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Doing Things Differently

Tackling the Backlog in the Aftermath of Covid-19

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At the peak of the pandemic, one in three of all hospitalisations in Wales were due to Covid-19.

Over half a million people are now waiting for treatment. What are we going to do differently?

Please note: this paper should be read alongside the Bevan Commission publication 'Doing Things Differently: Supporting Service Development in the Community'. Both papers will be followed up with detailed examples of how service change can be achieved and accelerated across Wales through a series of 'How To' guides.

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Executive Summary

Tackling the backlog in the aftermath of Covid-19

Finding ways to reduce the huge and continually increasing number of people on a hospital waiting list in Wales is one of the biggest challenges facing the NHS. Before the Covid-19 pandemic hit, the backlog was already an issue. One year on, it has escalated. There are now almost 550,000 waiting for treatment - this is almost 1 in 6 people in Wales – and 217,655 of those people have been waiting more than 36 weeks, a rise of 192,021 since February 2020.

Tackling the backlog is a priority and will require bold, decisive action. We have do things differently if we are going to find a way forward and this paper will suggest possible solutions including the following:

Bold Transformative Leadership: Tackling the backlog will require bold leadership, imagination and drive to transform health and care in Wales. Covid-19 has shown the NHS can adapt and adopt innovative practice at pace when circumstances dictate it. The post Covid-19 environment requires the same mind-set and action moving forward.

Improving Quality and Efficiency: The system was not coping before the pandemic hit. There were many practices that added little or no benefit, including, for example, patients attending hospital appointments that could have been done remotely - or even not at all. Also, traditional ways of working and running services (9-5, Monday to Friday) need to be updated to allow the productive capacity of both facilities and staff to be fully realised. Alongside this is the need to adopt and spread best practice consistently and as quickly as possible. Moving forward, accountability for delivery of the required changes needs to be clear and driven with the same urgency that we saw the NHS respond to the Covid-19 pandemic.

Transforming Outpatient Services: Covid-19 has provided positive opportunities for the transformation of outpatient services. These must be urgently built upon, resetting outpatient services as "digital first" and eliminating all unnecessary appointments. This would require a fundamental review of follow up care, with Patient Initiated Follow Up (PIFU) and See on Symptoms (SoS) replacing traditional routine follow up appointments. Virtual care should be offered as the first choice but with a blend of options to ensure those who are digitally excluded are able to access the care they need.

Technology Embedded Care: Technology must be embedded and integrated between the various parts of the health and care system, with patients and the public, and in the planning and delivery of care. To enable this to happen technology must be easy to use, inter-connected and reliable. This requires further development of the single clinical record and much greater patient access to their results.

Establishing NHS Wales Regional Specialist Centres: Dedicated elective treatment, staff and diagnostic capacity is required to use available skills and resources to best effect. To do this, NHS Wales Regional Specialist Centres will need to be established to deliver a service to a regional population. Health Boards will need to work collaboratively to ensure they are established at pace and run effectively. Where elective services remain within hospitals that also deliver unscheduled care, there needs to be a strict separation of the bed stock. Innovative solutions to self-management and rehabilitation needs to be an integral part of all these services (see 'Supporting Service Development in the Community' paper for further details).

Clinical Leadership and Prioritisation: Many people will be on a waiting list with no immediate prospect of a surgical, or other secondary care based intervention. A clinical approach to risk stratification and prioritisation of cases to avoid harm to patients while waiting is needed. This should be determined by evidence of clinical effectiveness and likelihood of good outcomes as the basis of the management of the backlog. This means that Referral to Treatment Times

(RTT) can no longer be the main criteria for how patient treatment lists are constructed. As part of that, the provision of support and alternatives to surgery (where possible) needs to be available. We have to work proactively with patients to help them manage and minimise their symptoms through greater self-care, use of technology, support groups and community facilities.

Creative Staffing Solutions: In increasing proactive capacity, staffing is more often the critical constraint than physical space. NHS Wales recruitment, training and retention strategy has to learn from Covid-19, identifying opportunities to use all skills and resources effectively, including patients and the public. It will need to adopt more flexible roles and ways of working, and be resourced and focused enough to deliver.

Sharing Responsibility for Population Health: Wales has one of the unhealthiest populations in Europe. People need to have more control over the choices available and be involved in shared decision making about their own health and well-being. We will all have to take more responsibility for our health and be supported and encouraged to do so. The best chance of success is by taking a 'whole system' approach that enhances the infrastructure in communities to support people. Health, social care, local government, third sector and businesses will need to work together to deliver this.

Introduction

Before the pandemic, Wales already had a major problem with waiting times. In February 2020, there were 461,809 patients waiting for treatment with 25,634 waiting over the 36 weeks (target-zero) and 6,722 waiting over a year[1]..The Covid-19 crisis has severely impacted the backlog in elective care, with a substantial and sustained reduction in operational capacity, only partly mitigated by a reduction in referrals. The reasons for the reduction are :

- Staff being reassigned to deal with emergency demand
- Elective care facilities being reassigned to meet emergency demand
- Staff sickness or self-isolation
- Infection control measures
- A need to minimise patient footfall into hospitals

Planning for recovery needs to take place now and we need to base our thinking around the Four Prudent Principles and Value Based Care, as previously identified within the Parliamentary Review[2] and subsequently 'A Healthier Wales'[3]. This underpinning philosophy and approach to problem solving has been demonstrated to be even more valid in a Covid-19 environment and will be post Covid-19 too. Working with people, using all skills and resources to best effect, doing only what is needed and using evidence transparently will be crucial in moving forward. We must also take account of the following:

- **Not simply returning to services as 'normal'**: We should not expect to return to the service we had before Covid-19 as the system was already not coping. There were many inefficiencies, and unwarranted variation in care and ways of working, that we should be at pains to avoid perpetuating or recreating.

1. Stats Wales. Available from: Patient pathways waiting to start treatment by month, grouped weeks and stage of pathway (gov.wales)
2. The Parliamentary Review of Health and Social Care in Wales: A Revolution from Within: Transforming Health and Social Care in Wales. Crown 2018 [Online]
3. A Healthier Wales: our long term plan for health and social care June 8 2018. [Online]

- **Work rapidly to establish what is high-value care**: We need to know what is important and which elements of care add little or no value to patients. We should then invest resource in the former and stop the latter. This requires the NHS to measure the outcomes that matter to patients and to know the costs and impacts of different parts of the care pathway (a central plank of Value-Based Healthcare).
- **Take advantage to build upon innovation**: There have been many innovations forced on the NHS by Covid-19 and the climate and conditions established are conducive to change. Many of these are to do with managing risk and the use of technology as a transformational agent.
- **Prioritise needs and actively manage demand**: We have to acknowledge that not all health and social care demands can (or should be) met by health and social care systems. Prioritisation will need to be led by clinicians. There will be, for a considerable time to come, a significant mismatch between available capacity and demand.
- **It's everyone's business**: The management of waiting times needs to be a collective responsibility. It should be done as transparently as possible, working with people and professionals in a fair and open way with meaningful alternatives to treatment, self-care and support to manage their condition as best as possible.
- **Do only what it is needed**: More than ever, the NHS and its partners, including patients, should only do what is effective and evidence based - no more and no less. Achieving this requires placing more emphasis on the systematic assessment of evidence based interventions in healthcare.

Context

For the purposes of this paper, we have limited the term 'elective care' to mean the services provided by secondary or tertiary care providers following referral by a GP or other medical practitioner. Currently, this is measured by 'Referral to Treatment Times' (RTT). This is the total time waited from referral to treatment in the NHS in Wales and includes time spent waiting for outpatient appointments, diagnostic tests, therapy services and inpatient or day-case admissions. The data source used throughout (unless stated otherwise) is Stats Wales.

There are many other areas of health and social care that are subject to waits, including but not restricted to, community assessments, mental health, orthodontics and paediatric dentistry. However, these are not currently part of RTT reporting and manageability has dictated our approach given the number of specialties that are covered by RTT.

The scale of the backlog is as follows:

- The total number of people waiting for treatment in Wales as of February 2021 is 549,353.
- The over 36 week waits total 217,655 (target zero) 192,021 more than were waiting in February 2020.
- In February 2021 there were 157,619 people waiting over one year.
- In February 2020 that number was 6,722.
- There are now 4,771 people who have been waiting over two years.
- Around one in almost six people are on a hospital waiting list and almost one in thirteen people have been waiting longer than 36 weeks.
- The total number waiting is 87,544 greater than it was in February 2020 and that figure would be much higher if the referrals to secondary care had remained at pre-Covid-19 levels.

Alongside this, there is also most likely a tsunami of latent demand as we know that:

- GP referrals are down by 31% (423,620 less referrals) Febuary 2020 to January 2021 compared to same period in the previous year.
- Whilst referrals began to increase over the summer, they didn't reach more than 81% of the same month in the previous year (September).
- February 2021 saw only 75% of the referrals made in February 2020.

Notwithstanding this, currently very little 'routine' elective operating is taking place with the NHS having to focus on meeting the emergency demand generated by a combination of the second wave of Covid-19 and traditional 'winter' pressures.

Given the current Welsh Government target for waits over 36 weeks is zero, the scale of the challenge ahead is truly daunting. To put this into perspective, in 2019/20, NHS Wales undertook 77,620 day cases, and 78,209 elective inpatients (the last year data is publicly available from Patient Episode Database for Wales (PEDW)). As of February 2021, there are 112,747 people waiting for an admitted diagnostic or therapeutic intervention. All things remaining equal, a substantial and sustained increase in elective activity will be required, even if referrals remained at those seen during the Covid-19 pandemic (which is unlikely).

NHS Wales was clearly struggling with waiting times well before Covid-19 appeared. In February 2020, there were already 25,634 people waiting in excess of 36 weeks and that number was almost double the figure from the year before. Of these, 8,424 (nearly 33%) were in Trauma and Orthopaedics (T&O). The total number of people waiting more than 36 weeks has grown to 217,655 and 52,173 of them are waiting within T&O.

The scale of the long wait problem requires both clinicians and managers to focus on ensuring that patients do not come to harm whilst waiting. Some conditions may well get progressively worse (and possible life threatening) over time whilst others are more stable in character. This implies the need for both regular review and treatment based on clinical need - not the length of time someone has waited.

Other considerations, such as whether the condition is negatively affecting an individual's ability to work, or care for others, are also more relevant than simply time waiting for treatment. This means that RTT can no longer be the main criteria for how patient treatment lists are constructed.

Recovery will be a long journey. The public and the NHS will need to take that journey together to review 'rights' and 'responsibilities' and challenge the dominant medical 'healthcare' paradigm of the last 70 years, which might be summarised as: the 'patient' is the passive recipient of care determined by 'experts'.

The foundations of that paradigm were set in the great pharmaceutical and surgical innovations that followed World War II, boosted by a sustained period of economic growth and resultant increased healthcare funding. Those gains were very real, but they also came at a price (beyond an ever-increasing share of GDP on healthcare) and growing expectations. They created a treadmill for the public and NHS alike. For the NHS, the treadmill was very visible in the stream of patients seeking treatment and associated waiting lists. For the public, the treadmill has been more subtle, a growing dependency on 'medical' intervention to solve every problem.

Linked to this is increased life expectancy for many. There have always been a few people who have lived over 80, 90,100 years but the difference now is that many more do so. One in five of the population of Wales is over 65 and this is predicted to increase to 36.6% by 2041. It is also expected that those over 85 years will increase by 127% by 2039[4].

One illustration of the impact of this upon the system in Wales is the rise in prescriptions from 7.6 per person in 1973 to 25.4 in 2019/20. It has more than doubled per head since 1996[5].

The turmoil Covid-19 has brought and will continue to bring, necessitates a different approach. The NHS will have neither the capacity, nor the finances, to rapidly address the disparity between supply and demand. However, that does not mean nothing can be done. The situation can be improved in many ways and the evidence we have considered already provides some of the answers.

4. Stats Wales: national level population estimates by year, age and UK country. [Online]
5. Stats Wales: Prescriptions summary data by year Prescriptions summary data by year (gov.wales)

Evidence: what is already known?

In preparing this paper, evidence of current practice, innovative changes including Bevan Exemplars (both pre and during Covid-19) and best practice recommendations have been drawn from a variety of sources (see Appendix iii. and Appendix iv. for references). There are two things of particular note in terms of the evidence base for the changes set out in this paper.

Firstly, that best practice in terms of how elective care services should operate is, for the most part, subject to well-established guidance from the Royal Colleges, clinical work streams within the All Wales Elective programme and Audit Wales. The issue is not that the best way to organise service delivery is unknown, but rather that implementation across NHS Wales has been inconsistent in both pace and application. The same applies in maximising the best use of technology. This paper is not making radical, new proposals. There are no (previously undiscovered) approaches that deliver a 'magic bullet'. Rather, this paper is making a clear case that what is known to work must now be implemented - in full and at pace.

Secondly, there is an evidence base for establishing high volume elective/diagnostic units. Hospitals are largely fixed cost operations. Those that treat more patients can spread their fixed costs across a wider activity base, reducing the average cost per patient. Higher volume centres also provide more flexibility in choosing asset configurations and in organising resources, e.g. through division of labour and specialisation[6,7]. These improved asset and process structures allow the corresponding activities to be performed more effectively and efficiently, which should result in lower costs and higher numbers of patients treated.

6. Staats B, & Gino F (2012) Specialization and variety in repetitive tasks: Evidence from a Japanese bank. Management Science 58(6):1141–1159

7..Argote (2013) Organizational learning: Creating, retaining and transferring knowledge (New York: Springer Science & Business Media), 2nd edition.

Innovative Practice: Sustaining elective surgery at University Hospital of Wales (UHW), Cardiff during the pandemic

At UHW changes were made to make elective surgery a discrete, ring fenced set of services even though they operated within UHW. Over 5000 patients underwent general anaesthesia and surgery by the end of February 2021, without a single case of COVID, no Cl. difficile, MRSA, MSSA and no deaths. Significant system benefits have been realised, including a drastic reduction in cancellations, increased bed and theatre utilisation, and improved staff morale.

A higher volume of patients also leads to statistical economies of pooling. Higher operating volumes reduce the coefficient variation of patient arrivals, meaning that service systems can achieve the same service level with less surplus capacity. At higher volumes there are also more opportunities for individuals and organisations to learn, and there is evidence that with additional accumulated experience, individuals and organisations become more productive and effective in completing tasks[8,9,10]. Quality improvements have also been attributed to organisational learning at high volumes[11,12,13].

8. Staats B, & Gino F (2012) Specialization and variety in repetitive tasks: Evidence from a Japanese bank. Management Science 58(6):1141–1159

9. Pisano G, Bohmer R, & Edmondson A (2001) Organizational differences in rates of learning: Evidence from the adoption of minimally invasive cardiac surgery. Management Science 47(6):752–768.

10. Nembhard I, & Tucker A (2011) Deliberate learning to improve performance in dynamic service settings: Evidence from hospital intensive care units. Organization Science 22(4):907–922.

11. Li G, & Rajagopalan S (1998) A Learning Curve Model with Knowledge Depreciation. European Journal of Operational Research 105(1) 143-154

12. Diwas KC, Staats B & Gino F (2013) Learning from My Success and from Others Failure: Evidence from Minimally Invasive Cardiac surgery. Management Science Vol 59, No 11, pp 2435- 2449

13. Ramdas K, Salah K, Sten SN & Liu H (2016) Variety and Experience: Learning and Forgetting in the Use of Surgical Devices. Management Science Articles in Advance pg 1-19.

The medical literature complements the management literature providing strong evidence of a positive association between volume and clinical outcomes, across a variety of clinical conditions and surgical procedures[14,15]. Providers that see a high volume of similar patients not only gain experience and become more effective in applying a given standard of care, they also are more innovative and develop new routines for improving service delivery[16,17].

14. Begg C, Cramer L, Hoskins W, & Brennan M (1998) Impact of hospital volume on operative mortality for major cancer surgery. JAMA 280(20):1747–1751.

15. Birkmeyer J, Siewers A, Finlayson E, Stukel T, Lucas F, Batista I, Welch H, & Wennberg D (2002) Hospital volume and surgical mortality in the United States. New England Journal of Medicine 346(15):1128– 1137.

16. Porter and Teisberg (2006), Redefining health care: Creating value-based competition on results (Boston, MA: Harvard Business Press).

17. Christensen C, Grossman J, & Hwang J (2009) The Innovator's Prescription: A Disruptive Solution for Health Care (New York: McGraw-Hill).

Discussion and Key Findings

There are five areas discussed in this section including:

- Outpatients
- Digital Infrastructure
- Dedicated elective/diagnostic treatment demand and capacity
- The critical importance of Staff and the Public
- Organisational Structure

1. Outpatients

The proposals in this document mirror many made over time by bodies such as the Planned Care Programme for Wales, the Royal College of Physicians and the Royal College of Surgeons. The problem is not that there is no sense of how things could be different, but rather that prior to Covid-19 change had often been isolated to individual pockets of services and enthusiastic pioneers. One real benefit of Covid-19 has been the widespread and rapid adoption of new ways of working previously discussed (often for years). We must now build on this and not simply regress back to traditional ways of working, especially as specialities may have to operate under capacity for a considerable time into the future[18].

Historically, the vast majority of patient interactions with secondary care have been through outpatient clinics. Excluding A&E, **outpatient care represents about 85% of all doctor-patient interactions in hospital**[19]. Those interactions, although sometimes vital, are often a frustrating experience, and too often even an unnecessary one. This includes; uninformative appointment letters, the wait for the appointment, cancellations and new dates, the journey to hospital (often at inconvenient times), parking and waiting in the clinic. In some cases, the entire

18. Royal College of Physicians (2019) Returning the NHS to an even keel RCP London

19. Royal College of Physicians (2018) The Future: Adding value through sustainability Outpatients - The future - Report (2).pdf

process is repeated and the visit barely lasts longer than it takes to say, "All OK, we'll see you again in [x] months". This model is no longer fit for purpose.

The RCP 2018 paper, Outpatients: the Future Adding Value Through Sustainability[19], highlights that in 2016/17 NHS Wales had undertaken 3.1m outpatients appointments but also had a 9.4% DNA rate whilst England's DNA rate was 6.7%. Whilst the current position is not known, (Stats Wales only has figures for 2018/19[8] when the overall DNA rate was 7.7% -257,032 non attendances). The reporting lag notwithstanding, this gives a flavour of the scale of Outpatient activity and its problems. It is also worth noting that NHS Wales had undertaken 16,000 fewer new outpatient appointments in 2018/19 than it had in 2016/17 and there was a 7% DNA rate for new outpatient appointments.

The Bevan Commission endorses the best practice that the RCP (and others) have previously produced, but suspects that the changes to historical practice can be even more dramatic. Moving forward, NHS Wales could deliver significant improvements in both the productivity and quality of outpatient services by ensuring that:

- Many patients will not need to be 'seen' at all. The mind set and actions that currently take place as 'outpatients' are transformed around the needs of people to support self-management. Shared responsibility for health will empower patients to determine when they may need help and support, and be able to access it as and when needed.
- The default approach for interactions between patients and the NHS should be digital. This is not about excluding those who cannot use technology but rather about freeing up time and resources to ensure those people can be seen face to face - when required. At least 84% of the UK adult population own a smartphone[20]. However a significant (but reducing number) of people are unable to use, or do not have access to the required technology and will still need to be contacted and communicated with. They cannot be simply excluded so a blended approach will be needed.

20. Mobile internet statistics - 2020 | Finder UK).

Taken together, we believe that a significant percentage, around 50%, of outpatient appointments will no longer be necessary. That percentage will vary between specialties, but the opportunity cost this offers is significant. We also believe there remains potential for Allied Health Professionals to play a greater role in proactively managing health conditions outside of the hospital, to avoid referral to secondary care, particularly in orthopaedics.

2. Digital Infrastructure

NHS Wales has made considerable progress in its use of technology and Wales is now on the cusp of embedding a digital infrastructure as the foundation of the way it both interacts with the public and delivers services. The word 'cusp' is deliberately used. We wish to convey two important points.

Firstly, the core functionality for interacting digitally with the public is either in place, or could be put into place, within the next twelve months or so. This is not about a long-term plan of using (in development) software. For the most part, this is about embedding and maximising its use as core practice, using established applications. Further training and support may be needed to ensure this is achieved.

The second point however is that the use of such applications across NHS Wales to date has been 'patchy'. The saying 'The Future is here, it's just not evenly distributed' applies here. There has to be a national commitment and required funding to the establishment of this core digital functionality across health and social care. Welsh Government have made significant investment into establishing that digital infrastructure[21] but further investment will be needed, alongside reinforcement to all parties that this will be the new standard operating model for health and care in Wales. The use of technology has to move from the province of the enthusiasts to be mainstream working practice and Digital Health and Care Wales will have a responsibility to lead this alongside the recently published Digital Strategy for Wales. Technology should be made simple to use and systematically

21. Gov.Wales (2019) £50 million and new body to transform digital health and care services in Wales | GOV.WALES]

applied, working with people and professionals to make this easy, to ensure everyone is fully utilising its potential.

The establishment of a core digital platform/interface between services and the public will provide a foundation for an interactive relationship between the NHS and the public based on a genuine partnership. Central to this is the funding and proactive implementation of the Digital Strategy for Wales and the Digital Services for Patients and the Public programme. This will provide an interface that allows a number of software products to be informed, accessed and updated by both the public and NHS. This will allow:

- Patients to manage and monitor their own self-care, with support and access to other tools and resources.
- Patients to schedule and manage their own outpatient appointments.
- Patient to access to their electronic medical records from both primary, secondary and independent care, and the ability to add to it and share it securely with whom they choose (typically other clinicians, family and carers).
- Receive information, reminders and specific health advice including care plans and guides.
- Allow the capture, sharing and storing of Patient Recorded Outcome Measures.
- Facilitate more asynchronous care and data collection.
- Promote two-way communication between patients and health and care teams.

Systems should start with the patient and work backwards, linking the entire record of their encounters with the health and care system and making it accessible to all the participants in the care pathway. Those systems must deliver, (with appropriate safeguards), accessible data that can be used for checking, evaluating and predicting health and care effectiveness and demand.

It is important that the technology used in Wales is ‘open architecture’ – that is that common open standards are used that allow interoperability between different pieces of software and that allows ‘third party’ software to link to the

core system. This is important because without it, you limit accessible applications and you get issues with data sharing, logging on etc.

The NHS should not limit itself to only using software that it has developed. There are many very useful, commercially available applications and the private sector is often better equipped to develop these applications. This is particularly true of patient-facing applications where agility, user experience and support are critical to success.

Because the delivery of telemedicine is undertaken digitally, it allows measurement of the extent to which patients are willing to try a particular therapy and if so, how long they adhere to it. This is a crucial factor in determining how effective new therapies can be in improving outcomes. Supplementing telecare with other tools such as apps, 'chatbots' or wearables can further enhance the ability of providers to study engagement. Capturing and analysing this data will help services continuously improve the way they deliver services and help promote a culture of being a 'learning' organisation.

3. Dedicated elective/diagnostic treatment demand and capacity

Appendix 1 shows the wait times for the Top 11 specialities in Wales as of February 2021. The top three specialities - Trauma and Orthopaedics, General Surgery and Ophthalmology - make up over 38% of all waits and 50% of all 36 - week wait cases (109,049 cases). Around 15% of all patients are on a Trauma and Orthopaedics waiting list and that speciality makes up almost 24% of all plus 36 - week waiters. However, looking at Patient Episode Data Wales (PEDW) reports (Appendix 2) 2012/13 to 2019/20 (latest data available) we see that:

- 2012/13 to 2019/20 Welsh Providers total Elective activity (Inpatient and Day Cases) has gone up by a relatively modest 0.95% a year. Emergency admissions have gone up by 2.04% a year.
- T&O Activity in 2019/20 was actually down on 2012/13. There were 11,115

less elective inpatient cases in 2019/20 than in 2012/13 and 5,025 fewer day cases undertaken by Welsh NHS providers whilst median wait times increased by 70.7 days. Emergencies T&O cases went up by 1743 over the same period.
- Both hip and knee activity dropped in 2019/20 compared to the year before. There were 800 fewer hips and 759 fewer knee cases. Both median and mean LOS went up for Hip Surgery in 2019/20 compared to 2018/19. Up 0.3 days (to 9.2 days) for mean LOS and 1 day (to 5 days) for median LOS.

We believe that a mixed model of elective care delivery is urgently required to help address the backlog and improve the overall quality of care generally. More complex tertiary care needs to be delivered at regional, or even in some cases, national level to get appropriate economies of scale, including the ability of clinicians to cross cover for leave. Large volume/low clinical risk procedures (such as ophthalmology, orthopaedics, general surgery) are also amendable to delivery at stand-alone regional centres. For those cases that need to remain in acute hospitals, it is extremely important that they work as a separate protected bed unit (even if physically contained within the same buildings as the rest of the hospital).

Audit Wales have previously highlighted poor theatre efficiency[22] and high levels of non-clinically related cancellations. Most theatres are empty in the evenings and almost all at weekends. NHS Wales has an opportunity to use its existing capacity and capability much more efficiently particularly in helping to reduce the backlog.

Opportunities exist to maximise expertise, staffing and economies of scale by establishing Regional Specialist Centres. This may mean some existing hospitals (that currently undertake both emergency and elective work), should be re-purposed as specialist, elective-only centres. Health Boards need to agree the location and staffing of these units and commit to this pattern of service provision as a national approach. To help counter any concerns that access to

22. Wales Audit Office (2016) Operating Theatres: A Summary of Local Audit Findings. Operating Theatres: A Summary of Local Audit Findings | Audit Wales (wao.gov.uk)
23. Royal College of Surgeons of England (2007). Separating emergency and elective surgical care: recommendations for practice. London: Royal College of Surgeons England [Online].

these centres would be skewed to a particular Health Board population, it may be worth considering establishing these as NHS Wales Regional Specialist Centres (pan Health Board) with special arrangements for governance, accountability and performance.

In 2007, the Royal College of Surgeons of England (RCS)[23] recommended separating elective surgical admissions from emergency admissions. The three main reasons to have physically separate elective capacity/units are:

- Beds, staff and theatres are not taken over by unplanned emergency caseload.
- Optimisation of operational flow by concentrating on doing a limited number of things well. Dedicated units are more likely to adopt and develop elective best practice, such as delivering as much surgery as possible on a day case basis.
- Better infection control (including in relation to Covid-19).

We believe that a mixed model of elective care delivery is urgently required to help address the backlog and improve the overall quality of care. More complex tertiary care needs to be delivered at regional, or even in some cases, national level to get appropriate economies of scale, including the ability of clinicians to cross cover for leave. Large volume/low clinical risk procedures (such as ophthalmology, orthopaedics, general surgery) are also amendable to delivery at stand-alone regional centres. For those cases that need to remain in acute hospitals, it is extremely important that they work as a separate protected bed unit (even if physically contained within the same buildings as the rest of the hospital).

4. The critical importance of Staff and the Public

The relationship between the NHS and the Private Sector

Throughout Covid-19 the NHS has made considerable use of the private sector (where it exists in Wales) to ensure some elective care can be delivered. Opportunities to forge a more strategic partnership between the two sectors to help deliver service solutions for the public should be further explored.

Covid-19 has placed a great mental and physical burden on many NHS staff and reinforced the importance of both adequate staff numbers and their welfare to the delivery of services. As we emerge from the pandemic, we should be mindful of the demands on staff to date before moving headlong into tackling the backlog. Availability of staff is likely to initially drop once the Covid-19 situation becomes more manageable, not just because of staff sickness/ recovery but because there will be a 'backlog' of staff annual leave to be honoured and time to catch up on disrupted training and study leave. Going forward, excellent staff retention coupled with aggressive, sustained recruitment, are required alongside ensuring that the available staff resource is utilised most prudently.

There remains an opportunity to bolster the 'workforce' by maximising the assets

Innovative Practice: Harnessing the potential of the 'retired' workforce.

Many clinicians retire from the NHS every year, some of whom are only in their 50's. Some may be interested in part time roles, with greater flexibility of work hours and workplace which could be utilised to:

- Follow up outpatients which could be reviewed remotely
- Review patients currently awaiting an outpatient appointment to assess the evidence supporting the referral straight to a clinical intervention or whether further information/referral to a complimentery service is the appropriate action.
- Develop clinical pathways to streamline referral and assessment processes.

of people, patients, communities and the third sector, alongside ex-staff who have recently retired and may wish to continue to undertake some NHS or voluntary work. The last year has shown that a great deal of clinically related work can be undertaken with more flexible and innovative approaches.

Actively engaging the public in designing and developing services to incorporate their ideas and views on the challenges will be important to help find the best solutions to of long waiting lists and engage wider understanding of the options. For example, people may have to travel further to obtain elective treatment, but by doing so will be treated faster. This will be the new reality. If the public understand why the traditional pattern of services are being changed and the benefits it will bring, they will demand that they are implemented as quickly as possible.

5. Organisational Structure

Whilst undertaking the background research for this paper we attempted to map out the various organisations and groups of people that have responsibility for taking some part of the work forward. We found this to be overly complex, with a multitude of working groups at Health Board and national level. Many have been in place for years, others more recently and this is further compounded when considering where accountability for delivery lies, which appears less clear in practice than on paper. The plan to establish an NHS Executive function is (in part) a recognition of the need to address this deficit and to streamline form and function. In the meantime, we would suggest a review and rationalisation of current arrangements, to ensure that accountabilities and the roles of various working groups and standing bodies are clear and joined up, and that they are ‘fit for purpose’ to deliver on the future agenda, constant with the National Clinical Framework.

Recommendations

We have identified **three** core recommendations that we feel will have the biggest beneficial impact in tackling the backlog in the future. They are also reasonably quick to implement.

'Digital First': embedding technology into day-to-day health and care services by:

- Ensuring the default way that patients and the NHS interact is digitally.
- Prioritising the implementation of the Digital Services for Patients and the Public programme with resources to ensure a digital first service.
- Systems need to link the entire record of patient encounters within the health and care system and be made accessible to all in the care pathway.
- Fully realising the opportunities of asynchronous care and data collection.

Transforming Outpatient Care: improving efficiency and care pathway redesign by:

- Redesigning comprehensive pathways across all specialties engaging patients and including transformed thinking around pre and rehabilitation.
- Replacing routine follow ups with a combination of Patient Initiated Follow up (PIFU) and See on Symptoms (SoS) which are both reliable and timely.
- Supporting patients to be co-owners of their health and care decisions including scheduling and digitally managing their own appointments.
- Ensuring clinical information is available to the clinician and patient prior to appointment including notes, test results and decision aides.
- Ensuring departments manage patient appointments efficiently and are accountable for performance.

Creating Specialist Diagnostic and Elective capacity across Wales by:

- Establishing Regional Specialist Centres to ensure expertise and resources are maximised including use of theatres over extended days and weekends.
- Physically separating elective work from emergency caseload where possible.
- Maximising the use of day surgery (with revised pathways) including pre-surgery optimisation and post-operative rehabilitation at home or in the community.
- Collaborating across NHS Wales to overcome barriers and develop Wales wide solutions, including sharing resources, skills and expertise.
- Transforming prehabilitation and rehabilitation including preparing people before surgery, speeding up discharge, accelerating digitally enabled recovery at home or in the community (this subject is covered in more detail in 'Supporting Service Development in the Community').
- Actively engaging the public in designing services that incorporate their ideas and views on the challenges, solutions and options around long waiting lists.

Conclusion

The Covid-19 crisis has been traumatic for both the nation and its health and care services. It has severely exacerbated long-standing problems with meeting demand for elective care and created substantial backlogs. However, it has also provided an accelerant for positive change to the way services are delivered and has demonstrated to government, the public and the service itself that the NHS is capable of making rapid change and at scale. That capability and self-realisation must be retained and actively nurtured, as the country recovers from Covid-19.

The scale of the imbalance between demand and capacity requires radical and transformational change. It will need health and care systems in Wales to work together to fully embrace and realise prudent health and care which; uses all skills and resource to best effect, eliminates interventions of limited value, avoids unnecessary treatments or interventions, and engages people in sharing responsibility for their own health and care.

Services must be as efficient, effective and of a high quality as possible and of course used responsibly by the public. If the recommendations in this paper are implemented it will not only ensure that the extensive backlog is proactively addressed but will deliver wider, more prudent benefits across the board. As this paper was being completed the Welsh Government published Health and Care in Wales-Covid-19: Looking forward[24] and the National Clinical Framework: A Learning Health and Care System[25] which reflects the sense of urgency and need for change that this paper has proposed and can hopefully provide a springboard to their early realisation.

24. Gov.Wales (2021) 'Health and Care in Wales-Covid-19: Looking forward' March 2021 [Online]
25. National Clinical Framework 8.0 [Online]

Appendices

Appendix 1: Top 11 Waiting Specialties (February 2021)

Specialty	0 to 24 weeks (n)	24 to 36 weeks (n)	36 weeks plus (n)	Wales - waiting 36 weeks plus (%)	Total Waiting (n)	Wales - waiting (%)
T&O	24907	6310	52173	23.97%	83390	15.17%
General Surgery	33129	6607	25181	11.56%	64917	11.81%
Ophthalmology	26453	5400	31695	14.56%	63548	11.56%
ENT	16737	4683	26354	12.10%	47774	8.69%
Diagnostic Services	31936	2516	2985	1.37%	37437	6.81%
Gynaecology	17423	3425	12949	5.94%	33797	6.15%
Urology	15822	3139	12986	5.96%	31947	5.81%
Dermatology	15129	3411	12715	5.84%	31255	5.86%
Gastroenterology	17502	2767	6251	2.87%	26520	4.82%
Cardiology	14700	2154	4328	1.98%	21182	3.85%
Oral Surgery	7403	1428	11159	5.12%	19990	3.63%
Total	221141	41840	198776	91.27%	461757	83.98%

Source: Stats Wales. Patient pathways waiting to start treatment by month, grouped weeks and treatment function (gov.wales) [Online]

Appendix ii - Activity Trends 2012/13 to 2019/20

Trauma and Orthopaedics	2019/20	2018/19	2017/18	2016/17	2015/16	2014/15	2013/14	2012/13	Difference (2012-2020)
Finished Consultant Episodes (FCEs) (n)	64,707	68,385	66,249	68,874	69,472	67,683	68,692	73,117	- 8,410
Admissions (n)	60,783	64,705	62,385	64,886	65,527	64,061	64,981	69,605	- 8,922
Emergency (n)	24,674	23,664	22,769	23,010	22,594	22,576	23,086	22,931	1,743
Waiting list (n)	34,713	39,607	38,389	41,955	41,851	40,321	41,005	45,828	- 11,115
Mean Waiting Time (days)	204	212	177	169	167	152	137	133	71
Median Waiting Time (days)	159	161	134	128	132	124	114	112	47
Mean Length of Stay (days)	6.9	6.7	6.8	6.9	6.9	6.9	6.4	6.4	0.5
Median Length of Stay (days)	3	3	3	3	3	3	3	3	0
Mean Age (years)	57	57	57	56	56	56	55	55	2
Inpatients (n)	45,056	45,957	44,450	44,725	44,908	44,028	45,489	48,441	- 3,385
Day cases (n)	19,651	22,428	21,798	24,149	24,562	23,655	23,201	24,676	- 5,025
Bed days (n)	288,533	285,354	281,955	286,306	287,579	281,600	269,791	289,072	- 539

All Specialities	2012/13	2019/20	Difference	%	% per year
Total activity Electives	332,805	355,101	22,296	6.69%	0.95%
Emergency	343,152	392,403	49,251	14.30%	2.04%

Source: Data source: Patient Episode Database for Wales (PEDW) PEDW Data Online - NHS Wales Informatics Service [Online]

Appendix iii - Evidence Base

The evidence for the Doing Things Differently Series was collated from a desktop review of the relevant academic literature, reports and articles. Evidence was also gathered from professionals and the public as part of group events and individual interviews. An expert group was established to consider the content and recommendations of this paper. Here are some of the sources we have drawn from in addition to the references included as footnotes in this report.

Health Foundation:

Returning NHS Waiting Times to 18 Weeks for Routine Treatment [Online]

Using Virtual Consultations in the Fight Against COVID-19 [Online] (30 March 2020).

Think Yourself into a New Way of Acting [Online]

Kings Fund:

The Digital Revolution: Eight Technologies That Will Change Health and Care [Online] (13 November 2020).

Technology and Innovation for Long-Term Health Conditions [Online] (3 August 2020).

What is COVID-19 Revealing About Innovation in the NHS? [Online]

Nuffield Trust:

Is it time to think differently about outpatients? | The Nuffield Trust

Outpatient services: a more intelligent approach is needed

Search | The Nuffield Trust | Health care research and policy analysis

The remote care revolution in the NHS: understanding impacts and attitudes

The remote care revolution in the NHS: understanding impacts and attitudes | The Nuffield Trust

Achieving a digital NHS: Lessons for national policy from the acute sector. Search | The Nuffield Trust | Health care research and policy analysis

Going digital: Three crucial areas for NHS policy

Going digital: three crucial areas for NHS policy | The Nuffield Trust

Royal College of Physicians:

(2019)Returning the NHS to an even keel

(2018) The Future: Adding value through sustainability

Royal College of Surgeons:

(2017) Outpatient Clinics; a guide to good practice rcs_outpatients [Online]

(2007) Improving your elective patient's journey improving your elective patients journey.pdf

(2007) Separating emergency and elective surgical care: recommendations for practice.

Stats Wales:/PEDW

Various data/statistics to establish trends/point in time wait time/activity positions

Evidence from professionals and the public including:

Establishment of an expert group to consider the content and recommendations of this paper.

Additional Bevan Commission Sessions

Bevan Commission Open Session held virtually on the 26th January 2021 at which 100 NHS staff and members of the public contributed.

A Bevan Commission questionnaire on addressing the backlog had 49 responses.

Individual staff interviews were completed for this work.

Appendix iv. Highlighting some of the Bevan Exemplars related to backlogs

Cohort 6

1. Bringing the knowledge gap. Digital vascular education packages to increase staff knowledge when caring for vascular patients following 'step down' from the specialist critical care centre (GUH) to ensure safety, sustainability and continuity of care pan-ABUHB
2. Validation of rapid gene test to guide treatment options for certain cancer patients whose diagnosis may have been delayed by Covid 19: this new service to be delivered through a hub and spoke model with the aim to improve turnaround time to improve patients prognosis
3. Virtual pain management programme for osteroarthritis patients waiting for surgery
4. Healthy start vitamins for families in North Wales- explore barriers and solutions to increasing accessibility (uptake) for eligible families
5. Redesign of MSK outpatient service post Covid
6. An application for people with Parkinson's
7. Clinical Specialist Physiotherapists - a solution to the Tsunami backlog
8. Immersive environment/ VR to manage chronic pain in a primary care setting
9. Secure services referral and step down pathway
10. Virtual Covid-19 Ward
11. Urgent GP response unit for acute medical care in the community
12. Pembrokeshire 'blue team' advice line
13. Vascular Catheter Preservation Initiative (PICC & Midline Virtual Ward)
14. Revised early years Neurodevelopment assessment pathway and toolkit

Cohort 5

1. Acceptance and Commitment Therapy (ACT) Based Sleep Promotion Group
2. Implementation of a Family Wellbeing Practitioner Service in Primary Care GP Practices
3. PACE Project - NHS Podiatry Access serviCe for Everyone
4. Needle in a Haystack: Finding the glaucoma patient that are going blind
5. An Innovative Approach to ILD Management
6. Using population segmentation and risk stratification to deliver asthma care where it's needed most
7. A pilot to explore the adaptability of the Hafal Recovery Programme in supporting mental health inpatients transition to community discharge.
8. An Intensive Community Support Team – Preventing Inappropriate / Unnecessary Admissions to Learning Disability Inpatient Wards
9. Advance Care Planning in rural Powys
10. Super-Agers - Transforming the Lives of Older Adults
11. Telehealth platform for cleft lip and palate/ velopharyngeal dysfunction.
12. Bronchiectasis-specific Pulmonary Rehabilitation
13. Design & implement an Improvement and Innovation Ideas Web Platform/Portal for the Welsh Ambulance Services NHS Trust (WAST) to capture ideas generated by all staff within the Trust and support staff to lead the change themselves.
14. Connecting SMART Infusion Pumps to meet the WHO challenge
15. Byw Bywyd Gyda Phoen

Earlier Cohorts

1. Delivering end of life care education programme into Nursing Homes, community hospitals, commencing delivery into secondary care from September 2015.
2. Revolutionising the way we think about Blood Donation and Transfusion in Wales by optimising Patients Haemoglobin for Major Open Heart Surgery.
3. Using the principles of complexity science, engage multiple audiences, including public, press, politicians and professionals, to gain personal ownership of issues relating to infection prevention and

management.
4. The idea is to develop an innovative Physiotherapy Practitioner-led pathway designed to reduce the pressures on secondary care Orthopaedic out–patients by providing patients with early access to specialist opinion in a local community setting.
5. To develop the pharmacists contribution to encouraging a greater focus on addressing non-adherence
6. The Integration of Clinical Pharmacists into the Admission Process
7. Improving the outcome for IBS (irritable bowel syndrome) patients in Primary Care using the low FODMAP diet approach
8. Primary care oncology development
9. Improving the pathway for patients requiring palliative/emergency radiotherapy by developing a rapid access service delivered by a radiographer led service.
10. Development of a virtual ward supported by community paramedic practitioners
11. Breast Referral & Pre-Assessment Innovation - Streamlining the process
12. Real time results notification – "CHAI Ping"
13. Good NEWS – it is time for home! (time4home)
14. Commissioning for Quality: implementing a referral pathway for service users diagnosed by their GP with Fibromyalgia, Chronic Fatigue Syndrome (ME).
15. Development of a specialist radiographer led pathway for palliative radiotherapy
16. Building an app to evaluate the health effects of weight loss as a motivational tool
17. Local Serial Casting: A business plan for repatriating local lower limb Serial casting service for muscle lengthening for children and young people by the paediatric and 14+ Physiotherapy Service. To include the ability to provide both fixed and removable serial casts, and serial night splints and to provide a mobile service that can be truly local for all clients.
18. Introduce the use of subcutaneous infusions of Furosemide for patients with advanced heart failure for treatment of episodes of fluid overload at home, when a palliative approach is appropriate and where being at home and quality of life are the main priorities.
19. Serious Illness conversations (SIC), symptom control and shared decision making for ambulance clinicians.
20. ABM Integrated Response Model between WAST and Community Teams (Neath Port Talbot Acute Clinical Team and Swansea Acute Clinical Team) with particular focus on use of mobile communications for urgent response
21. Tele-ophthalmology in North Wales using smart phone adaptors to improve management of acute eye disease
22. Patient worn tracheotomy tube support device
23. Implementation of My COPD Web-Based Application to support Pulmonary Rehabilitation and self- management in Powys Teaching Health Board
24. The development of a new model for optimising the care of vulnerable people in Primary Care through developing Safeguarding Supervision Groups.
25. Medicines management support for recently discharged patients in the Cardiff West Cluster: a co-ordinated, needs-assessed, approach
26. Digital Companions : improving health and wellbeing in a digital age
27. Use of AliveCor smart ECG monitors in the development of the new IP pharmacist role to improve the early detection of atrial fibrillation
28. Implementing a virtual clinic for People with Parkinson's with the aid of wearable technology
29. Buzzard Café

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