practitioners*, 1-27.

McMahon, D., & Wee, B. (2019). Medical undergraduate palliative care education (UPCE). BMJ Supportive and Palliative Care.

Mitchell, G. K. (2002). How well do general practitioners deliver palliative care? A systematic review. Palliative medicine, 16(6), 457-464.

Mitchell, S., Loew, J., Millington-Sanders, C., & Dale, J. (2016). Providing end-of-life care in general practice: findings of a national GP questionnaire survey. British Journal of General Practice, 66(650), e647-e653.

Oireachtas Éireann. (2020, September 15). *Dying with Dignity Bill 2020*. https://www.oireachtas.ie/en/bills/bill/2020/24/

Plat, F. M., Peters, Y. A., Giesen, P., & Smits, M. (2018). Availability of Dutch general practitioners for after-hours palliative care. Journal of Palliative Care, 33(3), 182-186.

Quill, T. E., & Abernethy, A. P. (2013). Generalist plus specialist palliative care—creating a more sustainable model. New England Journal of Medicine, 368(13), 1173-1175.

Reed, E., Todd, J., Lawton, S., Grant, R., Sadler, C., Berg, J., ... & Watson, M. (2018). A multi-professional educational intervention to improve and sustain respondents' confidence to deliver palliative care: A mixed-methods study. Palliative Medicine, 32(2), 571-580.

Temel, J. S., Greer, J. A., Muzikansky, A., Gallagher, E. R., Admane, S., Jackson, V. A., ... & Billings, J. A. (2010). Early palliative care for patients with metastatic non–small-cell lung cancer. New England Journal of Medicine, 363(8), 733-742.

Thoonsen, B., Gerritzen, S. H., Vissers, K. C., Verhagen, S., van Weel, C., Groot, M., & Engels, Y. (2019). Training general practitioners contributes to the identification of palliative patients and to multidimensional care provision: secondary outcomes of an RCT. BMJ supportive & palliative care, 9(1), e18-e18.

World Health Organization. (2014). Strengthening of palliative care as a component of integrated treatment throughout the life course. Journal of Pain & Palliative Care Pharmacotherapy, 28(2), 130-134.

Zimmermann, C., Swami, N., Krzyzanowska, M., Hannon, B., Leighl, N., Oza, A., ... & Donner, A. (2014). Early palliative care for patients with advanced cancer: a cluster-randomised controlled trial. The Lancet, 383(9930), 1721-1730.

Depersonalised Medicine

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As medicine has evolved over the past century, medical care has become more patient-centred, rather than disease-centred. The pressure faced by our healthcare system is unlike anything the NHS has seen before, and this is putting our patient-centred care at risk. As doctors are being asked to do more, and patient contact is becoming less and less, the personalised aspect of medicine is being diminished - we are moving towards a new 'depersonalised' type of medicine.

I recently read an online thread about the future of medicine and diagnostics in the UK in relation to Artificial Intelligence. Within the comments section of the article, an individual was having a heated discussion with other readers. The individual had a particularly despondent view of doctors and their role in healthcare. He claimed that doctors provide no benefit to patient care; that they are merely sources of human error in the diagnostic and treatment process, constantly making mistakes and disregarding patients' thoughts and emotions. He recounted personal stories, and those of family members, telling of how badly they had been treated by doctors. His only silver lining was the caring and empathetic nature of the nurses looking after him. In short, he suggested that the NHS would be a better place if doctors were not in it, replaced instead by computers.

This infuriated me. This stranger was daring to suggest that the role of a doctor was obsolete. That the care and support that thousands of doctors provide around UK was, in fact, a waste of time. Whilst I expect that this individual must have been driven to this cynical outlook from previous failures in care and loss of trust in the medical profession, I still felt angry about this mere suggestion. My entire medical education has been based upon the belief that the practice of effective, personalised medicine requires not only good scientific knowledge, but also human compassion. The relationship that we form with the patient and the trust that we are instilled with are as important as the care that we deliver and the knowledge that we must maintain. I consoled myself in the remainder of the comments section, as a host of others reprimanded the individual and told their stories of gratitude - standing up for their NHS and the doctors that faithfully serve it.

The future of the NHS and Artificial Intelligence provides the scope for an entire discussion, but in the end, the human role of the doctor in empathising, supporting, and comforting a patient can never be replaced by a machine. What if we lose this human perspective? What separates doctors from diagnostic machines, other than our most fallible characteristic of human error? This thought was brought into my mind following a conversation with a friend. They had been troubled with UTI symptoms for a few months and despite multiple antibiotic treatment regimes, little symptomatic improvement was made. My friend was growing ever more anxious and concerned about her condition, starting to research alternative diagnoses of a more sinister nature. Following several conversations where I reassured her, we decided that she should go to the GP again and get a urine sample sent for culture. Knowing the anxiety that this problem was causing, I hoped that the reassurance from a doctor would benefit her greatly. So, my friend went for her appointment; in the door —surgery running slightly behind — into the GP after an anxious wait — 5 minutes — out the doors again. Like an efficient, well-oiled machine, the doctor took a history, formulated a diagnosis, and gave my friend 3 sample bottles and 3 syringes for urine culture. The doctor asked all the right questions, all the red flags, did all the correct procedures - but my friend still felt uneasy, anxious and scared. She had not been able to talk about her worries around her symptoms. Her ideas, concerns and expectations were left untouched. In a medical school OSCE, you would have left your history station kicking yourself for not asking the patient the 'ICE' questions - but for some reason, as our medical practice becomes more streamlined, the patient's ideas, concerns and expectations have been left behind, discarded in our medical room 101, along with the ophthalmoscope and bemused attempts at balloting the kidneys. I fear that in the process of advancing the efficiency of our service in the face of cutbacks and understaffing, we create a culture of depersonalised medicine.

Why has this happened? Why has the patient-doctor relationship been put under pressure, despite medical schools shifting the importance of holistic care into the core of their training? Well, as with most problems that exist in modern healthcare, the highly strained system is largely to blame. The frequently debated topic of 10-minute GP appointments is certainly one aspect of this. The UK has one of the shortest appointment times in all of the developed nations. It is difficult to believe that a GP can deliver a comprehensive medical assessment, formulate a diagnosis, and create a treatment plan in under 10 minutes. As paperwork volumes, waiting times and the average age of the population all continue to increase, the flawed nature of a 10-minute doctor's appointment is being compounded.

Helen Salisbury states in her article in the BMJ that for some patients it takes a minute to get up and walk into the room, another minute to find the piece of paper explaining all their symptoms, another 2 minutes undressing for the doctor to listen to their chest (1). By the time all of this is done, where could GPs possibly find the time to provide a fully comprehensive appointment? The answer is they cannot. Therefore, one of three things happens – the doctor runs overtime, the doctor cuts the consultation short gets it finished within the 10 minutes, or, the patient is asked to book another appointment in the future.

Allowing the clinic to run overtime is not a solution as it puts massive stress onto the doctor and also creates long delays for other patients. So, to ensure the consultation is finished within the 10 minutes, doctors may have to streamline their care, ensuring that the key complaint is covered and that there are no other dangerous symptoms or signs. It can become very easy to prioritise this and backbench the patient's thoughts and feelings when under time pressures. Finally, the option of booking another appointment. Frequently, patients will discuss more than one problem at their appointment, the average number being 2.5 (2). So, it makes sense that to adequately address all the issues being raised, another appointment may be needed. This option fails when it comes to patient concern, however. Patients often feel anxious and scared that they are wasting doctor's time; paradoxically, these patients are often the ones who are most anxious and worried about their condition. The idea that a patient will book another appointment to discuss their ideas, concerns and expectations is absurd, the result being that the individual will be left unfulfilled by their consultation.

The Royal College of General Practitioners published their Fit for the Future report in 2019 and detailed that by 2030, face-to-face consultations will be at least 15 minutes. This is a positive sign that GP's concerns around the 10-minute appointment are being listened too and hopefully will provide doctors with adequate time to deliver more holistic care and form closer relationships with patients. This is not to say that increasing the consultation length will solve the problem, however. If we look at healthcare in other countries around the world, it is obvious that contact time with patients is not the only significant factor. A systemic review of international primary care consultation times found that there was no significant association between patient satisfaction and consultation length (3). This supports pre-existing literature within primary care in the UK (4). As well as this, by increasing the length of individual appointments, the overall number of appointments is reduced, and patients will end up waiting longer to be seen. It could be argued that by increasing the length of consultations, patients may be more fulfilled with their appointment and so this could reduce the number of follow up appointments made. That being said, the true crisis which requires addressing to solve this problem is the understaffing of GP's and healthcare staff in primary care.

If we concede that consultation times only partially contribute to depersonalisation in medicine, then what is the cause? One explanation is the ever-evolving patient-doctor relationship. The archaic paternalistic role of the physician, characterised by "Doctor in the House", is now being left behind – exchanged instead for the patient-centred 'Deliberative Model', where the doctor gives the patient the information, gives their opinion and then helps elicit the patient's feelings. This method, in theory, is highly effective and provides the gold standard of how doctors and patients should decide on treatment options. As with most things in life, however, the best way to do something is often not the easiest. The patient-centred treatment model is more time consuming - as the patient must be given the appropriate information, given time to understand it, their thoughts and feelings must be elicited, before finally making a joint decision. Although more time consuming, it is agreed that this mutual participation model is most beneficial when it is medically feasible. When doctors are expected to work in an understaffed environment, with insufficient appointment times, this can be very challenging. Patient-centred care in a time-pressured environment runs the risk of confusing the patient. Many older patients are used to the paternalistic role of a GP, where you were told to take your medicine and that is what you did. Younger generations are more used to the patient-centred approach where you are involved in treatment decisions. Both require trust in your doctor and faith in their information and decisions, and although patient-centred treatment is far more effective, the most dangerous thing to do is combine them to save time; that is confusing the patient with information and making them decide too quickly, or make them feel like you are taking the decision out of their own hands because they don't understand. This can ruin the trust in a patient-doctor relationship. Patients want to be involved in their treatment plan, but most importantly, they want to feel informed and listened to.

The internet has also affected the personal relationship between doctors and patients. The advent of the internet has brought a vast array of medical resources and literature into the public view. This has a number of advantages in terms of patient understanding and empowerment. When used properly, doctors can direct patients to reliable websites and online resources, which can help explain illnesses and medications. Unfortunately, online health information is poorly regulated, and patients can easily access poor quality literature, based on unfounded and unscientific principles. As well as this, the ability for social media to spread sensationalised and emotionally charged healthcare stories, almost instantaneously, creates fear and uncertainty in patients. Online health information is frequently utilised by those who are most anxious or worried about their health. When this is combined with a lack of technical knowledge, fuel is added to the metaphorical fire of anxiety. Upon presentation to a doctor, it can make the interaction more difficult and may create distrust or uncertainty in the doctor's decisions. Online diagnoses and treatments suggested by patients, which may have no medical grounding and seem ridiculous to the doctor, can frequently be dismissed as such. This can make patients feel unheard and cause them to question their doctor's competency. How doctors should approach educating patients about the use of online health information is still debated, but what is certain is that the topic should be approached. By discussing what makes information reliable and where is appropriate to source it, doctors can help educate patients and influence their actions. Many doctors worry that online information may exacerbate primary care and A&E attendance, however, by appropriately educating patients on how to correctly use online resources, it should have the opposite impact and provide clear guidance on what healthcare service is appropriate to access in order to manage their symptoms. Importantly, the internet should not be used as a substitute for providing information on a patient’s diagnosis and treatment plan. This would only further intensify the depersonalisation of medicine, by referring patients to the internet to answer any questions or concerns they may have. The doctor is in the best position to give medically sound information, delivered at an appropriate level for the patients understanding. This is something which cannot be replaced by a computer and so online health resources should only be used to consolidate a patient's understanding.

All the topics that I have discussed above are already well-known problems in General Practice, and across the face of healthcare. But currently, the depersonalisation of healthcare has been accelerated by the COVID-19 crisis. An already strained and struggling service has been moved onto video and telephone calls. We have lost the most personal aspect of a consultation with a patient. Being able to observe them, read their body language, assess what is worrying them, and most importantly form a rapport. The current situation, of course, has dictated this change and I am in no doubt that it is far safer during a global pandemic to reduce the number of vulnerable patients entering a doctor's surgery. But I fear that the time saved, and efficiency created, by these virtual consultations, will see them become common in a post-COVID time. There is a time and a place for telephone consultations, but they cannot replace the personalised service that can be delivered from a face-to-face meeting. The influence of technology in healthcare has brought many extraordinary changes about and saved many lives, but we walk on dangerous ground by allowing virtual consultations to enter our healthcare system. How can you see the transition from GPs doing house calls, to patients being assessed over the phone and photos being sent using a smartphone, as a form of progress? Other than demonstrating how far technology has advanced, this does not provide an answer to understaffing and underfunding of primary care. It merely reduces the quality of care which can be delivered and further removes the GP from their role in the community.

Patient care is at a pivotal point. We look ahead at a future which sees consultations being replaced by phone calls, the patient-doctor relationship being replaced by distrust and disagreements, and the physician being replaced by artificial intelligence. The slow, but insidious creep of medicine towards depersonalised patient interaction, holds a real cause for concern. As our profession continues to evolve, endeavouring to try to keep up with technology, and remain efficient under pressured conditions, we risk losing what is at the heart of our profession – patient-centred care. Efficiency, precision, and information cannot replace reliability, reassurance, and empathy. If this is lost from medicine, then not only will patients be impacted, but also doctors. The majority of people who enter medicine do so because they want to help the most vulnerable in society by forming a compassionate and trusting relationship with their patients. By depersonalising medicine to nothing more than a diagnostic algorithm, we will lose the aspect of this career that makes it the most rewarding job in the world. I am aware that this is not the fault of doctors, in fact, patient-centred care is more emphasised than ever before throughout medical training. It is instead a product of an over-stretched system which is finding any means to try and cope. We must ensure, however, that in the face of current and future hardships, we prevent medicine from becoming depersonalised and protect the standards of the profession which we all strive to uphold.

References

1. Salisbury H. Helen Salisbury: The 10 minute appointment. BMJ. 2019 Jun 4;365(l2389).
2. Salisbury C, Procter S, Stewart K, Bowen L, Purdy S, Ridd M, et al. The content of general practice consultations: Cross-sectional study based on video recordings. Br J Gen Pract. 2013 Nov 1;63(616):e751–9.
3. Irving G, Neves AL, Dambha-Miller H, Oishi A, Tagashira H, Verho A, et al. International variations in primary care physician consultation time: A systematic review of 67 countries. BMJ Open. 2017 Oct 1;7(10):e017902.
4. Elmore N, Burt J, Abel G, Maratos FA, Montague J, Campbell J, et al. Investigating the relationship between consultation length and patient experience: A cross-sectional study in primary care. Br J Gen Pract. 2016 Dec 1;66(653):e896–903.

Social Prescribing: Tackling loneliness post-COVID 19

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An essay discussing some effects of loneliness due to COVID-19 on General Practice and subsequently exploring the need for social prescribing in a clinical context.

STAY AT HOME. “Stay indoors and avoid contact with other people” [1] was the public health message as Ireland prepared to face the COVID-19 pandemic.

Initially, the concept of two weeks lockdown sounded like a pseudo-staycation to me. Long lie-ins, time to perfect that banana bread, and renew the Netflix subscription … all sounded great! The novelty however soon waned as the reality of being on my own for such long periods sank in. The necessary process of protecting ourselves and others against COVID-19 has created the conditions for a multitude of other illnesses to surface. For so many people, life was put on hold and we all remained in limbo with each day blurring into the next, each week blurring into a month.

Loneliness is however not confined to the COVID-19 quarantine but is now regarded as a serious global problem which is not restricted to the elderly but affects every group in society. COVID-19 has raised people’s awareness of loneliness who would not ordinarily have encountered it. The long-term effect of the government prescribed isolation to combat COVID-19 is not yet known, but I suspect that the absence of social interaction and relationship formation will only have an increased effect on the prevalence of loneliness.

General Practitioners are at the front-line of healthcare and arguably at the core. From my time spent on placement in GP Clinics, I could see the holistic approach doctors have with their patients, many of whom they know personally. Through meeting with patients, GPs are able to decipher what is wrong, treat or refer if necessary, as well as offering reassurance and support. My experiences taught me the importance of face-to-face meetings with patients to really get to the bottom of many issues, especially surrounding mental ill health. While Telemedicine has really benefited GPs and the health service in general during this public health emergency, I expect that not all of these virtual consultations will pick up on those nuances for example, body language, eye contact and posture that can help the GP to ask the right questions and find the right solution.

When I think about people self-isolating, "cocooning", "shielding" … loneliness comes to mind. As a Medical Student, it seems almost inevitable that we will be exposed to COVID-19 through either testing positive for it yourself or being named as close contact. This means the dreaded 14 days of self-isolation while life moves on around you. For me, the 6th of October was D-Day as an unwelcome Track and Trace text popped up. I had already managed to drag myself out of my warm bed and into the Antarctic that was my student house kitchen. The kettle was boiling and in autopilot I was eating my breakfast when suddenly the day stopped, and I was forbidden to leave my flat for a full two weeks. My heart sank as I thought about all my placement teaching I was missing; my best friend's 21st birthday dinner that I had been looking forward to all week; how I was going to get my groceries and the potential for me to actually develop COVID-19 symptoms and get really sick. After a five-minute panic session, I pulled myself together and accepted that this was just the new way of life. I spent most of the days watching Netflix, suffering extreme FOMO (fear of missing out) and contemplating if prison would actually be more fun than self-isolation. I did feel lonely at times but knowing that the days were gradually counting down meant that I remained very optimistic. Unfortunately, I know that this is not the case for many people and having spent two weeks in isolation I completely understand how feeling lonely could spiral into a major emotional issue.

Studies have shown that isolation and loneliness can be twice as bad for your health as smoking cigarettes and significantly increases the risk of premature mortality (2). This is not an encouraging statistic in these times because self-isolation is becoming more and more common as the rate of infections rise.

Self-isolation does not just affect mental health. The literature links isolation with poor sleep quality, altered cognitive ability, poor cardiovascular function and impaired immunity at every stage of life (3). Being cooped up at home means that exercise workouts are exclusively available to those more fortunate with enough space. This inequality is also seen in education, where kids with access to online learning, books and educated parents will excel and the less fortunate won't. The long-term effects will undoubtedly be felt in General Practice.

Interestingly, research links loneliness to an impaired immune response. This was discovered in 2015 and identified a connection between the white blood cells of research participants that described themselves as lonely having an increased expression in genes involved in inflammation and a decreased expression in genes involved with mounting a viral response (type 1 interferon responses) (4). Could the social consequences of COVID-19 even influence the symptoms of the virus?

Before coronavirus, a substantial proportion of GP consultations were mental health related (5). I think that this will only be more pronounced in the months and years to come. Campaigns such as Mental Health Week in October run by Mental Health Ireland (6) are so important for raising awareness of mental ill health and I think that now more than ever they help primary care to identify and subsequently reduce cases of mental illness and loneliness in society.

Social prescribing in the primary care setting may become more important following this pandemic. This is a means of self-management and empowerment for patients, that makes patients aware of non-medical support systems available to improve their health and wellbeing (7). Social prescribing is inextricably linked to General Practice and mirrors its person-centred approach to health while also addressing the wider determinants, such as housing and unemployment.

By definition, social prescribing is a form of community referral in which General Practitioners and other healthcare professionals refer suitable patients to non-clinical services within the local community which aim to improve health and wellbeing (8). Examples that are already making a difference in County Donegal include a range of group sports, gardening, arts and craft and reading clubs (9). Very often this is arranged via a 'link' worker who connects the patient with a specific socially prescribed activity. This enables individuals to take more control and interest in their own health.

I think that 'link workers' for social prescribing in General Practice is an idea that should be explored and utilised more. A review by the University of Westminster has shown that not only will this improve patient outcomes, but it will also reduce the pressures placed on general practice. It illustrated a 28% decrease in demand for GP services and an average 24% fall in A&E attendance for patients that had been referred to a social prescribing scheme (10). Moreover, the BMA comments that social prescribing schemes should be offered to patients suffering isolation, loneliness and mental health issues and therefore could be extremely beneficial for patients who have been affected in this way due to COVID-19 (11).

A 'realist' study was conducted in central London that analysed the collaboration between General Practice and the voluntary sector with regards to social prescribing. It highlighted that the majority of GPs have a limited awareness of voluntary sector services, and many find it difficult to keep up to date with changes regarding the services. This was mainly due to the rate of activity turnover. It also identified the potential need for 'pop up' alerts on GP monitoring systems to remind GPs of the Social Prescribing Network that is available to them (12).

On the other hand, there is the argument that a “social prescription” may leave the patient feeling as though their complaints are not important. For example, it could trivialise the complex emotion of loneliness by being able to cure it through a quick chat. This could dishearten patients and potentially increase stigma around mental health and expressing your feelings. Similarly, some patients may not reap the rewards of social interaction and this could trigger anxiety or even make the symptoms worse (13).

Social prescribing relies on the members of the community being trained to educate, inform and raise awareness of the issue. The proposal of appointing a Social Prescribing Champion within each General Practice could be beneficial in achieving this. Moreover, a link coordinator would need to be identified and work in partnership with the General Practice and community. The issue of funding is complex and would probably require political involvement from local governments, however, it is hoped that in the long-term social prescribing is economically effective (14).

Other long-term effects of social prescribing include reduced prescription costs as less antidepressants are needing to be prescribed, increased physical activity and therefore less obesity-related health issues, emotional recovery of patients so that they are able to get back to work and contribute to the economy (14) and of course, better quality of life, which is priceless! A 2019 meta-analysis looking at the impacts of social prescribing concluded that more research is needed in order to establish a strong evidence base for its effectiveness (15). Similarly, studies have identified the need to clarify the circumstances in which social prescribing is appropriate and the type of patients that will benefit from it (16).

A study completed by the College of Medicine identified that the majority of medical students are unaware of Social Prescribing but are interested in learning about it (17). The study suggests that Social Prescribing should be a mandatory concept to learn and should be clarified early in undergraduate training (17). This would be a great way of raising awareness and would lay a sound foundation for future practice.

In conclusion, the impact of the COVID-19 pandemic has meant that life has changed for everybody and undoubtedly the new ‘norms’ of social distancing and quarantine will affect mental health in the grand scheme. This means that General Practice will have to adapt for a rise in patients attending with mental health issues and loneliness complaints. I suggest that a way of coping with this potential rise in demand is availing of and introducing Social Prescribing Schemes at a local level but widespread across Ireland. Through reviewing the literature, I believe that raising awareness of these schemes to GPs would bring a multitude of benefits and is a long-term sustainable solution to combatting loneliness in society.

References

1. Coronavirus COVID-19 Public Health Advice (2020) *Patient information for self-isolation at home*, Available at: https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/guidance/selfisolationathome/Self-isolation%20leaflet.pdf (Accessed: 7th November 2020).

2. Holt-Lunstad, J., Smith T., Baker, M., Harris, T., Stephenson, D. (2015) 'Loneliness and Social Isolation as Risk Factors for Mortality: A Meta-Analytic Review', *Association of Psychological Sciences*, 10(2) [Online]. Available at: https://doi.org/10.1177%2F1745691614568352 (Accessed: 18th October 2020).

3. Hawkley, L., Capitanio, J. (2015) 'Perceived social isolation, evolutionary fitness and health outcomes: a lifespan approach', *Philosophical Transactions of the Royal Society B*, 370(1669) [Online]. Available at: https://doi.org/10.1098/rstb.2014.0114 (Accessed: 18th October 2020).

4. Cole, S., Capitanio, J., Chun, K., Arevalo, J., Ma, J., Cacciopo, J. (2015) 'Myeloid differentiation architecture of leukocyte transcriptome dynamics in perceived social isolation', *PNAS*, 112(49) [Online]. Available at: https://doi.org/10.1073/pnas.1514249112 (Accessed: 18th October 2020).

5. MIND UK (2020) *Mind calls for better training and resource as GPs say numbers have increased in last year*, Available at: https://www.mind.org.uk/news-campaigns/news/40-per-cent-of-all-gp-appointments-about-mental-health/ (Accessed: 18th October 2020)

6. Mental Health Ireland (2020) *Campaigns*, Available at: https://www.mentalhealthireland.ie/mhi-campaigns/ (Accessed: 18th October 2020).

7. Elemental Social Prescribing People (2020) *10 Ways Social Prescribing Can Improve Mental Health*, Available at: https://elementalsoftware.co/10-ways-social-prescribing-can-improve-mental-health/ (Accessed: 18th October 2020).

8. Ewbank, L., Buck, D. (2020) *What is social prescribing?*, Available at: https://www.kingsfund.org.uk/publications/social-prescribing (Accessed: 5th November 2020).

9. Self Management Support Donegal (2020) *Donegal Social Prescribing for Health and Wellbeing*, Available

at: *https://www.hse.ie/eng/health/hl/selfmanagement/donegal/programmes-services/social-prescribing/* (Accessed: 5th November 2020).

10. Polley, M.J., Pilkington, K. (2017) 'A review of the evidence assessing impact of social prescribing on healthcare demand and cost implications', *University of Westminster*, [Online]. Available at: *https://westminsterresearch.westminster.ac.uk/download/e18716e6c96cc93153baa8e757f8feb602fe99539fa281433535f89af85fb550/297582/review-of-evidence-assessing-impact-of-social-prescribing.pdf* (Accessed: 30th October 2020).

11. (2019) 'Social Prescribing: Making it work for GPs and patients', *General Practice and PCN support*, [Online]. Available at: *https://www.bma.org.uk/media/1496/bma-social-prescribing-guidance-2019.pdf* (Accessed: 30th October 2020).

12. Bertotti, M., Frostick, C., Hutt, P., Sohanpal, R., & Carnes, D. (2018). A realist evaluation of social prescribing: An exploration into the context and mechanisms underpinning a pathway linking primary care with the voluntary sector. Primary *Health Care Research & Development*, 19 (3), 232-235. Doi:10.1017/S1463423617000706

13. Kou, C. (2020) *What is social prescribing? What are the disadvantages*, Available at: *https://www.bwams.co.uk/post/what-is-social-prescribing-what-are-the-disadvantages* (Accessed: 30th October 2020).

14. Kimberlee, R., Jones, M., Powell, J. (2013) 'Kimberlee, R., Jones, M., & Powell, J. (2013). Measuring the economic impact of the wellspring healthy living centre's social prescribing wellbeing programme for low level mental health issues encountered by GP services'pp. 49 [Online]. Available at: *https://uwe-repository.worktribe.com/output/926277* (Accessed: 30th October 2020).

15. Helen J. Chatterjee, Paul M. Camic, Bridget Lockyer & Linda J. M. Thomson (2018) Non-clinical community interventions: a systematised review of social prescribing schemes, Arts & Health, 10:2, 97-123, DOI: 10.1080/17533015.2017.1334002

16. Husk, K., Blockley, K., Lovell, R., et al. (2019) 'What approaches to social prescribing work, for whom, and in what circumstances? A realist review', *Health and Social Care*, 28(2), pp. 309-324 [Online]. Available at: *https://doi.org/10.1111/hsc.12839* (Accessed: 5th November 2020).

17. Chiva-Giurca, B. (2018) *REPORT EXPLORING THE NEED TO FORMALLY INTRODUCE SOCIAL PRESCRIBING WITHIN THE UNDERGRADUATE MEDICAL SCHOOL CURRICULUM*, Available at: *https://collegeofmedicine.org.uk/wp-*

content/uploads/2018/01/Official-Report-2017-Social-Prescribing-within-the-Undergraduate-and-Posgraduate-Medical-School-Curriculum.pdf (Accessed: 30th October 2020).

Don’t let their memory rely on ours: The case for adding cognitive tests to the CDM programme

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It is important that we have confidence in a diagnosis and feel that we’ve done our best for our patients. The new Chronic Disease Management Programme supports this by providing a structure for both opportunistic diagnosis and monitoring of long term illness[1]. It does not, however, include common neurological illnesses such as dementia, leaving a sense of uncertainty over cognitive heath in the community. This exclusion is likely due to a perceived lack of benefit for patients[2], issues about GP confidence in diagnosing[3] and concerns about increased workload if the available tests were to be included. Yet if we read a little deeper into the figures it is clear we are missing a significant opportunity to improve community care for older people. A neurological addition to the CDM has a lot to offer at very little cost and would become exponentially more relevant as we move towards having an older population.

Dementia is most likely to be noticed at primary care level. Early signs of the disease are varied and can be as minor as confusion over drugs, missed appointments[4] or mild changes in cognitive function in someone with depression[5]. The diagnosis also often relies on a collateral history or on noting subtle changes in the individual over time[6], giving an advantage to any practitioner that sees a patient regularly, sees other family members or has regular contact with carers. Factors such as mood changes or difficulty in activities of daily living may have less relevance to a specialists’ field but are appropriate areas of concern for a GP. It is therefore unsurprising that patients are more likely to bring these concerns to a primary care provider [7]. Hence, no-one is better placed to elicit and contextualise these minor signs within the full picture of the individual than a GP with a strong knowledge of dementia.

The trouble with dementia is that it is unlikely to be diagnosed early if we don’t test for it regularly. Retrospective analysis of patient data, has shown that changes in behaviour and presenting habits can precede a formal diagnosis by up to 4 years[4]. A systematic review published this year has shown that between 29% and 76% of cases go unrecognized in the primary care setting[2]. This deficit may be arising out of time-constraints in a standard consultation[6]. Patients in Ireland are seen on average for 14 minutes at visits almost 100 days apart[8]. For CDM conditions such as diabetes, heart disease and asthma, there is a comfort in knowing that objective data from laboratory results will be processed in the meantime, and the HbA1c, LDL-c or Spirometry results will be waiting on our system to help inform the next consultation. The result is that we are much less reliant on the 14 minutes for these conditions.

Ironically, when it comes to the diagnosis of dementia the patient is much more dependent on our memory of how well they seemed at their last session more than 3 months ago. As anyone who has had the experience of tracking their close contacts for COVID-19 will know, it can be a strain to remember what we did two weekends ago, let alone how someone else responded to a few questions during a busy clinic in the last calendar season. Also use of a collateral history may not always be reliable in a country where public understanding of dementia is poor[9]. If GPs see on average over 100 patients per week[10], it seems unfair that the monitoring of someone's cognitive and memory skills should be reliant on ours.

The available cognitive screening tools offer a valid and reliable alternative. Evidence from a meta-analysis showed the GPCOG test, to have a sensitivity of 82-85% and specificity of 83-86% [7 11]. The same figures for the MMSE are 82-89% and 87%-90% [2 12][1]. The MoCA test has been shown to have higher average sensitivity again[13]. Note that these figures refer to once-off use of these tests. Their true value would likely be realised if they were repeated over time, particularly for a disease like dementia, the most common variants of which are defined by slow, progressive change. When used to provide a baseline and a reference point for longitudinal trends in cognitive health, and when combined with the clinical picture and unique history of the person sitting in the consultation room, the effectiveness of these tools may increase. They may provide a robust answer to the challenge of getting an early diagnosis.

This is also a low-cost intervention. It requires just 20 minutes of time per week and no capital or hardware investment. Allow me to briefly bore you the figures. The average GMS list includes 836 patients[14][2]. 19% of the population are aged over 65[15]. This means 159 GMS patients per practice who might be considered as part of the higher risk group for developing dementia[16]. At an average of 2 GPs per practice[10] and a CDM requirement to test each patient twice per year, this adds up to 159 cognitive tests per GP per year or, put another way, 3 per week. If a GPCOG takes 5 minutes, that gives us 15 minutes a week plus time to make clinical notes, so let's say 20 minutes. Testing could incur questions from patients as to why the test is necessary. This also used to be the case with GPs asking about mood or suicidality and if difficulty broaching the topic is the issue, then all the more reason this should be done at primary care where the relationship is most familiar. That's our cost, 20 minutes a week and perhaps the odd awkward explanation.

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[1] Figures included for MMSE are combined from both Creavin and Owens

[2] For a more accurate reflection, the figure used is a from an average taken from GMS lists between 2013-2017

For these 20 minutes we get better treatment for the patient. Testing can lead to earlier diagnosis[17][3] which can contribute to disease delay or even prevention[18] by encouraging investigation into reversible causes of memory loss[6]. It also allows for early initiation of pharmacological and non-pharmacological[19] therapies which have been proven to be effective[20]. As Bradford[6] notes, however, the most important thing it does is buy time. This is invaluable to the people who will eventually have to provide more intensive care down the line. It provides time to make legal decisions with clarity including those about what level of care is desired. It provides time to organise savings and budget for projected care costs and it provides time to consider long term decisions such as family members moving closer to the patient's home to provide more regular support. Without this time, primary care practitioners, family members and the patient themselves may have a much more awkward experience juggling these major life decisions. It is no wonder that patients are grateful when their GP can detect change earlier. Evidence shows that although receiving a diagnosis of dementia is distressing, families appreciate getting the information early so they can have that time to adapt[7]. This 20-minute investment also benefits GPs. Doctors have highlighted that concerns about the impact of both misdiagnosis and accurate diagnosis on the patient are major reasons for why a diagnosis of dementia was missed or delayed[6]. By contrast, the assurance of a baseline cognitive measurement and being able to track trends over time would give GPs more confidence in their diagnosis. As already discussed, an earlier diagnosis would also make the news less of a blow to patients and their families who would now have more time to adapt and prepare, contributing to a better therapeutic alliance and a stronger family support network to draw on in the interest of the patient. Including cognitive testing in the CDM would also address the pressures on GPs from the healthcare system that influence the standards of dementia care. Through the CDM reimbursement structure, it would alleviate uncertainty around appropriate reimbursement for providing dementia care. It would also address concerns about the lack of prioritisation of dementia within the public healthcare system. This would be a significant change as both issues have been expressed by doctors as reasons for why dementia diagnosis may be missed or delayed[6]. The increased focus on cognitive health would also encourage improvement of referral pathways at a time when dementia is on the rise in the population. I'll say it again, now is the time to make important structural changes, not when the population demographics shift in the next 20 years. Of course, this raises the eternal question- ''will more testing mean more referrals, and can we manage it?''. The short answers are 'yes' and 'very possibly', but let's get a realistic idea of what an affirmative answer actually means. Firstly, this is about appropriate referrals with a strong clinical suspicion based on trends over time. If the

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[3] The Alzheimer's UK *World Alzheimer's Report* has noted a gap between the onset of a period (T2) in which the disease is potentially detectable and the period (T3) in which it is detectable after patient or carer concerns are raised in the absence of a screening programme, see p11

tools are used to monitor trends, it means we will be referring with good cause so that those who should get referred do get referred and get referred early. Secondly, if a demand for better dementia care is exposed, this does not only mean involving consultant services. Rather, it is a call to expand and diversify our expertise with a disease that is becoming more prevalent and more treatable with time. A referral for dementia may require neurological assessment to assess the subtype [2] but it can also mean referral to a home care nurse with appropriate qualifications in managing dementia, or can involve a GP getting specialist advice on optimal care without the patient having to wait to be seen by a specialist[19] in much the same spirit as virtual clinics now aid the community management of heart failure or diabetic nurses advise on diet. In turn this creates a demand for up-skilling in dementia management within the nursing and carer professions, leading to a feedback system of earlier diagnosis and continually improving care. The other option is to allow the condition to progress to a severity at which the disease is more obvious. In the long run, that approach is neither best for the patient nor the service in terms of workload or cost. Given our ageing population, delaying action also seems short-sighted.

The major reason for not implementing screening is that the clinical trials have yet to come to a conclusion on a clear benefit. That may be enough to convince you against the points made above, however, I invite you to take a stepwise look at these assertions and see that there is something missing from the picture. The *World Alzheimer's Report 2011*, authored by Alzheimer's UK, noted a gap between the time when the disease can be detected clinically and the point when patient or carer concerns are normally raised in the absence of screening[17]. Despite the fact that it can be detected early, the US Preventative Services Task Force (USPSTF) recommends that more evidence is needed to show a clear benefit of screening[2] (or clear evidence of harm for that matter). This position is at odds with an understanding that the early use of available treatments is beneficial, and that the absence of a screening programme leads to a delay in diagnosis. If dementia is detectable and we know the treatment works then why should patients miss out on months or even years of beneficial treatment? The studies informing the USPTF guidelines are, as the study notes, short term and may not give the full picture for a chronic disease. This may explain why, despite the undecided position of the USPSTF, both Medicaid and Medicare services in the Unites States have included cognitive screening in their annual reviews of at risk patient groups since 2011[2].

Dementia in Ireland has an annual incidence of 4000 and its prevalence is expected to double over the next 20 years[9], reaching over 150,000 people by 2046[21]. Our population of over-65's is projected to grow to 1.6m by 2051[22]. If we are serious about healthy ageing and promoting independence amongst older people, if we are committed to dealing with chronic disease in the community and if we want to feel supported in providing the best standard of care for our patients, then we should take this opportunity to evolve the system for dementia care now. All of this has the potential to improve GP's sense of control over community cognitive health and to transform the diagnosis of dementia from a potentially devastating blow to being more similar to another chronic condition which is accepted and planned for with proper support. Isn't this what the CDM programme is all about and hence shouldn't we include cognitive screening? In fact, this idea is already gaining momentum and Alzheimer's Ireland have recently opened a research tender to explore the possibility[23]. But why wait for another round of HSE-IMO negotiations? If you think this is worth 20 minutes of your time, you could implement it in your practice today. Your success may not only buy time and better treatment for your patients, it could also encourage change at a national level. The time to learn about managing an ageing population and improve community neurological health is now. It's up to GPs to lead the charge.

1. Dept.Health. Terms of Agreement between the Department of Health, the HSE and the IMO regarding GP Contractual Reform and Service Development, 2019.
2. Owens DK, Davidson KW, Krist AH, et al. Screening for Cognitive Impairment in Older Adults: US Preventive Services Task Force Recommendation Statement. JAMA 2020;**323**(8):757-63 doi: 10.1001/jama.2020.0435[published Online First: Epub Date]|.
3. Turner S, Iliffe S, Downs M, et al. General practitioners' knowledge, confidence and attitudes in the diagnosis and management of dementia. Age Ageing 2004;**33**(5):461-7 doi: 10.1093/ageing/afh140[published Online First: Epub Date]|.
4. Bamford C, Eccles M, Steen N, Robinson L. Can primary care record review facilitate earlier diagnosis of dementia? Fam Pract 2007;**24**(2):108-16 doi: 10.1093/fampra/cml068[published Online First: Epub Date]|.
5. Holmquist S, Nordström A, Nordström P. The association of depression with subsequent dementia diagnosis: A Swedish nationwide cohort study from 1964 to 2016. PLoS Med 2020;**17**(1):e1003016 doi: 10.1371/journal.pmed.1003016[published Online First: Epub Date]|.
6. Bradford A, Kunik ME, Schulz P, Williams SP, Singh H. Missed and delayed diagnosis of dementia in primary care: prevalence and contributing factors. Alzheimer Dis Assoc Disord 2009;**23**(4):306-14 doi: 10.1097/WAD.0b013e3181a6bebc[published Online First: Epub Date]|.
7. Robinson L, Tang E, Taylor JP. Dementia: timely diagnosis and early intervention. BMJ 2015;**350**:h3029 doi: 10.1136/bmj.h3029[published Online First: Epub Date]|.
8. Pierse T, Barry L, Glynn L, Quinlan D, Murphy A, O'Neill C. A pilot study of the duration of GP consultations in Ireland. Pilot Feasibility Stud 2019;**5**:142 doi: 10.1186/s40814-019-0532-4[published Online First: Epub Date]|.
9. HSE. dementia-stats. Secondary dementia-stats 2020. https://www.hse.ie/eng/services/list/4/olderpeople/dementia/about-dementia/dementia-stats.
10. O'Kelly M TC, O'Kelly F, Ni Shúilleabháin A, O'Dowd T. Structure of General Practice in Ireland 1982-2015. Trinity College, Dublin: Irish College of General Practitioners, 2016.
11. Yokomizo JE, Simon SS, Bottino CM. Cognitive screening for dementia in primary care: a systematic review. Int Psychogeriatr 2014;**26**(11):1783-804 doi: 10.1017/S1041610214001082[published Online First: Epub Date]|.

12. Creavin ST, Wisniewski S, Noel-Storr AH, et al. Mini-Mental State Examination (MMSE) for the detection of dementia in clinically unevaluated people aged 65 and over in community and primary care populations. Cochrane Database Syst Rev 2016(1):CD011145 doi: 10.1002/14651858.CD011145.pub2[published Online First: Epub Date]|.
13. Hoops S, Nazem S, Siderowf AD, et al. Validity of the MoCA and MMSE in the detection of MCI and dementia in Parkinson disease. Neurology 2009;**73**(21):1738-45 doi: 10.1212/WNL.0b013e3181c34b47[published Online First: Epub Date]|.
14. CSO. GMS patients and Corresponding GP claim costs 2013-2017. Secondary GMS patients and Corresponding GP claim costs 2013-2017 2019. https://www.cso.ie/en/releasesandpublications/er/hfgc/hsefundedgpclaims/.
15. CSO. Census of Population 2016- Profile 3 An Age Profile of Ireland. Secondary Census of Population 2016- Profile 3 An Age Profile of Ireland 2017. https://www.cso.ie/en/releasesandpublications/ep/p-cp3oy/cp3/agr/.
16. van der Flier WM, Scheltens P. Epidemiology and risk factors of dementia. J Neurol Neurosurg Psychiatry 2005;**76 Suppl 5**:v2-7 doi: 10.1136/jnnp.2005.082867[published Online First: Epub Date]|.
17. Prince M, Bryce R, Ferri DC. World Alzheimer Report 2011. London, UK, 2011.
18. Livingston G, Huntley J, Sommerlad A, et al. Dementia prevention, intervention, and care: 2020 report of the Lancet Commission. Lancet 2020;**396**(10248):413-46 doi: 10.1016/S0140-6736(20)30367-6[published Online First: Epub Date]|.
19. National Institute for Heath Care and Excellence (NICE). Dementia: Assessment, management and support for people living with dementia and their carers (NICE GUIDELINES NG97), 2018.
20. Birks J. Cholinesterase inhibitors for Alzheimer's disease. Cochrane Database Syst Rev 2006(1):CD005593 doi: 10.1002/14651858.CD005593[published Online First: Epub Date]|.
21. Pierce M C, S., & O'Shea, E. Prevalence and Projections of Dementia in Ireland. Report prepared for Genio Ltd, 2014.
22. CSO. Population and Labour Force Projections 2017-2051, 2017.
23. Alzheimers Society of Ireland. ASI Policy Tender: A Case for Dementia in the Chronic Disease Management Programme. Secondary ASI Policy Tender: A Case for Dementia in the Chronic Disease Management Programme 2019. https://alzheimer.ie/wp-content/uploads/2019/10/Chronic-Disease-Programme-Invitation-to-tender.pdf.

Telemedicine in Primary Care: a temporary substitution or a future role?

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It was around a few months ago when I received a phone call from the embassy of Kuwait asking me to pack immediately and prepare for the evacuation flight from Dublin to Kuwait. Although the coronavirus pandemic has been going on for a while now, I never grasped the full magnitude of the situation until that phone call. As an international medical student, I panicked upon receiving the call. A million thoughts kept rushing through my head. I started worrying about what that meant for my future and career. Uncertainty never left me, it still haunts me to this day. I was never an uncertain person; yes, I worried all the time for exams, but I always assumed it was a normal response as we all are in the same situation.

I remember March 12th when Ireland went on full lockdown shutting down schools, universities and businesses. Little did I know the impact this had on our society, environment, politics and medical practice moving on…

Initially, it was very difficult adapting to the restrictions. We humans are very customised to physical touch and social interaction. It was tough not being able to meet up with my friends. They were the only family I had here since my whole family was back home. I was thankful for the technology which became my only point of contact with my friends and family. I started appreciating my phone and laptop more as they enabled me to communicate with the people I cared about. Technology became my escape, my reassurance. Suddenly, my mother's face on a screen meant way more than just a video call.

Eventually, I ended up flying back home for the remainder of the summer semester as our clinical placements got "cancelled". This experience was bittersweet to say the least. The journey to the airport was nerve wrecking and I was overwhelmed with this mixture of emotions I experienced. I was happy to go home and see my family of which I only get to see once a year, but at the same time I was sad to leave Ireland without any knowledge about what was yet to come. ***Will I even return to Dublin? Will I even graduate on time?***

The next few days were a blur, I became hypervigilant to every notification I received. The university started flooding us with emails and it was difficult to organize my train of thoughts. I was always a planner, but this was never in my plans. I started checking my university email hour by hour as things were rapidly changing.

Finally, after weeks of waiting we received the proposed plan for the remainder of the year. Our modules had to be delivered online due to the Covid-19 pandemic. Initially, I was confused of how a clinical module was to be transferred to online learning. At the time, I was in my second last year of my degree where it was vital to stay in the hospital setting and interact with patients on a face-to-face basis. ***How was I going to do surgery online? How will I build up my clinical skills and communication skills since I will not be in contact with patients anymore?*** To say the least, I was disappointed as I really was enjoying my clinical placements.

After finishing my medicine and surgery modules, we started moving towards the sub-specialties: General practice, psychiatry, OB/GYN followed by paediatrics. Most of the online teaching was done through the virtual classroom on Brightspace, our school portal. I started noticing my motivation slowly drifting away. It was not the same as active learning at the hospitals or during live lectures. The tutors emphasised the need to keep a healthy “routine” as if we were attending normal placements. This involved dressing professionally for the online lectures and interacting as much as possible. However, for some classes, I was not even obliged to put on my camera and microphone. This left room for procrastination. I started using my phone and checking my messages during the lecture because I regarded it as less important than a face-to-face lecture where I felt I had to focus more. Truth is, the consequences were not as great as if I was physically there in class. Sometimes, the only way of communicating with the tutors was this tiny chat box on the right side of the screen. The online platform was frustrating at times; glitches, audio problems and video problems all made it hard to concentrate and stay focused. Occasionally, I was very tempted to “leave” the session. My eyes also started taking a toll on me, I was staring at this screen for about 8-9 hours every day. As a result, I started getting headaches and my vision was getting worse.

Next thing I know, weeks turned into months. I was almost done with my specialty online learning and exams were approaching. This was probably my toughest period so far, I was about to be examined on material I only learned from **online** lectures. Anxiety started kicking in, I have never felt so unprepared in my life. I was not entirely sure if I was under or over studying for those exams, I kept wondering about the format of this exam**. *Will we be able to go back and forth between questions? what will happen if my connection stops working? What if the time stops, will my answers still be submitted?*** I was always a visual learner and I preferred taking paper exams where I could highlight key words as I was reading through the vignette.

Looking back now, I never understood the sacrifices our tutors made. I could not imagine trying to teach a class of 190 students and not getting feedback in the form of non-verbal communication.

Fast forwards two months and here I am trying to find a way back to Ireland to commence my clinical placements for my final year in medicine. My first rotation was general practice and medicine for the elderly. Unfortunately, my GP placement was cut short to one actual week of being at the practice with the remainder once again being online. I have already done a GP placement about a year ago but this one was completely different. I arrived and was immediately told to put on a face shield for protection. Seats were separated with only 2-3 people being allowed in a consultation room. The histories I took were not like any other I have taken before. The patients found it hard to hear me with the mask on and although I was in the same room, I felt very distanced from the patient. I found myself repeating questions more than once or having to raise my voice in order to effectively communicate with the patients. I had to disinfect the chairs and equipment every time a patient left the room.

Due to Covid-19 restrictions, the majority of the consultations were carried out by phone. Unfortunately, I was not able to listen to most phone consultations as the GP used earphones and preferred to be alone to ensure a quiet setting. Telephone consultations had their advantages and disadvantages, the main drawback being the lack of physical examination which is a vital step in the consultation. During our teaching sessions, we had a task of delivering bad news on the phone. I found it extremely hard to display empathy on the phone with the absence of non-verbal communication such as head nodding and eye contact.

The arrival of the Covid-19 pandemic has dramatically transformed the primary care sector forcing practices to adapt to the new restrictions to minimize infection transmission among the community. Consequently, the use of telemedicine via telephone and video consultations has increased over the past few months. The world health organization (WHO) defines telemedicine as “the delivery of healthcare services at a distance with the use of information and communication technologies” (1). Telemedicine has been proposed as a tool of maintaining continuum of care in general practice during this period. A telemedicine process cycle is outlined in figure 1.1 highlighting the role of guideline implementation such as obtaining informed consent prior to initiating the session and the role of safety netting and arranging a follow up appointment if indicated (2).

It is essential to try to replicate the standard consultation via providing a quiet, private setting. The national healthcare communication programme suggests the use of headphones to minimize background noise, establishing if the patient can hear and comprehend the information given, appropriate body language and allowing sufficient time for the patient to explain the concern before interruption (3). With regards to video consultations, additional measures such as professional dressing, optimal lightning and quality and positioning of the camera should be taken into consideration (4). Delivering telemedicine eliminates the ability to physically examine the patient which is vital in confirming diagnoses and guiding management. The physical touch also plays a role demonstrating reassurance, healing, caring and humanity (5).

The average patient usually spends more than two hours per appointment between traveling and waiting to be called in (6). As systematic review demonstrated a time reduction of 1.5 minutes during phone consultations when compared to face-to-face consultations (7). The study also demonstrated that telephone consultations lead to increased follow ups. Although virtual consultations offer the advantage in terms of convenience, access of internet and affordability are key factors affecting equality of healthcare delivery. The standard of video consultations was evaluated according to the Royal College of General Practitioners (RCGP) quality indicators which demonstrated a worse performance in the area of "problems in a psychosocial context" when compared to the standard consultation (8). Another study looked at patient satisfaction rates of video consultations (VC) and reported a 94-99% satisfaction rate with 95% stating they would use VC again (9). A qualitative study demonstrated that patients felt comfortable and established a connection with their physician (10). On the other hand, a randomized control trial comparing both video and routine visits demonstrated that patients still preferred the routine visit (P=0.01) (11). Clinicians described that their confidence during VCs was reduced when ordering laboratory tests or initiating new treatments. GPs also shared the concern of the vulnerable group of patients who struggled with engaging virtually which potentially lead to an unintentional lower quality of healthcare delivery.

The discrepancy between patient and clinician perspective made me wonder about the impact of appropriate training for virtual consultations. A survey was conducted across the UK assessing prior training and barriers towards tele-consultations which revealed interesting findings. The survey demonstrated that 95% of healthcare professionals have not received any training and 64% of them were not up to date with the latest General medical Council guidelines for telemedicine (12). *Survey findings are displayed in figures 2.1-2.5*. The most common barrier identified in this study was the ability to review patient records during the online consultation. Lack of training can introduce patient safety concerns and thus a medico-legal burden. Another area explored was the impact of medical students' training as the standard consultation offered a better opportunity for bedside training.

Another survey was carried out looking at GP trainees specifically and their level of confidence with tele-consultations. This study demonstrated that privacy and confidentiality were difficult areas of the consultation experienced by the trainees (13). A graph demonstrating the relationship between prior training and confidence to carry out tele-consultations independently is displayed on figure 3.1(13). All trainees regardless of their level agreed that there is a significant need to strengthen the training for telephone consultations and liaise with policymakers to implement this demand. The use of telephone triage was also examined among different healthcare workers (nurses, GPs and other physicians) to evaluate the impact of training, age, gender and experience. The cross-sectional study explored the quality of triage in out of hours primary care with the aid of a computerised decision support system (CDSS) in Denmark. The study revealed a higher quality of triage conducted by the nurses compared to GPs and physicians. However, the overall efficiency was higher for GPs as the nurses had longer durations of calls (14). Physicians received the lowest ratings on most items and were perceived as less efficient and safe.

In 2014, Norway introduced a telemedicine program named "digital dialogue with the general practitioner" which comprised of four distinct services: electronic appointment booking, electronic prescription renewal (only regular medications), GP contact for non-clinical inquiries and an electronic consultation for clinical concerns. This service further expanded nationality in 2019 reaching 383+ GP practices. The E-prescription service was the most useful where 90% of patients have reported that it saved time (15). In terms of the E-consultation, this only included inquiries regarding known health conditions which were of non-urgent demand. Examples of safe online consultations included follow up on mental illness (non-emergency), questions about use and side effects of medications and discussions about specialist referrals. This physician was allowed a period of 5 days to respond to E-consultations and a quicker response was associated with improved patient satisfaction. When evaluating the demographics of the digital health service, the most common users were young adults with technology experience, women>men, and people with a high educational background (60% had third level education +) (15). For telemedicine to be effective in a primary care setting, it should be accessible to all users despite their technological and educational background.

The application of telemedicine in medication reviews was explored by a systematic review and meta-analysis involving 29 studies from the united states of America, Canada, Australia and brazil. This analysis compared tele-health medication reviews with the standard face-to-face reviews in terms of cost-effectiveness, medication use and patient satisfaction. This review demonstrated a reduction in medical errors from 37 to 5 after the implementation of a tele-review (16). One of the other studies included also showed an improvement in adherence and a decrease in inappropriate antibiotic prescribing. In terms of costs, the standard medication review had a higher cost per service in comparison to the tele-review, 279.89 $ AUS ; 214.66$ AUS respectively (16). Overall, technological implications in medication reviews were associated with improved patient satisfaction and cost saving through minimizing travel. This could be a used as a guide to implement in Ireland through general practice and pharmacy institutions.

The question of who to target with telemedicine interventions remains unclear. A systematic review estimated that about 50% of patient concerns may be approached with telephone advice on its own (17). Other sources have recommended telephone and video consultations for known chronic conditions of non-urgent status and for potential substitution of first time visits (18)(16)(15)(7)(8). All in all, face-to-face consultations remained the preferred method for both patients and clinicians, but tele-consultations have shown similar satisfaction rates and advantages in time management, cost effectiveness and healthcare quality delivery.

In summary, telemedicine will play a major role in the future of primary care if appropriate guidelines are implemented and standardized on a national level. Limitations include education and awareness among GPs and patients with specific relevance to those unable to access or operate technology. Training programs for general practitioners in tele-consultations should be provided. There is a need for further investments in infrastructure and cybersecurity. Finally, further research is required in Ireland to establish the role of telemedicine in primary care practices, pharmacies and other healthcare institutions.

References:

Iyengar, K., Jain, V. and Vaishya, R., 2020. Pitfalls in telemedicine consultations in the era of COVID 19 and how to avoid them. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews*, 14(5), pp.797-799.

Bokolo Anthony Jnr., 2020. Use of Telemedicine and Virtual Care for Remote Treatment in Response to COVID-19 Pandemic. *Journal of Medical Systems*, 44(7).

Each.eu. 2020. *TELEPHONE CONSULTATIONS CALGARY-CAMBRIDGE GUIDE*. [online] Available at: <https://www.each.eu/wp-content/uploads/2020/05/EACH-NHCP-DIFFICULT-CONVERSATIONS-PHONE.pdf> [Accessed 11 October 2020].

Hse.ie. 2020. *VIDEO CONSULTATIONS CALGARY-CAMBRIDGE GUIDE*. [online] Available at: <https://www.hse.ie/eng/about/our-health-service/healthcare-communication/nhcp-video-consultations.pdf> [Accessed 11 October 2020].

Kelly, M. and Gormley, G., 2020. In, But Out of Touch: Connecting With Patients During the Virtual Visit. *The Annals of Family Medicine*, 18(5), pp.461-462.

Smith, W. and Kohlwes, R., 2020. From Leather Bags to Webcams, the Emerging Tools of Tele-primary Care. *Journal of General Internal Medicine*, 35(3), pp.628-629.

Downes, M., Mervin, M., Byrnes, J. and Scuffham, P., 2017. Telephone consultations for general practice: a systematic review. *Systematic Reviews*, 6(1).

Matheson, J., 2020. Video consultations: quality, access, and equity in COVID and post-COVID general practice. *British Journal of General Practice*, 70(696), pp.329-329.

Thiyagarajan, A., Grant, C., Griffiths, F. and Atherton, H., 2020. Exploring patients' and clinicians' experiences of video consultations in primary care: a systematic scoping review. *BJGP Open*, 4(1), pp.bjgpopen20X101020.

Powell RE, Henstenburg JM, Cooper G, *et al*. Patient perceptions of telehealth primary care video visits. *Ann Fam Med* 2017; **15**(**3**): 225–229. DOI: https://doi.org/10.1370/afm.2095

Stahl JE, Dixon RF. Acceptability and willingness to pay for primary care videoconferencing: a randomized controlled trial. *J Telemed Telecare* 2010; **16**(**3**): 147–151. DOI: https://doi.org/10.1258/jtt.2009.090502

Elawady, A., Khalil, A., Assaf, O., Toure, S. and Cassidy, C., 2020. Telemedicine during COVID-19: a survey of Health Care Professionals’ perceptions. *Monaldi Archives for Chest Disease*, 90(4).

Chaudhry, U., Ibison, J., Harris, T., Rafi, I., Johnston, M. and Fawns, T., 2020. Experiences of GP trainees in undertaking telephone consultations: a mixed-methods study. *BJGP Open*, 4(1), pp.bjgpopen20X101008.

Graversen, D., Christensen, M., Pedersen, A., Carlsen, A., Bro, F., Christensen, H., Vestergaard, C. and Huibers, L., 2020. Safety, efficiency and health-related quality of telephone triage conducted by general practitioners, nurses, or physicians in out-of-hours primary care: a quasi-experimental study using the Assessment of Quality in Telephone Triage (AQTT) to assess audio-recorded telephone calls. *BMC Family Practice*, 21(1).

Zanaboni, P. and Fagerlund, A., 2020. Patients’ use and experiences with e-consultation and other digital health services with their general practitioner in Norway: results from an online survey. *BMJ Open*, 10(6), p.e034773.

Shafiee Hanjani, L., Caffery, L., Freeman, C., Peeters, G. and Peel, N., 2020. A scoping review of the use and impact of telehealth medication reviews. *Research in Social and Administrative Pharmacy*, 16(8), pp.1140-1153.

Vitale, R., Smith, S. and Doolittle, B., 2019. Improving patient satisfaction through improved telephone triage in a primary care practice. *Family Medicine and Community Health*, 7(4), p.e000208.

Wolthers TO, Wolthers OD. Telephone consultation as a substitute for face-to-face consultation during the COVID-19 pandemic. Dan Med J. 2020 Jun 23;67(7):A04200300. PMID: 32734880.

Appendix:

Figure 1.1

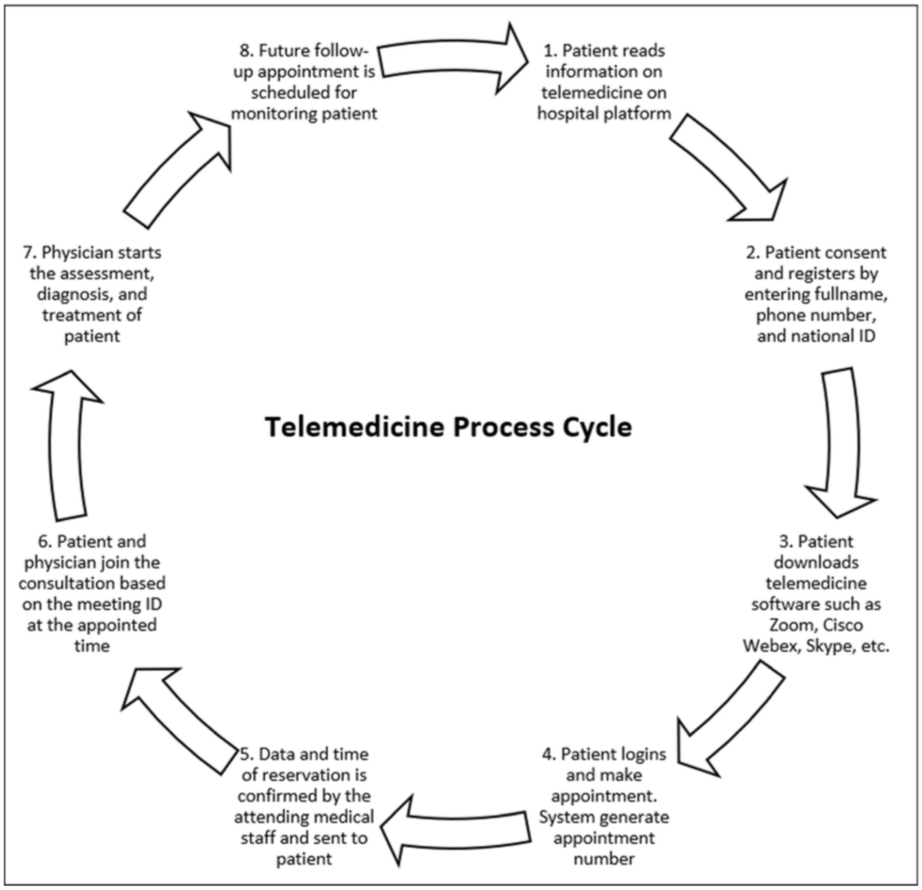
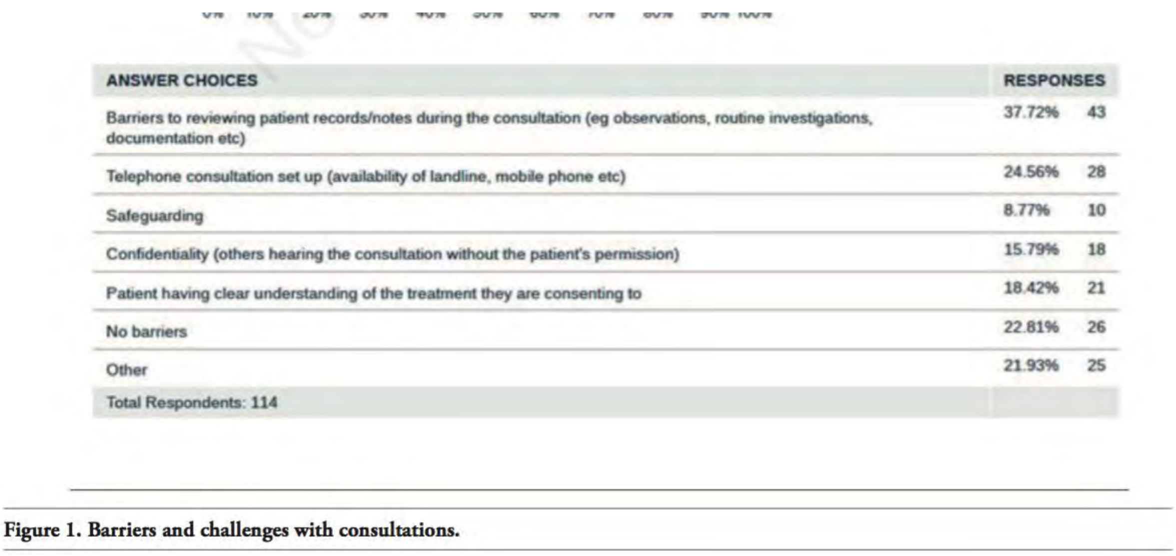


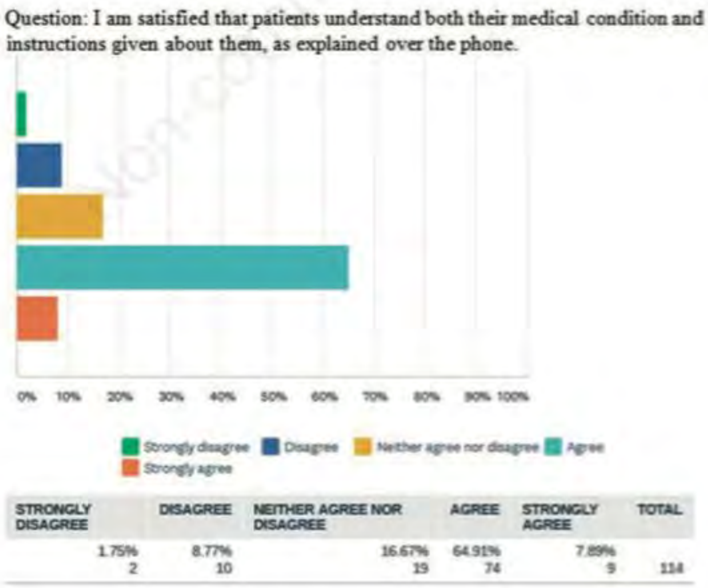
Figure 2.1



ANSWER CHOICES	RESPONSES	
Barriers to reviewing patient records/notes during the consultation (eg observations, routine investigations, documentation etc)	37.72%	43
Telephone consultation set up (availability of landline, mobile phone etc)	24.56%	28
Safeguarding	8.77%	10
Confidentiality (others hearing the consultation without the patient's permission)	15.79%	18
Patient having clear understanding of the treatment they are consenting to	18.42%	21
No barriers	22.81%	26
Other	21.93%	25
Total Respondents: 114		

Figure 1. Barriers and challenges with consultations.

Figure 2.2

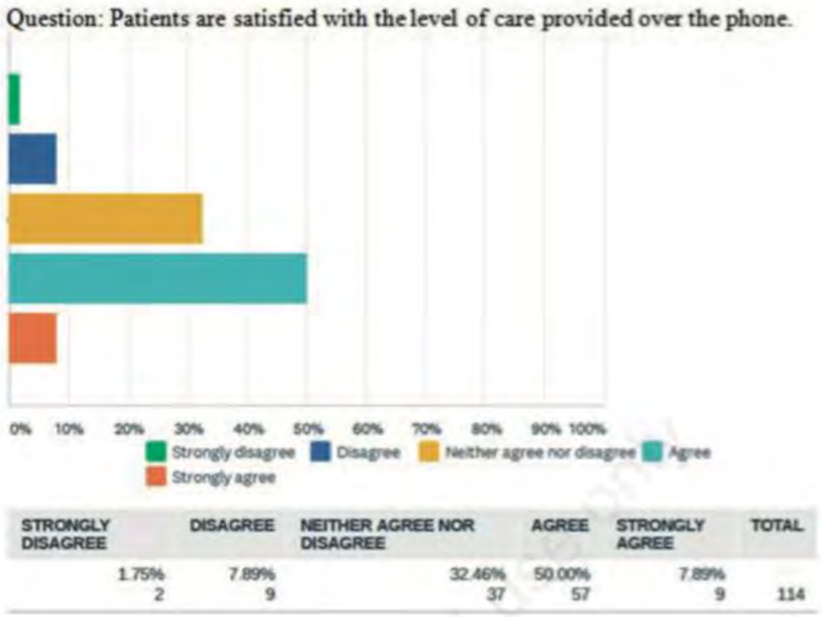


Question: I am satisfied that patients understand both their medical condition and instructions given about them, as explained over the phone.

STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE	TOTAL
1.75% 2	8.77% 10	16.67% 19	64.91% 74	7.89% 9	114

Figure 2. Patient's understanding of their medical conditions and of the instructions given.

Figure 2.3

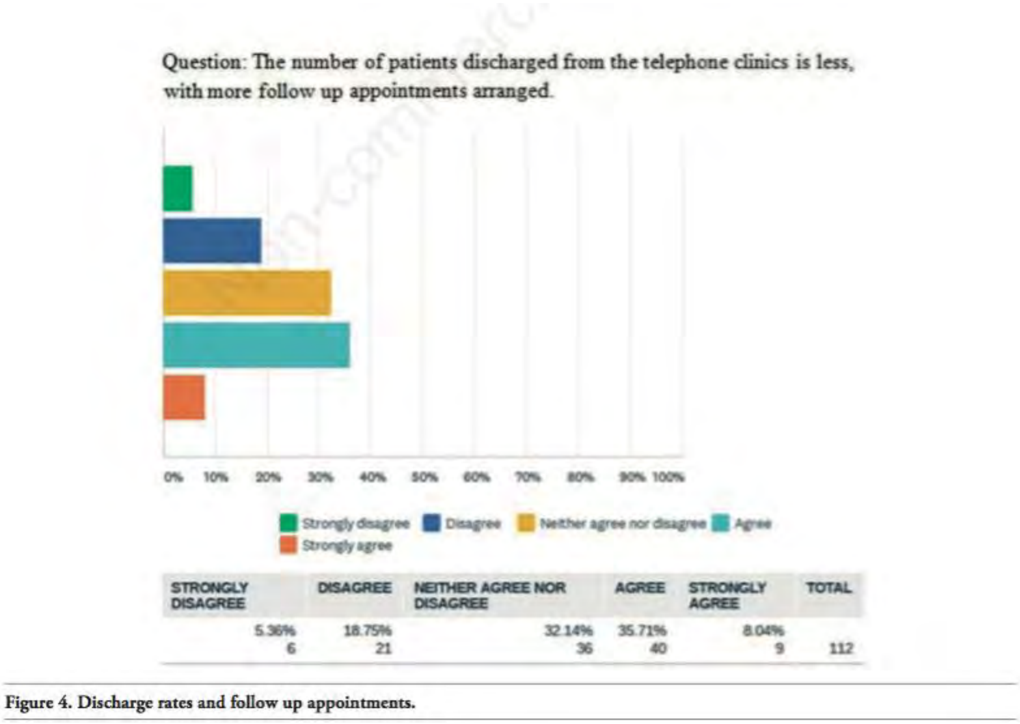


Question: Patients are satisfied with the level of care provided over the phone.

STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE	TOTAL
1.75% 2	7.89% 9	32.46% 37	50.00% 57	7.89% 9	114

Figure 3. Patients' satisfaction with the level of care.

Figure 2.4

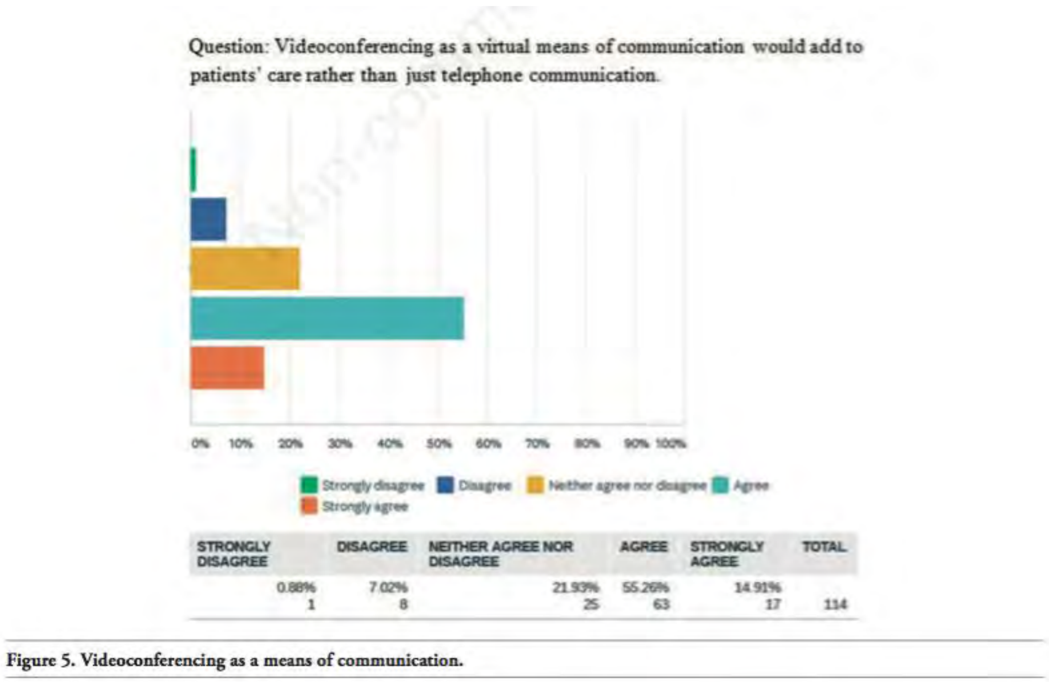


Question: The number of patients discharged from the telephone clinics is less, with more follow up appointments arranged.

STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE	TOTAL
5.36% 6	18.75% 21	32.14% 36	35.71% 40	8.04% 9	112

Figure 4. Discharge rates and follow up appointments.

Figure 2.5



Question: Videoconferencing as a virtual means of communication would add to patients' care rather than just telephone communication.

STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE	TOTAL
0.88% 1	7.02% 8	21.93% 25	55.26% 63	14.91% 17	114

Figure 5. Videoconferencing as a means of communication.

Figure 3.1

BJGP Open

Research

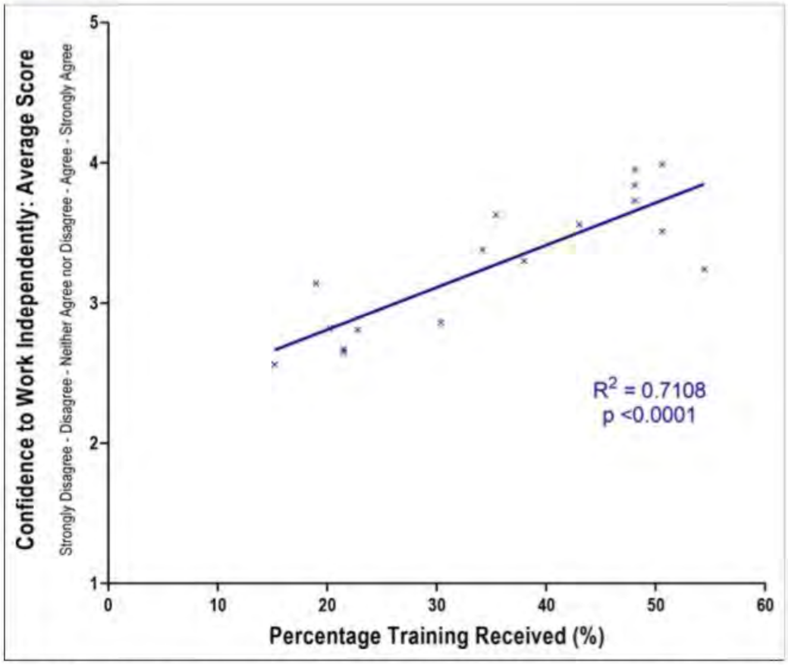


Figure 2 Relationship between percentage training received and the confidence to work independently for telephone consultations.

Audit of the Assessment of Cardiovascular Disease Risk Factors in Women with Polycystic Ovarian Syndrome Registered with a GP Practice in Northern Ireland

Author: Hannah Maguire, undergraduate medical student, Queens University Belfast

1. Introduction

Polycystic Ovarian Syndrome (PCOS) is a common endocrine condition that affects approximately 1 in 5 women in the UK [1]. According to the Rotterdam criteria, PCOS is characterised by two of the following; i- oligo- or anovulation, ii- clinical and/or biochemical signs of hyperandrogenism or iii- polycystic ovaries on imaging [2]. PCOS has been linked to metabolic syndrome, which is defined by insulin resistance, hypertension, dyslipidaemia and central obesity [3]. Metabolic syndrome is associated with increased risk of type 2 diabetes mellitus, cardiovascular disease and sleep apnoea and affects up to 1/3 of women with PCOS [3,4]. PCOS is reported to double the risk of coronary heart disease (CHD). This represents a significant increase in risk when coupled with metabolic syndrome, which increases the risk of CHD by 3-6 times [4]. Primary prevention is key where early identification and management of metabolic syndrome is necessary to reduce morbidity and mortality. Cardiovascular disease (CVD) costs the NHS 7 billion pounds every year, thus establishing preventative interventions in women with PCOS will help to reduce future NHS burden [5]. At PCOS diagnosis, the Royal College of Obstetrics and Gynaecology (RCOG) recommend the baseline measurement of CVD risk factors as a means of establishing risk and facilitating prevention of future health consequences [6]. This is particularly important as CVD remains one of the most common causes of female mortality [6].

2. Aims and Objectives

The aim of this audit was to ensure that current practice is compliant with RCOG guidelines that state “100% of women with PCOS should be assessed for CVD risk by assessing individual CVD risk factors at baseline.” The objective was to collect data on the assessment of CVD risk in women with PCOS. Data collected was used to determine if the following factors were recorded at time of PCOS diagnosis (and the result if applicable); BMI (body mass index), waist circumference, physical activity levels, smoking status, lipid levels, blood pressure, blood sugar, impaired glucose tolerance, diagnosis of type 2 diabetes mellitus (T2DM), family history of T2DM and provision of lifestyle advice.

3. Method

3.1. Study Design

This was a retrospective audit of the assessment of CVD risk factors used to establish the CVD risk in women registered at a GP practice with a diagnosis of PCOS.

3.2. Procedure

Patients were identified by searching the database of all those registered with the practice. Women coded as having a diagnosis of PCOS as of 27 August 2020 were eligible for inclusion in the study. The author used a standardised electronic abstraction form for data extraction. The form was pilot tested, which allowed for familiarity with its use and ensured the retrieval of relevant information. The abstracted data included the reporting of and result for CVD risk factors such as BMI, smoking status and lipid levels. The RCOG green top guideline (No. 33) “Long-term consequences of polycystic ovarian syndrome” published in November 2014 was used as the standard to which current practice was compared [6].

4. Results

4.1. Search Results

A search for ‘women with a diagnosis of PCOS’ in the electronic records yielded 48 results. 4 patients were excluded due to incomplete data (absence of secondary care letters on the system) therefore 44 women were included in the audit, thus n= 44. The mean age of women in the sample was 26.5 (Standard deviation (SD) 6.34).

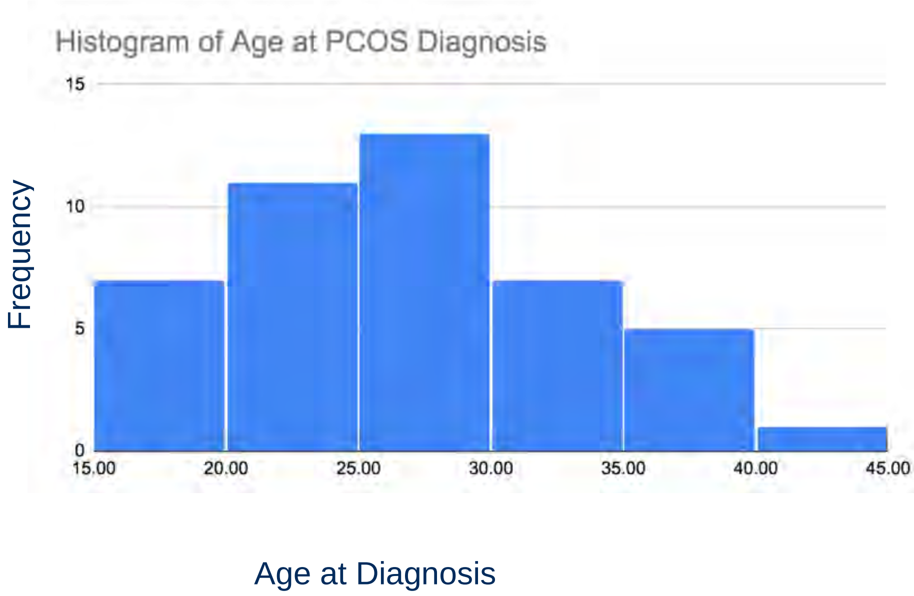


Figure 1- Histogram of age at PCOS diagnosis

4.2. Assessment of CVD Risk Factors

No patient had screening of all 8 risk factors. 13.6% of records had none of the CVD risk factors recorded at time of diagnosis. Table 1 describes the reporting of the relevant factors. Smoking was the most likely to be recorded where it was recorded for 35 women. Where smoking status was recorded, 10 women were identified as current smokers. No patient received an impaired glucose tolerance test. Dyslipidaemia and physical activity levels were assessed in only 4.5% of women. Of the 2 patients with recorded lipid levels, one was slightly abnormal with a slightly raised total cholesterol (5.5 mmol/L [normal is 5 or below]) and raised LDL (3.4 mmol/L [normal is 3 or below]). Results for the other patient were normal.

Table 1: Recording of CVD Risk Factors

Risk Factor	Number of Women With Risk Factor Recorded
Obesity (through measurement of BMI and waist circumference)	BMI: 21/44 (47.7%) Waist circumference: 0/44
Physical activity	2/44 (4.5%)
Smoking status	35/44 (79.5%)
Dyslipidaemia (through measurement of lipids)	2/44 (4.5%)
Hypertension (Measurement of blood pressure) *Hypertension defined as BP> 140/90*	11/44 (25%)
Family history of T2DM	22/44 (50%)
Diagnosis of T2DM	43/44 (97.7%)
Impaired glucose tolerance test	0/44

4.2.1. Obesity

Obesity was determined through the use of body mass index (BMI) scores and waist circumference. None of the women had a waist circumference recorded. BMI scores were reported in just under half of patients (47.7%). Of those recorded, the average BMI was 33.7 (SD 6.15). 17 women had a BMI of >30, thus were defined as obese. The highest BMI recorded was 43.11. Normal weight is defined as BMI score between 18.5

and 24.9 [7]. This was only applicable to two patients in the sample. BMI scores for the remaining women were categorised as overweight.

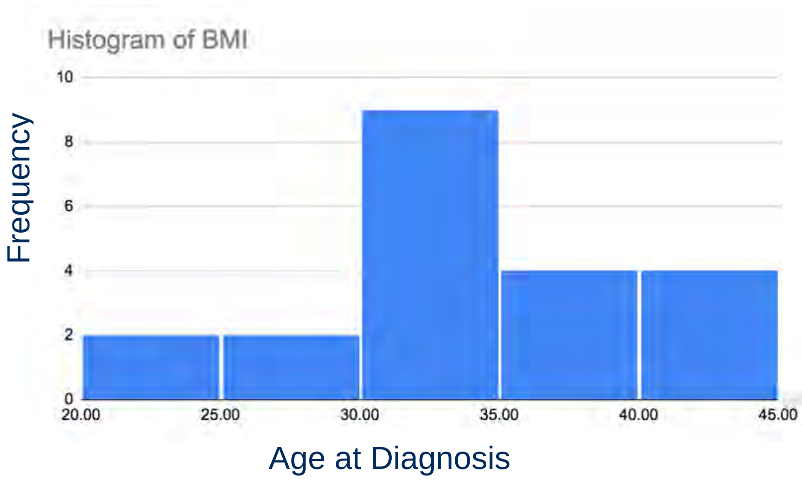


Figure 2- Histogram of BMI scores for women with a diagnosis of PCOS

4.2.2.Type 2 Diabetes Mellitus

Family history of diabetes was recorded in half of patients where only 7 had a positive family history. 11.4% of women had a recorded diagnosis of type 2 diabetes mellitus. Two women were insulin-dependent diabetics. In addition, one woman was undergoing investigations in relation to the condition. Blood glucose levels or HbA1c were assessed in 4 patients, which were all normal.

4.2.3. Hypertension

Blood pressure was recorded in 25% of the sample. Hypertension was defined as blood pressure of greater than 140/90, thus 3 women in the sample were considered hypertensive. 6 records reported use of anti-hypertensive medications.

5. Discussion

Of the 44 women included in the study, 36 had at least one CVD risk factor measured at baseline and no record recorded all 8 risk factors. Thus, adherence to the guidelines set by the RCOG is sub-optimal. This may be explained by time constraints in both general practice and in the outpatient setting where doctors have insufficient time for measurement of the risk factors. For example, impaired glucose tolerance testing involves the collection of samples at various timepoints, ending after two hours [8]. This is no longer routinely done in general practice or at gynaecological outpatient clinic.

Of the 7 risk factors specified by the RCOG guideline, BMI confers the greatest risk in this sample. The mean was a BMI of 33.7, which is characterised as obese. If this is a representative sample, this suggests the PCOS population are obese on average and represents an important area for intervention. Obesity in PCOS is linked to insulin resistance in a vicious cycle (see figure 3). Insulin resistance (IR) is thought to be the mechanism that links PCOS and the metabolic syndrome [4].

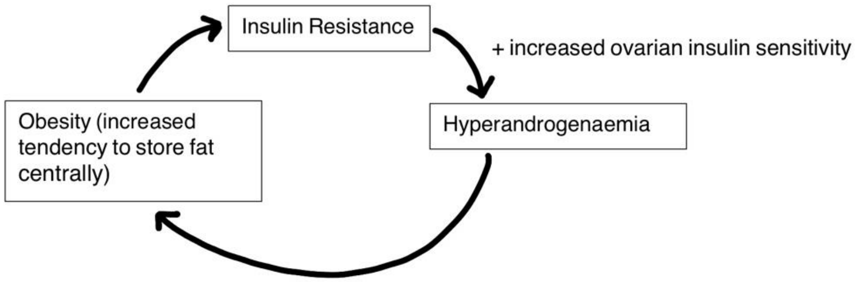


Figure 3- Adapted from “Metabolic Syndrome in Women with PCOS”- Chandrasekaran, S. and Sagili,H [4].

A nationwide population study of 18,112 Danish women with PCOS demonstrated that obesity was a significant predictor for the development of CVD where the risk was significantly increased by 170% compared to controls (hazard ratio= 2.7, $p<0.001$) [9]. Similar to this study, the majority of BMI scores for the Danish cohort were overweight or obese. Therefore, primary prevention that encourages weight loss could substantially reduce the metabolic complications of PCOS. The Danish study included the measurement of waist circumference as a CVD risk factor. Various large population-based studies have demonstrated that waist circumference is a strong predictor of clinical outcome, particularly diabetes, independent of BMI [10]. As outlined above, central fat storage is linked to IR and the development of cardio-metabolic disease. Thus, measurement of waist circumference is used as a surrogate marker of abdominal fat mass [10]. Waist circumference was not measured in any of the patients included in this study. It should be measured alongside BMI to improve the accuracy of prediction of CVD risk.

Regarding the other risk factors, few women received a diagnosis of diabetes, hypertension or dyslipidaemia. This may be due to the relatively young age of the cohort (of mean age 26.5) where sufficient metabolic dysfunction is yet to occur.

Women with PCOS are at an increased risk of metabolic consequences, including CVD, diabetes and gynaecological cancers, as a consequence of the increased prevalence of metabolic syndrome in the population [11]. Early identification of risk factors and metabolic syndrome can facilitate intervention to prevent future CVD. First line interventions include lifestyle modification, including weight loss and improving diet and exercise. Weight loss and lifestyle modification have been shown to be effective at improving lipids and reducing circulating insulin and androgens [12]. Androgen reduction can reduce physical symptoms of PCOS (such as acne and increased hair growth) and aid weight loss while improved lipids and insulin can reduce the metabolic risk. Pharmacological therapy may be offered as a second line option to improve risk factors like hypertension and high cholesterol where lifestyle modification has proved insufficient.

This study is limited by the study population where data was collected from one GP practice. Therefore, this cohort may not be representative of all women with a diagnosis of PCOS, thus impacting the generalisability of the results. This is further supported by the small sample size. In addition, the study was carried out in a GP practice, therefore, hospital notes were not accessible, only consultant letters from clinic. This may have impacted the results of the audit as reporting of factors like BMI may have been recorded in the notes as opposed to the clinic letter. It must also be considered that verbal lifestyle advice may have been delivered but not documented.

6. Future Recommendations for Practice

In order to reduce morbidity and mortality from CVD in women with PCOS, a better care pathway is warranted. A co-ordinated approach from primary and secondary care is necessary to facilitate baseline measurement of CVD risk factors, in accordance with the RCOG green top guideline, and continued monitoring of these criteria as the condition progresses.

6.1. Future Recommendations for Primary Care

Update the primary care protocol to include GPs and/or practice nurses to measure blood pressure, BMI and carry out blood tests at time of referral to gynaecology for suspected PCOS. Lipids and blood glucose should be measured in addition to routine investigative bloods like FSH/LH and prolactin. The results of these blood tests should be sent to gynaecology.

Introduce a shared care agreement that includes annual monitoring in primary care for women with PCOS, with the following screening of:

Smoking, alcohol and drug use

Diet and physical activity levels

Blood pressure

Cardiovascular risk assessment

Body mass index (BMI)

Assessment of blood glucose levels to screen for the development of diabetes such as annual HbA1c.

6.2. Future Recommendations for Secondary care

At time of confirmation of PCOS at gynaecology clinic, allocate time in the appointment for measurement of these risk factors. This could be carried out by the consultant or have another healthcare professional be responsible for this before or after consultation with the doctor.

Introduce a role for PCOS specialist nurses who could be responsible for the measurement of risk factors as outlined above. In addition, they could facilitate education to help women understand the importance of reducing their CVD risk and how this can be achieved. The specialist nurses could also manage patients who confer increased risk, such as obese or diabetic patients.

7. Future Research

The current study is limited to women registered with one GP practice in Northern Ireland. Therefore, this study should be extended to include women with PCOS from multiple practices to increase the sample size and improve generalisability of the results. If annual monitoring of risk factors in women with PCOS were established, a prospective study examining the morbidity and mortality of CVD would be key to inform practice. The ideal study would compare a group of women with PCOS monitored as outlined above, with an unmonitored control group, in order to determine the efficacy of monitoring in reducing CVD risk. However, this type of study would present challenges in terms of funding and would be time-intensive as a long follow-up would be necessary. In addition, research is warranted to determine what interventions are established for these women and which interventions confer the greatest risk reduction.

8. Conclusion

Current practice is not compliant with guidance from the RCOG green top guideline therefore a better pathway of care needs to be in place to reduce morbidity and mortality in women with PCOS as a consequence of CVD. Women in the study were obese on average, which represents significant risk and an important area for targeted primary prevention. Baseline risk was not established for the majority of women included in the study, thus it is unlikely that preventative interventions were established for these women. Improving care for women with PCOS is vital to improve patient outcomes and reduce future NHS burden. It would certainly involve the development of a shared care protocol agreement between primary and secondary care.

References

1. RCOG (2020) PCOS (Polycystic Ovarian Syndrome), Available at: https://www.rcog.org.uk/en/patients/fertility/female-problems/pcos/ (Accessed: 25th September 2020).
2. Rotterdam ESHRE/ASRM-Sponsored PCOS Consensus Workshop Group. Revised 2003 consensus on diagnostic criteria and long-term health risks related to polycystic ovary syndrome. Fertil Steril. 2004 Jan;81(1):19-25. doi: 10.1016/j.fertnstert.2003.10.004. PMID: 14711538. (Accessed 24th September 2020)
3. Scicchitano P, Dentamaro I, Carbonara R, et al. Cardiovascular Risk in Women With PCOS. Int J Endocrinol Metab. 2012;10(4):611-618. doi:10.5812/ijem.4020 (Accessed: 25th September 2020)
4. Chandrasekaran, S. and Sagili,H. (2018) 'Metabolic syndrome in women with polycystic ovary syndrome', Royal College of Obstetrics and Gynaecology, 20(10.1111/tog.12519), pp. 245-252 [Online]. Available at: https://obgyn.onlinelibrary.wiley.com/doi/epdf/10.1111/tog.12519 (Accessed: 28th September 2020).
5. NHS (2020) The Long Term Plan is a Game Changer, Available at: https://www.england.nhs.uk/blog/the-long-term-plan-is-a-game-changer/ (Accessed: 16th October 2020).
6. RCOG (November 2014) Long-term Consequences of Polycystic Ovarian Syndrome: Green-top Guideline No.33
7. NHS (2020) Obesity, Available at: https://www.nhs.uk/conditions/obesity/ (Accessed: 30th Septmeber 2020)
8. Eyth E, Basit H, Smith CJ. Glucose Tolerance Test. [Updated 2020 Aug 11]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2020 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK532915/
9. Glintborg, D., Rubin, K.H., Nybo, M. et al. Cardiovascular disease in a nationwide population of Danish women with polycystic ovary syndrome. Cardiovasc Diabetol **17,** 37 (2018). Available at: https://cardiab.biomedcentral.com/articles/10.1186/s12933-018-0680-5#citeas (Accessed 12th October 2020)
10. Klein,S., Allison,D. et al. Waist Circumference and Cardiometabolic Risk. Diabetes Care, 30 (6) 1647-1652; (2007) **DOI:** 10.2337/dc07-9921

11. Ali,A. (2015) 'Polycystic Ovarian Syndrome and Metabolic Syndrome', Czech Gynaecology, (4), pp. 279-289 [Online]. Available at: https://www.prolekare.cz/en/journals/czech-gynaecology/2015-4-3/polycystic-ovary-syndrome-and-metabolic-syndrome-52866 (Accessed: 28th September 2020).
12. Dennett,C. and Simon,J. (2015) 'The Role of Polycystic Ovary Syndrome in Reproductive and Metabolic Health: Overview and Approaches for Treatment', American Diabetes Association Diabetes Spectrum, 28(1944-7353), pp. 116-120 [Online]. Available at: https://spectrum.diabetesjournals.org/content/28/2/116.article-info (Accessed: 12th October 2020).

The Gatekeepers of Healthcare

Author: Rory Holohan, undergraduate medical student University College Cork

It is often said that those who cannot learn from history are doomed to repeat it, so as humanity locked itself away at home a century ago in fear of encountering a stranger who had a cough, we come to do it all over again. The world has changed very dramatically in so many respects since China announced just ten months ago that it had discovered a new member of the coronavirus family and that we should all sit up and take notice. Across the world, populations have made demands of their healthcare systems that could never have been forecast, even in the darkest corners of an epidemiologist's mind.

How is it that we are cured of our fever, persistent dry cough and get two weeks off work if a hospital can't do it for us? Why, the same way we managed these needs even before COVID-19's arrival: through our 'family doctor' of course. So often the linchpin of a community, the burden of expectation that's now placed on a general practitioner will come to define the role forever more. Previously they were the first medical person a patient meets on what may be a long treatment journey, beginning with examination in the GP's offices, and ending with surgical intervention on the operating table. Indeed now it's the GP's decision who should or should not be sent for the definitive PCR nasal swab cementing their place as the gatekeepers to healthcare.

Referral to specialists has long been a trademark of community care. Where an initial prescription of antibiotics or physiotherapy has not improved the presenting complaint, a patient is duly sent to another doctor whose specialist training may help to resolve the issue.

This isn't to suggest that the GP was unable to help the patient in the way they might have preferred, rather to highlight their role as an avenue for the patient to enter the labyrinth of treatment pathways that is hospital-based medicine.

Community care is where most of a patient's experience with a health service takes place so it remains essential for the GP to know when a complex pathology is presented to them. Now that coronavirus has caused so much chaos in the system, it becomes more challenging not only to refer patients onto an overburdened hospital, but also to encourage people to make and attend appointments in the first place.

A recent press release from the Irish Medical Organisation (IMO) highlighted the decline in patient numbers at surgeries and directly called on patients to come forward if they have worrying symptoms of any description, not just of COVID-19[1]. These hesitations may stem from a fear of possible infection in a healthcare setting, or perhaps that people took the message to “protect the HSE” by staying home far too literally and were now causing themselves considerable harm in the process. Data from the UK indicated that the numbers of people going without a diagnosis for common conditions sharply declined[2], which presents its own complications in time.

The severity of pathology that would typically come through the door is now much worse, which makes management more challenging both for the GP in follow-up consultations, but also for the hospital team due to receive a referral. Once again do we see the need for a clear delegation pathway to function effectively. If I am a general practitioner, with an onslaught of patient numbers on the way, how do I best determine who should be sent into a probable backlog of waiting lists in Hospital Departments, knowing, as I do, that a deluge of paperwork requesting that other surgery’s patients be seen *right now* is already ahead of them?
How do I best serve my role as a custodian of care pathways?

A doctor cannot play God in attempting to treat an illness beyond his/her capability, he/she must trust in the system, and make a referral if needs be. Certainly, there are horror stories of patients dying because they did not receive timely treatment, but it is more productive to accept that the pathways have been struggling with delays for many years, and that the pandemic has merely served to highlight this[3]. This creates a further burden for the GP who must sympathize strongly with patients, knowing that it could be months or even years before they receive a letter of reply, and maybe even years before their patient is ever seen.

I’ve had some exposure to General Practice through placement as a student. I sat in on many appointments that weren’t simply about doing a history or examination, but had a rather a more personal element. The patients had often booked in for a chat, some being elderly and needing the social support, with others desperately wanting to know if they had secured an OPD slot. I distinctly recall the mis-shapen ankle of one man who had suffered a fracture in 2012, because I thought of him reading a report that the hospital in his locality had nationally syndicated waiting list times for surgical repairs[4]. That man received notice of an appointment eighteen months ago set for 2023, it now behoves that same GP to repeat the last eight years of prescribing painkillers, to hear him struggling to get up the stairs of the medical practice & reassure him that the letter requesting the Consultant’s attention was indeed sent on.

Coronavirus will almost certainly exacerbate waiting list frustrations both here at home[5,6] and our nearest neighbours[7], but we cannot let it define the healthcare experience for our patients. They'll rely on us as we battle this invisible enemy, and they'll still need us when it's gone. To quote Yeats, "Mere anarchy is loosed upon the world…and everywhere the ceremony of innocence is drowned". Adversity will come to haunt general practice as it recovers from the struggles currently pressuring its abilities, but an experienced hand on the tiller of decision-making, patients seen to or sent onwards will steady the ship in time.

To speak now of consultations and how they have changed, we must address the fact that the insidious presence of an illness spread by close contact has destroyed the holistic way in which people meet with their doctor(s).

We are all now familiar with the notion that approximately fifteen minutes beside someone carrying the virus has the potential to pass it onto us[8]. Aside from wearing industrial strength respirators inaccessible to most, there is no avoiding the fact that people should not meet one another unless absolutely necessary. What this has meant for general practice is the need, as with so many other facets of daily life now, to go online and meet virtually.

Online meeting presents its own benefits and challenges. A GP can make many Skype/Zoom calls in a day, as there's no longer any need to move patients in & out of a waiting room or from the bedside. That in itself is a concern, however, as the personable nature of General Practice should not be replaced by the quality of one's internet connection.

Virtual consultation has taken away from the time honoured tradition of a concentrated ten-to-fifteen minute meeting, and the data shows this[9]. The interventions and assessment of people that you get in-person is incomparably better than an online interaction. A hip replacement is not performed by by incising with a butter knife, so how can the quality of a camera be trusted to tell you about the severity of a skin rash that the patient may be exhibiting?

There's understandable worry from all parties that not seeing something in-person, may expose a doctor to litigation in the future from the ever-present threat that is the medico-legal machine. We know that some GPs are very fearful of being sued or sanctioned and may indulge in the practice of defensive medicine[10], knowing it is a waste of a referral, but ultimately protects their name. Given the importance of detailed documentation, current opinion and practice indicates this can be done in a greater capacity if done digitally[11]. This is course, leads to more time taken between consultation calls in order to accurately document proceedings. If I serve as a GP in my capacity to a patient accessing healthcare, can I be sure that the same patient I turn away should I deem their complaint not serious enough for referral, won't come back to haunt me?

The acceptance of video calls has been mixed, be it accepted as part of infection control or as an alien concept altogether. General practice has always been a very computer literate profession but also has had to adapt its behaviours in the current circumstances.

The softer elements of ascertaining patient wellbeing and medical diagnosis are lost to bandwidth capacity and the scope of a computer camera. You cannot see wringing of the hands under the table in a patient who says the problem is headaches, when really it might be an anxiety disorder. If so, does someone really want to videocall their doctor if the consultation will be an artificial construction? This serves to undermine the fundamental trust between a patient and a healthcare provider, possibly causing them to present much later with far more advanced illness.

We must also consider that GPs, in connecting patients to treatment, are on the frontline of seeing health inequalities[12] play out. There are advantages to remote consultation, where the cocooning elderly can get a regular check-up, but equally this system fails if a necessary component is not in place. It would be unwise to assume that everyone over the age of 70 doesn't know how to operate a laptop, but this is the age group most affected by the changeover to e-Medicine as they're the most frequent visitors to a GP's surgery[13]. Given that they often present with multiple co-morbidities, the routine assessment of blood pressure or INR has to be overlooked, unless absolutelt necessary.

Previously, a GP had to consider how many people they'd refer on, now the issue is how many people come into their offices must be weighed up. Research pertaining to our colleagues in Dentistry[14] outlines some of the protective behaviours undertaken by those in high-risk contact scenarios. In between calls to make consultations, primary care doctors now must now carry out initial assessments over the phone to decide if it's actually safe for them and their ancillary staff to have a symptomatic patient of any degree call in person.

This poses its own challenges – should they check on a teenager with ongoing depression, knowing that they aren't coping well with lockdown or do they gauge the severity in an older woman with shortness of breath? There's only so much time in the day, and only so many patients that may be seen in that period. How the GP decides who should be dealt with[15], be it in person or over the phone, confirms his or her position as a sentinel standing over therapeutic avenues.

Even with all of the usual demands to referrals or budgeting overheads and wages expected of them, a general practitioner is now asked to de-facto run the coronavirus screening program nationally since all requests for a nasal swab must be organized through them[16]. Couple that with an already overwhelming demand for routine care and you have a phone that will not stop ringing all day in their practice.

Having volunteered my summer to the efforts of contact tracing, I can personally testify to the preparation and administration[17] that is required to make it run efficiently.

So much detail and time is required to get an accurate record of an individual's whereabouts prior to their receiving a positive test result for COVID-19. It should, therefore, *not* have fallen upon GPs to ration the tests in the first place, distorting their place as a concierge to care, relative to how many symptoms[18] someone had at the time. While this was done with good intentions by the National Public Health Emergency Team to protect available stocks from being exsanguinated, it did however leave very many people by the wayside who could have gone without being picked up. Coronavirus affects everyone differently so if an asymptomatic individual passes it to someone who is badly affected, then the chain of transmission has not been identified as the symptom-less person had not been considered. Data from August[19] would suggest that approximately 1.7% of the Irish population are estimated to have been infected, though this only analyzed volunteers in two Counties of vastly different populace (Dublin and Sligo).

Thankfully, this country never arrived at the wartime medicine triage situation that befell the people of Bergamo (Italy) and Madrid (Spain). Doctors here were not asked to choose who would receive a ventilator, and who would go without one, potentially succumbing to the virus' effects. On a more scaled back scenario, GPs are however tasked with determining who should be sent for a test.

We are in this month of November at a time where anyone who needs a test can get one, but during the viral peaks preceding this second national lockdown, we saw the collapse in the integrity of the Irish contact tracing system[20]. This in turn, as it so often has done during this pandemic, passed the buck right back onto GPs alone. Many hundreds of people had to phone their doctor de-novo as a potential, but unofficial, contact of a known coronavirus case at the same time that these primary care physicians were also being asked to do the contact tracing for any of their patients who had already received a positive result. An unrealistic expectation to make of even the most diligent and committed of persons, no matter the circumstances.

The apology[21] was quick in coming but likely did little to placate the fury of many who feel too much is being sent to too few people to accomplish. I am confident that General Practice shall weather the storm but its issues of early retirement[22] to avoid the current punishment of servitude will continue to plague this profession. Proper Government funding of the discipline will enhance patient care and permanently secure the family doctor's position as the adjunct to functioning health service. In February of 2021, I shall travel to the village of Mitchelstown to undertake my GP rotation for Final Year. COVID-19 could be better or worse as a threat to the country, so all of the above that I have discussed may come into play, or not. What shall remain is the discipline's warm nature – hearing about a patient's grandchild as you fit a blood pressure cuff on their arm, or simply shooting the breeze about sports with another patient who volunteers with the local football club.

Be they handing out a prescription, calling a pharmacist to discuss a tablet regime or recording a hospital discharge letter to their notes, the general practitioner will forever more remain the gatekeeper of healthcare.

References

1 – *The Irish Medical Organisation*
https://www.imo.ie/news-media/news-press-releases/2020/imo-gps-appeal-for-patien/index.xml

2 – Griffin, S., 2020 - "Covid-19: Diagnosis of common conditions in general practice halved during lockdown, study finds"
The British Medical Journal
https://www.bmj.com/content/370/bmj.m3732
3 – Hanna T.P et al, 2020 – "Mortality due to cancer treatment delay: systematic review" | *The British Medical Journal*
https://www.bmj.com/content/371/bmj.m4087

4 – "Almost 76,000 patients now on waiting lists for orthopaedics" – *The Irish Examiner, published October 14th 2020*
https://www.irishexaminer.com/news/arid-40064744.html
5 – "Almost 850,000 people waiting for hospital care due to Covid -19 delays" | *The Irish Times, published October 9th 2020*
https://www.irishtimes.com/news/ireland/irish-news/almost-850-000-people-waiting-for-hospital-care-due-to-covid-19-delays-1.4376947
6 – *The National Treatment Purchase Fund Report; October 2020*

{Data as cited in Reference 5, but available for viewing here}
https://www.ntpf.ie/home/pdf//2020/09/nationalnumbers/in-patient/National01.pdf

7 – Griffin S., 2020 – “COVID-19: Waiting times in England reach record highs” | *The British Medical Journal*
https://www.bmj.com/content/370/bmj.m3557

8 – Close contact and casual contact | *Health Service Executive*
https://www2.hse.ie/conditions/coronavirus/close-contact-and-casual-contact.html

9 – Jedrek Wosik et al., 2020 – “Telehealth Transformation: COVID-19 and the rise of Virtual Care” | PubMed ID 7188147
Journal of the American Medical Informatics Association
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7188147/

10 – Baungaard N et al., 2020 - “How defensive medicine is defined and understood in European Medical Literature: protocol for a systematic review” | *BMJ Open - PubMed ID 7050374*
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7050374/

11 – Car J et al., 2020 – “Video consultations in primary and specialist care during the COVID-19 pandemic and beyond”
The British Medical Journal
https://www.bmj.com/content/371/bmj.m3945

12 – Bambra C et al., 2020 – “The COVID-19 pandemic and health inequalities” | PubMed ID 7298201
Journal of Epidemiology and Public Health
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7298201/

13 – Lee ES et al., 2020 – “Video Consultations for Older Adults With Multimorbidity During the COVID-19 Pandemic: Protocol for an Exploratory Qualitative Study” | PubMed ID 7592461
Journal of Medical Internet Research, research protocols
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7592461/

14 – Ahmed MA et al., 2020 – “Fear and Practice Modifications among Dentists to Combat Novel Coronavirus (COVID-19) Outbreak”
PubMed ID 7216192
International Journal of Environmental Research and Public Health

15 – Gray DP et al., 2020 – “COVID-19: a fork in the road for general practice” | *The British Medical Journal Editorial*
https://www.bmj.com/content/370/bmj.m3709

16 – How to get tested; COVID-19 testing, Health Service Executive
https://www2.hse.ie/conditions/coronavirus/testing/how-to-get-tested.html

17 – COVID-19 Contact Tracing Centres, Department of Health
https://www.gov.ie/en/publication/6a6e32-covid-19-contact-tracing-centres/

18 – "Those seeking Covid-19 test must display two major symptoms under new rules" | Raidió Telefís Éireann, March 25th 2020
https://www.rte.ie/news/coronavirus/2020/0325/1126202-those-seeking-test-must-display-two-major-symptoms/

19 – Results of seroprevalence study, Health Service Executive
https://www.hse.ie/eng/services/news/media/pressrel/hse-announces-results-of%C2%A0seroprevalence-study.html

20 – "Backlog forces HSE to skip calls to thousands of close contacts"
The Irish Times, published October 20th 2020
https://www.irishtimes.com/news/health/covid-19-backlog-forces-hse-to-skip-calls-to-thousands-of-close-contacts-1.4386512

21 – HSE apologises over contact tracing breakdown
Radio Teilifís Éireann, published October 28th 2020
https://www.rte.ie/news/2020/1028/1174289-hse-test-and-trace/

22 – "GPs now considering early retirement over strain of recent months" | The Irish Independent, published November 8th 2020
https://www.independent.ie/world-news/coronavirus/gps-now-considering-early-retirement-over-strain-of-recent-months-39719582.html

My Girl Friday: How can GPs protect their secretarial staff from an increasingly demanding public?

Author and Undergraduate Winner of the Sheppard Memorial Prizes Essay Competition 2020: Anita Lucey, undergraduate medical student, University College Cork

It will come as no surprise to general practitioners (GPs) that the public is becoming increasingly more demanding. From a consultation perspective alone, patients rarely present with a sole complaint. Instead it is much more commonplace for there to be a primary issue followed by a slew of secondaries. A recent study conducted in the rural GP setting, showed that across a sample of 500 consultations, 48.9% of patients expressed multiple (greater than or equal to 2) concerns to their GP per consult.[1]However, what the GP may not appreciate is that the workload for the secretarial staff is also increasing exponentially.

The role of a GP secretary is multifaceted. Their responsibilities include an array of administrative and organisational tasks that include, but are not limited to, triaging patients, allocating appointments, preparing medico legal reports, and filling forms and applications. [2,3] The advent of numerous additional schemes for patients with chronic illnesses coupled with the increasingly litigious nature of society, has made for a greater workload for the average GP secretary.[4] While this increasing workload may be taxing to the secretarial staff, it is not the most prominent issue that they face. Instead, what tends to pose the greatest issue is the attitude of the public towards the front of practice staff.

GP secretaries are the bridge that connects the patient to the healthcare system.[2] They are the front of house in the GP surgery and are often the first point of contact to the Health Service Executive (HSE). Therefore, in cases where the HSE fails to deliver upon promises made, the secretary can often end up bearing the brunt of the patient's grievances.[5] This has been clearly evidenced by the current rollout of the flu-vaccine. HSE-lead campaigns encouraging the uptake of the flu-vaccine for the entire population without securing adequate supply, have created a national shortage which has forced GPs to "play God" in deciding who should receive the vaccine.[6,7] But if the GP is playing God, then the secretary plays the role of the devil that delivers the bad news. The HSE press releases which deny the existence of a shortage, only serve to give patients the

impression that the vaccine is being withheld from them.[8] Additionally, ambiguity surrounding the number of vaccines that practices are due to receive, have made it very difficult for secretaries to provide patients with an accurate estimate of when they will likely receive a vaccine.[9] This gives rise to angry phone calls and on occasion angry in-person encounters. It is an unfortunate scenario but one to which I can attest.
For the majority of the year, I can be found on the wards getting consultant's questions wrong and chasing after SHOs like a bad shadow. But for brief periods during the summer and winter holidays, I work as a secretary in a GP practice. While I have been witness to the somewhat justified anger felt by patients seeking the flu-vaccine, I have also witnessed many more unprompted outbursts. In fact, over the course of the past year or so, I have begun to notice a marked change in the way patients treat the secretarial staff. Patients have been more impatient, significantly more demanding and at times rude and abusive. I am in a unique position in that I only see these patients intermittently; in this sense this change of attitude has been much more acute to me. However, I don't believe myself to be alone in noticing this either. Speaking with the other secretaries that I work with and those whom I have met through placements- they are experiencing a similar shift. A shift which has no doubt been exacerbated further by the COVID-19 pandemic.

The infectious nature of COVID has forced a pivoting of the traditional consultation format. The rise of phone and video consults have meant that patients have been able to access GP care and advice without risk of infection. While the phone calls have certainly had a positive effect with regards to continuity of care; they have also birthed a direct line from patient to GP. Many patients will now call the practice with the hopes of having a "quick chat" with [insert GP's first name here]. In fact, some patients will call multiple times per day- especially when they feel as though they are not getting a response fast enough (this may be within the space of an hour). For these patients it may seem as though the secretarial staff are not passing on their queries fast enough or are not conveying the seriousness of their request to the GP. And in instances such as these, patients have been known to verbally lash out at staff. Whether it be the passive aggressive comments regarding one's professional abilities or the outright accusations of being "a liar", none of it is pleasant. Especially if there are number of these interactions per day. There is the old troupe that the GP secretary is the villainous "dragon behind the desk", perhaps this essay might serve as an origin story.[10]

A tweet I read recently queried why GP secretaries in the UK acted like "the bouncers for the NHS".[11] While I found this to be hilarious, I also noted it be somewhat true. The GP secretary does in some ways acts as a "bouncer" or "gatekeeper" whose goal is to protect the GP. This has become especially true during the COVID era, when secretaries play a role in screening patients for the risks that they pose to the GP's safety. The appointment booking that they do helps to ascertain the risk that the GP will face in seeing this patient in clinic. It is based on guidelines and schematics provided by GP staff and done in complete conjunction with them. However, the issue arises when patients feel as though by answering any of the questions in the affirmative their chances of seeing the GP decrease- this can often arise in omissions. Additionally, studies have shown that certain patients may employ strategies, such as persistence or threats, in order to coerce secretaries into booking appointments.[12] The responsibility of triaging appointments in the COVID era is one which is not taken lightly by the secretary. In fact, there is no feeling worse than finding out that a doctor had to leave the room mid-consult to don additional PPE for a patient that you had noted to not be clinically suspicious for COVID.

From a patient's perspective, it may be uncomfortable to divulge their intimate medical information down the phone to the secretary. Especially, in cases where the patient may be unaware of the confidentiality that secretaries are bound to. This perceived intrusion by the secretary can garter aggro from patients and perpetuate to them a stereotype of the secretary as an uncompromising gatekeeper who yields unchecked power over them- the vulnerable patient.[2] Other sources of abuse include the rise of the letter requesting anti-masker and TD referral. However, it begs the question- if all of the above-mentioned instances of abuse and questionable behaviours are incurred by the secretary, then is this truly a GP issue?

My answer- yes, absolutely. First and foremost, your administration staff are your employees. And as in any workplace, across any discipline, it is the duty of an employer to protect their staff.[13] Research has shown that general practice team members tend to be more motivated and resilient when they feel safe.[14] However there has been evidence to suggest that persistent negative patient interactions have the capacity to leave secretaries feeling unsafe and dissociated from the rest of the team.[15] So how can the GP protect their team and make them feel safe? Communication and open dialogue are always a good place to start in the creation of a safe workplace environment. It is crucial that administration staff be afforded an opportunity to voice concerns without fear of disregard. A secretary's location as front of house is unlikely to ever change but studies have shown that some of the effect of these negative interactions may be mitigated through the sharing of experiences with superiors.[15] Of course, this is all quite obvious and achievable in theory but what happens when the patient's behaviour towards the doctor is in diametric opposition to the way in which they treat the secretary?

As a medical student and part time GP secretary, I am privy to meeting the average patient both inside and outside of the consultation room. It has been through this experience that I've really been able to appreciate the difference with which patients treat the secretaries compared to the GPs. In some cases, patients have had such split personalities that it would almost compel you to suggest referral for psychiatric assessment. Patients who were aggressive and rude at the front desk were considerably better behaved once they had crossed the threshold of the doctor's office. Effectively painting the secretary out to be "the boy who cried wolf".

This phenomenon poses a dilemma for the GP. On one hand it is best practice to believe that which you see with your own eyes, yet on the other hand should you not trust your staff enough to believe what they are telling you? It is a difficult line to tow. Any disciplinary action towards a patient may result in irreparable damage to the GP-patient relationship. However, on the other hand, perceived disregard for the genuine concerns of a team member could plant seeds of resentment within the team. Resentment is a poison that has no place in the GP practice. It can drive a wedge between GP and secretary, ultimately creating a gap through which issues of patient safety may fall.[16] To prevent said scenario, a good flow of communication is key. If a secretary is empowered and encouraged to communicate concerns with the GP, it becomes less likely that frustrations will bubble beneath the surface. It also allows the GP to have all the facts about a patient and gives clues to their character outside of the consult. Equipped with this information the GP can extend the flow of communication to the patient and communicate to them the expectations for how all staff at the practice should be treated. A breakdown in this flow of communication could both damage team dynamics and perpetuate bad behaviours among patients. It is a lot to ask of a GP, to expect them to change the attitudes of growing cohort of the population. A more reasonable expectation would instead be to institute practice values that promote mutual respect- at least whilst inside the building.

As mentioned previously, a team that feels safe is a more motivated team. But why should this matter to the GP? As self-employed business owners, GPs should be looking for opportunities to maximise efficiency and reduce turnover wherever possible. Increased staff turnover incurs additional recruitment and training costs to the employer, and it has the potential to create information gaps that threaten patient safety and continuity of care.[17] The role of a secretary can require specialised knowledge, especially with regard to triage and repeat prescribing; however no formal qualifications are required.[3] Therefore, much of the training is done in—house. This poses significant cost and risk to GP's, firstly GP practice staff tend to be under significant time constraints which are not conducive to providing teaching opportunities. Secondly, untrained staff are left with blind spots; they lack knowledge of the system and of its players. One could therefore surmise that it would be more cost-effective for a GP to culture increased levels moral in their existing secretaries than it would be to replace them[17].

Additionally, efficiency tends to be at its highest when moral is good. However, daily instances of abuse have the tendency to chip away at this moral and have a negative effect on job satisfaction.[15] The average salary for a medical secretary is not astronomical by any means but as many recent job satisfaction indices have noted, compensation is no longer considered to be one of the top drivers of job satisfaction.[18,19] Instead, the key drivers include a business's values and culture, the quality of its leaders and the career opportunities available.[19] Where there is ambiguity surrounding a practice's values or the creation of a culture which tolerates the mistreatment of secretarial staff, then there is likely to be decreased job satisfaction.
It should be also be noted that the job of medical secretary does also have another compelling driver which may not be captured fully in the job satisfaction index- it affords staff the opportunity to help people who may be at their lowest. That could mean trying to organise Fair Deal for an elderly patient or helping a newly diagnosed patient to navigate the resources available to them, or it could mean any one of the many other non-administrative tasks that are not captured in the job specification. I can really only speak to my experience with the secretaries that I've worked with or have met throughout my placements, but I know them to be kind, helpful and willing to go above and beyond for the patients. I would hope that for them, and the patients they help, the drivers for job satisfaction continue in the right direction. The issue for GPs arises when the challenges of the job begin to outweigh the positives for their employees, and they face the prospect of losing good staff.

At this time, I should include a disclaimer to say that the small cohort of patients whom I refer to in this essay are not reflective of all patients. They are simply the loudest and, unfortunately, the most memorable. The vast majority of patients who attend are kind and considerate. And it would be a shame for them if by consequence of a breakdown in communication and a changing practice culture, their safety and continuity of care was negatively impacted. Lastly, this essay is by no means an ode to the GP secretarial staff of Ireland nor is it an opportunity to air any grievances. It is simply a recognition of an issue which may seem inconsequential at the minute but has the potential to be a catalyst for more serious troubles down the road.

References:

1. Say R, Lucey J, Guha-Murphy S, Buckley S, Holmes K, Collins J. All The Livelong Day: A Study Of GP Workload.
2. Hammond J, Gravenhorst K, Funnell E, Beatty S, Hibbert D, Lamb J, Burroughs H, Kovandžić M, Gabbay M, Dowrick C, Gask L. Slaying the dragon myth: an ethnographic study of receptionists in UK general practice. British Journal of General Practice. 2013 Mar 1;63(608):e177-84.
3. Burrows M, Gale N, Greenfield S, Litchfield I. A quantitative assessment of the parameters of the role of receptionists in modern primary care using the work design framework.
4. Cusack DA. Ireland: breakdown of trust between doctor and patient. The Lancet. 2000 Oct 21;356(9239):1431-2.
5. BBC NEWS | Health | GP staff 'trained to be cheerful' [Internet]. News.bbc.co.uk. 2003 [cited 5 November 2020]. Available from: http://news.bbc.co.uk/2/hi/health/3058611.stm
6. Duffy R. Winter flu vaccine campaign gears up to prevent 'dual outbreaks' of influenza and Covid-19 [Internet]. TheJournal.ie. 2020 [cited 5 November 2020]. Available from: https://www.thejournal.ie/flu-vaccine-ireland-3-5184452-Aug2020/
7. Roche B. Doctors are being asked to 'play God' in deciding who to give flu vaccine to – GP [Internet]. The Irish Times. 2020 [cited 5 November 2020]. Available from: https://www.irishtimes.com/news/ireland/irish-news/doctors-are-being-asked-to-play-god-in-deciding-who-to-give-flu-vaccine-to-gp-1.4391072
8. Kenny A. HSE denies flu, pneumonia vaccine shortages [Internet]. Irish Examiner. 2020 [cited 12 November 2020]. Available from: https://www.irishexaminer.com/news/arid-40073042.html
9. Burns S, Clarke V, Cullen P, O'Halloran M. Additional supplies of flu vaccine unlikely to become available [Internet]. The Irish Times. 2020 [cited 5 November 2020]. Available from: https://www.irishtimes.com/news/health/additional-supplies-of-flu-vaccine-unlikely-to-become-available-1.4406237
10. Arber S, Sawyer L. The role of the receptionist in general practice: a 'dragon behind the desk'?. Social science & medicine. 1985 Jan 1;20(9):911-21.
11. drunkdr1v3rs_kw. why do gp surgery receptionists think they're the bouncers of the nhs. [Internet]. 2020 Oct 13 [cited 2020 Nov 2]; Available from: https://twitter.com/drunkdr1v3rs_kw/status/1316094582514429956
12. Gallagher M, Pearson P, Drinkwater C, Guy J. Managing patient demand: a qualitative study of appointment making in general practice. British Journal of General Practice. 2001 Apr 1;51(465):280-5.
13. Health and Safety at Work etc. Act 1974 [Internet]. Legislation.gov.uk. 2015 [cited 5 November 2020]. Available from: http://www.legislation.gov.uk/ukpga/1974/37
14. How to build effective teams in general practice [Internet]. The King's Fund. 2020 [cited 6 November 2020]. Available from:

https://www.kingsfund.org.uk/publications/effective-teams-general-practice#communication
15. Hertting A, Nilsson K, Theorell T, Larsson US. Personnel reductions and structural changes in health care: work-life experiences of medical secretaries. Journal of psychosomatic research. 2003 Feb 1;54(2):161-70.
16. Employee Resentment and Discontent [Internet]. Emergency Support Network. 2019 [cited 5 November 2020]. Available from: https://rb.gy/ekmfyq
17. Jones CB, Gates M. The costs and benefits of nurse turnover: A business case for nurse retention. The Online Journal of Issues in Nursing. 2007 Sep 1;12(3).
18. Secretary M. Medical Secretary Salaries in Ireland | Indeed.com [Internet]. Ie.indeed.com. 2020 [cited 5 November 2020]. Available from: https://ie.indeed.com/salaries/medical-secretary-Salaries
19. Totah Z. Employee Satisfaction | Measuring Job Satisfaction In 2020 [Internet]. Selecthub.com. 2020 [cited 5 November 2020]. Available from: https://www.selecthub.com/hris/measure-employee-satisfaction/

Through Closed Doors

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Telemedicine. This is a term derived from the Greek ‘tele’ and the Latin ‘medicus’. Its literal translation is ‘healing at a distance’.[1]

Distance.

‘Social’ distance. An oxymoron.

Today, an uncomfortably familiar word that will never fully regain its innocence.

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On Wednesday the 11th March 2020, the World Health Organisation declared the severe acute respiratory coronavirus 2 outbreak a pandemic.[2] This was also the day when Ireland suffered its first fatality from the disease.[3]

Tension in the ICU at Blackrock Clinic – where, unbeknown to me at the time, I was placed for my last ever clinical rotation of my third undergraduate year – was palpable.

“Will we stay a little later today and get some cases signed off? Who knows if we’ll be back tomorrow!”. Only half-joking.

“Are you two medical students? Are you sure you’re meant to be here?”.
Our responses meek and unconvincing.

“Did you hear the guys in Naas have been sent home?”. Unable to mask the concern in my voice.

“Dear students, please note that <u>all</u> year 3 students are advised to stay home tomorrow regardless of the hospital you are currently attending on placement”. An abrupt and anticlimactic end to my placement, my year and medicine as we had known it. A door had closed.

‘When one door closes, another opens’; an optimistic and familiar quote by Alexander Graham Bell whose aphorism, until this year, I had dismissed.[4] Six uncertain months at home in North Wales brought with it the cancellation of an elective placement at Great Ormond Street Hospital among other opportunities. Its replacement came in the form of a collaborative research project with the paediatric department at my local hospital.

2020 saw gathering momentum across the globe to minimise inessential patient exposure, contend with staff redeployment, adhere to social distancing guidelines and witnessed the widespread, rapid implementation of telemedicine.[5] Two of the commonest areas targeted have been primary care and outpatient clinics. My task in Wales during the summer lockdown: to conduct a service evaluation assessing the acceptability of telephone clinics to parents of paediatric outpatients and sample their attitudes towards its potential for continued use beyond the pandemic. 301 telephone surveys later, I was surprised by the results.

In October, I began my fourth year with a rotation in General Practice back in Dublin. This placement was unlike any other I had previously experienced. With a second lockdown impending and cases on a steep incline, direct patient contact was limited in favour of a now-familiar, more remote approach. Hours spent observing from my appropriately-distanced chair in the corner allowed me to witness an evolving new art – the clinical application of telemedicine. As I listened, I began to reflect on the patient feedback that I had gathered over the summer. With each case that presented, patterns began to emerge.

An age-old assumption in medicine is that the greatest healing benefit of the patient-doctor interface derives from the physical presence of the two parties. It was therefore surprising to observe the considerable acceptability of telemedicine, both in the paediatric and primary care settings. Of the parents whom I had surveyed, over 90% felt safe and that their expectations were met. A significant majority also believed that telephone calls were of equal value to face-to-face consultations and expressed positive interest in the concept of ongoing remote clinics. This was reflected in an average satisfaction rating of 9.1/10. In the GP surgery, patients echoed this gratitude and expressed relief for the chance to speak to the doctor and receive prescriptions without having to attend in person during the pandemic.

Perhaps, therefore, we have overestimated the importance of physical interaction at the expense of a much simpler art; listening.

The ‘Golden Minute’ hypothesis refers to the first sixty seconds of a consultation, during which a patient, if allowed to speak uninterrupted, usually reveals most of the relevant information necessary for diagnosis.[6,7] Despite this, Beckman and Frankel reported that only 23% of patients were allowed to complete their opening statement without premature redirection.[7] Studies have demonstrated that listening to patients can enhance healthcare outcomes. This includes improved satisfaction and trust in the profession, better accuracy of diagnosis, improved adherence to medical regimes and reduced medical litigation.[8] Additionally, the simple act of listening can offer a healing benefit in its own right, simply by addressing the psychosocial factors underlying illness.[9] This was exemplified by a lengthy and emotional call with a young divorcée who articulated her struggle with domestic abuse for the first time. With every caged sentence that she freed and every tear that she shed, I felt her regain her strength. The doctor, for the most part, remained silent – afraid to deprive her of this moment – however the woman who put down the phone was unrecognisable. The acceptability of telemedicine, despite its limitations, is a testimony to the importance of giving one's time. When the world was being told to go home and shut their doors, remote medicine allowed the patient to retain their voice, to be able to make contact, and has emphasised the value that patients place on being heard.

While listening remains at the core of effective communication, the shift towards telehealth and the associated loss of physical cues has necessitated a more focused and conscientious approach to history taking. Surveyed parents expressed particular gratitude for careful, directed questioning, thereby reducing reliance on their own descriptive skills. Similarly, they valued the doctor's skill in asking the "right questions". This also became apparent as I observed conversations evolve in the GP clinic. A predictable pattern began to emerge. Consultations often began with initial discomposure as the patient attempted to gather their thoughts and prioritise their concerns. Afforded time, they gained confidence and were better able to communicate their needs. When followed by relevant, directed enquiries, it enabled the patient to paint a more comprehensive picture and a differential usually became apparent. A balance must therefore be achieved. Careful prompting can elicit valuable information and help avoid fixation error. Patient-centred models such as the Calgary-Cambridge Guide to Medical Interview and the 'ICE' method are transferable to a virtual format and provide frameworks for establishing rapport, gathering information, handling of patient expectations and shared decision-making.[10,11,12] I had started to realise the possibilities that when used to focus the emphasis onto the patient and their experience, telemedicine may contribute to effective implementation of truly patient-centred care, even beyond the pandemic.

A significant advantage of telemedicine is the opportunity for improved access to mental health services, particularly among younger demographics.[13] Perhaps unsurprising, given the current climate, I could not help but notice the prevalence of calls relating to anxiety or depression. I am, however, a witness to the human mending that can be achieved through respectful and active listening, the acknowledgement of a patient's concerns, reassurance and signposting. When uninvited societal barriers had precipitously forced people apart, here was a means to alleviate stress and continue to empower patients to take ownership of their own well-being. It is recognised that telemedicine provides an effective means of improving healthcare engagement among adolescents and young adults in particular, many of whom are 'digital natives'.[13,14] There are, however, counterbalancing considerations. While virtual visits provide an opportunity for young people to avail of confidential services without alerting caregivers, I realised that problems can still arise in ensuring confidentiality and privacy, particularly when patients are living in crowded home environments.[13,14.] Another significant barrier in telepsychiatry is the ability to accurately assess case severity. Delicate handling and safety protocols are necessary when approaching acute concerns such as suicidality, disclosed abuse or when considering involuntary admission. It is ironic that despite contributing significantly to the mental health burden of young people, this pandemic has also promoted a rise in telemedicine, and this, even with certain limitations, offers an effective and accessible intervention.[14]

While the benefits of telemedicine for younger populations is described, challenges arise in managing patients at the extremes of age. From my own audit, I observed that parents of infants under two years of age were less interested in the concept of ongoing virtual clinics compared to parents of older children. A possible explanation is that this cohort requires more reassurance, perhaps due to anxiety resulting from a relative lack of parenting experience. At the other end of the age spectrum, this pattern is reflected in older patients. Evidence and experience have highlighted that deafness, cognitive deficit, disinterest or inexperience with technology and difficulty in making oneself understood are all factors that complicate the use of digital services among the elderly.[15] As a result, the GP practice concluded that any patient over the age of 65 should automatically be offered a personal consultation. This emphasises the importance of recognising differing requirements of service-users and implementing measures which bridge these divides.

Inequities, no doubt existent already, have been spotlighted in other areas. A mother of seven children described her journey to the hospital to attend a paediatric outpatient clinic in North Wales. Her youngest child, only 10 months of age, requires regular investigation for severe reflux. Two of her children are autistic and suffer from intense separation anxiety when left at home. She recounted her despair when a four-and-a-half-hour trip entailing four bus journeys to the hospital resulted in an inconclusive five-minute conversation and her embarrassment as she collapsed into tears in the hospital foyer. Given the rural setting of the study, it was therefore unsurprising that those travelling over an hour to the hospital expressed greater interest in the option of future telemedicine consultations compared to those with shorter journeys. While primary care facilities are generally more accessible than hospitals, large discrepancies exist between counties in Ireland. For example, the average distance travelled to access a GP in Dublin City is 0.6km whilst in County Cork, it exceeds 7km.[16] For those relying on public transport, which is often sparse outside of the cities, such a journey could discourage attendance. With appropriate triaging, telemedicine could offer a feasible and convenient solution to improving the accessibility of primary care, especially to those in more rural areas.

The new age of telehealth has uncovered an interesting dichotomy between the provision of acute and chronic care. Among the surveyed parents, the consensus was that telephone consultations, whilst acceptable for uncomplicated follow-up of stable conditions, were insufficient for managing a child with acute needs. On GP placement, I noted that a similar approach had been adopted in the primary care setting whereby patients describing acute, 'non-COVID' symptoms could be invited for in-person evaluation. However, triaging decisions regarding whom to invite are left entirely to the doctor and as a result, rely heavily on the processes in place for gathering initial presenting information from the patient. In the absence of clinical indicators, recognition of an acute emergency can be challenging and so thorough history taking and clinical judgement are paramount. Even after invitation, patients may remain reluctant to attend during the pandemic and as a result, some GPs believe that acute care has been compromised.[17]

On the other hand, chronic disease management and preventative care during the pandemic have seemingly benefitted from the implementation of telemedicine. Parents of children suffering from conditions including asthma and cystic fibrosis expressed gratitude for the opportunity to access medical advice without having to expose their children to a hospital environment. The GP practice described a significant decline in in-person attendance for the Chronic Disease Clinic since March; a phenomenon that has been widely recognised and is largely attributed to fear of infection.[18] As a result, these patients would be at risk of being deprived of necessary health checks, medication reviews, mental health support and interventions such as dietary and behavioural modification.[18] Remote monitoring, whilst perhaps an imperfect method, has allowed for continued care and communication with an otherwise potentially abandoned and vulnerable cohort. Additionally, it has been shown that the use of telephone contact can improve uptake of preventative health measures including the influenza vaccine, childhood immunisation and smoking cessation; interventions that are particularly relevant to this cohort.[19,20,21] Recent concern surrounding the pause in cancer screening programmes has also led me to consider the potential value of telemedicine in facilitating opportunistic screening of such high-risk patients. Deliberate, targeted history-taking during routine reviews could help to identify patients who require referral for further testing.

As medical students, we undertake training in the art of clinical medicine. We are taught that through careful observation, history-taking and physical examination, an accurate diagnosis can often be reached. These findings are then used to guide selection of appropriate diagnostic tests which may confirm clinical suspicion. Telemedicine poses threat to this classical approach. An unavoidable limitation of remote consultation is its inherent dissociation of physical interaction. Surveyed parents echoed these concerns. Generally, telephone consultations were more acceptable to those who did not expect clinical examination or testing for their child. A significant advancement in the delivery of telemedicine has been the introduction of videoconferencing and other digital platforms as a means of providing visual information. This has been particularly relevant in examination of skin lesions, with the use of 'Teledermatology' dating back to 1995.[22] Beyond this, videoconferencing offers some other important advantages over telephone clinics. These include improved accuracy of diagnosis, fewer medication errors, better medication adherence and reduced mortality.[23] During paediatric consultations, videoconferencing may also better facilitate the inclusion of older children in conversations with the doctor; something that parents particularly value. Additional diagnostic information can also be obtained remotely. With training, selected patients could be asked to provide data including biometric measurements, temperature checks, pulse rates and glucose levels from home. Sometimes, however, accurate assessment is not possible without direct contact. In these instances, a telemedicine triaging model may help to identify patients in most need of limited face-to-face slots.[24]

It is questionable whether telemedicine will or should replace traditional consultations. It is also unlikely, however, that remote consults will be abandoned once the pandemic has subsided. The COVID-19 crisis has resulted in a forced, radical adaptation of medicine – but perhaps it was an incipient movement waiting to be catalysed. As future doctors facing a career in the post-COVID era, it is now our turn to adapt.

Where will medicine turn at this point? The post-COVID human health story is yet to unfold. Alarming forecasts about adverse cancer and heart-disease outcomes are predicted.[25,26] But how much of the potential damage to the overall well-being of our patients have we ameliorated with our already changed ways? New digital ways of working may contribute to capturing and describing the legacy of the pandemic but could possibly also be harnessed in future processes to repair and improve. Shifts of this nature will invite the politics of change. It will raise issues of access, applicability, efficacy and regulation. A global crisis that has restricted our movement has taught us more about the significance of distance in healthcare and that this can result from physical impairment, psychological barriers, time restrictions or geographical separation. We face undoubted challenges. Every inequality potentiates the so-called 'digital divide' and we cannot predicate care on systems that embed disadvantage. We need to also be careful what we are asking for. My own observations have cemented my faith in the healing influence of human contact, however that is achieved.

Perhaps, I should not have been so quick to dismiss the thoughts of the man who not only invented the telephone but also cautioned us about both closed and open doors.

References

[1] Strehle EM, Shabde N. One hundred years of telemedicine: does this new technology have a place in paediatrics? *Arch Dis Child.* [Internet]. 2006 Dec [cited 2020 Nov 2]; 91(12):956-959. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2082971/#:~:text=The%20term%20telemedicine%20was%20coined,and%20Greek%20%E2%80%9Ctele%E2%80%9D).&text=During%20the%201920s%2C%20Norwegian%20doctors,at%20sea%20via%20radio%20link.

[2] Ghebreyesus TA. WHO Director-General's opening remarks at the media briefing on COVID-19 - 11 March 2020 [Internet]. World Health Organisation. Speech presented on 2020 Mar 11 [cited 2020 Nov 4]. Available from: https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020

[3] Wikipedia contributors. Timeline of the COVID-19 pandemic in the Republic of Ireland [Internet]. *Wikipedia*, *The Free Encyclopedia*. Last updated 2020 Nov 11 [cited 2020 Nov 4]. Available from: https://en.wikipedia.org/wiki/Timeline_of_the_COVID-19_pandemic_in_the_Republic_of_Ireland

[4] Banzhaf R. Who said "When One Door Closes Another Opens" [Internet]. Your Dictionary. (undated) [cited 2020 Nov 4]. Available from: https://quotes.yourdictionary.com/articles/who-said-when-one-door-closes-another-opens.html

[5] Ahmed A, Sanghvi K and Yeo D. Telemedicine takes centre stage during COVID-19 pandemic. *BMJ Innov.* [Internet]. 2020 Jun [cited 2020 Nov 12]; 2020:1-3. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7316111/

[6] Coope S. MDU guide for consultants: Staying patient focused [Internet]. United Kingdom: Medical Defence Union; (undated) [cited 2020 Nov 7]. Available from:

https://www.themdu.com/guidance-and-advice/guides/consultant-pack/staying-patient-focused

[7] Beckman HB and Frankel RM. The effect of physician behavior on the collection of data. *Ann Intern Med.* [Internet]. 1984 Nov [cited 2020 Nov 7]; 101(5):692-6. Available from: https://pubmed.ncbi.nlm.nih.gov/6486600/

[8] Davis J, Foley A, Crigger N and Brannigan MC. Healthcare and Listening: A Relationship for Caring. *International Journal of Listening* [Internet]. 2008 Jul 27 [cited 2020 Nov 8]; 22(2):168-175. Available from: https://www.tandfonline.com/doi/pdf/10.1080/10904010802174891?casa_token=hnA1_8BD98sAAAAA:8YfW-n9u2NLvNe81pXPVpV8AYq0gJxoOytbl9dtOShQ-_uixMcv_YsS8snJr9vN5Q7hoZlc2Rwg

[9] Jagosh J, Boudreau JD, Steinert Y, MacDonald ME and Ingram L. The importance of physician listening from the patients' perspective: Enhancing diagnosis, healing, and the doctor-patient relationship. *Patient Education and Counselling* [Internet]. 2011 Jan [cited 2020 Nov 8]; 85:369-374 Available from: https://www.bch.org/documents/Staff-Login-/Importance-of-physician-listening.pdf

[10] Health Service Executive and International Association for Communication in Healthcare. Telephone Consultations: Calgary-Cambridge Guide. Ireland: National Healthcare Communication Programme; (undated) [cited 2020 Nov 8]. Available from: https://www.hse.ie/eng/about/our-health-service/healthcare-communication/nhcp-telephone-conversations.pdf

[11] Kurtz DM and Silverman JD. The Calgary-Cambridge Referenced Observation Guides: an aid to defining the curriculum and organizing the teaching in communication training programmes. *Med Educ.* [Internet]. 1996 Mar [cited 2020 Nov 12]; 30(2):83-9. Available from: https://pubmed.ncbi.nlm.nih.gov/8736242/

[12] Matthys J. Patients' ideas, concerns, and expectations (ICE) in general practice: impact on prescribing. *Br J Gen Pract.* [Internet]. 2009 Jan [cited 2020 Nov 8]; 59(558):29-36. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2605528/#:~:text=Disclosure%20by%20patients%20of%20their,exemplifies%20a%20patient%2Dcentred%20approach.

[13] Evans YN, Golub S, Sequeira GM, Eisenstein E and North S. Using Telemedicine to Reach Adolescents During the COVID-19 Pandemic. *J Adolesc Health* [Internet]. 2020 Oct [cited 2020 Nov 8]; 67(4):469-471. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7403159/

[14] Barney A, Buckelew S, Mesheriakova V and Raymond-Flesch M. The COVID-19 Pandemic and Rapid Implementation of Adolescent and Young Adult Telemedicine: Challenges and Opportunities for Innovation. *J Adolesc Health* [Internet]. 2020 Aug [cited 2020 Nov 8]; 67(2):164-171. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7221366/

[15] Lam K, Lu AD and Shi Y. Assessing Telemedicine Unreadiness Among Older Adults in the United States During the COVID-19 Pandemic. *JAMA Intern Med.* [Internet]. 2020 Aug [cited 2020 Nov 8]; 180(10):1389-1391. Available from: https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2768772

[16] Central Statistics Office. Measuring Distance to Everyday Services in Ireland [Internet]. Ireland: CSO; (undated) [cited 2020 Nov 8]. Available from: https://www.cso.ie/en/releasesandpublications/ep/p-mdsi/measuringdistancetoeverydayservicesinireland/generalresults/

[17] Verhoeven V, Tsakitzidis G, Phillips H and Van Royen P. Impact of the COVID-19 pandemic on the core functions of primary care: will the cure be worse than the disease? A qualitative interview study in Flemish GPs. *BMJ Open* [Internet]. 2020 Jun [cited 2020 Nov 8]; 10(6): e039674. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7306272/

[18] Liu N, Huang R, Baldacchino T, Sud A, Sud K, Khadra M and Kim J. Telehealth for Noncritical Patients With Chronic Diseases During the COVID-19 Pandemic. *J Med Internet Res.* [Internet]. 2020 Aug [cited 2020 Nov 8]; 22(8): e19493. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7419134/

[19] Car J and Sheikh A. Telephone consultations. *BMJ* [Internet]. 2003 May [cited 2020 Nov 9]; 326(7396):966-969. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC153854/

[20] Matkin W, Ordóñez-Mena JM and Hartmann-Boyce J. Telephone counselling for smoking cessation. *Cochrane Database of Systematic Reviews* [Internet]. 2019 May [cited 2020 Nov 12]. Available from: https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD002850.pub4/full

[21] Hull S, Hagdrup N, Hart B, Griffiths C and Hennessy E. Boosting uptake of influenza immunisation: a randomised controlled trial of telephone appointing in general practice.

Br J Gen Pract. [Internet]. 2002 Sep [cited 2020 Nov 9]; 52(482):712-716. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1314410/

[22] Peredinia DA and Brown NA. Teledermatology: one application of telemedicine. *Bull Med Libr Assoc*. [Internet]. 1995 Jan [cited 2020 Nov 12]; 83(1):42-47. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC225996/pdf/mlab00102-0058.pdf

[23] Rush KL, Howlett L, Munro A and Burton L. Videoconference compared to telephone in healthcare delivery: A systematic review. *International Journal of Medical Informatics* [Internet]. 2019 Oct [cited 2020 Nov 9]; 118(2018):44-52. Available from: https://pubmed.ncbi.nlm.nih.gov/30153920/

[24] Downes MJ, Mervin MC, Byrnes JM and Scuffham PA. Telephone consultations for general practice: a systematic review. *Syst Rev*. [Internet]. 2017 Jul [cited 2020 Nov 9]; 6:128. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5496327/

[25] Jazieh A et al. Impact of the COVID-19 Pandemic on Cancer Care: A Global Collaborative Study. *JCO Global Oncology* [Internet]. 2020 Sep [cited 2020 Nov 12]; 6:1428-1438. Available from: https://ascopubs.org/doi/pdf/10.1200/GO.20.00351

[26] Bhatia RT, Gati S, Papadakis M and Sharma S. The Impact of COVID-19 on the Continuity of Cardiovascular Care: The authors discuss the challenges and offer potential solutions to facilitate safe and effective clinical care during and after this unique pandemic. *European Heart Journal* [Internet]. 2020 Oct [cited 2020 Nov 12]; ehaa742. Available from: https://academic.oup.com/eurheartj/advance-article/doi/10.1093/eurheartj/ehaa742/5918346

Isotreinoin in the Management of Acne Vulgaris: A focused literature review

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Literature Review

Demographics: Acne vulgaris, universally referred to as acne, is classified as a chronic inflammatory disease affecting the pilosebaceous unit of the skin (1). It is considered to be the most common skin condition affecting up to 95% of teenagers, with a peak incidence ranging from 13-16 years old in females & 15-18 years old in males; however, it is not only a problem of adolescence (2-4). Acne has also been documented in both children & adults, indicating a considerable impact on the overall population (5).

Burden of disease: While acne is not directly associated with mortality, significant morbidity has been established. In Ireland, the global disease burden of acne accounts for 3,700 healthy years lost due to living with the disease (6). Acne presents with erythema, swellings & tenderness, with up to 43% of patients experiencing lasting changes to the skin (7). The cosmesis associated with this condition has been shown to negatively impact an individual's self-esteem, sense of pride & mental health (1). It is also associated with an increased prevalence of loneliness, social anxiety, depression & suicidal ideation relative to their peers with other long-term skin diseases (2, 3, 5, 8). Moreover, people with acne have reduced quality of life (regardless of acne severity) that is on par with the values reported by individuals suffering from other chronic illnesses, including diabetes, arthritis, or epilepsy (8). Efforts should be made to manage acne properly & efficiently in the clinical setting to limit negative patient outcomes & prevent potentially devastating consequences to individual well-being.

Pathophysiology: The human body is populated by a multitude of bacteria responsible for maintaining skin health (9). This microbial flora helps preserve an ideal microenvironment for the skin, occupying niches & producing substances that inhibit the growth of pathogenic organisms (9). However, when the normal balance is disrupted & phylogroup diversity is lost, there is an increased risk of opportunistic infection & subsequent development of cutaneous conditions (9).

There are four main pathogenic factors involved in the development of acne: The abnormal proliferation of keratinocytes producing a follicular plug, androgen-induced overproduction of sebum, bacterial colonisation & proliferation within the duct, & a resulting local inflammatory response (4, 5, 9). Specifically, Propionibacterium acnes has been implicated in the development of acne vulgaris (7, 9-11). This anaerobic, gram-positive rod has several distinct subtypes, which are the primary population that colonises the skin follicles (9). The majority of P. acnes strains are skin-protective; however, an association has been found between acne development & pilosebaceous units dominated by the type IA1 clade (9). That is to say, an inherent lack of diversity among cutaneous microbiota or a bacterial shift that favours the type IA1 strain of P. acnes predisposes an individual to develop acne lesions, in combination with genetics & additional factors that increase sebum production (9).

Clinical presentation: Characteristic features of acne vulgaris include a variety of cutaneous lesions in areas highly concentrated with pilosebaceous units (1, 8, 9, 11). These lesions that commonly occupy the face, trunk & buttocks include open & closed comedones, cysts, pustules, nodules & scars (1, 2, 11). Comedones are the result of the hyper-keratinized follicular plugs that may or may not be oxidized (closed comedones/whiteheads & open comedones/blackheads, respectively), which become cysts when dilated & pustules are follicles filled with neutrophils (11). Nodules are inflamed lesions at the site of follicular rupture, which can ultimately result in scarring once healed, creating permanent skin imperfections as a result of collagen changes in the skin, manifesting as ice-pick, boxcar, hypertrophic &/or atrophic clinical scars (1, 2, 11).

Clinical management: With the high prevalence of acne within the general population & its associated sequelae, it would be expected that consultation rates regarding acne would be relatively high. This is indeed the case in secondary care, with acne being one of the most common conditions treated by dermatologists; however, the same is not true within the primary care system (2, 5, 12). It has been estimated that every year, only 1 out of 8-9 patients with acne will consult their family doctor (5, 8, 12). This disparity between primary & secondary care is particularly alarming as dermatology had the 3rd longest waiting list among medical specialties in Ireland, with over 13,500 patients expected to wait more than 1 year for an initial consultation in 2019 (13). Even so, it has been suggested that the vast majority of cases can be effectively & more appropriately treated in primary care (2). General practitioners are best suited to accurately assess & diagnose acne, elucidate their concerns & expectations, discuss options to collaborate & form treatment plans, monitor compliance & provide continued support for the patient. Most importantly, general practitioners can manage the contraceptive needs, monitor all adverse effects & accurately assess the mental health of the patient (12).

Treatment options: All severe cases of acne require systemic treatment to prevent permanent effects, such as physical & psychological scarring (4). At present, the available treatments include systemic antibiotics, hormonal agents, oral isotretinoin &

combinations of the aforementioned with topical treatments, each of which has been shown to have varying onsets of action, levels of efficacy & side effects (4, 5, 14). However, the prudent antimicrobial stewardship in the face of resistance & the possibility of disrupting the patients' microbiome has led to rising concerns of antibiotic use for acne (10, 12). Yet despite recommendations to limit their use in the treatment of acne, antibiotics continue to be the most frequently prescribed systemic treatment in clinical practice, with use often exceeding the recommended duration of therapy (10). On the other hand, while hormonal agents (antiandrogens) have shown to be effective at reducing outbreaks, the elevated risk of thromboembolism in females is less than ideal (4).

Isotretinoin: Isotretinoin is the only treatment available that targets all pathogenic mechanisms of acne, showing superior efficacy & consistent effects relative to other treatments (4, 14). This drug effectively reduces sebum production, decreases follicular clogging, decreases inflammation & prevents excess bacterial growth on the skin, therefore reducing lesions & scarring (4, 5). As such, isotretinoin has been identified as first-line therapy in the treatment of severe acne by the European evidence-based (S3) guidelines, with up to 85% of patients cured after an average of 4 months (3, 4). However, isotretinoin is not without adverse effects, with the mucocutaneous & musculoskeletal systems most commonly affected (5). Temporary side effects include dry lips, xerosis, facial erythema, epistaxis, cheilitis & myalgia, with other less common effects including hepatitis, pancreatitis & kidney disease (15, 16). Isotretinoin has also been the topic of controversy due to its established teratogenic effects & conflicting associations with depression & suicidal ideation (17). However, the majority of studies have found the use of isotretinoin has no negative impact on psychological well-being, with some studies showing depressive symptoms improving (3, 5). All things considered, to limit the negative effects of oral isotretinoin, a list of recommendations have been made to assist in safe prescribing, whereby:

1. Isotretinoin should be used as a first-line treatment for severe nodular & treatment-resistant acne or where there is a high risk of associated scarring or psychosocial distress
2. Low dose isotretinoin can be used to reduce the severity of adverse effects
3. All adverse effects should be monitored throughout the course of treatment, specifically screening for signs of depression
4. All patients require baseline & routine blood tests for liver function, serum cholesterol & triglycerides until response to treatment is established
    a. Pre-isotretinoin treatment
    b. During treatment: at 1 & 3 months (monitoring is recommended until 3 blood tests are all within normal range)

5. Women of child-bearing age must adhere to a robust pregnancy prevention programme, receive education on appropriate methods of contraception & require baseline & routine pregnancy tests before each prescription issued
    a. Two negative pregnancy tests, about 10 days apart, before initiating isotretinoin (may also consider starting menses as further confirmation before commencing treatment)
    b. A negative pregnancy test before issuing each monthly prescription
    c. A negative pregnancy test following cessation of treatment (5).

Patient follow-up is imperative to minimize associated risks of isotretinoin while also ensuring optimal treatment for their severe acne.

Conclusion: At present, there are no national isotretinoin guidelines in Ireland for general practitioners. However, it has been demonstrated that general practitioners can safely & effectively prescribe isotretinoin, as seen in New Zealand, where 58% of all isotretinoin scripts were issued in primary care in 2011-12 (18). Data suggests that the current management of acne is suboptimal due to the overuse of antibiotics, short treatment courses, lack of patient follow-up & limited-service availability (12). In preparation for the scheduled January 2021 NICE guidelines for acne management, there must be sufficient training in dermatology & adequate access to resources in the primary care setting (12, 19, 20). It is important that this highly prevalent condition is not undertreated & that careful consideration is taken in selecting the most effective treatment option to prevent permanent physical scarring, reduce the risk of psychological distress & improve their overall quality of life (8, 21). Increased education & support at the primary care level is imperative to ensure suitable, standardized & equitable treatment, regardless of age, circumstance, or means, to improve outcomes for all patients with acne.

References

1. Thiboutot DM, Dreno B, Abanmi A, Alexis AF, Araviiskaia E, Barona Cabal MI, et al. Practical management of acne for clinicians: An international consensus from the Global Alliance to Improve Outcomes in Acne. J Am Acad Dermatol. 2018;78(2 Suppl 1):S1-S23.e1.

2. Loughnane J. Acne Management in Primary Care. Dublin: Irish College of General Practitioners; 2016.

3. Li C, Chen J, Wang W, Ai M, Zhang Q, Kuang L. Use of isotretinoin and risk of depression in patients with acne: a systematic review and meta-analysis. BMJ Open. 2019;9(1):e021549-e.

4. Zouboulis CC, Bettoli V. Management of severe acne. Br J Dermatol. 2015;172 Suppl 1:27-36.

5. Zaenglein AL, Pathy AL, Schlosser BJ, Alikhan A, Baldwin HE, Berson DS, et al. Guidelines of care for the management of acne vulgaris. J Am Acad Dermatol. 2016;74(5):945-73.e33.

6. IHME. Acne Vulgaris, Both Sexes, All Ages, 2017, YLDs Washington: Institute for Health Metrics and Evaluation; 2020 [Available from: https://vizhub.healthdata.org/gbd-compare/.

7. Bettoli V, Guerra-Tapia A, Herane MI, Piquero-Martín J. Challenges and Solutions in Oral Isotretinoin in Acne: Reflections on 35 Years of Experience. Clin Cosmet Investig Dermatol. 2019;12:943-51.

8. Gieler U, Gieler T, Kupfer JP. Acne and quality of life - impact and management. J Eur Acad Dermatol Venereol. 2015;29 Suppl 4:12-4.

9. McLaughlin J, Watterson S, Layton AM, Bjourson AJ, Barnard E, McDowell A. Propionibacterium acnes and Acne Vulgaris: New Insights from the Integration of Population Genetic, Multi-Omic, Biochemical and Host-Microbe Studies. Microorganisms. 2019;7(5).

10. Barbieri JS, Spaccarelli N, Margolis DJ, James WD. Approaches to limit systemic antibiotic use in acne: Systemic alternatives, emerging topical therapies, dietary modification, and laser and light-based treatments. Journal of the American Academy of Dermatology. 2019;80(2):538-49.

11. Gebauer K. Acne in adolescents. Aust Fam Physician. 2017;46(12):892-5.

12. Francis NA, Entwistle K, Santer M, Layton AM, Eady EA, Butler CC. The management of acne vulgaris in primary care: a cohort study of consulting and prescribing patterns using the Clinical Practice Research Datalink. Br J Dermatol. 2017;176(1):107-15.

13. NTPF. Outpatient National by Specialty. 2019.

14. Vallerand IA, Lewinson RT, Farris MS, Sibley CD, Ramien ML, Bulloch AGM, et al. Efficacy and adverse events of oral isotretinoin for acne: a systematic review. The British journal of dermatology. 2018;178(1):76-85.

15. HSE. Acne Treatment Dublin: HSE; 2019 [Available from: https://www2.hse.ie/conditions/acne/acne-treatment.html.

16. Brzezinski P, Borowska K, Chiriac A, Smigielski J. Adverse effects of isotretinoin: A large, retrospective review. Dermatol Ther. 2017;30(4):10.1111/dth.12483.

17. Bauer LB, Ornelas JN, Elston DM, Alikhan A. Isotretinoin: controversies, facts, and recommendations. Expert Rev Clin Pharmacol. 2016;9(11):1435-42.

18. Oakley A. Managing Acne in Primary Care. Best Practice Journal. 2013(51):16-27.

19. Advocacy: Irish Skin Foundation; 2020 [Available from: https://irishskin.ie/advocacy/.

20. NICE. Acne Vulgaris: Management. National Institute for Health and Care Excellence; 2019.

21. Jick SS, Kremers HM, Vasilakis-Scaramozza C. Isotretinoin use and risk of depression, psychotic symptoms, suicide, and attempted suicide. Arch Dermatol. 2000;136(10):1231-6.

These Unprecedented Times

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I thought long and hard about the conversation I shall have with you all today because that is essentially what an essay is, that little portal of connectivity from one person to another. I contemplated the aspects of medical generalism you physicians, like Dr. Jack Sheppard, would find most interesting and entertaining. Maybe, you've had a long hard day in the practice, and as the rain beats down outside, being the philomath that you are, would like to read something that brings a smile, a chuckle, a raised eyebrow, or a welcomed thought. Throughout this little quest of mine, I made a list of all the topics I could write about, but struggled to identify one in particular, that would be best suited to steal your attention. Until one evening, as the rumblings from the RTÉ newsroom made their way from the sitting room through my closed bedroom door. And as I listened to the figures, the death toll, the upcoming guidelines, I knew then what to write about. And so, I hope you enjoy this piece by a tyro medic on the changing role of the general practioner, as they attempt to navigate the flock toward a *new* normal during this COVID-19 pandemic.

It's the first question most GPs will ask, how are you getting on during the lockdown, during the pandemic? And the answers really do reflect how these "unprecedented times" actually manifest. During my placement, I met with numerous patients. There was the worrier: "Oh yes good now doctor, I have a mask in my car, in my purse, even one under my bra because you never know who you are going to meet, and oh yes I am showering 3 times now during the day to keep the buggers away, they are everywhere aren't they, how many can actually fit onto your finger doctor?" And then there was the sceptic, who thinks that someone somewhere is ahead of the game, playing chess while the rest of us play checkers: "grand now doctor, I read somewhere that the Chinese actually started it on purpose? And these masks actually don't stop it, that's hardly true? Is it possible this is all being blown out of proportion doctor?" And in between these more vocal patients, sits the recently unemployed man with a history of depression, or the cocooning grandmother struggling with the isolation: "fine now doctor.. doing okay.. I suppose... trying to keep going.. you know yourself.....do you think maybe there will be a vaccine soon maybe?" These are just some of the faces and voices that paint the changing picture of the current patient attending their general practice.

And so, acknowledging each patient's unique viewpoint while effectively responding in an attempt to relieve their psychological and physical concerns has never been more relevant. This of course has always been a staple of the consultation, ever since Engel described the biopsychosocial model in 1977.[1] But it is also pertinent to adapt this approach specific to the disease which currently wears the hat of the COVID-19 infection produced by the anathema that is the SARS-CoV-2 virus. Vraga et al., [2] described effective communication during a pandemic quite aptly by identifying 3 important challenges that must be acknowledged. These include information overload, information uncertainty and misinformation. For the GP, this can include dispelling obvious myths like the suggested efficacy of intravenous disinfectant in fighting the virus, as suggested by one notorious American bureaucrat! This is spurred on in no small part by the coexisting explosion of information relating to the virus, or "infodemic" as it was called by the World Health Organisation. But more commonly the questions are realistic and involve a yearning for certainty. Is there an end in sight? Will this new vaccine save us all? Is it possible the virus is airborne? For example, regarding airborne transmission, it is not 100% impossible that the virus cannot be transmitted by an airborne route, as acknowledged by the World Health Organisation.[3] For the GP these can be tricky conversations as many of the answers remain unknown, exemplifying the "murky reality" of general practice which you all will only be too familiar with. However, these challenges can be countered by accurately communicating core messages such as the primary droplet route of transmission and the existing efficacy of hand washing, mask wearing and social distancing to reduce the transmission of the virus.[4-6] Reiterating core messages while dispelling harmful falsities with reference to the existing evidence (which may have limitations) are all part of the process of effective communication. Furthermore, accompanying this change in the characters of medical generalism, the stage of general practice has also been redesigned. The proportion of face-to-face consultations have fallen to about 10% of the previous level with most contacts now provided using symptom checkers, electronic messaging and phone/video consultations.[7] Virtual consultations have been used in the past, and their use was increasing even prior to the pandemic. [8] But for some people, the pandemic has acted like a catalyst to bring about inevitable changes that would eventually occur anyway. Virtual consultations can be used in the emergency triage of acute conditions and have been shown to be used effectively in the chronic management of hypertension, asthma, cancers and chronic pain syndromes.[9] In addition, they also provide doctors (who may high risk themselves) to continue practicing without the risk of contracting the virus. They could also offer a solution to reduce the expanding workload on the general practioner.

Virtual consultations do have limitations however. One key negative of the virtual consult relates to potential failure in maintaining the doctor-patient relationship. The key components of this relationship like empathy and continuity of care, cannot effectively occur using electronic messaging and phone calls. The consequence of this however could be very significant. Numerous observational studies have shown that continuity of care is significantly associated with higher patient satisfaction, adherence to medical advice, fewer admissions to hospital and fewer emergency department visits (especially for the elderly).[10, 11] In one notable study of type 2 diabetics, higher physician empathy scores (as determined by their patients) were actually associated with a significant reduction in all-cause mortality.[12] Additionally, the physical exam is an important part of the clinical method and cannot be carried out which can lead to incorrect or missed diagnoses. Of course, the patient can always be brought in for a physical exam if it is necessary but judging who should come in and who shouldn't is not without its own error. Another interesting point relates to training which was brought up during my placement, as the GP watched my "rusty" technique to performing a neurological exam! But the point is valid nonetheless, as no virtual substitute exists for learning clinical skills for the student or GP trainee. Although the definitive effect of virtual based consultations cannot really be properly elucidated until further research is carried out, these above points are still worrying. Moving forward, general practice has to adapt to continue to provide the "Right Care at the Right Place at the Right Time" and it will be interesting to see which changes remain and which ones do not.

My old English teacher used to say "Clarity eats breakfast, lunch, dinner and dresses in a colourful shirt, white pants and brown shoes". What she means of course is that coherency needs a clear structure, often coming in three parts, like the start, middle and end of this essay. And so, after talking about the affects of the pandemic, I would like to direct you now to the potential realities of the post-pandemic general practice. First of all on a lighter note, the buzz of COVID-19 has surrounded major aspects of all of our lives for a long time now. In the practice I worked in there was a general agreement that COVID should not be brought up in conversation while having lunch and so the term "NOVID" was facetiously coined. And in a way, this is a healthy thing to do as COVID consumes so much of our lives, sitting firmly perched at the forefront of our minds, waiting to be vocalised at soon as the arriving lull in conversation provides the opportunity. It is the common denominator of background chatter nowadays and the starting and returning point of most conversations, so much so that other previously common subjects never get a mention anymore (the topic of Irish weather must feel particularly lonely!).

But in all seriousness there are perhaps some aspects of health that may have been neglected since lockdown which will arrive inevitably at the doorstep of the general practioner. For one, the incidence of cancer related deaths is expected to dramatically increase.[13] This is partly related to the backlog of diagnostic and screening services but also influenced by the patient's reluctance to come for medical attention despite ongoing problems. The woman with ongoing post-menopausal bleeding for weeks and weeks is an example of this (red flag for endometrial carcinoma). Another worrying aspect of this relates to mental health. The exact figures are hard to come by with the National Self

Harm registry, for example, suspending their data collection on suicide and self harm rates since lockdown. One striking statistic that was thrown around, although never confirmed, was that more people died from suicide than COVID-19 in August. It is very likely that there will be a surge of mental health related problems and for the GP, there is no easy solution to combat this. The most preferable approach probably involves a mixture of maintaining good lifestyle habits and detecting early relapse of symptoms, which may be tricky given the virtual based format of both psychiatric outpatient and general practice consultations. One possibility that could be used for high risk groups is the use of smart phone based surveys coupled with machine learning analysis, which incorporate validated instruments like the PHQ-9 and GAD-7 into their algorithm.[14] The recent press release from Pfizer has hinted that an end may be in sight. Their phase III trial is the first to report findings of the final round of human testing, which is indeed very hopeful especially given the predicted 90 % effectiveness at preventing disease. But key questions like the potential for long term immunity will remain unanswered for quite some time. Another issue which is likely to contribute to its efficacy relates to the uptake of the vaccine among the general population with many people being hesitant to take the vaccine at all. But with this news, it is worth reflecting on some of the lessons learned from the pandemic. One fascinating observation that can be taken from this relates to public health. GPs in Ireland are persistently trying to change and maintain healthy lifestyle habits in their patients. Smoking has long been one of the key adversaries of health in Ireland and surprisingly causes more deaths per year than the COVID-19 infection. But perhaps what this pandemic has taught us is that effective change needs to be government led with a strong supporting role from the general practioner. Imagine if the Taoiseach and Dr. Holohan addressed the public every week on the impact of smoking on our bodies or if they reported the number of cigarettes bought every week on the news (it would be too difficult to report the mortality related to smoking given its role in various diseases). It is not impossible that people would begin to get behind the message as they did for this pandemic given the absolute burden of smoking related morbidity and mortality on the healthcare system. For me, I do think that Ireland has showed an incredible togetherness throughout the lockdown and this is something that doesn't exist everywhere, something that could help wellbeing and general practice.

As I finish up this essay, I would like to point out that each of the above points are multifactorial in nature and further exploration and extrapolation would be needed to fully characterise their influence on general practice. Saying that, hopefully you will found some of the observations I have made reflective of changing role of the general practioner during these unprecedented times. To paraphrase William Butler Yeats, the most powerful language comes from common everyday speech and so I will leave you with the words of Mr. X, a patient who I met while on placement. I went and brought Mr. X into the practice from the newly founded waiting room that was his own car. A farmer by trade, he trudged toward the door wearing an antalgic gait given to him from years of labouring and a tweed cap which sat atop his grey head of hair. At the end of the consultation, after being asked about his thoughts on the upcoming lockdown, he turned to me and in his distinctive Donegal Gaeilge and said: “*A Dhochtúir, an rud nach bhfuil leigheas air caithfear cur suas leis, nach bhfuil?”(Doctor, what can’t be cured must be endured, isn’t that right?)*

References

1. Engel GL. The need for a new medical model: a challenge for biomedicine. Science. 1977 Apr 8;196(4286):129-36.
2. Vraga EK, Jacobsen KH. Strategies for effective health communication during the coronavirus pandemic and future emerging infectious disease events. World Medical & Health Policy. 2020 Sep;12(3):233-41.
3. World Health Organization. Transmission of SARS-CoV-2: implications for infection prevention precautions: scientific brief, 09 July 2020. World Health Organization; 2020.
4. Kratzel, Annika, et al. "Inactivation of severe acute respiratory syndrome coronavirus 2 by WHO-recommended hand rub formulations and alcohols." Emerging infectious diseases 26.7 (2020): 1592.
5. Howard J, Huang A, Li Z, Tufekci Z, Zdimal V, van der Westhuizen HM, von Delft A, Price A, Fridman L, Tang LH, Tang V. Face masks against COVID-19: an evidence review.
6. Fong MW, Gao H, Wong JY, Xiao J, Shiu EY, Ryu S, Cowling BJ. Nonpharmaceutical measures for pandemic influenza in nonhealthcare settings—social distancing measures. Emerging infectious diseases. 2020 May;26(5):976.
7. Gray DP, Freeman G, Johns C, Roland M. Covid 19: A fork in the road for general practice. The BMJ. 2020 Sep 28; 370.
8. Car J, Koh GC, Foong PS, Wang CJ. Video consultations in primary and specialist care during the covid-19 pandemic and beyond. bmj. 2020 Oct 20;371.
9. Mallow JA, Petitte T, Narsavage G, Barnes E, Theeke E, Mallow BK, Theeke LA. The use of video conferencing for persons with chronic conditions: a systematic review. E-health telecommunication systems and networks. 2016 Jun;5(2):39.
10. Van Walraven C, Oake N, Jennings A, Forster AJ. The association between continuity of care and outcomes: a systematic and critical review. Journal of evaluation in clinical practice. 2010 Oct;16(5):947-56.
11. Mercer SW, Jani BD, Maxwell M, Wong SY, Watt GC. Patient enablement requires physician empathy: a cross-sectional study of general practice consultations in areas of high and low socioeconomic deprivation in Scotland. BMC family practice. 2012 Dec 1;13(1):6.

12. Dambha-Miller H, Feldman AL, Kinmonth AL, Griffin SJ. Association between primary care practitioner empathy and risk of cardiovascular events and all-cause mortality among patients with type 2 diabetes: A population-based prospective cohort study. The Annals of Family Medicine. 2019 Jul 1;17(4):311-8.
13. Maringe C, Spicer J, Morris M, Purushotham A, Nolte E, Sullivan R, Rachet B, Aggarwal A. The impact of the COVID-19 pandemic on cancer deaths due to delays in diagnosis in England, UK: a national, population-based, modelling study. The Lancet Oncology. 2020 Aug 1;21(8):1023-34.
14. Keep mental health in mind. Nat Med 26, 631 (2020). https://doi.org/10.1038/s41591-020-0914-4

“Are you feeling okay?”: Mental Health Treatment in General Practice

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In light of the COVID-19 pandemic, the importance of overall physical health by maintaining a healthy weight and not smoking have been highlighted as modifiable risk factors to prevent becoming more unwell with coronavirus (Hernandez-Galdemaz et al., 2020). Concurrently, we find ourselves talking about mental health amongst ourselves more and more in relation to the impact of the measures taken in reducing the spread of the virus. The role of the General Practitioner (GP) has never been more important in identifying patients who are at a high risk of developing a mental illness and supporting those patients who have one already.

The general practitioner is the cornerstone within a community and has but a limited time per patient. 14.1 minutes is the average length of a GP consultation in Ireland (Pearse et. al, 2019). Any general practitioner reading this essay can guess in a moment as to why that is: workload. Indeed, the increasing pressures on general practices across the nation have been found to be multifactorial (Pearse et al., 2019). Reasons for the ever-rising daily worklist have been attributed to a rise in emigration in newly qualified GP’s (Pierse et al., in O’Kelly et al., 2015), to an increasing older population cohort with a myriad of chronic diseases and comorbidities (Glynn et al., 2011). The rising pressure on GP’s has not gone unnoticed and has in part been attributed to shorter consultation times (Deveugele et al., 2002). However, the time spent per patient by their doctor is not set in stone which is a key point in identifying at risk patients. Where a mental health concern is spotted by a GP in their patient, their consultation time has been known to double. Conversely, the same study found that when a patient comes to their GP with a mental health concern as the primary concern, the time spent with the patient has not been documented to change significantly

(Deveugele et al., 2002). To me this is rather paradoxical and begs the question of how bad would a mental health concern have to get before it is identified by their clinician? Furthermore, at what point do patients decide that they are in need of professional medical advice? The answer to both questions is a rather frustrating “it depends”. Some patients may never bring a mental health concern to their GP while some may go to their GP soon after they notice anything unusual with their mental health. Similarly, some mental health conditions may never present visually for some while for others, lack of hygiene and self care is how it might manifest itself.

Indeed, “There is no face of mental illness” (Kinsella, 2018). This poignant expression reinforces to me the concept that there is no typical patient with a mental illness or who is experiencing a difficulty in their lives that may predispose them to one. Mental illness can affect anyone at any point in their lives. In a time surrounded by numerous psychosocial stressors resultant from COVID-19 (Reger, Stanley, and Joiner, 2020), perhaps now is more important than ever to acknowledge the masked nature of mental illness. Yet, in the arsenal of every general practitioner lies a special privilege to lift that mask and to ask those difficult questions about how someone might really be doing. The caveat to this however is that responses and honesty to direct questioning may vary depending on a number of factors including age, the way the question is asked, and cultural differences. Consider the number of occasions that we might ask “How are you?” or “Are you okay?” in a day of practice. Now consider how many times the response is “I’m grand yeah” or “I’m okay”, even when the patient has presented to you for a physical complaint. There is almost the culture of “I’m grand” when the paradoxical reality is that Ireland has been documented to have the highest rate of mental illness in Europe standing at a frightening 18.5% of the population in 2016 (Health at a Glance Report, 2016). What this suggests is that perhaps our cultural desire to say everything is okay when it is not could be challenged by a new approach to asking the question. Need we banish “Hi, how are you?” from our greeting of patients altogether? What would happen if we formalised our inquiry into the mental wellbeing of a patient?

Truth be told, not every patient with an underlying mental health concern is ready to face and accept this reality. Even with direct inquiry, the patient may not admit the truth of what is going on or may in fact downplay the significance of it. Indeed, the patient's fears of disclosure and stigma, awareness as to the role of a GP, and once again, the duration of the consultation were all found to have effects on the choice of a patient to disclose a mental health concern to their GP (Dew et al., 2007). Unfortunately, yet another barrier has been created resulting from COVID-19: fear of accessing mental health services (Reger, Stanley, and Joiner, 2020).

While mental health has been historically stigmatised, the age of COVID and the public's definition of illness and hospitals overflowing have no doubt played their role in keeping mental health patients away from their GPs and other services. In the peak of COVID the HSE pathway for patients who may be suicidal or have self-harmed (Jeffers, Niazi and Jennings, 2020) may serve to worsen the problem by reinforcing anxieties surrounding help seeking. They are very often met by their GP with a phone call and a referral letter. Where a patient requires urgent emergency department psychiatric evaluation under request of the GP, the environment of being surrounded by physically ill people may not be appropriate. Furthermore, this is not to mention the heightened anxiety of being in a place where there are possible cases of COVID-19. Additionally, the strict visiting restrictions in place in the hospitals across the country, while well-meaning in their attempts to curb the spread of COVID-19, may have served to create a further sense of isolation. While in my experience visitors are typically allowed into the emergency department, notably for patients who require 1:1 support for mental health concerns, these restrictions only posed a challenge to patients in dire need of familial support in their presentation to the hospital. Were many GP's aware of this reality they were sending their patients into? Can we do better for these patients by banding together setting up an alternative in the event of another mass resurgence of COVID-19 that does facilitate mental healthcare in a more suitable environment?

Who is to say that a proportion of patients who should have presented to their GP chose not to out of the lack of desire to deal with an awkward phone conversation? That proportion may never be known but it is something for a GP to consider. Perhaps a patient presenting for a mental health concern in a time of crisis needs the choice to either have this difficult conversation face to face or with the comfort of telemedicine. Not everyone desires a level of anonymity and distance in help seeking, such as the patients accessing care of the elderly services. However, some young adults may be the ones to benefit from the rise of virtual/online consultations and platforms that might facilitate and encourage mental health help seeking (Pretorius, Chambers and Coyle, 2019). Some may find it easier to communicate their feelings into a written form as opposed to articulating it to a professional on the spot. Perhaps the option of a mental health questionnaire could be made available to patients before or after their consultation to allow patients the opportunity to reflect on their mental health.

Often we find ourselves separating the concept of physical and mental health, yet the two are not mutually exclusive. A patient may present with coronavirus-like symptoms but a mental health concern at the same time. In fact, patients with pre-existing mental health illnesses are more likely to become infected with COVID-19 (Moreno et al., 2020). Furthermore, patients with schizophrenia for example at a much greater risk of experiencing worse outcomes if they do contract coronavirus (Kozloff et al., 2020). It is the role of a GP to refer the patient for their swab and to manage their physical and mental health, a large undertaking indeed. Unfortunately, in a time of COVID-19, a 15 minute in person consultation may result in the GP becoming a close contact if the patient indeed has the virus (HSE, 2020). Yet, spending less time with the patient or using teleconsultation may further close the door for in depth exploration of mental health and its presentation or co-morbidities. Reduced consultation time or switching to a phone consultation may also result in the patient feeling rushed or worse, feeding into the feelings of isolation and distress at the minimal social contact. For some patients, seeing their GP is the only other person they have seen and spoken to in weeks. Of note, people with schizophrenia already are less likely to have a large and quality social support system (Kozloff et al., 2020). Thus, rushing a consultation with someone who has schizophrenia is likelier to have a more significant impact on their wellbeing than someone who is mentally well and has a large, quality support network.

For a moment, let us consider the patients who have overcome their anxieties surrounding presenting their mental health as a primary concern to their GP, and accepted that they need treatment. A concern that a patient may have and that may have held them back from presenting is that of the need for medication to treat the illness. Psychotropic medications have made their way into mainstream culture with such as "Mother's little helper" for diazepam in a song by the Rolling Stones in 1966. Even in more modern music, direct reference to brand names of psychotropic agents are made such as Prozac in the song "1985" by Bowling for Soup (2004), or Xanax in the form of "xannies" in "Good Kid" (2012) by Kendrick Lemar (and countless more songs). One popular rapper even refers to himself and is known as "Lil Xan". It is this overt medicalisation and trivialisation of mental health concerns in media and popular culture that plays a role in bringing patients in who may ask for them or indeed fear them. There has been a documented rise in the prescription of psychotropic agents in the cohort of young people presenting with mental health complaints in Australia (Brijnath et al., 2017). While no data has been identified for the Irish cohort of young people, it would be of little surprise if a similar trend were identified. It was in fact identified that Ireland had the highest prescription rate of benzodiazepines in the over 65 population according to the OCED report (OCED, 2016). In primary care, this should be of concern to general practitioners for 2 reasons: short term medicalisation in isolation, perceptions of patients on what mental healthcare is.

I believe it is the medicalised rather than holistic care of the patient that has in part led to the public understanding of the GP being centred over physical concerns (Dew et al., 2007). Yet with a combination of time constraint and indeed the pressures felt by GP's to prescribe unnecessarily (Cole, 2014; Weiss et al., 1996). Through the misinformation and perhaps the financial concerns associated with a GP visit, patients may find themselves inadvertently putting pressure on their GP to prescribe something to make them “better”. Another potential factor is an awareness from anecdotal evidence as to what the psychiatric services in Ireland are like with regards to delays and experience denoted from their friends and families who have been there. If a patient presents to their GP after a long time struggling building up to the visit, there might be almost an expectation of something tangible happening. For some, that might be medication to “hold them over” while they wait for the public services such as a psychologist, psychiatrist or indeed CAMHS if the presenting patient is paediatric.

In conclusion, the role of a GP in mental healthcare of their patient is challenged by modern challenges. Through increasing worklists thereby reducing time spent per patient, there is a decreased likelihood of a patient disclosing a mental health concern. The patient may feel rushed during the consultation or may be focused on a physical concern and not mention other associated psychological concerns during their visit. A method suggested to cope with this time constraint is to make use of a form of screening tool pre or post consultation to allow patients the opportunity to reflect on their mental health and in turn increase the likelihood of an appointment being made to tackle this concern. The GP should act as a support to the patient who is going through a mental health concern and the concept of them being “gatekeepers” should only play a part in what the patient sees as their role. The ways that they can do this may include the use of informatics to improve their accessibility for patients who might not feel comfortable or confident articulating their concerns face to face. The most important aspect of this however is maximising the opportunity for choice in this cohort of patients. Choice also applies to GPs in their choice of pharmacological management of mental health. Despite pressures to prescribe, the GP has a choice to support the patient in a more holistic way, perhaps through checking in on their patient and making it known that they have not been forgotten about. Finally, as a more long-term concept, I believe that there should be a push towards a less hospitalised approach to mental health. In a time of COVID-19, the hospitals have more than ever in the eyes of the public become places centred around physical maladies. Should GP's of Ireland be the ones to band together and be the ones to fight for their mental health patients to have a more suitable place to be referred to when they are in a time of crisis? Is the emergency department where we want to be sending our patients for evaluations or speedier connections to psychiatric services?

References

Brijnath, B., Xia, T., Turner, L. and Mazza, D., 2017. Trends in GP prescribing of psychotropic medications among young patients aged 16–24 years: a case study analysis. *BMC Psychiatry*, [online] 17(1), pp.1-8. Available at: <https://link.springer.com/article/10.1186/s12888-017-1375-2> [Accessed 9 October 2020].

Cole, A., 2014. GPs feel pressurised to prescribe unnecessary antibiotics, survey finds. *BMJ*, [online] 349(aug19 15), pp.5238-5238. Available at: <https://www.bmj.com/content/349/bmj.g523> [Accessed 9 October 2020].

Deveugele, M., Derese, A., Van den Brink-Muinen, A., Bensing, J. and De Maeseneer, J., 2002. Consultation length in general practice: cross sectional study in six European countries. *BMJ*, [online] 325(7362), pp.472-472. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC119444/> [Accessed 9 October 2020].

Dew, K., Morgan, S., Dowell, A., McLeod, D., Bushnell, J. and Collings, S., 2007. 'It puts things out of your control': fear of consequences as a barrier to patient disclosure of mental health issues to general practitioners. *Sociology of Health & Illness*, [online] 29(7), pp.1059-1074. Available at: <https://onlinelibrary.wiley.com/doi/full/10.1111/j.1467-9566.2007.01022.x> [Accessed 9 October 2020].

Glynn, L., Valderas, J., Healy, P., Burke, E., Newell, J., Gillespie, P. and Murphy, A., 2011. The prevalence of multimorbidity in primary care and its effect on health care utilization and cost. *Family Practice*, [online] 28(5), pp.516-523. Available at: <https://doi.org/10.1093/fampra/cmr013> [Accessed 9 October 2020].

Health Service Executive, 2020. *Close Contact And Casual Contact*. [online] Www2.hse.ie. Available at: <https://www2.hse.ie/conditions/coronavirus/close-contact-and-casual-contact.html> [Accessed 27 October 2020].

Hernández-Galdamez, D., González-Block, M., Romo-Dueñas, D., Lima-Morales, R., Hernández-Vicente, I., Lumbreras-Guzmán, M. and Méndez-Hernández, P., 2020. Increased Risk of Hospitalization and Death in Patients with COVID-19 and Pre-existing Noncommunicable Diseases and Modifiable Risk Factors in Mexico. *Archives of Medical Research*, [online] 51(6). Available at: <https://www.sciencedirect.com/science/article/pii/S0188440920307220#bib3> [Accessed 27 October 2020].

Jeffers, A., Niazi, A. and Jennings, R., 2020. *HSE Library Guides: Covid-19 HSE Clinical Guidance And Evidence: Clinical Pathway For People Who Self-Harm Or Who Have Suicidal Ideation 024*. [online] Hse.drsteevenslibrary.ie. Available at: <https://hse.drsteevenslibrary.ie/c.php?g=679077&p=4869229> [Accessed 9 October 2020].

Kinsella, B., 2018. You Don't Look Like You Have Depression. [Blog] *National Alliance on Mental Illness Blog*, Available at: <https://www.nami.org/Blogs/NAMI-Blog/December-2018/You-Don-t-Look-Like-You-Have-Depression#:~:text=It's%20really%20very%20simple%3A%20there,of%20schizophrenia%20or%20bipolar%20disorder> [Accessed 9 October 2020].

Kozloff, N., Mulsant, B., Stergiopoulos, V. and Voineskos, A., 2020. The COVID-19 Global Pandemic: Implications for People With Schizophrenia and Related Disorders. *Schizophrenia Bulletin*, [online] 46(4), pp.752-757. Available at: <https://academic.oup.com/schizophreniabulletin/article/46/4/752/5826166#205367124> [Accessed 27 October 2020].

Moreno, C., Wykes, T., Galderisi, S., Nordentoft, M., Crossley, N., Jones, N., Cannon, M., Correll, C., Byrne, L., Carr, S., Chen, E., Gorwood, P., Johnson, S., Karkkainen, H., Krystal, J., Lee, J., Lieberman, J., Lopez-Caramillo, C., Manniko, M., Phillips, M., Uchida, H., Vieta, E., Vita, A. and Arango, C., 2020. How mental health care should change as a consequence of the COVID-19 pandemic. *The Lancet: Psychiatry*, [online] 7(9), pp.813-824. Available at: <https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366(20)30307-2/fulltext> [Accessed 27 October 2020].

O Kelly, M., Teljeur, C., O Kelly, F., Ni Shúilleabháin, A. and O Dowd, T., 2016. *Structure Of General Practice In Ireland: 1987-2015*. [ebook] Dublin: Irish College of General Practitioners, pp.3-41. Available at: <https://www.tcd.ie/medicine/public_health_primary_care/assets/pdf/structure-of-general-practice-2016.pdf> [Accessed 9 October 2020].

OCED, 2016. *OCED Health Policy Overview: Health Policy In Ireland*. Online: OCED, pp.1, 2.

OCED, 2016. *Health At A Glance: Europe 2016*. 1st ed. Paris: Organisation for Economic Co-operation and Development (OCED).

Pierse, T., Barry, L., Glynn, L., Quinlan, D., Murphy, A. and O'Neill, C., 2019. A pilot study of the duration of GP consultations in Ireland. *Pilot and Feasibility Studies*, [online] 5(1). Available at:

<https://pilotfeasibilitystudies.biomedcentral.com/articles/10.1186/s40814-019-0532-4#:~:text=The%20average%20duration%20of%20a,between%20consultations%20of%2099%20days> [Accessed 9 October 2020].

Pretorius, C., Chambers, D. and Coyle, D., 2019. Young People’s Online Help-Seeking and Mental Health Difficulties: Systematic Narrative Review. *Journal of Medical Internet Research*, [online] 21(11), p.e13873. Available at: <https://pubmed.ncbi.nlm.nih.gov/31742562/> [Accessed 9 October 2020].

Reger, M., Stanley, I. and Joiner, T., 2020. Suicide Mortality and Coronavirus Disease 2019—A Perfect Storm?. *JAMA Psychiatry*, [online] Available at: <https://jamanetwork.com/journals/jamapsychiatry/fullarticle/2764584> [Accessed 9 October 2020].

Weiss, M., Fitzpatrick, R., Scott, D. and Goldacre, M., 1996. Pressures on the general practitioner and decisions to prescribe. *Family Practice*, 13(5), pp.432-438.

A Reflective Essay on Atrial Fibrillation in General Practice and the use of Risk Stratification Tools in Disease Management

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My first placement in my final year of medicine was a week of General Practice (GP). In the lead up to the week, I felt slightly unprepared as I only had a week of prior experience in GP, and I hadn't been on clinical placement for some time either. I wasn't sure what to expect. I found it was exciting to be back, after a few months of uncertainty about whether we would even be able to return to placements due to the COVID-19 pandemic. I felt more confident as the week progressed, settling back into a routine quickly. One particular patient stood out to me over the week of placement, and made me question a lot about what I knew about General Practice and how it works.

The case involved a 68 year old man with a history of atrial fibrillation (AF). The doctors were discussing him as they were considering starting him on a direct oral anti-coagulant (DOAC). This didn't seem particularly fascinating at first, but then they said the man had been diagnosed with AF four years ago. Why hadn't he previously been on a DOAC? At diagnosis, he would have had a CHA_2DS_2VASc score of 1 (due to a history of hypertension) and so had been started on aspirin. He had subsequently turned 65 in the four years since, and his CHA_2DS_2VASc score increased to 2, which should have led to consideration of starting a DOAC. This didn't happen.

I initially wondered whether there was a contraindication to DOACs, such as severe renal disease, allergy or previous bleeding history. I also considered that the doctor and the patient may have discussed the risks and benefits of DOACs and decided not to initiate anti-coagulation, though the GP didn't recall such a conversation and there was no documentation supporting this, so I think this is unlikely.

The GP saw that the patient notes documented a $CHADS_2$ score of 1, not a CHA_2DS_2VASc score of 1. I hadn't realised that there were multiple risk stratification tools. The $CHADS_2$ score considers age greater than 75 years, and a history of diabetes, hypertension, heart failure or prior cerebrovascular event (stroke/TIA), whereas the CHA_2DS_2VASc score includes other stroke risk factors, such as age 65-74, gender and other vascular disease, and may thus improve the accuracy of risk stratification compared to $CHADS_2$.[1,2,3] In this particular case, the $CHADS_2$ score doesn't take age into account until 75, so risk stratification with this score would not have prompted a discussion about DOACs when the patient turned 65. If that score had been used, it may explain why the patient had not been started on an anti-coagulant at this time.

This situation made me ask myself a lot of questions about clinical practice as I did some further research on the topic. This is just one incidental case, and nothing adverse happened, but to me it represents the possibilities of what happens and what can happen in General Practice.

Initially, I set out to compare the two scores. The $CHADS_2$ and CHA_2DS_2VASc scores can help risk stratify patients with AF into those at low, moderate and high risk of thromboembolic events. This can help make more informed choices and aid the shared decision making between doctor and patient when assessing the risks and benefits of anti-coagulation. However, it seems to me that having multiple risk stratification scores available could lead to confusion. The CHA_2DS_2VASc isn't perfect, with one article interestingly pointing out that from ages 65-74 you get one point, equating the risk over those nine years, whereas the risk of stroke at 74 is generally higher than at 65.[2,4] The CHA_2DS_2VASc score has more variables, with more people therefore classified as higher risk, potentially increasing the use of anti-coagulation in practice.[5] The CHA_2DS_2VASc score is also more highly regarded, as it improves risk stratification for AF patients at low and intermediate risk of stroke, compared to the $CHADS_2$ score.[6] A $CHADS_2$ score of 1 is low, and clinical judgement plays a role in whether to start aspirin, anti-coagulation or nothing.[2,4] A low $CHADS_2$ score in a patient who might have a higher CHA_2DS_2VASc score could mean anti-coagulation wasn't considered when perhaps it should have been. This could potentially leave someone at higher risk of stroke than strictly necessary.

I initially thought that if you used the $CHADS_2$ and got a low score, further risk stratification with the CHA_2DS_2VASc score might further evaluate the risk for the patient and more reliably classify the patient as low, moderate or high risk. I would be more confident that a low CHA_2DS_2VASc score was more reassuring than a low $CHADS_2$ score. However, on reflection, expecting doctors to apply multiple scores is nonsensical, a waste of time and resources on the behalf of the doctor and the patient. This would inevitably lead to confusion and frustration, especially if the two scores categorised a patient into two different risk groups, recommending conflicting managements.

The whole basis of these indices is to eliminate bias and indecision, not to cause more uncertainty by having multiple tools. Oversights, miscommunications and discrepancies are inevitable in clinical practice, as they are in everything, but these tools are meant to guide not obfuscate. Having multiple scores complicates matters, but both are available online and both are used by clinicians. As accessibility to research from all over the world increases, clinicians are constantly inundated with new information. Guidelines with a consensus would be ideal, but impractical as research is updated continuously. Keeping up to date on evidence-based medicine and guidelines must take a lot of effort and commitment. How could we even expect anyone to know which score is better or what the evidence states? Even having a personal favourite would be tricky, as memories fade and with the sheer number of patients one sees in general practice, how could you ever keep track which tool you used when?

When reading the ‘Atrial Fibrillation Screening in General Practice’ study[7], what stood out to me most was the HSE Atrial Fibrillation Care Pathway, specifically the routine/ongoing care section, which outlines the follow up care for people with AF. It mentions a rate and rhythm review every six months, but doesn’t mention re-evaluating someone’s thrombotic risks as they age and re-evaluating their management plan.

I did come across this principle in my reading, that if you use a clinical scoring tool to decide on a course of action or treatment, that you should regularly follow-up and re-consider the patient details using that same tool in order to dynamically assess if the risk has changed. In the patient case I came across in GP, this had been done informally prompting the discussion of starting a DOAC. This raises the question whether it could be done more formally and whether such dynamic assessment could be included in AF management guidelines. Risks and benefits, indications and contraindications that all relate to individual prescribing can change dramatically, especially as patients age and comorbidities accumulate. Follow-up studies of people with AF have shown their CHA_2DS_2VASc score may indeed increase over time, acknowledging the need for continuing assessment of patients’ risk factors.[8,9] One article I came across suggested a three or four month interval prior to re-assessment of stroke risk and consideration of anti-coagulation in someone who was previously low-risk, and where the risks had increased[10]. In my opinion, this interval is too short a period to expect a change in a patient’s health status. A 6-monthly or annual re-assessment using the same clinical scoring indices initially applied to the patient in order to re-evaluate their risk could be considered. I acknowledge that this re-assessment of the patient’s risk and health is probably done on a regular informal basis in General Practice, but is it done at the right time and, crucially, at the right time to optimise patient care? Clinical guidelines can be seen as ‘starting points’[11] but where does that leave patient review and follow up over the years?

Such formal reassessment would obviously have resource implications for the GP. From what I’ve seen, the consults in primary care are already compressed as tightly as they can be, with multiple comorbidities and concerns addressed in just 10-15 minutes. You can’t expect a rigid undertaking of guidelines in each consultation for each comorbidity as there simply isn’t enough time. For any particular pathology, the expert opinion is always the best assessment, but GPs can't be experts in everything while expected to be able to handle anything.

I have spent a lot more time on placement in hospitals than GP, and I was conscious of the relative lack of a team in general practice. There are usually multiple doctors in the practice; however they're doing their own work and you can't ask for advice on every patient. The hospitals are so different, where the whole team can discuss one patient, distributing the workload, considering different views, and ultimately, sharing the responsibility. Especially in times of COVID and telemedicine, when some consults don't allow a physical examination or bloodwork, I would consider the workload of GPs to be burdensome and difficult, without adding another obligation of re-assessing risk stratification scores.

I realise the scoring systems and the guidelines are meant as adjuncts to clinical decision making, but as I'm transitioning to clinical medicine, I'm finding them indispensable as my experiential learning isn't there yet, and I find myself depending on more objective values. They can lend certainty to clinical decisions, and also help me to remember certain risk factors or features associated with these conditions. I always think of CHA_2DS_2VASc for stroke risk in AF and I always think of Well's score for risk of deep venous thrombosis. They can be a useful memory aid while also furthering knowledge and allowing clinical implementation of the knowledge.

Listening to the doctors discussing this patient triggered a lot of questions and led me to reflect on my pre-conceived ideas and notions about clinical medicine. This is how medicine should be taught, with experiential learning the cornerstone. I don't think I would have questioned this much if I had been in a lecture hall hearing about risk and sensitivity and predictive value. Clinical practice should be individualised. While the lack of standardisation of scores and protocols can complicate matters, it can also ultimately distract from the main conversation, which is whether the benefits outweigh the risks for this particular decision for this particular patient. The patient's preferences should be central to any conversation regarding anti-coagulation with AF.[12]

As I transition to clinical practice, I wonder how I'll fare with the unpredictable nature of medicine. Expecting guidelines to be rigidly followed would be naïve, due to many factors, such as having multiple evidence bases, constant development of new data and the personalised nature of every consult, to name a few. As I started researching risk stratification tools, I initially thought I'd conclude by recommending one tool over the other, and to stick to the optimal score and ignore the others. As I reflect on the case in question, I do think annual re-evaluation of the patient's risk factors for a certain disease and their evolving healthcare needs would be beneficial to patients and to doctors. Such a re-evaluation may have led to considering a DOAC for this gentleman years prior to my interaction. However, I did examine my own dependence on these risk prediction tools and guidelines that are more meant to supplement clinical reasoning than replace a lack thereof. As I start practicing medicine next year, I hope I remember to keep the patient's preference and expectations at the centre of their care. Instead of concentrating on whether to use the $CHADS_2$ or CHA_2DS_2VASc score, I hope I use these risk scores to supplement my judgement not dictate it, and to always take the full clinical picture into account.

References

1. Friberg, L., Rosenqvist, M. and Lip, G., 2012. Evaluation of risk stratification schemes for ischaemic stroke and bleeding in 182 678 patients with atrial fibrillation: the Swedish Atrial Fibrillation cohort study. *European Heart Journal*, 33(12):1500-1510.
2. 2020. [online] Available at: <https://gpnotebook.com/simplepage.cfm?ID=x20110126111628933383>
3. Zhu, W., Xiong, Q. and Hong, K., 2015. Meta-Analysis of CHADS2 versus CHA2DS2-VASc for Predicting Stroke and Thromboembolism in Atrial Fibrillation Patients Independent of Anticoagulation. *Texas Heart Institute Journal*, 42(1): 6-15.
4. Uptodate.com. 2020. *Uptodate*. [online] Available at: <https://www.uptodate.com/contents/atrial-fibrillation-anticoagulant-therapy-to-prevent-thromboembolism>
5. *CHA2DS2-Vasc Calculator For Guiding Antithrombotic Treatment In Atrial Fibrillation*. 2020 [online] Clincalc.com. Available at: <https://clincalc.com/Cardiology/Stroke/CHADSVASC.aspx>
6. Olesen, J., Torp-Pedersen, C., Hansen, M. and Lip, G., 2012. The value of the CHA2DS2-VASc score for refining stroke risk stratification in patients with atrial fibrillation with a CHADS2 score 0–1: A nationwide cohort study. *Thrombosis and Haemostasis*, 107: pp.1172-1179.
7. Hse.ie. 2020. [online] Available at: <https://www.hse.ie/eng/services/publications/clinical-strategy-and-programmes/atrial-fibrillation-screening-in-general-practice.pdf>.
8. Chao, T., Lip, G., Liu, C., Lin, Y., Chang, S., Lo, L., Hu, Y., Tuan, T., Liao, J., Chung, F., Chen, T. and Chen, S., 2018. Relationship of Aging and Incident Comorbidities to Stroke Risk in Patients With Atrial Fibrillation. *Journal of the American College of Cardiology*, 71(2), pp.122-132.
9. Domek, M., Gumprecht, J., Mazurek, M., Chao, T-F., Lip, G.Y.H., 2019. *Should We Judge Stroke Risk By Static Or Dynamic Risk Scores? A Focus On The Dynamic Nature Of Stroke And Bleeding Risks In Patients With Atrial Fibrillation*. J Cardiovascular Pharmacol, 74(6): 491-498.
10. Chao, T., Liao, J., Tuan, T., Lin, Y., Chang, S., Lo, L., Hu, Y., Chung, F., Chen, T., Lip, G. and Chen, S., 2019. Incident Co-Morbidities in Patients with Atrial Fibrillation Initially with a CHA2DS2-VASc Score of 0 (Males) or 1 (Females): Implications for

Reassessment of Stroke Risk in Initially 'Low-Risk' Patients. *Thrombosis and Haemostasis*, 119(07): 1162-1170.

11. @berkeleywellness. 2020. *The Pros And Cons Of Medical Guidelines*. [online] Available at: <https://www.berkeleywellness.com/healthy-community/health-care-policy/article/pros-and-cons-medical-guidelines>.
12. Chong, C., 2018. Pros and cons of clinical practice based on guidelines. *Hong Kong Medical Journal*: 24: 440-441.

The Guiding Light: The Essential Role of the General Practitioner throughout Pregnancy, with a focus on Early Pregnancy Loss

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As part of my clinical training in medical school, I recently completed an obstetrics and gynaecology placement in a regional hospital in Ireland. It was the most eye-opening of my clinical experiences thus far. I feel privileged to have witnessed important moments in the lives of Irish women and am grateful for the opportunity to experience the soaring highs and devastating lows of pregnancy care at this early stage of my training. As I rotated through the early pregnancy unit and antenatal clinic, I was struck by the diversity of these routine consultations, which seemed to touch on all facets of maternity care. In what seemed like only a moment, I witnessed a surprised, yet overjoyed mother of two teenagers as she learned of her new pregnancy after a missed period; a numb and fragile form of a woman as she was told she was actively miscarrying, her sixth; a grateful woman in the final stages of an elective termination of pregnancy. In witnessing these consultations and learning about each woman's medical journey, I was repeatedly struck by the central role of the General Practitioner (GP) in the provision of care to these women, before they ever reached a hospital door and long after they leave. I began to consider the GP as a safe guiding light for women through all stages of pregnancy, but most pertinently in early pregnancy care and in pregnancy loss. I believe this role is understated and deserves to be widely acknowledged.

From the outset the GP is present. Educating women about potential teratogens, motivating them to change harmful behaviours, supporting them in adhering to folic acid and prenatal supplement regimes, to optimising current medications for pregnancy. The GP plays an essential and diverse role in pre-conceptual care for many women. The GP monitors each woman's vaccination status and immunity to potential high-risk infections in order to protect their future child. The GP may discuss stopping contraception and support the women through these choices. They offer conception advice, education on their fertility cycle and psychological support to build resilience during what can be a stressful time. In the case of recurrent pregnancy loss or problems conceiving, the GP guides her through further investigations collaborating with a multi-disciplinary team of fertility specialists and artificial reproductive therapy clinics as necessary.

If a woman becomes pregnant, it is very often the GP who is the first person to confirm the news. It's the GP who completes the referral for her booking visit at 12 weeks' gestation; who is at the end of the phone for twinges, headaches, bleeding and unfamiliar symptoms a woman might experience during pregnancy. It's the GP she will visit at 16, 24, 28, 30, 34, 37, and 39 weeks' gestation as well as at two and six weeks' postnatally to ensure she and her baby are healthy and well. It's the GP who then supports this new baby, administering vaccines, completing check-ups and watching them grow up offering medical treatment as required throughout their life. I was particularly struck during this rotation when I realised that a woman might meet a different healthcare professional during each hospital visit, and so her GP remains as the familiar and constant presence throughout her pregnancy care.

If unfortunately all does not go well in pregnancy, as is sadly often the case, it's the GP who assists in referral to the early pregnancy unit, and supports the woman following treatment of the lost pregnancy. In cases of crisis pregnancy, it's the GP who a woman will usually visit first, and who begins the process of explaining her options. In this intense and emotional setting, the GP's actions can have a lasting impact on these women's lives. As the RCPI highlights in their guidelines for crisis pregnancy management, "the response of the GP and other healthcare professionals at the initial consultation can have a profound impact on her experience of this life crisis"(1).

I have come to realise the particularly important role the GP plays during the early stages of pregnancy, especially in the first trimester. As a society, the majority of our focus is on uncomplicated pregnancies and the joyous arrival of a new bundle to a happy, healthy mother. However, what is less known and indeed less spoken about is that in Ireland approximately one in five pregnancies end in miscarriage with approximately 14,000 women having a miscarriage each year. The majority of these early pregnancy loses occur in the first 12 weeks of pregnancy. These figures also include the less discussed ectopic pregnancies and molar pregnancies. Furthermore, recurrent miscarriage of three or more consecutive losses accounts for 1% of pregnancy loss(2,3). For women going through any of these experiences, the GP plays a central role in providing support and guidance along the way. Indeed, in cases where a hospital visit is unwarranted, many women go through a pregnancy loss in the community, with the support of their GP alone (4).

During my placement, I rotated through the early pregnancy assessment unit and attended many consultations where women required medical or surgical treatment for a pregnancy loss, ectopic or molar pregnancy. While the consultations were conducted in a caring, empathetic and supportive environment, these women were then discharged back to the safe hands of their GP. I reflected on how a consultation or a follow up appointment with a GP during or after treatment in hospital must be vital to these women - both for their ongoing medical and psychological care. Feelings of bereavement and anxiety are common after miscarriage (5–7) and research shows there is a perceived lack of open dialogue and discussion about miscarriage in the media and broader society – further highlighting the role of a GP in supporting these potentially isolated and vulnerable women(8). This centrality of the GP is highlighted in the National Standards for Bereavement Care following Pregnancy Loss and Perinatal death (9) where rapid communication with the women's GP after discharge is essential following treatment for early pregnancy loss. The standard states women should be explicitly encouraged to attend her GP for review following discharge. This is also noted in the Clinical Practice Guideline for Management of Early Pregnancy Loss (10).

Furthermore, I hypothesised on how the nature of this interaction may have a lasting impact on a women. Studies confirm the importance of an empathetic approach in these situations- where shared decision-making with her healthcare provider and clear information can improve a woman's experience during such a difficult time(11). In recurrent miscarriages, Bailey et al highlight the importance of professional affirmation and a sympathetic approach, and while the women knew the involvement of a GP or healthcare professional would not alter the outcome of their pregnancy, they felt supported and acknowledged the value in being able to openly share their concerns throughout the experience (12).

I have also learned that there may be scope for improvement in this area. A systematic review completed by J van den Berg et al. demonstrated that follow-up was decidedly lacking in some cases of early pregnancy loss, and that even a simple follow-up phone call to women who had suffered a miscarriage was greatly appreciated (13). A study based in the UK by Moscrop et al similarly found that less than 1 in 10 women who had attended the early pregnancy unit had follow up appointments with their GP. Of those who did have a follow-up appointment, they found it helpful and reassuring (14). This echoed the need and desire for follow up recorded by Wong et al (15). Notably, in a study where a follow up interview occurred following a miscarriage, these women suffered less depressive symptoms at six weeks and six months than women who did not (5,16).

In addition to the management and support of women throughout early pregnancy loss, a subject also pertinent to GPs in Ireland managing early pregnancy is the new legislation regarding termination of pregnancy. Following the successful repeal of the Eighth amendment by an Irish referendum in May 2018, and publication The Health (Regulation of Termination of Pregnancy) Act in 2018, elective termination of pregnancy is now offered prior to 12 weeks' gestation, or in specific cases after 12 weeks. According to the Health Service Executive, this service is being provided by GPs, family planning clinics and women's health clinics (17). While there is space for conscientious objection by healthcare providers, all must offer referrals and provide information to women seeking a termination. Thus the role of the GP in these early weeks is clearly a vital one. This of course is quite a new service in Ireland and research in 2019 shows a lack of training and patient support services in the area (18). I am eager to track progress in this area and learn about the emergent role of the GP in delivering this care and the experience of women receiving this care.

I will never forget the diverse outcomes and complexities that arise during pregnancy care and how the GP remains the ever-present guiding light throughout. For most women pregnancy will progress without complication and the GP will support them along the journey, from pre-conception through to working closely with their obstetric and midwifery colleagues and thereafter. So too in the case of early pregnancy loss or crisis pregnancy management, the GP serves as a central support for these women. A woman may feel particularly alone and in the dark at a time like this, and I have come to understand and appreciate the essential role the GP plays to guide their patients through these situations. The GP is an unwavering source of unbiased information; an empathetic ear; a guiding light, offering a safe space for the woman, and perhaps her partner, serving to navigate these uncharted and often worrisome times.
I am hopeful I may have the privilege of guiding women and serving as a source of support along such journeys in my future medical career.

References

1. Riain A, Daly M, Ryan S, Murphy M. Crisis Pregnancy: A Management Guide for General Practice. 2013;18.
2. Repeated Miscarriages | ACOG [Internet]. [cited 2020 Nov 11]. Available from: https://www.acog.org/womens-health/faqs/repeated-miscarriages
3. The Miscarriage Association of Ireland [Internet]. [cited 2020 Nov 11]. Available from: http://www.miscarriage.ie/aboutmiscarriage.html
4. Prendiville W, O’kelly F, Allwright S, Mcguinness N. The Management of First

Trimester Miscarriage by General Practitioners in Ireland.

5. Lee C, Sladet P. REVIEW MISCARRIAGE AS A TRAUMATIC EVENT: A REVIEW OF THE LITERATURE AND NEW IMPLICATIONS FOR INTERVENTION. Vol. 40, Journal of Psychosomatic Research. 1996.
6. Cumming G, Klein S, Bolsover D, Lee A, Alexander D, Maclean M, et al. The emotional burden of miscarriage for women and their partners: trajectories of anxiety and depression over 13 months. BJOG An Int J Obstet Gynaecol [Internet]. 2007 Jul 26 [cited 2020 Nov 12];114(9):1138–45. Available from: http://doi.wiley.com/10.1111/j.1471-0528.2007.01452.x
7. Lok IH, Neugebauer R. Psychological morbidity following miscarriage [Internet]. Vol. 21, Best Practice and Research: Clinical Obstetrics and Gynaecology. Best Pract Res Clin Obstet Gynaecol; 2007 [cited 2020 Nov 12]. p. 229–47. Available from: https://pubmed.ncbi.nlm.nih.gov/17317322/
8. Bellhouse C, Temple-Smith MJ, Bilardi JE. "It's just one of those things people don't seem to talk about." women's experiences of social support following miscarriage: A qualitative study 11 Medical and Health Sciences 1117 Public Health and Health Services. BMC Womens Health [Internet]. 2018 Oct 29 [cited 2020 Nov 12];18(1). Available from: /pmc/articles/PMC6206670/?report=abstract
9. HSE. Bereavement Care Following Pregnancy Loss and Perinatal Death National Standards for Bereavement Care following Pregnancy Loss and Perinatal Death [Internet]. 2016 [cited 2020 Nov 12]. Available from: https://static.rasset.ie/documents/news/standardsbereavementcarepregnancyloss.pdf
10. HSE. CLINICAL PRACTICE GUIDELINE MANAGEMENT OF EARLY PREGNANCY MISCARRIAGE [Internet]. [cited 2020 Nov 12]. Available from: https://www.hse.ie/eng/about/who/acute-hospitals-division/woman-infants/clinical-guidelines/management-of-early-pregnancy-miscarriage.pdf
11. Geller PA, Psaros C, Kornfield SL. Satisfaction with pregnancy loss aftercare: Are women getting what they want? [Internet]. Vol. 13, Archives of Women's Mental

Health. Arch Womens Ment Health; 2010 [cited 2020 Nov 2]. p. 111–24. Available from: https://pubmed.ncbi.nlm.nih.gov/20177721/

12. Bailey SL, Boivin J, Cheong YC, Kitson-Reynolds E, Bailey C, MacKlon N. Hope for the best ...but expect the worst: A qualitative study to explore how women with recurrent miscarriage experience the early waiting period of a new pregnancy. BMJ Open [Internet]. 2019 May 1 [cited 2020 Nov 2];9(5). Available from: https://pubmed.ncbi.nlm.nih.gov/31154315/
13. van den Berg MMJ, Dancet EAF, Erlikh T, van der Veen F, Goddijn M, Hajenius PJ. Patient-centered early pregnancy care: A systematic review of quantitative and qualitative studies on the perspectives of women and their partners. Hum Reprod Update [Internet]. 2018 [cited 2020 Nov 2];24(1):106–18. Available from: https://pubmed.ncbi.nlm.nih.gov/29040571/
14. Moscrop A, Harrison S, Heppell V, Heneghan C, Ward A. Primary care follow-up and measured mental health outcomes among women referred for ultrasound assessment of pain and/or bleeding in early pregnancy: A quantitative questionnaire study. BMJ Open [Internet]. 2013 [cited 2020 Nov 2];3(4). Available from: https://pubmed.ncbi.nlm.nih.gov/23585390/
15. Wong MKY, Crawford TJ, Gask L, Grinyer A. A qualitative investigation into women's experiences after a miscarriage: Implications for the primary healthcare team. Br J Gen Pract [Internet]. 2003 Sep 1 [cited 2020 Nov 12];53(494):697–702. Available from: /pmc/articles/PMC1314692/?report=abstract
16. Neugebauer R, Kline J, O'Connor P, Shrout P, Johnson J, Skodol A, et al. Depressive symptoms in women in the six months after miscarriage. Am J Obstet Gynecol [Internet]. 1992 [cited 2020 Nov 12];166(1 PART 1):104–9. Available from: https://pubmed.ncbi.nlm.nih.gov/1733177/
17. Where to go for an abortion - HSE.ie [Internet]. [cited 2020 Nov 11]. Available from: https://www2.hse.ie/conditions/abortion/how-to-get-an-abortion/where-to-go-for-an-abortion.html
18. O'Connor R, O'Doherty J, O'Mahony M, Spain E. Knowledge and attitudes of Irish

GPs towards abortion following its legalisation: A cross-sectional study. BJGP Open [Internet]. 2019 [cited 2020 Nov 11];3(4):1–9. Available from: https://pubmed.ncbi.nlm.nih.gov/31822491/

A Systematic Review of Clinical Practice Guidelines On The Prevention Of Cardiovascular Disease In Women With A History Of Preeclampsia

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ABSTRACT

Introduction: Preeclampsia is an increasingly common complication during pregnancy and is a risk indicator for future cardiovascular disease. Much of cardiovascular prevention occurs in general practice. This systematic review sought to determine if there were high quality guidelines available to guide clinicians on assessment or management of cardiovascular risk in women with a history of preeclampsia.

Methods: A systematic review of the literature was completed using the PRISMA guidelines. Searches were undertaken using Embase, PubMed, and the Cochrane database and on relevant websites. Guidelines were included if they were published in English, referred to humans, were published between 1st January 2010 and 7th of July 2020, were the most recent version available and related specifically to long term assessment or management of cardiovascular risk following a pregnancy complicated by preeclampsia or contained sections dedicated to this purpose. Included guidelines were assessed for quality and methodological rigour using the AGREE II (Appraisal of Guidelines for Research and Evaluation II) tool and their content analysed using a content analysis approach.

Results: Fourteen guidelines were included in the review. The quality of the guidelines varied with two not being recommended for use following assessment. Domain median scores were highest for scope and purpose (91%) and clarity of presentation (89%) while scores for applicability (19%) and rigour of development (42%) were lowest. Most guidelines recommended that women are followed up to monitor for the development of cardiovascular disease but differed regarding the frequency and components of this monitoring. Education and lifestyle modification were also suggested by several guidelines, but it was not clear how this should be provided or done.

Conclusions: Few high-quality guidelines exist to provide clear recommendations regarding how and when women with a history of preeclampsia should be followed up to monitor for the development of cardiovascular disease or how it may best be prevented. Applicability and rigour of development were lacking. There is a need to develop guidelines in this area.

INTRODUCTION

Preeclampsia is one of a group of hypertensive disorders of pregnancy which includes chronic hypertension, gestational hypertension and preeclampsia (Rana *et al.* 2019). Mild preeclampsia occurs among 10% of primigravid women, while 1-2% of all pregnant women will develop severe preeclampsia (Health Services Executive (HSE) 2011; The National Institute for Health and Care Excellence (NICE) 2019).

In recent years attention has turned to the long-term consequences of preeclampsia for women. A recent metanalysis showed that the relative risks (95% confidence intervals) for hypertension were 3.70 (2.70 - 5.05) after 14.1 years weighted mean follow-up, 2.16 (1.86 - 2.52) after 11.7 years for ischaemic heart disease (IHD), 1.81 (1.45 - 2.27) after 10.4 years for stroke and 1.79 (1.37 - 2.33) after 4.7 years for venous thromboembolism (Bellamy *et al*. 2007). After 14.5 years overall mortality following preeclampsia was also increased 1.49 (1.05-2.14). Cardiovascular and circulatory diseases are among the leading causes of death in women (Central Statistics Office 2019). This has prompted many organisations to produce female specific guidelines and recommendations related to cardiovascular disease (Bushnell *et al.* 2014; Vera Regitz-Zagrosek *et al.* 2018;

Williams *et al.* 2018). However, while many these organisations acknowledge preeclampsia as a risk factor for the development of future cardiovascular disease few provide guidance on how to potentially reduce the risk of these women developing cardiovascular disease or how to monitor them for its development long term (Lowe *et al.* 2015; Arnett *et al.* 2019).

Pregnancy and so preeclampsia occur early in life and thus present an ideal opportunity for early intervention for the prevention of complications in future pregnancies and cardiovascular disease in later life. General practice could play a crucial role in cardiovascular disease prevention among these patients. Awareness of this at-risk group may however be low. A Canadian study demonstrated that only 54% of prenatal care providers were aware of the long-term risks of hypertension following preeclampsia, and just 58% of GPs surveyed reported they were informed by maternity care providers of their patients' hypertensive disorder of pregnancy (MacDonald *et al.* 2007). Unfortunately, no structured or resourced programme for post-partum care for these women exists in Ireland. A high-risk cardiovascular prevention programme is due to commence in general practice in 2021 (Department of Health 2019). For a structured cardiovascular disease prevention programme in general practice to be developed for these women however, high quality guidelines should be available. This systematic review sought to determine if there were high quality guidelines available to guide clinicians on monitoring women with a history of preeclampsia for the development of cardiovascular disease and how best to prevent it.

METHODS

This systematic review is reported as per the Preferred Reporting for Systematic Reviews and Meta-Analyses (PRISMA) criteria (See appendix 1).

Search Strategy

A systematic search of the literature was completed to identify appropriate guidelines available on Embase, PubMed and Cochrane databases. See appendix 2 for search strategies and search terms used. Individual websites of organisations whose role includes developing guidelines in obstetrics or cardiovascular disease (appendix 3) were also searched using terms including ‘preeclampsia’ and ‘hypertension’.

Inclusion Criteria

Guidelines were included in the review if they were 1) published in English 2) referred to the care of humans, 3) published between 1st January 2010 and the 7th of July 2020, 4) the most recent version when multiple versions of guidelines were available, 5) guidelines compiled pertaining specifically to preeclampsia or containing sections dedicated to this purpose, 6) contained recommendations for the assessment and prevention of cardiovascular disease in women with a history of preeclampsia. All records obtained during the systematic search which did not meet the inclusion criteria were excluded. Guidelines were excluded if they were published prior to 2010 as most guidelines are updated within a ten-year period and if not are likely unrepresentative of current evidence-based medicine.

Data Extraction

The records obtained were imported into EndNote X9 reference manager. EndNote X9 was then used to collate the records and remove duplicates. The remaining records were then exported to Rayyan (www.rayyan.qcri.org/) with further duplicates removed. The titles and or abstracts and full texts of the remaining records were screened for suitability for inclusion.

The articles eligible for inclusion were then assigned a code (table 1). These documents were then read and re-read to identify recommendations pertaining to the follow up or prevention of cardiovascular disease among women with a history of preeclampsia. Techniques including cutting and sorting and searching for repetitions and similarities and differences as suggested by Ryan and Bernard (2003) were used to identify themes among these recommendations. The identified recommendations were initially cut and sorted into a word document, these were then read and re read to identify repetitions, similarities and differences. The main themes evident in the document were identified and the recommendations were coded as to which theme they belonged to. The coded recommendations were then further cut and sorted and grouped under their main theme. The recommendations within these groups were then further assessed for repetitions, similarities and differences. This process was repeated by the author to reduce bias in data analysis and to increase the validity and reliability of the data, with the same results being obtained.

Quality Assessment

The methodological rigour and quality of included guidelines was assessed using the AGREE II tool (Brouwers *et al.* 2010). This tool consists of 23 statements which are divided into 6 domains namely scope and purpose, stakeholder involvement, rigour of development, clarity of presentation, applicability and editorial independence. A seven-point scale, from 1 (strongly disagree) to 7 (strongly agree) was used to score each of the 23 statements for each guideline. The quality score for each domain was then calculated by adding up all the scores of the individual statements linked to each domain – scope and purpose: 3 statements, stakeholder involvement: 3 statements, rigour of development: 8 statements, clarity of presentation: 3 statements, applicability: 4 statements and editorial independence: 2 statements. The total score obtained for each domain for each guideline was then scaled as a percentage of the maximum possible score for that domain as suggested by the AGREE Next Steps Consortium (2017), figure 1 below shows the equation used to calculate this. A cut-off score of 50% was chosen as a marker of high quality as in previous research (Hoffmann-Eßer *et al.* 2018; Zhao *et al.* 2020). An overall rating was also assigned to each guideline and whether it should be recommended with options being yes, yes with modifications or no.

Figure 1: Calculation of obtained, maximum, minimum and scaled domain score

Obtained score = sum of all the scores of the individual items in a domain

Maximum possible score = 7 (strongly agree) x (no. of items) x (no. of appraisers)

Minimum possible score = 1 (strongly disagree) x (no. of items) x (no. of appraisers)

Scaled domain score:

$$\frac{\text{Obtained score} - \text{Minimum possible score}}{\text{Maximum possible score} - \text{minimum possible score}}$$

Source: AGREE Next Steps Consortium (2017)

RESULTS

Search Results

Figure 2 below outlines the guideline selection process. Database searches yielded 4346 records. 31 records were obtained from website searches. 291 duplicates were identified and removed. The titles and or abstracts of the remaining 4086 records were screened for suitability for inclusion, 4044 of these were excluded. The full text of the remaining 42 articles were then reviewed and the inclusion criteria applied resulting in the exclusion of a further 28 records. Fourteen records were deemed eligible for inclusion.

Guidelines Selected- Characteristics:

The characteristics of the eligible are summarised in table 1. All guidelines included were published during or after 2014. Of the fourteen guidelines included six were produced by institutions related to obstetrics and gynaecology or pregnancy, five were produced by institutions focused on cardiovascular health and three were produced by departments of health. Seven guidelines were specific to hypertensive disorders of pregnancy, four related to pregnancy with sections dedicated to preeclampsia while three related to cardiovascular disease with recommendations specific to preeclampsia. Thirteen of the fourteen guidelines chosen were evidence based, 3 of which were also based on expert opinion, one guideline was a consensus statement. Ten of the fourteen guidelines used a scoring system to grade the recommendations they contained.

Figure 2: Guideline selection process

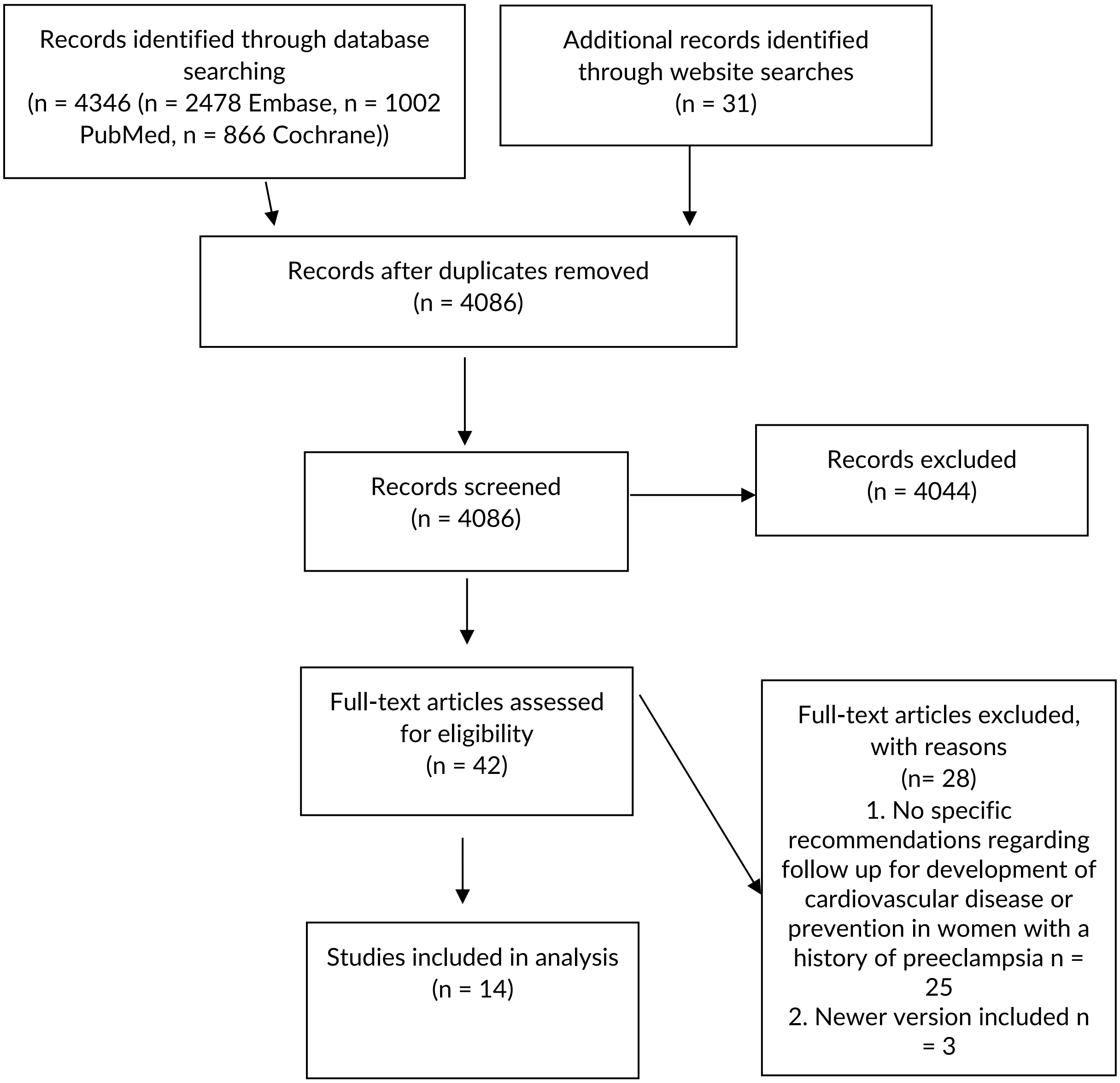


Table 1: Guidelines meeting inclusion criteria for review

Code	Title	Year	Authors	Guideline group	Location	Guideline Type	Evidence scoring
G1	ESC Guidelines on cardiovascular disease prevention in clinical practice	2016	Piepoli *et al.*	ESC	Europe	Evidence based	ESC grading system
G2	ESC Guidelines for the management of cardiovascular diseases during pregnancy	2018	V. Regitz-Zagrosek *et al.*	ESC	Europe	Evidence based	ESC grading system
G3	ESC/ESH Guidelines for the management of arterial hypertension	2018	Williams *et al.*	ESC	Europe	Evidence based	ESC grading system
G4	Hypertensive disorders of pregnancy and eclampsia	2014	Staff *et al.*	NFOG	Norway	Evidence based	nil
G5	Diagnosis, evaluation, and management of the hypertensive disorders of pregnancy	2014	Magee *et al.*	Canadian Hypertensive Disorders of Pregnancy Working Group	Canada	Evidence based	Canadian Task Force on Preventive Health Care & GRADE
G6	FIGO Post pregnancy Initiative: Long-term Maternal Implications of Pregnancy Complications—Follow-up Considerations	2017	Sheiner *et al.*	FIGO	International	Evidence based	GRADE

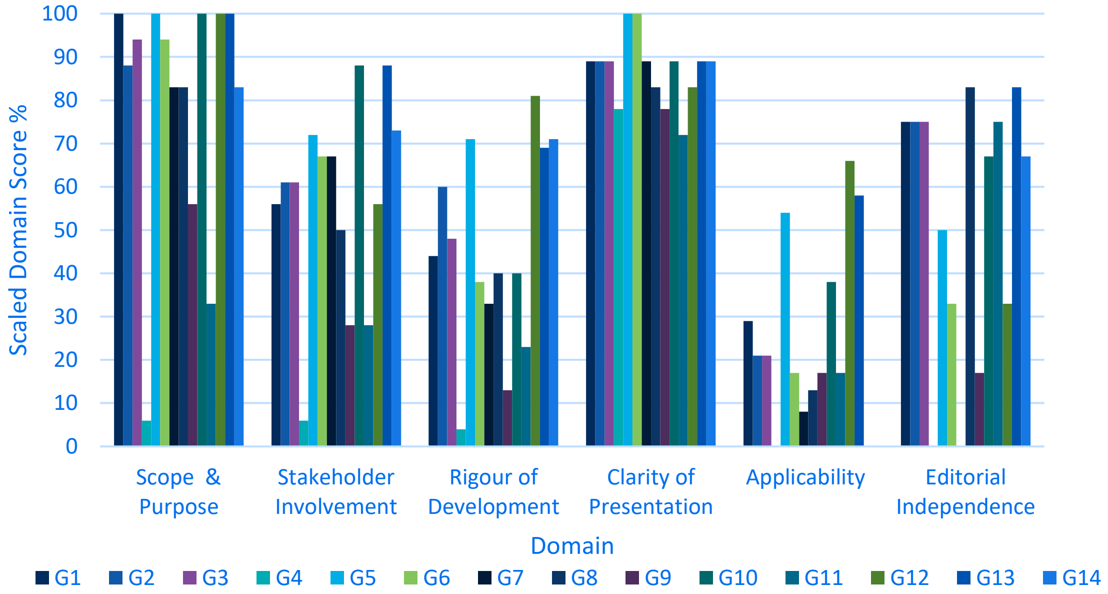
G7	Guidelines for the prevention of stroke in women: a statement for healthcare professionals from the AHA/American Stroke Association	2014	Bushnell *et al.*	AHA	US	Evidence based	AHA/ACC and supplementary AHA stroke council
G8	Hypertension and pregnancy: expert consensus statement from the French Society of Hypertension, an affiliate of the French Society of Cardiology	2016	Mounier-Vehier *et al.*	The French Society of Hypertension	France	Evidence based & consensus	French Society of Cardiology
G9	Hypertensive disorders of pregnancy	2016	Queensland Clinical Guidelines	Queensland clinical guidelines	Queensland	Evidence based	nil
G10	Hypertensive Disorders of Pregnancy ISSHP Classification, Diagnosis, and Management Recommendations for International Practice	2018	Brown *et al.*	ISSHP	International	Evidence based, expert opinion	nil
G11	Optimising Postpartum Care	2018	ACOG	ACOG	US	Committee opinion	nil
G12	Hypertension in pregnancy: diagnosis and management	2019	NICE	NICE	UK	Evidence Based	GRADE
G13	Diagnosis and Treatment of Hypertension and Pre-eclampsia in Pregnancy in New Zealand: A clinical practice guideline	2018	Ministry of Health	Ministry of Health	New Zealand	Evidence Based	GRADE
G14	Cardiovascular risk management after reproductive and pregnancy-related disorders: A Dutch multidisciplinary evidence-based guideline	2016	Heida *et al.*	Dutch Society of Obstetrics and Gynaecology MWG	The Netherlands	Evidence base & consensus	Dutch Institute for Healthcare improvement

ESC= European Society of Cardiology, ESH = European Society of Hypertension, NFOG = The Nordic Federation of Obstetrics and Gynaecology, FIGO = International Federation of Gynaecology and Obstetrics, AHA = American Heart Association, ISSHP = International Society for the Study of Hypertension in Pregnancy, ACOG = The American College of Obstetricians and Gynaecologists, NICE = The National Institute for Health and Care Excellence, GRADE = Grading of Recommendations, Assessment, Development and Evaluations. MWG= multidisciplinary working group, ACC= American College of Cardiology

AGREE II Assessment

Figure 3 summarises the scaled domain scores achieved by each guideline. The outcome of the AGREE II assessment was mixed for the guidelines assessed, just two guidelines achieved >50% in all 6 domains (G5 and G13), three guidelines (G2, G12 and G14) achieved >50% in all but 1 domain. Five of the fourteen guidelines performed particularly poorly, achieving <50% in three or more domains (G6, G7, G9, G11 and G4), performance of guidelines G1, G3, G8 and G10 was mixed, achieving a score of >50% in 4 out of 6 domains. Domain 5 (applicability) was the poorest performing domain overall with just three guidelines achieving >50%. All guidelines achieved a score of 72% or more in domain 4 (clarity of presentation). The median scaled domain scores for each domain were: domain 1 scope and purpose: 91%, domain 2 stakeholder involvement: 61%, domain 3 rigour of development: 42%, domain 4 clarity of presentation: 89%, domain 5 applicability: 19%, domain 6 editorial independence: 67%. Regarding overall rating out of 7, 7 being the highest possible quality no guideline achieved a score of 7, the NICE, New Zealand and Canadian Hypertensive Disorders of Pregnancy Working Group guidelines all achieved an overall score of 6 and so were recommended for use. A further 6 guidelines achieved a score of 5 or more overall and were recommended for use with some modifications, the remaining 5 guidelines achieved an overall score of 4 or less and so were either not recommended for use (G4, G9) or recommended with modifications (G7, G10, G11).

Figure 3: Scaled domain scores



Data Extraction

Forty-one recommendations for the prevention of cardiovascular disease in women with a history of preeclampsia or their follow up for the development of cardiovascular disease were identified**.** The main themes identified using content analysis were screening and monitoring, lifestyle modification and education.

i) Screening and monitoring

Thirteen of the guidelines recommend follow up for women with a history of preeclampsia due to their increased cardiovascular risk, 38% of these did not provide guidance regarding the timing of such follow up, three of the guidelines recommended annual follow up, two recommended periodic and another recommended lifelong follow up. In contrast to other guidelines Staff *et al.* (2016) and Heida *et al.* (2016) recommend reviewing women in their fifties to assess for cardiovascular disease. Table 2 summarises what screening tests the guidelines recommended. Four guidelines recommended intervening to treat risk factors.

Table 2: Screening tests recommended

Screening test recommended	**Number of guidelines**
Measure blood pressure	10
Cardiovascular risk assessment	8
Screen for diabetes mellitus	4
Lipid screen	4
BMI	4
Metabolic screen	3
Smoking	3
Proteinuria/ renal function	3
History	2
Physical exam	2
Lifestyle	2
Thyroid function	1

ii) Lifestyle modification and weight management

Ten of the guidelines included recommendations regarding lifestyle modification. Three of these guidelines did not elaborate further as to how this should be done. The most recommended intervention was weight management (n=5). A healthy diet was recommended by four of the guidelines, three guidelines also recommended physical activity and smoking cessation.

iii) Education

Recommendations regarding the provision of education and advice to women with a history of preeclampsia were included in nine of the guidelines. Of these, seven recommended educating women on their long-term cardiovascular risk and six recommended providing education regarding risk factor reduction including lifestyle modification. Of interest three guidelines recommended ensuring general practitioners were informed of their patients' history of preeclampsia to allow for adequate follow up.

DISCUSSION

This systematic review identified 14 guidelines for the prevention of cardiovascular disease in women with a history of preeclampsia. It provides detailed information on the quality and methodological rigour with just two guidelines achieving >50% in all 6 domains. The guidelines produced by the Canadian Hypertensive Disorders of Pregnancy Working Group and the New Zealand Ministry of Health scored highest overall, closely follow by those produced by NICE, the Dutch Society of Obstetrics and Gynaecology and the European Society of Cardiology (ESC) (G2). Of note the New Zealand and Dutch groups both used the AGREE II instrument to evaluate this guideline prior to publication (Heida *et al.* 2016, Ministry of Health 2018,). As expected, in keeping with previous research (Zhao *et al.* 2020), the lower scoring guidelines were those which were based on consensus or did not use evidence scoring systems. As has been noted in previously the highest median AGREE II scores were awarded to domain 1 – scope and purpose and domain 4 – clarity of presentation (Gillespie *et al.* 2018; Pavenski *et al.* 2018; Molino *et al.* 2019; Zhao *et al.* 2020). Regarding domain 4, all guidelines achieved a score >72% highlighting that recommendations tended to be specific, unambiguous and clearly presented. The median score for scope and purpose (domain 1) of 94% however was not representative of all guideline scores, G4 achieved just 6% and G11 just 33% as their objectives, research questions and population of interest were not clearly defined. Clinical practice guidelines have repeatedly scored poorly in domain 5 - applicability (Pavenski *et al.* 2018; Molino *et al.* 2019; Zhao *et al.* 2020) as was the case in this review (n=11, <50%) as information was not provided about what facilitators, barriers or resource implications there may be when implementing recommendations. Tools and advice for implementation and audit are also rarely provided. The NICE, New Zealand and Canadian working group guidelines included most of what is required to score highly in this category. The domain 3 - rigour of development, median scaled score of 42% was similar to that found in previous systematic reviews of guidelines (Pavenski *et al.* 2018; Molino *et al.* 2019) due to the lack of use of evidence scoring systems and little information on literature searching and guideline formulation. Guidelines scored moderately well (median 61%) in domain 2 - stakeholder involvement due to multidisciplinary input. Average scores for domain 6 (67% in this study) range from the 40 to 70 in the literature (Pavenski *et al.* 2018, Gillespie *et al.* 2018), which is concerning as this domain relates to editorial independence. Poorly scoring guidelines often excluded information regarding funding, competing interests and their influence on the guideline.

All the higher scoring guidelines (G2, G5, G12, G13, G14) were among those (n=13) which recommended follow up for women with a history of preeclampsia however further clarification is needed regarding the timing and type of screening. The higher quality guidelines also recommended lifestyle modification. The NICE, Dutch and New Zealand guidelines all recommended providing education to patients. Lifestyle modification is also of high priority, with many of the guidelines (n = 9) recommending a healthy diet, weight management and or smoking cessation.

The consensus among the high scoring guidelines regarding patient education, follow up and lifestyle modification adds weight to the importance of these recommendations. It is clear from this review that these women require follow up and intervention to reduce their future cardiovascular risk. It seems prudent that women with a history of preeclampsia are included in the high-risk prevention programme launching in Ireland in 2021 with resources provided to support their care. This review has highlighted specifically the need for follow up of women with a history of preeclampsia, and the encouragement of lifestyle modification including healthy eating, weight management and smoking cessation which could form the basis for a high quality guideline for general practice for the future management of such patients. General practices, if provided with adequate resources, are best placed to provide this care given their regular contact supporting women with contraception, future pregnancies and links with families regarding childhood vaccines and illness. General practice can also provide access to the multidisciplinary team to support these women in making changes to reduce their risk of developing cardiovascular disease.

Strengths and Limitations

Guidelines included in the review were limited to those published in English. This may have introduced bias by excluding country specific guidelines published in native languages.

While the AGREE II tool is widely used to assess the methodological rigour and quality of clinical practice guidelines its use is not without limitations. Thresholds for domain scale scores are not provided for in the AGREE II tool to differentiate high quality guidelines (set as > 50% in this study) from those of low quality, this leaves such results open to interpretation depending on what the chosen cut of percentage is. In addition, the AGREE II tool does not rate how relevant, appropriate or applicable guidelines are to clinical practice as it focuses solely on the quality and methodological rigor of the guidelines. The overall rating score for each guideline was not focused on in this review as this measure was deemed more subjective than the scaled domain scores due to a lack of instructions available for its calculation.

CONCLUSION

Few high-quality guidelines or recommendations are available for prevention of cardiovascular disease among women with a history of preeclampsia. Where guidelines do exist, they give clear information regarding their scope and purpose and present information clearly but lack applicability. Women with a history of preeclampsia are at increased risk of cardiovascular disease and there is an opportunity to intervene early to help prevent cardiovascular disease in later life and improve outcomes in future pregnancies. General practice is ideally placed to undertake this if appropriate resources and support for multidisciplinary team members are provided particularly as the HSE high risk prevention programme is commencing in 2021. Developing a high-quality guideline for general practice on cardiovascular prevention for women with a history of preeclampsia and other cardiometabolic complications of pregnancy should be a priority

References:

ACOG (2020) 'Gestational Hypertension and Preeclampsia: ACOG Practice Bulletin Summary, Number 222', *Obstet Gynecol*, 135(6), 1492-1495, available: http://dx.doi.org/10.1097/aog.0000000000003892.

AGREE Next Steps Consortium (2017) *The AGREE II Instrument (Electronic version)*, available: www.agreetrust.org [accessed 7th July 2020].

Arnett, D.K., Blumenthal, R.S., Albert, M.A., Buroker, A.B., Goldberger, Z.D., Hahn, E.J., Himmelfarb, C.D., Khera, A., Lloyd-Jones, D., McEvoy, J.W., Michos, E.D., Miedema, M.D., Muñoz, D., Smith, S.C., Jr., Virani, S.S., Williams, K.A., Sr., Yeboah, J. and Ziaeian, B. (2019) '2019 ACC/AHA Guideline on the Primary Prevention of Cardiovascular Disease: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines', *J Am Coll Cardiol*, 74(10), e177-e232, available: http://dx.doi.org/10.1016/j.jacc.2019.03.010.

Bartsch, E., Medcalf, K.E., Park, A.L. and Ray, J.G. (2016) 'Clinical risk factors for pre-eclampsia determined in early pregnancy: systematic review and meta-analysis of large cohort studies', *Bmj*, 353, i1753, available: http://dx.doi.org/10.1136/bmj.i1753.

Bellamy, L., Casas, J.P., Hingorani, A.D. and Williams, D.J. (2007) 'Pre-eclampsia and risk of cardiovascular disease and cancer in later life: systematic review and meta-analysis', *Bmj*, 335(7627), 974, available: http://dx.doi.org/10.1136/bmj.39335.385301.BE.

Bokslag, A., van Weissenbruch, M., Mol, B.W. and de Groot, C.J. (2016) 'Preeclampsia; short and long-term consequences for mother and neonate', *Early Hum Dev*, 102, 47-50, available: http://dx.doi.org/10.1016/j.earlhumdev.2016.09.007.

Brouwers, M.C., Kho, M.E., Browman, G.P., Burgers, J.S., Cluzeau, F., Feder, G., Fervers, B., Graham, I.D., Grimshaw, J., Hanna, S.E., Littlejohns, P., Makarski, J. and Zitzelsberger, L. (2010) 'AGREE II: advancing guideline development, reporting and evaluation in health care', *Cmaj*, 182(18), E839-42, available: http://dx.doi.org/10.1503/cmaj.090449.

Brown, M.A., Magee, L.A., Kenny, L.C., Karumanchi, S.A., McCarthy, F.P., Saito, S., Hall, D.R., Warren, C.E., Adoyi, G. and Ishaku, S. (2018) 'The hypertensive disorders of pregnancy: ISSHP classification, diagnosis & management recommendations for international practice', *Pregnancy Hypertens*, 13, 291-310, available: http://dx.doi.org/10.1016/j.preghy.2018.05.004.

Burton, G.J., Redman, C.W., Roberts, J.M. and Moffett, A. (2019) 'Pre-eclampsia: pathophysiology and clinical implications', *Bmj*, 366, l2381, available: http://dx.doi.org/10.1136/bmj.l2381.

Bushnell, C., McCullough, L.D., Awad, I.A., Chireau, M.V., Fedder, W.N., Furie, K.L., Howard, V.J., Lichtman, J.H., Lisabeth, L.D., Piña, I.L., Reeves, M.J., Rexrode, K.M., Saposnik, G., Singh, V., Towfighi, A., Vaccarino, V. and Walters, M.R. (2014) 'Guidelines for the prevention of stroke in women: a statement for healthcare professionals from the American Heart Association/American Stroke Association', *Stroke*, 45(5), 1545-88, available: http://dx.doi.org/10.1161/01.str.0000442009.06663.48.

CSO (2019) *Vital Statistics Annual Report 2017*, Ireland: Central Statistics Office, available: https://www.cso.ie/en/releasesandpublications/ep/p-vsar/vitalstatisticsannualreport2017/ [accessed 7th July 2020].

Department of Health, Irish Medical Organisation, Health Service Executive (2019) 'Terms of Agreement between the Department of Health, the HSE and the IMO regarding GP Contractual Reform and Service Development'. Available https://www.hse.ie/eng/about/who/gmscontracts/2019agreement/agreement-2019.pdf [accessed 11th November 2020].

ESC (2017) *Governing Policies and Procedures for the Writing of ESC Clinical Practice Guidelines*: European Society of Cardiology

Gillespie, B.M., Bull, C., Walker, R., Lin, F., Roberts, S. and Chaboyer, W. (2018) 'Quality appraisal of clinical guidelines for surgical site infection prevention: A systematic review', *PLoS One*, 13(9), e0203354, available: http://dx.doi.org/10.1371/journal.pone.0203354.

Heida, K.Y., Bots, M.L. and Franx, A. (2015) 'Cardiovascular risk management after reproductive and pregnancy related disorders: A dutch multidisciplinary evidence-based guideline', *Reproductive Sciences*, 22, 230A-231A.

Hoffmann-Eßer, W., Siering, U., Neugebauer, E.A.M., Lampert, U. and Eikermann, M. (2018) 'Systematic review of current guideline appraisals performed with the Appraisal of Guidelines for Research & Evaluation II instrument-a third of AGREE II users apply a cut-off for guideline quality', *J Clin Epidemiol*, 95, 120-127, available: http://dx.doi.org/10.1016/j.jclinepi.2017.12.009.

HSE (2011) *Pre-eclampsia*, available: https://www.hse.ie/eng/health/az/p/pre-eclampsia/causes-of-pre-eclampsia.html#:~:text=How%20common%20is%20pre%2Declampsia,it%20again%20in%20subsequent%20pregnancies. [accessed 29th July 2020].

Johnston, A., Kelly, S.E., Hsieh, S.C., Skidmore, B. and Wells, G.A. (2019) 'Systematic reviews of clinical practice guidelines: a methodological guide', *J Clin Epidemiol*, 108, 64-76, available: http://dx.doi.org/10.1016/j.jclinepi.2018.11.030.

Karumanchi, S.A., Lim, K.-H. and August, P. (2020) 'Preeclampsia: Pathogenesis', available: https://www.uptodate.com/contents/preeclampsia-pathogenesis?csi=9e2b3627-7120-457-82d8-9019c1d7d879&source=contentShare.

Lowe, S.A., Bowyer, L., Lust, K., McMahon, L.P., Morton, M., North, R.A., Paech, M. and Said, J.M. (2015) 'SOMANZ guidelines for the management of hypertensive disorders of pregnancy 2014', *Aust N Z J Obstet Gynaecol*, 55(5), e1-29, available: http://dx.doi.org/10.1111/ajo.12399.

MacDonald, S.E., Walker, M., Ramshaw, H., Godwin, M., Chen, X.K. and Smith, G. (2007) 'Hypertensive disorders of pregnancy and long-term risk of hypertension: what do Ontario prenatal care providers know, and what do they communicate?', *J Obstet*

Gynaecol Can, 29(9), 705-10, available: http://dx.doi.org/10.1016/s1701-2163(16)32601-9.

Magee, L.A., Pels, A., Helewa, M., Rey, E. and Von Dadelszen, P. (2014) 'Diagnosis, evaluation, and management of the hypertensive disorders of pregnancy', *Pregnancy Hypertension*, 4(2), 105-145, available: http://dx.doi.org/10.1016/j.preghy.2014.01.003.

Ministry of Health (2018) *Diagnosis and Treatment of Hypertension and Pre-eclampsia in Pregnancy in New Zealand A clinical practice guideline*, Wellington: Ministry of Health.

Moher, D., Liberati, A., Tetzlaff, J. and Altman, D.G. (2009) 'Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement', *PLoS Med*, 6(7), e1000097, available: http://dx.doi.org/10.1371/journal.pmed.1000097.

Molino, C., Leite-Santos, N.C., Gabriel, F.C., Wainberg, S.K., Vasconcelos, L.P., Mantovani-Silva, R.A., Ribeiro, E., Romano-Lieber, N.S., Stein, A.T. and Melo, D.O. (2019) 'Factors Associated With High-Quality Guidelines for the Pharmacologic Management of Chronic Diseases in Primary Care: A Systematic Review', *JAMA Intern Med*, 179(4), 553-560, available: http://dx.doi.org/10.1001/jamainternmed.2018.7529.

Mounier-Vehier, C., Amar, J., Boivin, J.M., Denolle, T., Fauvel, J.P., Plu-Bureau, G., Tsatsaris, V. and Blacher, J. (2017) 'Hypertension and pregnancy: expert consensus statement from the French Society of Hypertension, an affiliate of the French Society of Cardiology', *Fundam Clin Pharmacol*, 31(1), 83-103, available: http://dx.doi.org/10.1111/fcp.12254.

NICE (2014) 31st October 2014 *Developing NICE guidelines: the manual*.

NICE (2019) *Hypertension in pregnancy: diagnosis and management*, United Kingdom: NICE.

Pavenski, K., Stanworth, S., Fung, M., Wood, E.M., Pink, J., Murphy, M.F., Hume, H., Nahirniak, S., Webert, K.E., Tanael, S., Landry, D. and Shehata, N. (2018) 'Quality of Evidence-Based Guidelines for Transfusion of Red Blood Cells and Plasma: A Systematic Review', *Transfus Med Rev*, 2018/06/21, available: http://dx.doi.org/10.1016/j.tmrv.2018.05.004.

Piepoli, M.F., Hoes, A.W., Agewall, S., Albus, C., Brotons, C., Catapano, A.L., Cooney, M.T., Corrà, U., Cosyns, B., Deaton, C., Graham, I., Hall, M.S., Hobbs, F.D.R., Løchen, M.L., Löllgen, H., Marques-Vidal, P., Perk, J., Prescott, E., Redon, J., Richter, D.J., Sattar, N., Smulders, Y., Tiberi, M., van der Worp, H.B., van Dis, I., Verschuren, W.M.M. and Binno, S. (2016) '2016 European Guidelines on cardiovascular disease prevention in clinical practice: The Sixth Joint Task Force of the European Society of Cardiology and Other Societies on Cardiovascular Disease Prevention in Clinical Practice (constituted by representatives of 10 societies and by invited experts)Developed with the special contribution of the European Association for Cardiovascular Prevention & Rehabilitation (EACPR)', *Eur Heart J*, 37(29), 2315-2381, available: http://dx.doi.org/10.1093/eurheartj/ehw106.

Queensland Clinical Guidelines (2016) *Hypertensive disorders of pregnancy*, available: https://www.health.qld.gov.au/__data/assets/pdf_file/0034/139948/g-hdp.pdf [accessed 10th July 2020].

Rana, S., Lemoine, E., Granger, J.P. and Karumanchi, S.A. (2019) 'Preeclampsia: Pathophysiology, Challenges, and Perspectives', *Circ Res*, 124(7), 1094-1112, available: http://dx.doi.org/10.1161/circresaha.118.313276.

Regitz-Zagrosek, V., Roos-Hesselink, J.W., Bauersachs, J., Blomström-Lundqvist, C., Cífková, R., De Bonis, M., Iung, B., Johnson, M.R., Kintscher, U., Kranke, P., Lang, I.M., Morais, J., Pieper, P.G., Presbitero, P., Price, S., Rosano, G.M.C., Seeland, U., Simoncini, T., Swan, L., Warnes, C.A. and Group, E.S.D. (2018) '2018 ESC Guidelines for the management of cardiovascular diseases during pregnancy: The Task Force for the Management of Cardiovascular Diseases during Pregnancy of the European Society of Cardiology (ESC)', *European Heart Journal*, 39(34), 3165-3241, available: http://dx.doi.org/10.1093/eurheartj/ehy340.

Regitz-Zagrosek, V., Roos-Hesselink, J.W., Bauersachs, J., Blomström-Lundqvist, C., Cífková, R., De Bonis, M., Iung, B., Johnson, M.R., Kintscher, U., Kranke, P., Lang, I.M., Morais, J., Pieper, P.G., Presbitero, P., Price, S., Rosano, G.M.C., Seeland, U., Simoncini, T., Swan, L., Warnes, C.A., Windecker, S., Aboyans, V., Agewall, S., Barbato, E., Bueno, H., Coca, A., Collet, J.P., Coman, I.M., Dean, V., Delgado, V., Fitzsimons, D., Gaemperli, O., Hindricks, G., Jüni, P., Katus, H.A., Knuuti, J., Lancellotti, P., Leclercq, C., McDonagh, T.A., Piepoli, M.F., Ponikowski, P., Richter, D.J., Roffi, M., Shlyakhto, E., Simpson, I.A., Sousa-Uva, M., Zamorano, J.L., Hammoudi, N., Piruzyan, A., Mascherbauer, J., Samadov, F., Prystrom, A., Pasquet, A., Caluk, J., Gotcheva, N., Skoric, B., Heracleous, H., Vejlstrup, N., Maser, M., Kaaja, R.J., Srbinovska-Kostovska, E., Mounier-Vehier, C., Vakhtangadze, T., Rybak, K., Giannakoulas, G., Kiss, R.G., Thrainsdottir, I.S., Erwin, R.J., Porter, A., Geraci, G., Ibrahimi, P., Lunegova, O., Mintale, I., Kadri, Z., Benlamin, H., Barysiene, J., Banu, C.A., Caruana, M., Gratii, C., Haddour, L., Bouma, B.J., Estensen, M.E., Hoffman, P., Petris, A.O., Moiseeva, O., Bertelli, L., Tesic, B.V., Dubrava, J., Koželj, M., Prieto-Arévalo, R., Furenäs, E., Schwerzmann, M., Mourali, M.S., Ozer, N., Mitchenko, O. and Nelson-Piercy, C. (2018) '2018 ESC Guidelines for the management of cardiovascular diseases during pregnancy', *European Heart Journal*, 39(34), 3165-3241, available: http://dx.doi.org/10.1093/eurheartj/ehy340.

Ryan, G.W. and Bernard, H.R. (2003) 'Techniques to Identify Themes', *Field Methods*, 15(1), 85-109, available: http://dx.doi.org/10.1177/1525822x02239569.

Sheiner, E., Kapur, A., Retnakaran, R., Hadar, E., Poon, L.C., McIntyre, H.D., Divakar, H., Staff, A.C., Narula, J., Kihara, A.B. and Hod, M. (2019) 'FIGO (International Federation of Gynecology and Obstetrics) Postpregnancy Initiative: Long-term Maternal Implications of Pregnancy Complications—Follow-up Considerations', *International Journal of Gynecology & Obstetrics*, 147(S1), 1-31, available: http://dx.doi.org/10.1002/ijgo.12926.

Staff, A.C., Andersgaard, A.B., Henriksen, T., Langesæter, E., Magnussen, E., Michelsen, T.M., Thomsen, L.C. and Øian, P. (2016) 'Chapter 28 Hypertensive disorders of pregnancy and eclampsia', *Eur J Obstet Gynecol Reprod Biol*, 201, 171-8, available: http://dx.doi.org/10.1016/j.ejogrb.2016.04.001.

The American College of Obstetricians and gynaecologists (2018) *736: ACOG Committee Opinion Optimizing Postpartum Care*.

Tranquilli, A.L., Brown, M.A., Zeeman, G.G., Dekker, G. and Sibai, B.M. (2013) 'The definition of severe and early-onset preeclampsia. Statements from the International Society for the Study of Hypertension in Pregnancy (ISSHP)', *Pregnancy Hypertens*, 3(1), 44-7, available: http://dx.doi.org/10.1016/j.preghy.2012.11.001.

Williams, B., Mancia, G., Spiering, W., Rosei, E.A., Azizi, M., Burnier, M., Clement, D.L., Coca, A., De Simone, G., Dominiczak, A., Kahan, T., Mahfoud, F., Redon, J., Ruilope, L., Zanchetti, A., Kerins, M., Kjeldsen, S.E., Kreutz, R., Laurent, S., Lip, G.Y.H., McManus, R., Narkiewicz, K., Ruschitzka, F., Schmieder, R.E., Shlyakhto, E., Tsioufis, C., Aboyans, V. and Desormais, I. (2018) '2018 ESC/ESHGuidelines for themanagement of arterial hypertension', *Journal of Hypertension*, 36(10), 1956-2041, available: http://dx.doi.org/10.1097/HJH.0000000000001940.

Zhao, Y., Lu, H., Zang, Y. and Li, X. (2020) 'A systematic review of clinical practice guidelines on uncomplicated birth', *BJOG: An International Journal of Obstetrics & Gynaecology*, 127(7), 789-797, available: http://dx.doi.org/10.1111/1471-0528.16073.

Appendix 1: PRISMA checklist

Obtained from Moher et al., (2009)

Table 3: PRISMA Checklist

Section/ topic	**Item no.**	**Checklist item**	**Reported on page no.**
Title			
Title	1	Identify the report as a systematic review, meta-analysis or both	1
Abstract			
Structured summary	2	Provide a structured summary including, as applicable, background, objectives, data sources, study eligibility criteria, participants, interventions, study appraisal and synthesis methods, results, limitations, conclusions and implications of key findings, systematic review registration number	2
Introduction			
Rationale	3	Describe the rationale for the review in the context of what is already known	3 & 4
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants,	4

		interventions, comparisons, outcomes, and study design (PICOS)	
Methods			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (such as web address), and, if available, provide registration information including registration number	Contact author
Eligibility criteria	6	Specify study characteristics (such as PICOS, length of follow-up) and report characteristics (such as years considered, language, publication status) used as criteria for eligibility, giving rationale	4
Information sources	7	Describe all information sources (such as databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched	4, 5 & 23-27
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated	23 & 24
Study selection	9	State the process for selecting studies (that is, screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis)	4-6
Data collection process	10	Describe method of data extraction from reports (such as piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators	4-6
Data items	11	List and define all variables for which data were sought (such as PICOS, funding sources) and any assumptions and simplifications made	4-6
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis	5
Summary measures	13	State the principal summary measures (such as risk ratio, difference in means)	4-6
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (such as I2statistic) for each meta-analysis	4-6
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (such as	5

		publication bias, selective reporting within studies)	
Additional analyses	16	Describe methods of additional analyses (such as sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified	5 & 6
Results			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram	7
Study characteristics	18	For each study, present characteristics for which data were extracted (such as study size, PICOS, follow-up period) and provide the citations	6 & 8
Risk of bias	19	Present data on risk of bias of each study and, if available, any outcome-level assessment (see item 12	9
Results of individual studies	20	For all outcomes considered (benefits or harms), present for each study (a) simple summary data for each intervention group and (b) effect estimates and confidence intervals, ideally with a forest plot	9-11
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency	n/a
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see item 15)	5 & 9
Additional analysis	23	Give results of additional analyses, if done (such as sensitivity or subgroup analyses, meta-regression) (see item 16	n/a
Discussion			
Summary of Evidence	24	Summarise the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (such as health care providers, users, and policy makers)	11-13
Limitations	25	Discuss limitations at study and outcome level (such as risk of bias), and at review level (such as in complete retrieval of identified research, reporting bias	13

Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research	13
Funding			
Funding	27	Describe sources of funding for the systematic review and other support (such as supply of data) and role of funders for the systematic review	n/a

Appendix 2: Search Strategies

EMBASE search strategy, search completed 07/07/2020:

Sources Embase, MEDLINE

Query(gestational AND hypertension OR (pregnancy AND induced AND hypertension) OR (pregnancy AND transient AND hypertension) OR (maternal AND hypertension) OR preeclampsia OR 'pre eclampsia' OR 'pre eclamptic' OR (pregnancy AND toxemia)) AND (guideline* OR standard* OR consensus OR recommend*) AND (cardiovascular OR stroke OR 'heart disease' OR mi OR 'myocardial infarction' OR 'heart attack' OR hypertension OR 'heart failure' OR cvd OR cad OR chd OR 'coronary heart disease' OR 'coronary artery disease' OR 'ischaemic heart disease' OR 'cardiomyopathy' OR 'high blood pressure' OR 'elevated blood pressure' OR 'transient ischaemic attack' OR tia OR atherosclerosis OR 'cerebrovascular accident' OR cva) AND [embase]/lim NOT [medline]/lim AND (2010:py OR 2011:py OR 2012:py OR 2013:py OR 2014:py OR 2015:py OR 2016:py OR 2017:py OR 2018:py OR 2019:py OR 2020:py) AND [humans]/lim AND [english]/lim

Mapped termsn/a

Pubmed search strategy, search completed 07/07/2020:

(((“gestational hypertension” OR “pregnancy induced hypertension” OR “pregnancy transient hypertension” OR “maternal hypertension” OR “preeclampsia” OR “pre-eclampsia” OR “pre-eclamptic” OR “pregnancy toxaemia”) AND (Guideline* OR Standard* OR Consensus OR Recommend*)) AND (Cardiovascular OR Stroke OR “Heart disease” OR MI OR “Myocardial infarction” OR “Heart attack”OR Hypertension OR “heart failure” OR CVD OR CAD OR CHD OR “coronary heart disease” OR “Coronary artery disease”OR “ischaemic heart disease” OR “cardiomyopathy” OR “high blood pressure” OR “elevated blood pressure” OR “transient ischaemic attack”OR TIA OR atherosclerosis OR “cerebrovascular accident” OR CVA)

With limits 2010-present, human and English

Cochrane search strategy search completed 07/07/2020:

“gestational hypertension” OR “pregnancy induced hypertension” OR “pregnancy transient hypertension” OR “maternal hypertension” OR “preeclampsia” OR “pre-eclampsia” OR “pre-eclamptic” OR “pregnancy toxaemia” in All Text AND Guideline* OR Standard* OR Consensus OR Recommend* in All Text AND Cardiovascular OR Stroke OR “Heart disease” OR MI OR “Myocardial infarction” OR “Heart attack”OR Hypertension OR “heart failure” OR CVD OR CAD OR CHD OR “coronary heart disease” OR “Coronary artery disease”OR “ischaemic heart disease” OR “cardiomyopathy” OR “high blood pressure” OR “elevated blood pressure” OR “transient ischaemic attack”OR TIA OR atherosclerosis OR “cerebrovascular accident” OR CVA in All Text

Limited to 2010- present

Appendix 3: Websites searched to source guidelines

Search terms: preeclampsia, hypertension

Organisation	Location	Website searched on 07/07/20
Institute of Obstetricians and Gynaecologists	Ireland	https://www.rcpi.ie/faculties/obstetricians-and-gynaecologists/
International Federation of Gynaecology and Obstetrics	International	https://www.figo.org/
The American College of Obstetricians and Gynaecologists	United States	https://www.acog.org/
International Confederation of Midwives	International	https://www.internationalmidwives.org/
European Board & College of Obstetrics and Gynaecology	Europe	https://www.ebcog.org/
American College of Nurse-Midwives	United States	https://www.midwife.org/default.aspx
Royal College of Obstetricians & Gynaecologists	United Kingdom	https://www.rcog.org.uk/
National Institute for Health and Care Excellence	United Kingdom	https://www.nice.org.uk/
Nursing and Midwifery Council	United Kingdom	https://www.nmc.org.uk/
The Royal College of Midwives	United Kingdom	https://www.rcm.org.uk/

The Society of Obstetricians and Gynaecologists of Canada	Canada	https://sogc.org/
China Obstetrics and Gynaecology Network	China	http://www.obgy.cn/
Sri Lanka College of Obstetricians & Gynaecologists	Sri Lanka	http://www.slcog.lk/
The Royal Australian and New Zealand College of Obstetricians and Gynaecologists	Australia and New Zealand	https://ranzcog.edu.au/
Zambia Association of Gynaecologists & Obstetricians	Zambia	http://za-go.net/
Nordic Federation of Societies of Obstetrics and Gynaecology	Denmark, Finland, Iceland, Norway. Sweden.	https://nfog.org/
The Federation of Obstetric and Gynaecological Societies of India	India	https://www.fogsi.org/
Asia and Oceania Federation of Obstetrics and Gynaecology	Asia and Oceania	http://www.aofog.net/
The Regulation and Quality	United Kingdom	https://www.rqia.org.uk/

Improvement Authority		
European Society of Cardiology	Europe	https://www.escardio.org/
German Academy for Gynaecology and Obstetrics	Germany	https://www.dggg.de/
The Royal Women’s Hospital	Australia	https://www.thewomens.org.au/
Queensland Health	Queensland	https://www.health.qld.gov.au/
Ministry of Health	New Zealand	https://www.health.govt.nz/
American Heart Association	United States	https://professional.heart.org/professional/index.jsp

The Longest March

Author and winner of the postgraduate category of the Sheppard Memorial Prizes Competition 2020: Dr John Travers, Trinity College Dublin/Health Service Executive Training Scheme.

This essay was published In BJGP Life, January 2021.

Time has stopped. Familiar boundaries that normally mark its passage have dissolved. Gone are the opening and closing of shops, the relief of a weekend at the end of a week. Movie times, restaurant sittings, meeting up with friends and doctor's appointments are all things of the past. A new dystopia has seeped into the timeless fabric of life. In old time's place is a new current that captivates and carries us along. A constant stream of news and information about the virus. How to avoid it and what it does to bodies and societies. The most anticipated and feared punctuation of this new flow is the daily toll of new infections and death.

What I hope will shine brighter in the memory are moments of humanity that shine through the bleakness of lock down. Precious family moments. Seeing the light and ease of joy in my daughters' eyes as we play in the back garden on a mid-morning normally stolen by work and crèche. Rediscovering the simple pleasures like treasure hunts in the park across the street or feeling little arms clasped around my neck as I give pony back rides at home while isolating. Neighbours I haven't seen for months stopping for a chat at a social distance as if we had all the time in the world. Strangers sharing kind smiles. A new camaraderie among colleagues. People running marathons on twelve-foot balconies. Communities wrapping arms around members who need care and offering groceries and chats across the divide. We have seen the resilience of a nation in the face of uncertainty. A political leader suggests that when things are at their worst, we are at our best.

There are certain other moments that mark this passage through the lifetime of the virus for me. Some like a thud of realisation at the cusp of sleep. Some like stepping barefoot on shards of glass.

My Mum and Dad call to say they have coughs and temperatures. I hear the emotion in their voices. I am stunned at the possibility that they may have contracted the virus and be among the first in the country to do so. It is only days since the cogs of society stopped turning on the twelfth of March. The total number of infections in the country is less than one hundred but there is a national anxiety, bordering on panic. They had called their local GP surgery, where my Mum had visited five days earlier, to find it had been closed due to virus contamination and no doctor was available for the foreseeable future. The alarm bells grow louder. I agree to take on their care. The medical council guide to professional conduct and ethics says it is not advisable to treat members of your own family except for minor illnesses and emergencies. I take a moment's reflection and push on in the hope that their GPs will be back in support soon.

Guidelines are changing daily and I realise I might already have missed an opportunity to get them in the lengthening queue for a test. I dash into my surgery early the next morning, a bank holiday for St Patrick's Day, to book a test on the secure referral system. I am alone in usually buzzing surgery building. The phone in reception rings repeatedly and echoes through the empty rooms before the line is diverted to the out-of-hours service covering for the holiday. It is the loneliest sound. Person after person waiting anxiously on the other end to tell of worrying symptoms or seek reassurance.
That same week, all three of my GP colleagues and the practice nurse are out for unanticipated illnesses or personal reasons. The four front-of-house team and I hold an emergency meeting each morning. We discuss how to apply the ever-morphing guidelines and create a plan for the day. The phone is off the hook. We shift all our emphasis and instincts from seeing patients to telephone triage and minimising face to face consultations. We don masks, throw out every scrap of unnecessary paper and equipment and create an isolation room. We work every hour we have to give. Call after call of telling patients we are there for them without the ability to lock eyes or grip a hand. The language of the body is lost. I send test referral after test referral.

I call an extraordinary meeting of the counselling not-for-profit I chair, MyMind.org. The board dials in and I urge an immediate move to online counselling and a stop to any face-to-face interactions. It has never been done before and would leap-frog the public health guidelines. There is resistance and I lament my inability to communicate the urgency better. I say I am not concerned about the robust young person attending a counselling session that may contract the virus. It is the vulnerable person they may infect or precious ICU bed they may displace from an older person. The change has to happen and I let the idea sink in. Within days the executive team make this the new reality. We lose a third of bookings overnight. We hold another meeting to go through emergency financial management for survival. Days later, the department of health selects us as the lead provider of online consultations to all frontline healthcare workers under stress and the general population suffering acute anxiety from social isolation, bereavement or loss of employment. Supporting mental health is the second front in this pandemic and we are privileged to help hold that line.

The flow of clinical learning travels a grim path from understanding testing criteria, to researching the limited treatment options, to memorising medicines for palliative care for disproportionately affected nursing home patients. There is a flood of information and too many memes on social network groups. Humour bubbles up through the online panic but it is dark.

My parents test positive. My Mum recovers but my Dad's fever burns on. I listen to his breathing intently at the end of a phone twice a day, like listening for static between musical phrases on a record. I bring over an oximeter. Our fingers graze on its exchange and the forbidden touch brings comfort and desolation. He declines auscultation of his lungs. I don't pursue the offer, knowing that viral pneumonia or a cytokine storm would likely be silent. Rest, fluids and paracetamol remain the only treatment. The immune system does the rest and I pray it does not lose the run of itself and become a killer. Stories trickle in from countries ahead of us on the infection curve that older people are being left on the heap as younger patients with a greater chance of survival are placed on scant ventilators. A video surfaces of corridors in a London hospital filled with body bags.

I ask for vital signs twice daily and despair that several are not settling. His body temperature rages for days and spurns any effects of anti-pyretic drugs. My finger hovers over a hospital transfer trigger, waiting for a change in breathing to pull it. I question if I am giving the right care. Is the fear clutching my heart dulling my judgment? I reach out to classmates and my trainer who support me to keep doing what I am doing. Most people start to feel a little better around days three or four after the onset of symptoms. He has not experienced any such reprieve. A small number may deteriorate around day seven and slip into a decline that leads to death around day twenty-one on average. Though the overall mortality rate may be close to three or four percent of confirmed cases or as low as one percent of all presumed cases, it is as high as twenty percent for the vulnerable older person. I do not sleep on the sixth night, or the seventh, or the eight. The fever breaks on the ninth day. I am filled with relief and weep. I stay tuned in to any hourly change as he continues to turn and mend.

The surgery gets quieter as people stay home and the initial surge of anxious calls subside. Novel electronic prescriptions are a revelation and reduce the work burden. The other doctors return and there is flexibility to get away slightly earlier in the day. I dash home to mind my two young daughters and give my wife, Lisa, the chance to do her work during normal hours. She has been getting up at six am and going to bed at two am, snatching time to fulfil the demands of her job. She is the hero. A little exhaustion sets in among us all. I cajole the girls away from the dining room where she has set up a remote working station, going through more lollipops than a children's party. We play in the spring sun at a local park. Every little thing is a wonder in their eyes. They ask why a duck does not move from its snugly nest, day after day. We wonder together. Fawn and chestnut speckles heaving over a slowed heart, eyelids drooping on contented eyes, a settling tail wag, all in a state of suspension, waiting softly in its bed of down. Has time stopped here too?

Just as things settle into a manageable rhythm, I get word that I am to be redeployed to a virus community assessment hub. This is where positive or presumptive virus patients are referred by GPs if they deteriorate. It aims to take the heat off hospital emergency departments and allow primary care surgeries to re-open to other consultations. GP registrars are redeployed without choice. I feel that basic leadership brings people along while forcing people to do things buckles morale. Despite the loss of autonomy, I am glad to be able to work in a hub to which I would have freely signed up. We are assigned to training the next day and I say a sudden farewell to the surgery team. We practice donning and doffing personal protective equipment (PPE). The brilliant national ambulance service trainers stress not to use hazmat suits or loop masks, which they say increases risk of infection compared to the equipment we practice with.

Lisa helps me shear my hair with a one blade after the girls are asleep. We have a long-needed belly laugh at the results. On the orientation morning at the new hub, our team of twenty are told we will be using hazmat suits and loop masks. On the first day that patients arrive, we are provided with a different type of gown again, which none of us have seen or used. We muddle through, committed to a cause. Eyebrows rise with deep inhalations when a manager suggests that we may resort to ‘bare below the elbow’ precautions if PPE runs short, literally just rolling up our sleeves to get on with it. We will cross that ethical bridge with patient needs and personal safety on either side if we come to it. We know instinctively there is only one side we will take.

Patient numbers ramp up but we are never overwhelmed thankfully. Most people assessed are encouraged to continue to monitor at home with advice on when to call an ambulance. Some go straight to ED. Dusky lips or oxygen saturation levels that fall with simple exertion are enough for a quick referral.

The PPE is claustrophobic and sweltering. Goggles dig in to the face and eyes strain through the foggy windows. Hot breath recycles in the mask. The gowns suck hydration out of us. Everyone shrugs off the headaches. We come up for air and water every two hours.

The team camaraderie is wonderful. Politics are gone. Hierarchy is gone. There is positive energy and a good will in every conversation. Laughter lives. We look out for each other. Yet the hub affects everyone, each in their own way. The gregarious nurse, full of chat and smiles, mentions in passing that she has not slept properly since starting

here. The quiet doctor buries his head in his phone between PPE changes, seeking anything to distract him from the uncertainty of what the next patient will bring.
My colleague manages an arrest of an older man who came for assessment. She is entitled to pause and consider her ethical compass. She should don an appropriate mask for an aerosol generating procedure but none is to hand. A man lies unresponsive with no pulse. She does not think to do anything else but help him. 'One and two and three...' echoes down the long corridor. He comes back to life after four rounds of thirty chest compressions and bag mask breaths. She waits for the possible tap of symptoms on her shoulder.

When I start coughing, I self isolate for days and await a test. A nurse stands firm as sea wind whips around her at the drive-up facility in Dun Laoghaire. Her flimsy plastic face guard and paper mask bend in the breeze. Aprons strings fly. She is calm and confident. She exudes care and I feel blessed. I hear halyards pummel sailing boat masts in the safe harbour. I never thought I would be swabbed like this in a place I have known for a lifetime of seaside walks, Teddy's ice creams and jumping in the freezing, life affirming water. The cough, myalgia and sensation of sandpaper on my respiratory tract go away within a few days.

It's the 57th of March someone says. Days blur together. Time continues to collapse. It has truly stopped for hundreds of thousands of people. I listen quietly to a woman weep on the phone that no one can attend her husband's funeral that day.

They tell us the transmission rate has fallen below one and that all the containment efforts are paying off. My parents rally strongly, as do their own caring GPs. There is clapping for frontline workers. I agree with the man who wrote a letter to a national newspaper saying that every single person is on the frontline. Everyone is contributing to beating the virus. The team of workers who care for a patient in ICU are as essential as the people staying home to avoid an ICU bed being filled.

Some people suggest that things will never be the same again. They feel the new ways of living and working will stay embedded where they have sunk their teeth. I despair at the thought of endemic suspicion and distancing, people crossing the road when they see a child because they consider them a vector or judging an older person for taking a stroll with freedom because all they see is the false label of vulnerability. Both ends of the age spectrum have suffered degradation. If there is change, I hope it is for greater attraction to the simple, rediscovered pleasures of life and an abandonment of unnecessary busying and commercial recreation. In truth though, I am not convinced major changes will stick. I see the tide rush back over the defences. I see 'new norms' disappear like the ocean smoothing footprints in the sand. I believe a certain human entropy will prevail.

Things seek the most comfortable state of energy in which to reside, like a perfume's scent easing its way to every corner of a room. People will fall back into old habits, not languidly but because they work. Industry may also induce us along, urging a return of shoulders to wheels of production. But entropy and industry are a small part of the story. I believe in the greater goodness of human nature: our ache for social connectedness, for human touch and warmth, for a little foolish sense of invincibility, bravery and pushing the boundaries of experience and excitement. Irrepressible creativity will continue to search the extremes of a canvas unexplored. Children will lead us back out to play and remind us of a simplicity that has always kept us grounded. We will take what we have learned and suffered and walk more firmly through challenges thrown our way, while more aware of our vulnerability. This makes us stronger.

The next pandemic will see us more prepared. Systems and processes will be dusted down and we will respond better to the next big one. For now, I thirst for this traumatic experience to be tucked into the folds of memory. I long for life to recover its beautiful rhythm. Will it happen? Only time will tell, when it begins again, and it will.

My daughters take me back to the park where we saw the nesting duck. The waiting has passed. Nature has nuzzled on its offspring without a care. Nothing has deflected its relentless surge. Warm sun falls in shafts through broad leaves onto the pond. Through its dappled prints swim mother duck and seven strong, brazen and unaffected ducklings. Life brims with promise in every stroke.