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AVOIDABLE HARM IN HEALTH AND SOCIAL CARE:

HOW HAS COVID-19 CHANGED RISKS AND THE PRIORITIES FOR INTERVENTION?

DECEMBER 2022



Executive Summary

- This report was commissioned by Improvement Cymru to explore how the COVID 19 pandemic shifted the balance of urgency in relation to “harms” affecting the delivery of health and social care in Wales, from the situation pre-pandemic to the here and now, moving from immediate response to dealing with the aftermath.
- Using a 90-day learning cycle of activity, the report was intended to highlight the emergence of new harms as well as those that have been exacerbated by the pressures created by the pandemic. A rapid review of the academic and grey literature, a series of interviews with experts in the field, and analysis of existing data were carried out.
- The research which underpins this report identified five major themes making a comprehensive picture of current harms within health and social care in Wales. This report sets out the context and likely causes of each of the themes and, while hard data are largely unavailable, it describes the likely impact. Finally, for each theme, the report proposes interventions or improvement approaches.
- Five themes emerged as being of significance:
 - Inequity
 - Systems Failures
 - Delays
 - Mental Health
 - Staff Wellbeing
- Each of these themes was evident before the pandemic arose, but they have increased in significance and impact because of the pressures caused by dealing with the challenges of seeking and providing care in extreme circumstances. The report highlights that each area of harm has grown and remains a major issue for the medium to long term provision of care.
- The context within which each harm arose, the causes and exacerbating factors, and the impact of the pandemic are described separately. What the literature highlighted was the extent to which the five distinct themes are syndemic and together make for a challenging programme of activity.
- Although suggestions for interventions have been made in the case of each harm, it is argued that the themes should not be treated separately, but as a whole and in parallel. The relationship between harms and potential interventions is demonstrated for this report in a driver diagram.
- An overriding issue that must be addressed is the lack of local and transparent data on a just-in-time basis. This would enable a more effective response to the issues highlighted here.

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Chapter 1: Introduction

This report was commissioned by Improvement Cymru, Public Health Wales and compiled by Drs Lynne Caley and Alan Willson of Swansea University.

The primary aim of the report is to build on existing knowledge and to develop a timely picture of system-wide safety and harm in NHS and Social Care in Wales. In particular, the report explores how the pandemic shifted that picture, from the situation pre-pandemic to the here and now, moving from immediate response to dealing with the aftermath. The focus is on the system challenges currently being experienced. It spans the continuum of care, i.e. a whole system including primary and social care, rather than the traditional focus on secondary health care.

The work reflects a 90-day learning cycle of activity – a process originally developed by Proctor and Gamble. The methodology was developed further by the Institute for Healthcare Improvement (IHI nd) for use in healthcare. This 90-day learning cycle is designed to:

- Identify the key system-wide safety and harm challenges within health and social care in Wales
- Identify the scale of the key system-wide safety and harm challenges within health and social care in Wales
- Recommend key enablers to overcome the challenges
- Recommend additional 90-day learning cycles or further actions

The research which underpins this report identified five major themes, making a comprehensive picture of current harms within health and social care in Wales. This report sets out the context and likely causes of each of the themes and, while hard data are largely unavailable, it describes the likely impact. Finally, for each theme, the report proposes interventions or improvement approaches.

The aim is to support Improvement Cymru to evolve its strategic approach to support organisations with quality and safety improvements and to offer additional evidence, interventions and theories for testing.

Most harm in healthcare seems to have got worse in the pandemic. Much recent progress on safety has been dismantled. There are several reinforcing loops caused by delays and system blocks. Encouragingly, we are now working with several organisations at local level to understand how processes are failing. The point is to build systems and processes which are safer and not just workarounds or compensate for system problems. It is very encouraging that senior leaders in Wales are pushing for a safety and quality approach. They expect it to be part of their assurance and accountability.

Professor John Boulton, Director of NHS Quality Improvement and Patient Safety, Improvement Cymru.

Chapter 2: Methodology

Research for the report is based on a rapid scan of the academic and associated grey literature plus interviews with recognised experts in this subject, in Wales and across the UK. The speed with which research, analysis, and reporting of findings was undertaken was advisedly chosen to reflect the urgency and relevance of the challenges faced post-pandemic. Although this placed constraints on what could be achieved, this approach nevertheless provided significant results.

The study was screened and approved by the School of Health and Social Care Science Ethics Committee, Swansea University.

Phase 1 (Scanning Phase) consisted of a rapid review of the academic literature. The search strategy included the search of Medline and CINAHL databases. The search terms and keywords used are shown in table 1. The inclusion and exclusion criteria as noted in table 2.

Table 1 – Keywords and Search terms

Causes of harm	Effects of harm	Context – Meso	Context – Micro	Context – macro	Covid-19
Fundamentals in safe care	Harm OR avoidable harm (MESH Patient harm – Medline)	Healthcare OR Health care	Consumer*	Policymaker*	Covid OR Covid-19
Health professional* OR health practitioner*	Exclusion	Acute care OR secondary care	Patient*		Pandemic
Delay*	Failure to access	Social care	User*		Coronavirus
Waiting times	Inequity OR equity	Public health	Professional* OR Practitioner* OR Staff		
Inequity OR equity	Prioritisation	Primary care			
Prioritisation	Self exclusion OR Self-exclusion				
Self exclusion OR Self-exclusion					

Resilience of system					
Human Factors					

Table 2 Exclusion and inclusion criteria

Inclusion Criteria	Exclusion Criteria
Published in the English language	Letters and commentaries
Published post 2019	Protocols
Focus on the causes and effects of harm	Conceptual, theoretical or methodological articles
Peer-reviewed journal articles	Abstracts and posters
Conference papers	

A citation tracking search using ten key papers was undertaken and a review of grey literature from expert and authoritative organisations such as the Health Foundation, The King's Fund, Joseph Rowntree Foundation and the NHS websites.

Semi-structured interviews were conducted with eight academic and service experts in health and social care safety. With the permission of the participants the interviews were recorded and transcribed. A thematic analysis of the interview data was undertaken.

Phase 2 (Focus) utilised a two-hour online workshop in which an audience of senior figures across health and social care in Wales were invited to consider the developing themes, comment on their relevance and suggest potential interventions and measurement.

Phase 3 (Summarise and disseminate) involved an informal consultation conducted by Improvement Cymru and inviting organisations across health and social care in Wales to comment on a mature draft of this report.

While it is too early for large scale research to have given definitive answers, triangulation of early research identified from the rapid review, authoritative grey literature and the opinions of recognised experts found 5 main themes:

- Inequity
- Systems failures
- Delays
- Mental Health
- Staff wellbeing

Each of these themes was evident before the pandemic arose, but they have increased in significance and impact because of the pressures caused by dealing with the challenges of seeking and providing care in extreme circumstances. The report highlights that each area of harm has grown and remains a major issue for the medium to long term provision of care.

The following chapters provide an overview of the context for the emergence of each theme and describe some exacerbating factors that support the view that the theme is significant. We then describe the impact of the pandemic on the theme and suggest interventions that may alleviate this impact.

Chapter 3: Inequity

This first theme recognises the ubiquity and significance of inequity of access to health and social care in Wales. Although not a new phenomenon, authors such as Kontapantelis et al (2022) are demonstrating that the COVID 19 pandemic has increased the level of harm that results from wide differentials of opportunity amongst the population.

Context

Even before coronavirus, almost a quarter of people in Wales were in poverty with estimates of 700,000 living precarious and insecure lives (Matejic 2021). The risk for children was higher, with three in ten children living in poverty. Gaps in life chances and life experience right across the UK were widening or static pre-pandemic, as evidenced by the Gini Coefficient (World Population Review 2022), a statistical measure of economic inequality. The higher the coefficient the more unequal a population. Inequality is generally lower in Europe than elsewhere in the world, e.g., in the US the coefficient was 41.1% in 2019 whereas in the UK the figure was around 35.1%, but higher than in other parts of Europe (e.g. Belgium 27.2%)

Life expectancy in Wales has been found on average to be at the lower end of the spectrum across the OECD (Marmot 2020). Wales has the highest estimates of poverty in the UK and excess mortality rates are the highest in Europe. Deprivation is widespread, and the pandemic has exacerbated this situation. There is a strong relationship between deprivation measured at the small area level and healthy life expectancy at birth. The poorer the area, the worse the health. And there is a social gradient in the proportion of life spent in ill health, with those in poorer areas spending more of their shorter lives in ill health. Healthy life expectancy has declined for women since 2010 and the percentage of life spent in ill health has increased for men and women (Marmot 2020). There are clear socioeconomic gradients in preventable mortality. The poorest areas have the highest preventable mortality rates and the richest have the lowest.

At individual level differing risks are related to socioeconomic factors and area deprivation, occupational exposures, living conditions, ethnicity, religion and previous health – itself closely related to socioeconomic status (NHS Long Term Plan 2022).

Inequality touches on many aspects of day to day living by hampering access to resources and thus inhibiting the likelihood of improvement. For example, much of modern community involvement requires access to digital forms of communication which is problematic for a significant proportion of the population, including the elderly, where lack of access is coupled with unfamiliarity and the need for outside support (Lewis et al 2020).

Exacerbating Factors

In Wales, Rhondda Cynon Taf is the local authority with the highest death rate in the UK, and one of only two areas of Wales with more than 30 people unemployed and claiming benefits per vacant job available after the pandemic had hit (British Medical Association 2020).

Bambra et al (2020) describe COVID 19 as syndemic, which they define as a situation in which two or more interrelated biological factors work together to make a disease or health crisis worse. The biological factors that contribute to a syndemic can be communicable or noncommunicable, and thus can incorporate sociological and economic factors. COVID 19 is occurring against a backdrop of social and economic inequalities in existing non-communicable diseases as well as inequalities in the social determinants of health.

By this interpretation, the fundamental causes of inequality, which lie in the socio-political power relations between population groups and social classes, and in the variations in the distribution of power, money and resources, will increase the impact of the pandemic. Such causes manifest themselves as overcrowding in living conditions; multi-generational occupancy amongst families and multi occupancy of housing by unrelated people; homelessness; unemployment. Thus, the capacity for home working and for self-isolation when necessary, is greatly reduced. Vaccine confidence is lowest amongst the most deprived and excluded members of society. All such causes indicate disadvantage with concomitant impact on health outcomes.

Those with pre-existing health conditions such as diabetes, dementia, COPD, Ischemic Heart Disease are particularly poorly served. Late presentation, unfamiliarity with the mechanisms of institutional pathways, and unequal resource allocation result in poorer outcomes and further inequality that has a domino effect across families and generations.

Impact of the pandemic

The health of the population is not just a matter of how well the health service is funded and functions, important as that is; people can expect to spend more of their lives in poor health if their circumstances are unequal (Kontapantelis et al 2022). And, during and after the pandemic, the health gap has grown between wealthy and deprived areas. Structural inequity and the social determinants of health mean that place matters, such that growing up in an area of deprivation such as South Wales is worse for your health than living in a similarly deprived part of London, to the extent that life expectancy is nearly five years less.

The COVID 19 pandemic has had markedly different impacts on the regions of England and Wales, both for deaths directly attributable to COVID 19 infection and for deaths resulting from the national public health wider response. Kontapantelis and colleagues (2021) looked at mortality registers and estimated expected years of life lost during 2020 by sex, geographical region, and deprivation quintile, using data from September 2015 – December 2020, arguing that this approach effectively determines unmet needs. Kontapantelis says

“the impact of the pandemic when quantified using years of life lost, was higher than previously thought, on the most deprived areas of England and Wales, widening pre-existing health inequalities”
(Kontapantelis et al 2021)

The pandemic has created new demands for NHS services beyond immediate COVID 19 care, including additional mental health needs and chronic side effects of COVID 19. Previous national targets such as for expanding access to mental health services for adults

and children will need to be revisited to account for greater need (NHS Long Term Plan 2020)

The COVID 19 pandemic and protective measures to guard the population, especially the most vulnerable, has required changes to the way we live and work that have amplified pre-existing gaps in life expectancy. Harms by omission have increased, and Years of Life Lost (YLL) are greatest in the most deprived quintiles, in deprived regions and starkest among the young. (Kontapantelis et al 2022). Age, ethnicity and pre-existing health status sit alongside location as signifiers of equity in life chances.

Social distancing has encouraged the greater use of digital forms of communication, and this has had uneven acceptance and value. Digital exclusion is caused, amongst other things, by lack of equity in the distribution of IT equipment coupled with unfamiliarity with use of software. Shared equipment causes privacy issues and concerns regarding the intrinsic safety of technologies and the extrinsic ability of technologies to drive safety. As the pandemic has hastened moves to a more digitally based service, inequality of access and treatment has increased (Lewis et al 2020).

The overall picture is one of major delay, disruption and increased demands on services. There have been delays to developing planned new services (see NHS 10 Year Plan 2020) in primary and community care and widespread disruption to elective care, cancer screening and treatment, mental health care, and other services, with serious consequences for people's health and wellbeing.

Inequalities in social and economic conditions before the pandemic contributed to the high and unequal death toll from COVID 19 and the economy and health are strongly linked. Reducing health inequalities, including those exacerbated by the pandemic requires long term planning and intervention.

Interventions

Wider reform is needed to improve population health and reduce inequalities. But the challenge goes above and beyond the focused delivery of health care, and points to a need for close working relationships across all services. There appear to be no national strategies for reducing health inequalities in England and Wales and public health budgets were 24% smaller per capita in 2021/2022 than in 2015/16. Increased investment in the NHS must go alongside investment in the wider services that shape health.

Focusing solely on the most disadvantaged will not reduce health inequalities sufficiently, indeed it may stigmatise those most affected while missing the opportunity to build cohesion across the population, who are all negatively impacted to a greater or lesser extent. At the same time the idea of trickle down to reach the disadvantaged has been shown to be as ineffective as has been demonstrated in economics (Reidpath and Allotey 2019). To reduce the steep social gradient in health, actions must be universal, but with a scale and intensity that is proportionate to the level of disadvantage.

The concept of proportionate universalism has gained currency (Marmot et al 2020). It implies policy driven by principles of universality but combined with judicious targeting to

reach the neediest. Coupling proportionate universal allocation of resources and targeted implementation with early intervention can help to alleviate health inequalities. Public engagement may be key, and, as demonstrated in the first wave of the pandemic, volunteers and community action groups can be mobilised.

Whole system monitoring and the strengthening of accountability will support and enhance action at national and local levels

Suggested interventions include:

- **Focus on localism whilst informed by national issues.** There needs to be a concerted and demonstrable shift to valuing and promoting the development of research and delivery mechanisms that are borne out of the reality of local contexts whilst complementing knowledge and evidence generated at national levels
- **Focus on equity within a universal service.** The concept of proportionality within a universal service is a powerful one but depends upon continual accurate and complete data collection and analysis.
- **Improve timeliness and completeness of data collection.** The effective use of data features strongly in all of the themes described in this report and is no less necessary here. However, despite the abundance of information on inequality its analysis and application at local level remains patchy at best. Focus, responsiveness and comprehensiveness remain key to identifying those vulnerable to being left behind
- **Health policies to tackle social determinants of health which** will require the maintenance of close working relationships between health care providers and other professional groups working with the disadvantaged, whether they be in public health, in education, in social services, or the police service. A seamless response to need can be developed with the benefit of transparent and relevant information sharing and response
- **Make digital forms of care more inclusive.** As the service moves rapidly towards digitisation it is vital that vulnerable members of society are not left behind, so attention must be given to identification of those requiring alternative forms of interaction and treatment. An evaluative approach to monitoring demand is needed.

Chapter 4: Systems Failures

In this chapter we review the extent to which the NHS's organisational structure and resources were prepared for the pandemic, and the degree to which shortcomings of existing systems were exaggerated by the pressures of coping with the unprecedented rise in demand. We use the term "Systems Failures" to encourage interventions which analyse and change underlying systems rather than patch or seek greater efficiency.

Context

Health and social care systems across the world are imperfect and often fail to deliver what is intended. Unintentional harm is commonplace. Prior to the pandemic, a systematic review of world literature estimated that 6% of patients experience harm, 12% of whom die (Panagioti et al 2019). The largest source of harm is drugs or other treatments, and most harm occurs in high intensity care settings. Primary health care has been less well studied but a recent paper estimated 36 probably avoidable harms per 100,000 patient years (Avery et al 2020). This case note review highlighted diagnostic errors and referral delays.

Medication related problems were also in evidence.

Written almost 20 years after the publication of "Crossing the Quality Chasm", the Panagioti paper notes that understanding and mitigating preventable patient harm is still a major public health challenge across the globe.

There are no equivalent reviews of harm in social care; and harm at home, increasingly a place where formal care is delivered, is largely unstudied.

The foregoing reflected the situation prior to the COVID 19 pandemic. It is too early for research to have comprehensively shown the effects of the virus on actual rates of unintentional harm. However, the available literature and the opinions of experts indicate that rates of harm have almost certainly increased and that there are hotspots which are the result of systems failing. The areas where system failures have been described include:

- Medication
- Diagnostic and screening services, especially for cancer
- Disrupted treatment pathways, especially for cancer
- Protection of patients from COVID 19 cross infection
- Access to mental health services

A recent paper based in primary care describes the nature of the changes related to COVID 19 as follows (Fournier et al 2021):

Of 132 incidents, 58 (44%) related to delayed diagnosis, assessments and referrals. Cancellations of appointments, hospitalisations or procedures was reported in 22 (17%) of these incidents. Home confinement-related incidents accounted for 13 (10%) reports and inappropriate medication stopping for five (4%). Patients delayed attending or did not consult their general practitioner or other healthcare providers due to their fear of contracting COVID-19 infection at an in-person visit in 26 (10%) incidents or fear of burdening their GPs in eight (3%) incidents. (Fournier et al 2021).

Expert witnesses described specific systems failures relating to COVID 19. Healthcare services and staff were not designed, trained or equipped to deal with the surge of sickness and risk associated with the pandemic. It is possible, but we have not sought or analysed further evidence and so cannot make a categorical statement, that the numbers of patients and staff who were infected with COVID 19 would have been less with better healthcare systems.

Causes

Superficially, the causes of increased harm include:

- Staff shortages
- Patient isolation
- People's reluctance to present with problems
- Reduced access to diagnostic, referral, treatment and care facilities
- Shift of resources to cope with pandemic pressures
- Limited capacity and capability to treat and contain COVID 19 infections

However, effective improvement solutions rely on accurate assessment of causes rather than treatment of their symptoms. At a deeper level, it is necessary to look at system weaknesses that have proved vulnerable with these new pressures. The limits of resilience have been exceeded. Gaps and faults which have had "work arounds" prior to the pandemic now need fixing.

A prominent example is harm from medication. As Panagioti et al., (2019) show, it has always been an area of risk and harm. When the 100,000 Lives campaign was established in the US (Institute for healthcare improvement 2016), it was clear that medicines were a real cause of common avoidable harm. At that time, and to the present, there are few demonstrably effective interventions. But whereas Panagioti et al., (2019) were concerned with a focus of risk in high intensity healthcare settings, reports from primary care describe potential harm from handover errors between care settings. In the pandemic, there is evidence of system breakdowns with reports of medication stopped inappropriately when patients transition (Fournier et al., 2021). Expert witnesses have corroborated this view. This has always been an area of concern. Historically, most interventions which seek to reduce harm from miscommunication around medicines involve error correction (medication review, medicines history taking and - IHI's focus in the 100,000 lives campaign - medicines reconciliation) rather than addressing their causes: systematic divide between separate medication records/supplies/responsibilities and thus the errors which occur at handover.

Another example is maternity services. They are frequently the focus for national scrutiny when things go wrong. Often, when problems are investigated, they are seen to be systemic and longstanding. Enquiries often seek to allocate blame and then to list recommendations. Disappointingly, those lists seldom say anything new or surprising.

Expert witnesses and, increasingly, discussion in the care safety literature is highlighting the role of home and homes in creating risk and harm for people who are discharged from care

or who are at home and balancing a number of interventions and services whilst lacking the resilience of an institutional setting. COVID 19 has greatly accelerated an underlying trend towards home-based care. There is little understanding of the causes, levels and mitigation of harm in these circumstances.

Over recent times, increasing pressures in the system have led to earlier discharge with responsibility for follow up care offloaded to carers. This has increased the significance of HOME as the site of care. Patients and family are taking on work previously done by clinicians. The pandemic is likely to have accelerated these changes.

For example, a baby with a gastroenterology has acute hospital care for one or two days. Thereafter, care is ceded to parents - untrained - with remote support using IT. These are not necessarily bad changes but we need to understand the new and potentially larger risks, and design mitigation accordingly.

Professor Charles Vincent, Emeritus Fellow of Jesus College, University of Oxford.

Lack of data about harm has been cited by some authors and some experts in interviews. There may be a lack of willingness to share data which might demonstrate failings, a sectorisation of data so that patient-based analysis is difficult and there may be a lack of analytical skills at local level.

Several authors (for example Amalberti and Vincent 2020) talk about a need to manage risk rather than drive for perfect safety or seeking simple transferrable solutions. This, they suggest, is a more appropriate organisational approach than seeking perfect safety and reliability especially in complex settings.

Finally, health and social care services must be prepared for current and future pandemics.

My strong clinical impression - and we are investigating the data - is that many people were infected with COVID while in hospital rather than coming in infected. Outdated facilities hampered care. Beds could not be distanced and staff rooms were too small. PPE was not up to the science and donning/doffing was inconsistent, especially because of the pressure staff were under. Infrastructure will continue to be at least as big a problem as pressure of numbers.

Dr Chris Subbe, Consultant in Acute, Respiratory & Critical Care Medicine, Senior Clinical Lecturer, Bangor University.

Interventions

How can improvement work be directed at a causal level? The literature and the expert interviewees spoken to in this study have suggested several possible approaches. Building

from the examples above and thinking about the wider range of systems failure, interventions need to focus on harm resulting from:

- Settings based (as opposed to patient based) records and divisions between professions, organisations and sectors
- Settings based (as opposed to patient based) supply of medicines, materials and treatments
- Failure to inform and involve patients and their carers
- Number of patient handovers
- Complexity of care for people with multiple conditions
- Reactivity (as opposed to proactivity) of diagnostic services
- Preoccupation with simple fixes for systemic problems
- Inadequate facilities, training, equipment and staff numbers to cope with cross infection risk

The specific suggestions include:

Analysing complex, high-risk systems and seeking simplification. This approach may result in a focus on reliability of current systems and/or a reduction of low value steps and repetition (Amalberti and Vincent 2020). It has been applied to complex care (Nwadiuko, 2018) but could equally well apply to other systems e.g., medication or documentation.

There is a system design problem with our documentation. If a patient has more than one condition and is treated in different settings, our documents cannot cope. On the other hand, clinical staff spend a disproportionate amount of time documenting problems, often repeating the same information several times, rather than providing care.

Dr Chris Subbe, Consultant in Acute, Respiratory & Critical Care Medicine, Senior Clinical Lecturer, Bangor University

Amplification of the patient voice and real empowerment to reduce the burden of treatment (Subbe, 2021). There has been much discussion of patient involvement in recent years but seldom have people been given real power and discretion to apply their personal priorities and values to their own treatment and care. Patients, their family and carers may be the best placed to make simplifications if they are given clear choices.

Increase the resilience of teams and systems in areas of high risk. The “for-us” framework developed by THIS Institute (nd) is a plain English expression of how the principles of reliable safety can be applied in a maternity unit. It makes clear that a successful approach is about consistency rather than magic bullet solutions. The same principles could be applied to many care settings: planned or unscheduled.

Conduct a survey of home settings: focus on one or more patient groups who are intensive users/recipients of in reach and outpatient-based services. Use the findings to better

understand risk and risk management for an increasingly large group of people and to refocus improvement effort around those people rather than around institutions.

More effective implementation of existing information technology. This might be through enhanced team coordination and communication, and greater personal and informational continuity of care. Patient held digital technology was advocated in the interviews with experts.

While traditional testing and evaluation are often concerned with proving that technology is reliable (it does what it says it will), improvement methodology is required to ensure that such technology achieves its intended benefits. The rapid expansion of virtual consultation during the pandemic is a case in point. It is very useful in some settings but it is not suitable for all care or for all people (Thiyagarajan et al 2020, Hammersley et al 2019).

Improving capability and capacity in avoiding cross infection from COVID 19 or other infectious diseases. This should extend through design of clinical settings, equipment, PPE, staff training and monitoring, especially in intense and complex settings. It could include using trained safety officers assigned during cardiac arrests to observe donning and doffing of PPE, a task which may be overlooked under such strained capacities.

Chapter 5: Delays

Delay in seeking unscheduled or emergency treatment and delays in access to planned care combined to create additional harm to patients and users of the health and social care services in Wales.

Context

Waits for necessary care cause harm to health as well as discomfort and anxiety. Treatment delays and waiting times across primary and acute care have been missing key targets for some years. A comprehensive review by the Bevan Commission published in 2021 reflected 7 years prior to the pandemic. It confirmed that the NHS hospitals in Wales had seen little change in productivity over that time and that some key specialties like orthopaedics had treated reducing numbers of patients. Overall, with year-on-year increases in demand and no matched response in increased supply, waiting lists were increasing. The report makes the point that the system was not coping with its workload. It follows that harm and waste from delays were also increasing.

Unsurprisingly, data since 2019 show that the pandemic has made things much worse. Hospital beds were 87% occupied in 2018/19 and 441,882 people were on hospital waiting lists. The equivalent numbers are now 69% (2020/21) and 688,835 (January 2022) (StatsWales). These are simple measures reflecting complex circumstances but they suggest that changes in service responsiveness have supply as well as demand components.

Similarly, performance figures for emergency and unplanned care in Wales, as elsewhere in the UK, show services which were under pressure before the pandemic have deteriorated rapidly.

There are several studies which show that screening services for serious disease were also hit. Colorectal cancer screening services across the world were cut by between 28 and 100% in different countries to combat COVID 19 (Mazidimoradi et al 2021). Morris et al (2021) illustrated the problem with English NHS data: referral, screening and treatment were all impacted.

The foregoing figures are just a snapshot of the problem. The mismatch between demand and supply is replicated in other sectors of health and social care and is likely to mask need which has not registered in the various datasets available. For a more in-depth analysis and links to wider reading, the King's Fund evidence to parliament, while focussed mainly on England, gives a wider view of the nature of delays, their spread beyond acute care and evidence of widening inequalities (Kings Fund 2021; also Bambra et al 2020).

Causes

The historical backlog has been compounded by realignment of resources before and during the pandemic. These have made shortfalls far worse and may have normalised an unacceptable situation. With widespread problems, simple performance measures such as the 4-hour target for A&E waiting times are no longer viable or relevant methods for ensuring safe and effective service delivery. There are also patient related issues of trust

and “candidacy”. Patients may be reluctant to come forward with health problems, they may find access difficult and may find it difficult to overcome personal barriers.

The pandemic has also caused capacity limitations including staff shortages and added complexity. While virtual consultation and teleconferencing has been a useful response to the pandemic, it may also have deterred some people from accessing services.

Impact

Care delays lead to deterioration and increased complexity with greater comorbidities, deterioration of patient health and resultant increasing complexity of cases. Mortality may be directly related to delay in diagnosis or treatment (Maringe et al 2020). Reports such as the review of ambulance services across the UK illustrate how patients experience harm when they are denied access to treatment (Association of Ambulance Chief Executives, 2021).

We're seeing a lot more people coming in with complications because they've not had their surgery or whatever. The person waiting for their gallbladder operation coming in with acute gallbladder problems because they've not had it sorted and things like that, you know, some things that had almost disappeared. So things like hernias, everybody thinks (they are) very benign but you can occasionally get serious complications. You know, I'd not seen any of those for 10 or 15 years. In this environment presenting with a hernia (with) dead bowel inside it. Whereas I've seen a couple of those in the last year.

Professor Matthew Cooke. Recently retired as Professor of Emergency Medicine, Warwick Medical School

Anxiety, depression, and quality of life may deteriorate with increasing wait time. There is greater impact among women and new immigrants, and those of younger age, lower socio-economic status or with less-positive coping ability. These problems often emerge as increased needs for care and so there is greater burden on social services, primary care and also knock-on effects to secondary and tertiary care.

The precise impact is difficult to quantify because it is still too early, because healthcare data rarely demonstrate such precise effects and because the effects are diffuse.

Using population mortality data, Kontopantelis estimated 2546 (CL 2448-2644) excess deaths had occurred in Wales during the first 30 weeks of the pandemic in 2019. Of these, just under 500 (20%) were considered indirect: that is, not related to COVID 19 or other respiratory causes. The same research group found that there were 42,101 (CL 38,114-46,089) excess Years of Life Lost (YLL) in Wales during the first 42 weeks of the pandemic. Just over 7000 (17%) were from indirect causes. It cannot be assumed that these extra, albeit non-COVID 19, harms were due or even significantly due to delays in care for non-COVID 19 needs. There are many other candidate causes and it is unlikely that the full harm impact from delays had manifested at these early stages of the pandemic.

An alternative approach to estimating impact is to model forward effects, a task which is easiest in data rich specialties such as cancer care. Reviewing studies which are pre-pandemic, Hanna et al (2020) showed that a four-week delay of cancer treatment is associated with increased mortality across surgical, systemic treatment, and radiotherapy indications for seven cancers. Kuryba et al in 2021 confirmed that elective surgical rates for colorectal cancer fell by 50% during the pandemic. That paper examines mortality after surgery but did not study the fate of patients who missed out on surgery during the study period. Using data from the COVID 19 era, Maringe et al (2020) estimate the pandemic will cause 3291–3621 additional deaths in England across three cancer groups within 5 years. The total additional years of life lost (YLL) is estimated to be 59,204–63,229. Based on population size, the effect in Wales might be expected to be around a sixth of the English numbers.

Interventions

Interventions are largely focussed on influencing demand, changing the service, or managing supply. Obviously, since mismatches between supply and demand are not a new experience, most approaches have been tried somewhere already. Arguably, those efforts were not coping even with pre-pandemic demand in Wales. What is required is to intensify the levels of improvement and innovation for these new times. The King's Fund report (2021) suggests strategies to ensure new approaches must not simply rely on the system running hotter. The reorganisation of services to create cold sites has been an obvious example of a changed service model (Boyle et al 2021).

All-Wales strategy and plans developed under A Healthier Wales (2018) are addressing service performance and have adopted new approaches such as the cancer pathways to do better at managing well known problems. More recently, schemes such as the Planned Care Innovation Programme are looking for new ways of working, at least in elective care. The programme is based on the premise that new thinking is needed and its aims make clear that the approach is to address demand issues, not just supply.

So, there is a question as to whether there is a harm related issue which is not already recognised and being addressed. From literature and from interviews, there are three approaches worthy of consideration. All are relatively new. All would have the ability to measure and reduce harm from delays. All apply to unscheduled and planned care.

1. Develop an evaluative approach to assessing demand and uptake.

The evidence points to harm being increased if access to services is not managed: disparities are becoming more apparent as supply is constrained. Historically, atlases such as those from Dartmouth and Public Health England have shown wide and apparently arbitrary differences in service uptake between populations where there is often a suggestion that demand is supply led. For frequently used procedures such as joint replacement or prescribing, wide variations can be seen at practice level which suggests that individual referral behaviour by general practitioners is a long-established factor driving variation (Fone et al 2002). Experience with referral management systems suggests that some

referrals are avoidable. Unnecessary healthcare is harmful but also, when resources are constrained, resources used wastefully are at the expense of lost benefit elsewhere.

Although Wales lacks a formal purchaser provider split and therefore commissioning is not mainly a formal contractual process, the integrated structure of NHS Wales and coterminosity with local government bestow many potential advantages. The ability to focus on local networks, efforts to develop the patient voice and close integration of public health expertise put Wales in a strong position to apply knowledge of disease incidence and effective interventions to support clinicians and communities to understand variations in demand and to start to manage demand based on need.

The recent LSE-Lancet commission on the future of the NHS describes this area of work as follows:

- *Continual evaluation drawing on data reflecting uptake, diagnosis, treatment, disease outcomes, and quality-of-life outcomes with a particular focus on the risk of reinforcing inequalities and digital exclusion*
- *Accompany with comprehensive professional and public dialogue regarding the understanding of risk, benefit, and uncertainty of testing; citizen panels should be consulted regarding the individual and social value of new routes to diagnosis*

(Anderson et al 2021)

Quality Improvement skills, especially in the analysis of variation (analysing time series, small datasets and infrequent events) are under-deployed in this area.

Public health skills are also required to bring health and utilisation maps into active use by service managers.

It might be argued that this approach requires a more concerted policy backdrop, encouraging public health in all policies. Certainly, this intervention is consistent with the views of authors such as McCartney et al 2021, Sayer and McCartney 2021 and Green et al 2021. However, it is also consistent with at least 5 of the 6 IHI dimensions of health care quality as well as the principles of Prudent Healthcare: these principles exist already.

The outcomes could include targeted screening and proactive case-finding where disease detection rates are lower or at a later stage than expected (e.g. lung cancer), focussed efforts to encourage candidacy, and reductions in unexplained variations in healthcare activity.

2. Drive for universal application of clinical pathways

Successful approaches for improving the reliability of acute stroke care, cancer care and some areas of elective care have adopted an approach of managing the whole pathway. Similar to the principles of value-based healthcare, the idea is to successfully deliver the right endpoint or outcome without wasting resource or incurring delay. The stroke care

example demonstrates that pathway management has at least as much relevance to unscheduled care as to planned care. Doing this well requires that the pathway starts when the need is first expressed and ends when it has been met and that pathway management is blind to divides between buildings, organisations and professions. It must also be an active process where those managing the pathways are empowered to drive for efficiency, ensure reliability and continuously improve. This approach sees pathways as a very active process, not a retrospective audit or procedural manual (Iedema et al, 2003; Rotter et al, 2010; 2019).

Pathways can be applied to short processes like crash team responses, catheterisation or vaccination campaigns. They can also be applied to bigger areas like surgical procedures. Referral to Treatment Time (RTT) methods used in Wales offer a head start in that they use many of the necessary metrics. However, what is being advocated here is an improvement approach which is owned by the service provider rather than a tool for accountability. It follows that if the service is continuously improved, that will be reflected in accountability metrics (if it is not, the metrics need changing!).

3. Increase the expertise in data analysis

Deming's Theory of Profound Knowledge advocates the study of variation as a tool to understand systems. Applying that theory to "Delays", analysis of variation in demographics, demand, provision, utilisation, delays, bottlenecks, costs, patient experience across the system will increase understanding of what is happening and where there are opportunities to improve reliability and performance. The techniques of data analysis are those of process control, quality management and quality improvement. Unlike a medical or research model, they do not seek generalisable truths. Unlike accountability models, they rely on granular data, openness in sharing and emphasis on learning.

Service managers from across social and health care need training in these data techniques to use existing data sets to solve current delivery problems. The benefits would go wider than just reducing service delays.

I am interested in the data challenge. There is no lack of data to understand where and how the system can be improved but the capacity and capability to analyse and learn from it are limited. My research group works with frontline teams, across sectors when appropriate, to combine our analysis of different safety data sources with the contextual knowledge held by those working day-to-day in the service. We use the WHO International Classification for Patient Safety Conceptual Framework, alongside the Systems Engineering Initiative for Patient Safety (SEIPs) framework, to understand the complex reasons why patients experience healthcare-associated harm and to guide designs of resulting QI interventions and measures. The priorities for the future are to encourage cross sectoral teams to examine system-wide issues and develop data analysis skills among frontline teams to permit timely and reliable data-driven safety improvements for patients.

Professor Andrew Carson-Stevens, Clinical Professor of Patient Safety and Quality Improvement, Division of Population Medicine, School of Medicine, Cardiff University.

Chapter 6: Mental Health

Despite growing recognition of the urgent need to increase provision of mental health services, the pandemic has highlighted the paucity of resource devoted to this area of health care. In this chapter we review the situation pre- and post- pandemic and argue that the situation can claim to be amongst the highest levels of harm affecting patient care in 2022.

Context

The number of mental health hospital admissions in Wales fell steadily between 2009-10 (the first year of comparable data after changes were made to the Mental Health Act) and 2019-20 to stand at 7,466, a decrease of 3,890 (34%). This decrease has been driven by informal admissions which have fallen from 9,904 in 2009-10 to 5,501 in 2019-20, a decrease of 44%. In contrast, formal admissions have risen from 1,452 in 2009-10 to 1,965 in 2019-20, an increase of 35%. More males than females were formally admitted each year in the same period. (Admission of patients to mental health facilities in Wales, 1 April 2019 to 31 March 2020 (gov.wales). For comparative purposes, in the same period there were 7000 admissions with stroke (British Heart Foundation, 2022). Arguably, more attention is given to the latter than to the former.

There has long been a social stigma attached to mental health and this conventionally manifests itself as a reluctance on the part of many potential patients to seek treatment. (Mackenzie et al 2013). Such barriers were beginning to fall in the two years leading up to the pandemic, as the prevalence and evidence of poor mental health in the community became more apparent, and thus spoken about.

Over the last several decades mental health as a specialism has suffered from lack of support and has generally been considered to be a “Cinderella service”; not well funded and not seen as an attractive career option (Ramchand et al 2021). Lack of provision resulted in patient waiting times for referral to in-patient care being inordinately long with shortages of in-patient beds so that patients not infrequently were transferred distances for treatment (Welsh Government 2021). Data to monitor service was often poorly specified or unavailable.

Demand for care outstripped supply before the pandemic due to inadequate funding and lack of resource as well as lack of recognition that mental health was of equal significance with physical health (Beech et al 2019).

A decade ago, the Welsh government document Together for Mental Health (2012) set out an ambitious programme for improving mental health and a vision for 21st century mental health services in Wales, covering people of all ages. The strategy describes a series of high level outcomes designed to improve the well-being of the whole population.

A Review of Together for Mental Health: The plan for 2019 to 2022 in response to COVID-19 was published in November 2021. Six priority actions for mental health and mental health services were specified:

- to improve mental health and well-being for everyone from all backgrounds.
- to improve access to support for children and young people.
- to improve crisis and out of hours support for people of all ages.
- to increase access to talking therapies and treatments for children.
- to improve services for pregnant women and mothers with newborn babies.
- to improve mental health services in general.

The focus is on better services for people with eating disorders, people involved with the criminal justice system, and people who also have substance misuse issues. Whilst aspirational and recognising the significance of co-production, of workforce planning, data collection, sharing of information, evaluating practice, there is a shortfall at the reality of “how” and “when”.

Exacerbating Factors

Evidence suggests that levels of service uptake are inequitably distributed by socioeconomic circumstances and some effort has been made to explain such differentials (McKenzie 2013). Increasing awareness of the significance of widespread poor mental health related in many cases to socioeconomic factors was emerging pre-pandemic and this became fertile ground for growing recognition that grave psychological harm sat alongside the physical manifestations of COVID 19 (Anderson et al 2021). Amongst other things the ‘stay-at-home’ policy adopted worldwide, while effective in curbing the spread of the disease, has contributed to an increment in stress levels, intra-family disputes and intimate-partner violence (Anderson et al 2021).

Indeed, across a range of services there is evidence that universal public provision, which often operates with explicit goals to reduce inequalities, can exacerbate the existence and experience of such inequalities through a range of implicit mechanisms that advantage the most privileged. These mechanisms include those associated with both supply and demand factors (Liberati et al 2022).

Supply factors might include the extent to which services are sufficiently resourced to target need, the degree to which systems work to overcome barriers of accessibility and the ways in which individual professionals practice inclusiveness. On the demand side such issues

might include the different perceived relevance of services and the differential capacity of the wealthiest and poorest groups in society to make the best use of available support.

Lockdowns, unavailable/pressurised care resources, social isolation, loneliness, stress, fear of dying coupled with decreased access to community support were widely acknowledged as stress factors in the build-up of demand for mental health services. Stress disorders increased amongst those immediately affected by COVID 19, including those hospitalised and witnessing staff in PPE spending as little time as possible at the bedside, lack of visitors, and minimal therapeutic touch, not forgetting the perceived threat of death (Shiner et al 2022). It is worth bearing in mind the impact of the pandemic on the mental health of staff treating patients with COVID 19 and the likely increase in PTSD in the coming months and years.

At the same time patients often delayed attending or did not consult their general practitioner or other healthcare providers due to their fear of contracting COVID 19 infection at an in-person visit or fear of burdening their doctor (Liberati et al 2022).

Impact of the pandemic

Public health measures put in place to prevent the spread of the virus had a devastating effect on the mental health of the community (Bhattaram et al 2022) and resulted in:

- Increase of psychological distress, depression, self-harm, suicidal ideation and violence
- Increase of PTSD and other traumatic responses
- Second-order mental health effects – including potential increases in suicide
- Vulnerability and poor mental health especially among homebound, frail, or lonely older adults.
- Reduced presentation of mental health crises at A&E
- Pre-existing psychological distress more likely to be associated with disruption of care.

Whilst greater attention in the media and wider acceptance has reduced the social stigma resulting in more people coming forward there has also been a notable “candidacy effect” and this has arguably grown larger since the onset of the pandemic. (Liberati et al 2022). This concept, first appearing in 2006, captures the idea that individuals’ views of whether they are a “candidate” for particular illnesses or conditions, and the associated interventions and services, are socially constructed. It is dynamic because it argues that acceptance of candidacy may be challenged and augmented over time through social and cultural circumstances and personal experience of service use.

Mackenzie et al (2013) describe the candidacy journey that begins with identification of candidacy, through navigation of the service, to its permeability, to asserting candidacy, adjudication by professionals, offers of / resistance to services and finally operating

conditions of candidacy. It is not difficult to envisage greater challenge at each of these stages for those with vulnerabilities.

Macro-level changes post-pandemic, including increased emphasis on crisis and risk management and adapted risk assessment systems, produced effects that went far beyond restrictions in the availability of services: they profoundly restructured service users' identification of their own candidacy, including perceptions of what counted as a problem worthy of attention and whether they as individuals needed, deserved and were entitled to care. Services became less permeable, such that finding a point of entry to those services that remained open required more work of service users and carers.

Perceived pressure on the NHS has resulted in many people, whilst experiencing symptoms, delaying presenting themselves as they believe themselves "not sick enough" to warrant attention. The requirement for patients to pro-actively seek attention rather than, as previously, be approached and reminded of the need for presentation, is another factor. The outcome is that when patients are seen they are suffering a much greater crisis than might otherwise have been the case (Beech et al 2019).

The impact of the pandemic has been an increase in patient numbers, who are at a later stage of their mental illness, and thus require more complex attention.

.. just a simple thing .. if you look at our response times within a category and you take those patients who are ringing with mental health presentations and those who are presenting with physical health. (There) can be up to three hours difference. So this kind of cognitive bias.. around those patients (has) to (be) drive(n) out. Because, if you look at patients calling us with self harm, it's just skyrocketed. And this we know in any kind of pandemic environment that is the unintended consequence. Young people,...teenagers or they're working age people who aren't coping and they are likely to be a long term challenge with a chronic mental health condition well into old age. So,... that would be my plea to you. It's, don't just turn over the obvious stones (like) long waiting listsbut let's have a look at some of the other stuff as well.

Dr Maxine Power, Executive Director of Quality, Innovation and Improvement, North West Ambulance Service

Interventions

At policy level a greater proportion of the health budget needs to be allocated to psychiatric services. But finance alone will not solve the problem without the addition of more effective and targeted interventions. Appropriate use of timely data can go a long way to highlighting the issues around mental health and enabling targeting of resources.

The prevention of mental ill health is considered key to addressing mental health inequalities across the UK in the wake of the COVID 19 pandemic. Parity of esteem, i.e. measuring progress towards equal support for mental and physical ill health, may be equated with equal spending, equal access to services, or excess mortality (the impact of mental illness on life expectancy).

Broadly, the quality and scope of data collected needs to be enhanced to ensure that full and accurate information is readily available. Tracking and reporting outcomes from mental health interventions as a patient-centred outcome for individuals with mental health and substance use issues and in relation to key index events such as emergency department presentation for suicidality or overdose, and discharge from inpatient mental health and substance use treatment, will enable better planning and use of resources.

Mandating universal documentation of external causes of injury (e.g. deliberate self-harm, accident, assault) for all emergency department visits and hospitalisations involving injury, and centralised collection and sharing of data will contribute to the effectiveness of responses.

At local level, efforts to make mental health specialism more attractive as a career option can ensure that increased funding is appropriately used.

Community involvement to identify and support mental health issues at an early stage can pay dividends. For example, evidence from telephone outreach activities have proved rewarding. Any moves to work more closely with other services that touch on mental health, such as social services, the police, and education, will also pay dividends (Bevan Commission 2021).

In summary there are three foci relating to more effective intervention to prevent and treat mental health:

- Supporting local health systems to address mental health inequalities;
- Improving the quality and flow of data to inform intelligent insights and decision making to advance mental health equalities;
- Working closely with partners to promote a diverse and representative workforce at all levels of the system.

Chapter 7: Staff Wellbeing

The final theme reviewed here is that which relates to those who deliver care in Wales. The pandemic caused a degree of pressure hitherto unknown for those working to mediate the effect of COVID 19, and regrettably the situation has subsequently eased only marginally. The immediate effects of the pandemic have lessened but the tailback is long and heavy.

Context

Evidence of the state of staff wellbeing in England's NHS is available and is more current than that for Wales, but there is very little data focusing on social care staff in either economy. Therefore the figures cited below are to be taken as indicators only. Arguably the situation in Wales closely mirrors that in England.

Staffing levels in both economies are low when compared with similar countries across Europe, and evidence suggests that the average age of the workforce is increasing. Together they exacerbate issues such as:

- The quality of care available
- A less than optimal trainee / student experience
- An increased training burden on fewer permanent staff
- Impact on research in care settings
- Impact on individual staff experience and well-being.

The 2021 NHS Staff Survey (NHS Providers 2022) has recently been published and the results, whilst not unexpected, are nevertheless deeply concerning. On all subcategories responses are more negative than previously making the overall picture bleak. In particular

- Only 27.2% of English NHS staff think there are enough staff in their organisation for them to do their job properly. The figure was 32.3% in 2019, pre-pandemic and 38.4% in 2020. Ambulance trust staff response fell especially sharply, from 36.7% to 20.3% in the last two years.
- 31.1% of staff reported often thinking about leaving their organisation, a four-year high and an increase of 3% since 2019. Similarly, 59.4% of staff would recommend their organisation as a place to work, a 4% reduction compared to 2019 and the lowest for six years.
- One in six (17%) ethnic minority staff in the NHS personally experienced discrimination from a manager or colleague in the past 12 months, the highest level since recording began. Only 44.4% of ethnic minority staff feel their organisations act fairly with regard to career progression / promotion (44% in 2020). That was 14% less than white staff. The difference was 16% in 2019.
- Only 34.7% of disabled staff feel their work is valued within their organisation (down from 39.2% last year). While discrimination experienced on the basis of disability is relatively low (9%), it has increased to its highest level since recording of this metric began in 2018

NHS Providers (England) | ON THE DAY BRIEFING March 2022

Staff recruitment and retention have been problematic for the NHS for some decades and this applies to all grades and specialities. Nursing, though an attractive career option, has traditionally been a female profession, and suffered from high percentages of trained nurses leaving once family responsibilities proved difficult to combine with shift patterns. Roughly a quarter (24 per cent) of UK nursing students who were due to complete their three-year degree course in 2017 abandoned or suspended their studies before finishing (The Health Foundation 2018). Medical Schools' limited access, and long training requirements meant constant shortfalls in trained medical personnel. Support staff frequently found pay and conditions better in other economic sectors, such as retail, and so numbers were hard to maintain (The Kings Fund 2019).

The long-standing solution was to look abroad to fill shortfalls, both from the old Commonwealth countries (African and Caribbean); Far East (Indonesia, Thailand) and from the EU. The Brexit referendum has changed these patterns but recruitment from overseas remains an important strategy to fill workforce gaps across several professions and specialties (UK Parliament 2021).

Central government funding has been squeezed for some years leading to disrepair, poor infrastructure, and worsening working conditions. Recent political developments such as Brexit have caused many trained and experienced staff to return home or to emigrate to places where terms and conditions are more favourable. Currently nurse vacancies stand at 40,000 in England; with doctors at similar levels; 1 in 17 posts unfilled (Guardian 04.03.22). The situation in Wales is similar and promised increases in training places have proved difficult to create.

In England, the Junior Doctor Contract 2014 caused short term and longer term breakdowns in relationships between the medical profession and government [NHS Hot Topics | Junior Doctor Contract and Strikes – the MSAG](#) -. Although Wales did not suffer such a breakdown as in this case, there are indications that relationships are not as sound as they might be. Lack of trust is ubiquitous and job satisfaction particularly in primary and community care is at an all-time low (Guardian 28.02.22).

Workforce planning appeared to have moved higher up the agenda to be given the attention it deserved in 2020 with the publication of the NHS Plan (2020) for England. Workforce shortages were already being felt to have impacted on patient safety and a sense of urgency prevailed.

“Staffing is the make-or-break issue for the NHS in England.” (King's Fund 2020)

The pandemic changed everything; planning stalled and has not restarted. Morale plummeted as the challenges of dealing with the consequences of the pandemic took hold. Although focused on the problem in England it was also the case in Wales that action was seen as urgently required. Reports from The Welsh NHS Confederation (2021) and a recent report from Public Health Wales (2022) summarise actions that were taken by the NHS and employers more widely to support their staff.

Exacerbating Factors

The recent Staff Survey also found that:

- 57.2% of staff reported working additional unpaid hours, a 1.9% increase from 2020, while 36.8% reported working additional paid hours, a 2.8% increase from 2020.
- 43.2% feel able to meet the conflicting demands on their time, a 4% decrease from 2020 and the lowest for five years.
- Only 23.5% of staff say they never or rarely have unrealistic time pressures (25.2% in 2020).

NHS Providers | ON THE DAY BRIEFING March 2022

Although difficult to pinpoint accurately due to varying conditions in workplaces, staff numbers and wellbeing are broadly affected by many causes including:

- Financial cutbacks and resource pressures in the years leading up to the pandemic
- Failing infrastructure not fully addressed
- Political pressures because of constant reconfiguring of service delivery
- Failure to address issues around recruitment and retention manifested as plugging gaps by recruiting from external sources
- Relationship failures with central government in England resulting in many trained medical staff seeking jobs abroad

Once the pandemic struck additional pressures emerged such as

- Perceptions of disorderly supply of PPE
- Lack of PPE and proper training in donning as potential causes of healthcare worker infection
- Uneven impact of COVID 19 related deaths amongst ethnic workforce
- Requirement to self-isolate if testing positive resulted in high proportion of sickness absence and consequent impact on remaining workforce
- Mandatory vaccination requirement and threat of dismissal

COVID 19 may have arguably introduced an unsafe culture that prevented workers from expressing safety issues voluntarily. The price of poor communication poses a threat to patient safety and may lead to public distrust.

Impact

In terms of mental and physical wellbeing

- 38% of staff find that work is often or always emotionally exhausting, 34.3% are often or always burnt out due to work, and 31.1% are often or always exhausted at the thought of another day at work. These are new questions this year and so have no trend

comparison, but results are worryingly high, with results for ambulance staff markedly worse.

- 30.8% of staff experienced musculoskeletal issues due to work in the last 12 months, the fourth year of consecutive increases in this metric, and 1.4% higher than 2020.
- After two years of working throughout the COVID 19 pandemic, measures of staff morale in the 2021 survey show downward trends:
- 31.1% of staff reported often thinking about leaving their organisation, demonstrating a four-year high that is over 4% higher than in 2020.
- 22.9% of respondents stated that they would likely look for a job at a new organisation in the coming 12 months, which is also the highest rate in four years.
- 16.6% said that they will leave their organisation as soon as they find an alternative role, which is again the highest rate in four years.

NHS Providers | ON THE DAY BRIEFING March 2022

So in the four nations of the UK we've seen people deteriorate to the point of cardiac arrest on the back of an ambulance. We've seen people miscarry on the back of an ambulance. We've seen people who essentially have needed critical interventions like dialysis, where they've attempted to wheel a dialysis trolley onto the back of an ambulance. We are seeing people waiting on the back of ambulance for 30 hours. And there's a real physical injury here, but there's also a moral injury. To staff who are just beside themselves..... you only need to talk to staff who are sat there with people who are confused or they're in pain or they're mentally unwell. And so this is not like sitting in, you know, nice settings with a cup of coffee. This is the most stressful. So I think in terms of harm, the harm to patients and then there's harm to staff. And that for me feels like very real.

Dr Maxine Power, Executive Director of Quality, Innovation and Improvement, North West Ambulance Service

Approaching the pandemic without a full set of tools in the armoury has proved devastating for the service and for those who deliver it. Frontline staff have demonstrated increased levels of anxiety and fatigue from a multitude of factors e.g. managing a little-understood disease, long hours, increased patient load, psychological stress from having to make difficult triage decisions and from the death of patients. Absence due to sickness is at an all-time high.

There have been shortfalls in the delivery of PPE; quality of PPE has varied and this has been perceived as resulting in many infections amongst staff, who were then required to self-isolate, appearing to add further pressure on colleagues battling to continue to provide care. There is a suspicion that COVID 19 infection amongst patients has been frequently hospital acquired (expert interview).

Social care has been particularly badly affected with large numbers of COVID 19 deaths in care settings including many care staff. Mandating vaccination as government policy has resulted in many staff feeling unappreciated. Minority ethnic staff have been particularly hard hit with incidences of discrimination and blame.

The interviews with service based experts reflect that, as we emerge from the pandemic, there is a deep sense of demoralisation amongst staff coupled with exhaustion and not infrequently a sense of unease about the quality of care that it is now possible to deliver. Long delays and queues for treatment add to the frustration and fear for the future of the service.

Retention of staff has suffered; there are both regional variations and specialty variations. For example, in mental health nursing the workforce vacancies are high whereas in community nursing it is lower though still unsatisfactory; GP numbers are in decline.

Physical and mental stresses impact on patient care and safety and the prognosis for rapid improvement is dire.

Interventions

Intervention must be ambitious, long term and widespread; at strategic as well as at policy levels; national and local. Workforce planning was being attempted pre-pandemic but became lost in the chaos; now it requires urgent attention. A piecemeal approach is not enough, but amongst other things attention must be given to:

- Sustained investment and policy action on domestic supply, including a marked improvement in retention of the current nurse workforce
- Coordinated, ethical and effective international recruitment will also be required but this should not be seen as an alternative solution
- The pandemic has increased the sense of urgency to improve conditions for minority ethnic staff who were particularly badly affected, losing their lives in greater numbers than any other group
- Diversity in recruitment and promotion

At local level attention should focus on:

- Better support for staff wellbeing
- Tackling of specific areas of concern such as bullying and harassment
- Prioritise developing cultures of compassion, inclusion and collaboration

Chapter 8: Cross-cutting themes

In preceding chapters five distinct themes have been identified, described, and assessed in terms of the increased harm to patient care that they have contributed to the post-pandemic landscape. Taken together, the five themes provide a holistic picture of harm in the NHS and social care. Arguably they are the aspects of patient care that warrant most attention in the short-medium term. A case can be made for addressing these themes singly, but to address them as a whole rather than in part, recognises the syndemic nature within which they interact and reinforce each other.

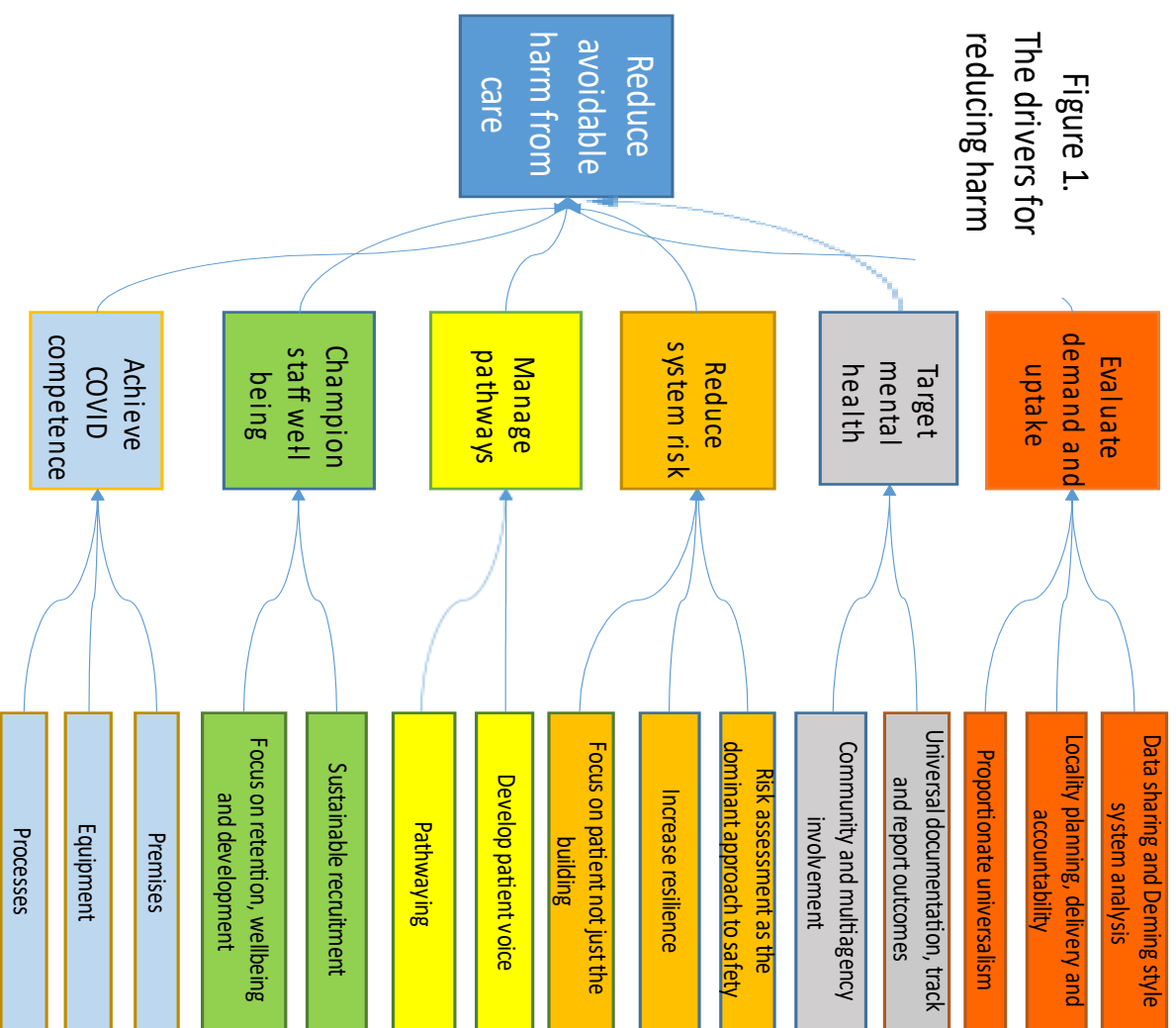
The concept of a syndemic relationship is a powerful one, highlighting the idea that two or more factors work together to exacerbate a situation (the whole is greater than the sum of its parts). Therefore, there is an argument for addressing responses to the harms represented in the five themes in totality; addressing inequality for example, impacts and reinforces benefits to the mental health of the community. And tackling any of the four patient related themes, i.e. inequality, mental health, delays and systems failures, will improve staff wellbeing by encouraging greater job satisfaction, making for a seamless response.

In relation to suggested interventions, four messages emerge.

- a. All areas of harm are exacerbated by shortfalls in resource allocation and use and funding gaps cannot be entirely plugged. This applies particularly to those harms that impact on the direct delivery of care such as in the field of mental health or managing COVID 19 infections, but delays in accessing treatment and some systems failures are second order results of resource shortfalls
- b. There is a great deal of data but it is often organisation specific, not shared and lacking in granularity. It needs to be openly shared between local organisations as “data for improvement”. It must be analysed to generate locally relevant hypotheses for change. Continual evaluation must draw on data reflecting uptake, diagnosis, treatment, disease outcomes, and quality-of-life outcomes with a particular focus on the risk of reinforcing inequalities and digital exclusion.
- c. A great deal of harm results from the passive nature of service response to expressed need. The LSE-Lancet Commission and Marmot report both point to approaches for evaluating uptake, forming consensus about risk and benefit, and acting to change the nature and level of service delivery.

The relationship between the themes and potential interventions is summarised in the Driver Diagram (Figure 1).

Figure 1.
The drivers for
reducing harm



Activities

- Develop multiagency policy to target social determinants of health
- Establish locally appropriate targets for uptake
- Develop locally appropriate service delivery
- Target screening and case finding for cases and groups where uptake is low
- Develop expertise and mapping for digital inclusion, ensuring alternative access for some services and some people
- Support local health systems to address MH inequalities; Improving MH data flow
- Promote a diverse workforce
- Locality based data and information sharing to highlight harm, clarify priorities and develop/test solutions
- Apply "For us" model to obstetrics and other similar teams which need to develop high reliability for unscheduled events
- Assess risk in home settings for patients with multiple needs, develop risk assessment and test solutions
- Manage unscheduled and planned care processes across organisational boundaries using agreed pathways
- Involve patients in simplifying complex care according to personal priorities
- Better support for staff well being
- Tackling bullying and harassment
- Prioritise compassion, inclusion and collaboration
- Develop and activate planning for epidemics covering premises, equipment and processes including staff training

Chapter 9: Reflections on the process

This report has used the IHI 90-day learning cycle of activity to identify the key system-wide safety and harm challenges within health and social care in Wales. It applied three phases of work, from Scanning, through Focus to Summarising and Dissemination. How appropriate was that structure to the purpose in this exercise? The authors offer the following reflections.

- Is the model fit for purpose?

IHI describe their model as “.. *one of our primary engines for research and development at the Institute. This process is designed to provide a reliable and efficient way to research innovative ideas, assess their potential for advancing quality and safety in health care, and bring them to action.*”

The essence of the model is rapid mobilisation of knowledge so that it can be applied to benefit practice. Mobilization and urgency are both drivers for Improvement Cymru in commissioning this report. Unlike the IHI model, however, this is an academic report written by university-based experts and mobilisation in this case refers to action by Improvement Cymru working with its service partners rather than, as in IHI’s case, a direct relationship with care settings. So, there is another step before knowledge can reach practice.

- Phase 1 – Scanning

Based on research and interview, the first 30 days of the IHI model is intended to result in a description of the current environment, a set of prevailing theories and mental models, an annotated bibliography and detailed specifications for innovative solutions. In practice, this phase was highly successful in producing a description of the current state, a bibliography and theories about cause and solution. Full development of specifications was limited because available data were at best patchy although wider consultation in later stages suggests that this can be improved. Those experts who were available for interview added invaluable insight, perspective, and sense-making. But many were not available within the project timescale. The result of Phase 1 was 5 clear themes but it cannot be said that it achieved detailed specifications.

- Phase 2 – Focus

This phase is intended to use prototyping and testing to move from descriptive to normative models. Again, if this is interpreted as models to drive changes to clinical practice, then it may be seen to have failed. However, that was not the goal here. The intention was to test the emerging themes to understand whether they would support Improvement Cymru in working with service partners. A workshop with service colleagues delivered validation and new insights into the emerging themes, allowed the report authors to develop material including a driver diagram and incorporated suggestions.

- Phase 3 – Summarise and Disseminate

The IHI model culminates in *“.. a summary (of) materials .. to enable development and testing of possible prototypes. Additionally, a synthesis of the work is required in order to hand off the final product to a testing or implementation team.”*

This phase has resulted in the current report. Final drafting has derived considerable benefit from an informal consultation with service partners and their comments have also given Improvement Cymru clear messages about how the service want to take forward the learning.

- Overall

The report has been a pragmatic exercise to translate emerging knowledge in rapid time. It has blended academic rigour with a respected tool for achieving consensus. It must be accepted that this is the first step of a two-step process but, with the observations offered above, the authors would argue that the model has delivered its intended product, to a high standard of rigour and within the required timescale.

What is required now is for Improvement Cymru to develop new 90-day cycles, working with locality-based improvement teams to apply this knowledge to local contexts and priorities.

Chapter 10: Recommendations

- The centrality of data and its value in decision making cannot be over-emphasised and health board and trust policy should stress the benefit of all staff working at a strategic level having a good working knowledge and competence in its collection and analysis
- Given the close relationship between the causes and outcomes of the five themes identified, policy direction should seek to capitalise on overlaps such that interventions focused on one theme will benefit other themes
- This report is addressed at a high level of abstraction in terms of the “harms” it discusses and a useful next step would be to focus on drilling down to specialist level when planning interventions
- The report can usefully be given wide circulation and used to assist staff at all levels to recognise and articulate issues that warrant attention
- Recognising that other national health and social care services face similar issues it is recommended that effort be made to share data and collaborate towards finding solutions to the issues raised in this report

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