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Iechyd Cyhoeddus Cymru
Public Health Wales

Achieving prudent healthcare in NHS Wales

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"A future for the NHS"

The Bevan Commission has commented on several occasions that NHS Wales must change to better meet the needs of the people of Wales in a sustainable way.

Prudent healthcare is a way of reshaping the NHS around the things that matter most – continuing to provide care for all, based on clinical need. These are the principles Aneurin Bevan stood for and they stand even if times have changed.

We now need a new partnership between clinicians and the people they care for to deliver the best, most appropriate healthcare in the safest, most effective way. This paper shows how involving people in the care they receive can provide huge practical benefits to the health service.

Prudent healthcare gives me the hope that there is a future for the NHS which will continue to deliver high quality healthcare to everyone who needs it. I believe this paper strongly makes the case for prudent healthcare and will support the application of its principles in the way NHS Wales works every day.

Professor Sir Mansel Aylward, CB
Chair, Bevan Commission and Public Health Wales

"Some important solutions"

Extracting greater value from resources spent on healthcare is a complex challenge for all industrialised countries, especially those in which the rate of economic growth is lower than the rise in health care costs.

The range of potential solutions is large, but everywhere it means health systems must work differently and encourage continuous improvement. The broad categories of solutions include: devising a policy and regulatory cocktail that accelerates innovations in care; trialling new models of care and contracting; applying more rigorous systems of care delivery; and supporting individuals far more in helping themselves stay well and make decisions that are right for them.

The 'Achieving prudent healthcare in NHS Wales' paper includes some important solutions, for example improving patient flow to reduce the waits people experience in emergency care, developing a genuine dialogue between clinician and patient through shared decision-making and measuring person centred care. At the Health Foundation we are committed to these approaches and welcome the ambition to apply these improvement approaches more thoroughly across Wales.

Dr Jennifer Dixon
Chief Executive, The Health Foundation

"Timely and welcome"

The NHS across the UK is facing unprecedented financial and service pressures. It is all the more important therefore that every pound is used well for the benefit of patients.

High performing health care organisations around the world have long known that quality and outcomes of care can be improved while lowering costs. This report shows how leaders in NHS Wales are pursuing similar objectives through a focus on prudent healthcare. The

examples in the report offer evidence of the scope for reducing harm and over treatment while also achieving greater equity between professionals and patients.

The challenge now is to move beyond pockets of innovation and bring prudent healthcare into the mainstream. This will only happen if thousands of staff are supported to bring about improvements in care in every surgery, clinic and hospital in Wales. Equally important is to engage patients in using services effectively and in sharing in decisions about their health and wellbeing. The idea of Prudent Healthcare is timely and welcome and this report points the way.

Professor Chris Ham,
Chief Executive, The King's Fund

"The way forward"

We know that harm can be caused by our inability to provide clear information and options to the service user to help them make an informed decision that fits their needs. In addition to increasing risks for people receiving care, this can lead to high levels of waste in the system – any delay is undesirable, but delays for treatment that is actually unnecessary is unacceptable.

The workshops that informed this paper included representatives of people using the various services that were under scrutiny. This has to be the way forward. Partnering with the people who are best placed to adjudge the success or failure of our systems can reveal to us where we need to change.

We need to start doing this because our healthcare systems cannot work harder. They need to work smarter. We need to think prudently, stop over-treating people, and help people make the best decisions about their healthcare based on a clear understanding of the goals and needs of the person. I am encouraged that this paper addresses this issue and hope it will have a lasting impact on the delivery of healthcare.

Professor Glyn Elwyn
Senior Scientist, The Dartmouth Center for Health Care Delivery Science and The Dartmouth Institute for Health Policy and Clinical Practice

"Two-way communication"

"I found the workshop very, very interesting. I was on a table with three clinicians and they were interested in what I had to say and I was interested to hear their view on patient care. It was very much a two-way communication.

"Sometimes as patients we are in awe of clinicians. We don't ask the questions. So staff need communication skills to go through the options with the patient and make sure they understand.

"Everybody has got an opinion on the health service without really understanding it. Prudent healthcare is an aim of where they want to get to, which I think will help patient care and the health service in the long run."

Terry West
Participant, Aneurin Bevan University Health Board workshop

Achieving prudent healthcare in NHS Wales

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Public Health Wales' ambition is to achieve a healthier, happier and fairer Wales. Our purpose is to protect and improve health and wellbeing and reduce health inequalities. www.publichealthwales.org

The **1000 Lives Improvement** service in Public Health Wales supports organisations and individuals to deliver the highest quality and safest healthcare for the people of Wales. www.1000livesi.wales.nhs.uk

Executive summary

In a speech to the Welsh NHS Confederation In January 2014, Professor Mark Drakeford, Minister for Health and Social Services, declared 2014 to be the "year of prudent healthcare." [1] This reflected the Welsh NHS Confederation's report 'From Rhetoric to Reality – NHS Wales in 10 years' time' which called for "decisive action"[2] to safeguard the future of the NHS.

Professor Drakeford defined this as, "Healthcare that fits the needs and circumstances of patients and actively avoids wasteful care that is not to the patient's benefit."[3]

The Welsh Government expressed prudent healthcare as delivering three objectives:

- Do no harm.
- Carry out the minimum appropriate intervention.
- Promote equity between professionals and patients.[4]

The figures regarding 'imprudent' healthcare are staggering. An estimated 10 per cent of all healthcare interventions are associated with some harm[5]. Approximately 20 per cent of all work done by the health service has no effect on outcomes[6]. Some studies suggest that only 18 per cent of time spent in clinical environments offer immediate value to patients – the rest is spent waiting for the next step in the process[7].

Health services are rarely commissioned on the basis of delivering outcomes valued by patients. Instead, many health services are arranged around the services and structures they already have, rather than the needs of those receiving healthcare. This funnels people into existing pathways regardless of the level of need, resulting in over-treatment or less effective treatment.

In addition to providing an improved experience of healthcare, which would have a positive effect on outcomes, prudent healthcare has the potential to deliver a greater return on investment for health organisations.

In a climate of austerity, this is welcome. However, the main driver behind prudent healthcare in NHS Wales is not saving money, but ensuring the people of Wales receive the best possible care from the available resources.

Imprudent healthcare persists for a number of reasons:

- Habitual practice.
- The causes of harm are challenging to identify and address.

[1] Welsh NHS Confederation Conference; 16th January 2014.
[2] Welsh NHS Confederation (2014) *From Rhetoric to Reality - NHS Wales in 10 years' time.* Cardiff: Welsh NHS Confederation.
[3] Welsh NHS Confederation Conference; 16th January 2014.
[4] Hussey, R. (2014) *Letter to Adam Cairns (Cardiff & Vale University Health Board CEO)*, dated 24 January 2014
[5] Vincent C, et al (2001) *Adverse events in British hospitals: preliminary retrospective record review* BMJ2001;322:517
[6] MacArthur H., Phillips C., Simpson H. (2012) *Improving Quality Reduces Costs.* Cardiff: 1000 Lives Improvement.
[7] The Health Foundation (2013) *Learning report 'Improving Patient Flow. How two Trusts focussed on flow to improve the quality of care and use available capacity effectively'* London: The Health Foundation www.health.org.uk/publications/improving-patient-flow

- Potential benefits are more obvious than the harm.
- Better practice is less attractive or unavailable.
- Capacity drives demand.
- Healthcare focuses on procedures rather than care.
- A lack of health literacy amongst patients and their carers.
- Care is not person-centred.
- Policies and rules get in the way.
- Management information does not accurately describe what is happening 'on the ground'.

The Bevan Commission has advised the Health Minister on prudent healthcare and described what it could look like in practice, drilling down into the ideas present in the Minister's speech and distilling the principles of prudent healthcare further[8].

The Minister requested Public Health Wales explore how the prudent principles could be applied in NHS Wales. The 1000 Lives Improvement service were then asked to co-ordinate and support workshops in four NHS Wales health boards to field-test these prudent principles and see how they could be applied in real-world healthcare scenarios.

The aims of the workshops were:

- To test the application of prudent healthcare principles to the specified topic in the specific health board.
- To address the following questions posed by the Minister:
  1. What happens now that does harm or little good?
  2. What happens now in an expensive way, which could be done in a more cost effective way?
  3. What would the pathway look like if organised around the minimum intervention principle?
- To determine aim, measures, tests of change and timescales.
- To apply knowledge of care and interventions whose use is different to available evidence and guidelines, or at odds with patients' needs.
- To consider how learning can be spread to other disciplines and settings.
- To consider the requirement for evaluation.

The workshops sought to apply the principles of prudent healthcare to treating chronic pain; better management of medicines prescribed in general practice; adult hearing loss, dizziness and tinnitus; and knee and hip disorders and surgery.

The workshops demonstrated agreement on actions required to improve patient outcomes, experience and deliver better value. Specific suggestions are included in this report and the detailed workshop reports are available online[9].

The outcome of the workshops affirmed that the prudent healthcare principles need to be clearly stated, communicated, understood and owned by everyone. There was agreement that operationally the definition should build upon Welsh

[8] Bevan Commission (2014) *Prudent healthcare - The Underlying Principles*. Cardiff: The Bevan Commission
[9] See www.1000livesplus.wales.nhs.uk/prudent-healthcare

Government's letter to the service and that it would be preferable to use terms other than patients and professionals. Hence, an amended version would be:

Any service or individual providing a service will:
- Minimise avoidable harm.
- Carry out the minimum appropriate intervention.
- Promote equity between the people who provide and use services.

The conclusions of these workshops support the thesis of this paper – that NHS Wales can implement prudent healthcare principles, but that organisations and micro-systems within NHS Wales need support to make this happen. The Minister's challenges in his speech to the Welsh NHS Confederation – could we achieve better value in healthcare by doing some things less, avoiding unnecessary interventions, doing more to ensure patients are involved in choices and decisions about their care – have been demonstrated in the workshops.

There are several areas where co-productive partnerships with the public can reduce harm. For example, the workshop examining chronic pain services concluded that better information exchange with patients can help reduce the use of medicines. The workshop looking at prescribing expressly noted the benefits of lifestyle changes instead of long-term proton pump inhibitors.

Evidence suggests co-production can create more cost-effective processes and also establish more appropriate levels of treatment for common conditions, which will lead to improved patient outcomes. This will require a cultural change among all NHS Wales staff and the wider public, but this is achievable.

At a strategic level, the health boards involved identified the need for everyone involved in providing and receiving healthcare to act on the prudent healthcare principles.

Health boards must focus on delivering outcomes and experience valued by patients and improving 'flow' through the system. Data that measures outcomes, experience and flow needs to be collected for providers of care to make appropriate decisions with citizens about service configuration and provision. This will ensure that organisations are focused on delivering what really matters to the people they serve.

Clinicians need training and time allocated to deliver better outcomes and experience within a culture of continuous improvement. They are responsible for ensuring people are fully informed and engaged in making decisions about their health and well being, that patients receive high quality support and care, based on the best available knowledge.

Finally, the people using NHS Wales need to work with clinicians to set personal goals and expectations of treatment, taking responsibility for their own health and recognising their contribution to the principles of prudent healthcare. In emergency circumstances it may not always be possible for people to be fully involved in, or aware of, decisions that have to be made in their care. But for the

overwhelming majority of healthcare interactions, there is a shared responsibility between the people receiving and the people delivering healthcare.

Delivery of these benefits will require leadership and clear policy from Welsh Government and health boards including clarity on performance management. It will require politicians, public service leaders and clinicians to have challenging conversations with citizens around shared responsibilities.

Introduction

The health service in Wales, like those in other countries, faces challenges from demand, expectation and austerity. Traditionally, the response to these challenges has been to make cuts to what is currently delivered but this presumes that all current services deliver good outcomes, experience and value. This approach has produced long waiting lists, poor outcomes and patient experience and has failed to achieve real savings.

In January 2014, Professor Mark Drakeford, Minister for Health and Social Services, set out an alternative approach to traditional solutions. His speech to the Welsh NHS Confederation proposed that new principles should be applied in order that:

> "Healthcare fits the needs and circumstances of patients and actively avoids wasteful care that is not to the patient's benefit." [10]

This reflected the recent Welsh NHS Confederation's report 'From Rhetoric to Reality – NHS Wales in 10 years' time' which called for "decisive action" and "bold, wholesale changes"[11] to safeguard the future of the NHS, concluding: "We know there are better solutions both for services and more importantly for the public."

During his speech, Professor Drakeford summarised the approach as three principles of prudent healthcare:

> "We have to find new ways of prioritising the services we provide, and to align them, and access to them, more directly on clinical grounds.
>
> And that's why I am keen that the NHS in Wales embarks on shaping our future on the basis of the principles associated with prudent medicine and prudent healthcare. [..] It is the first obligation of any service, and of any individual providing that service, to do no harm.[...]
>
> But I think that we have to move beyond the 'do no harm' principle to one which is focused on what is normally called minimum appropriate intervention. The principle that treatment should begin with the basic proven tests and interventions, calibrating intensity of testing and treatment consistent with the seriousness of the illness and the patient's own goals.[...]
>
> My third essential principle of prudent healthcare is that it is infused with a sense of equity. It provides us with a way of going on matching need and spending so we put our maximum resources where our needs are greatest..." [12]

[10] Welsh NHS Confederation Conference, 16 January 2014.
[11] Welsh NHS Confederation (2014) *From Rhetoric to Reality – NHS Wales in 10 years' time*. Cardiff: Welsh NHS Confederation. 3
[12] Welsh NHS Confederation Conference, 16 January 2014.

Such an approach would reduce costs and provide better outcomes and experience. The Minister then requested that the principles be tested in four workshops based on four distinct clinical services:

- Chronic pain.
- Medicines prescribed in general practice.
- Adult hearing loss and balance disorder.
- Knee and hip disorders.

The workshops were held between 31 March and 10 April 2014.They included professionals delivering services and invited members of the public who had first-hand experience of receiving services. To aid the workshops, Welsh Government expressed the principles as:

- Do no harm.
- Carry out the minimum appropriate intervention.
- Promote equity between professionals and patients. [13]

The aims of the workshops were:

- To test the application of prudent healthcare principles to the specified topic in the specific health board.
- To address the following questions posed by the Minister:
  1. What happens now that does harm or little good?
  2. What happens now in an expensive way, which could be done in a more cost effective way?
  3. What would the pathway look like if organised around the minimum intervention principle?
- To determine aim, measures, tests of change and timescales.
- To apply knowledge of care and interventions whose use is different to available evidence and guidelines, or at odds with patients' needs.
- To consider how learning can be spread to other disciplines and settings.
- To consider the requirement for evaluation.

The workshops also sought to assess the engagement of service users and providers to the prudent healthcare principles. The workshop findings suggested that there is broad agreement between the people delivering and the people receiving healthcare that the system can be dysfunctional some or most of the time and that could lead to harm, inappropriate treatment and a loss of patient-centeredness.

There was also agreement among the workshop participants that the principles made sense and would deliver an improved service. They affirmed that the principles need to be clearly stated, communicated, understood and owned by everyone. There was agreement that operationally the definition should build upon Welsh Government's letter to the service and that it would be preferable to use terms other than patients and professionals. Hence, an amended version would be:

Any service or individual providing a service will:

- Minimise avoidable harm.
- Carry out the minimum appropriate intervention.

[13] Hussey, R. (2014) *Letter to Adam Cains (Cardiff and the Vale University Health Board CEO)*, dated 24th January 2014

- Promote equity between the people who provide and use services.

However, the challenge of presenting prudent healthcare as a positive step for NHS Wales was noted. Both the wider public and NHS Wales staff need to be engaged on the principles and the discussion should be around delivering appropriate high quality services.

Workshop participants were invited to consider the opportunity for improving services if the principles were applied in the clinical area their workshop was concentrating on. There were several practical suggestions relating to service delivery and also suggestions around changing the culture of healthcare organisations and the attitudes of healthcare recipients. This suggests that there are short-term improvements to be gained from prudent healthcare, but prudent principles also need to be built into long-term planning to shape working culture and attitudes.

Finally, the workshops looked at the wider implications of the principles, specifically: what support do service users and providers need to work in this way? Paradoxically streamlining and improving services to improve their cost-effectiveness usually requires some up-front investment. However, if the prudent principles were applied across an organisation or even just a pathway, the money freed up from greater efficiency could be aggressively reinvested in quality improvements to produce a virtuous circle of ongoing improvements in patient outcomes and experience.

The detailed proposals from these workshops have been included in this report to illustrate engagement with the prudent principles, how they could be applied in specific areas, and wider implications.

Is healthcare imprudent?

> "Good people can fail to meet patients' needs when their working conditions do not provide them with the conditions for success." [14]

In its report into prudent healthcare, the Bevan Commission described spiralling costs, overspending, wasted resources and poor management and investment[15]. In other words, the Commission concluded that the health service is not meeting the simple principles of doing no harm, avoiding unnecessary or unproductive work and listening to the wishes of its users. These problems are not unique to Wales.

Approximately 1 in 10 people admitted to hospitals in the developed world experience unintended harm as a result of their care[16]. Around a third of that harm is avoidable. Harm is not confined to hospitals (although it is the most studied): there is evidence of similar problems in general practice. For example, side effects from prescribed medicines are considered to be the most common cause of

[14] Berwick D. (2013) *A promise to learn – a commitment to act. Improving the safety of patients in England*. London: National Advisory Group on the Safety of Patients in England.
[15] Aylward, M., Phillips, C., Howson H. (2013) *Simply Prudent healthcare – achieving better care and value for money in Wales – Discussion paper* Cardiff: The Bevan Commission.
[16] Vincent C, et al. (2001) *Adverse events in British hospitals: preliminary retrospective record review* BMJ2001;322:517

emergency admission to hospital[17]. Again, much of that unintended harm is caused by well known medicines and is both predictable and avoidable. This represents very considerable suffering for people who use services, large costs in dealing with the consequences but a major opportunity to improve outcomes, experience and value.

There are many examples of poor use of resources. Publication of well-evidenced lists of procedures with limited value have often had little impact on practice, raising questions about whether the lists are wrong or whether they have not been properly applied. Patients and carers often observe and report examples of poor use of resources that staff may not be aware of.

NHS Wales is currently working to reduce or eliminate wasted activities in emergency care, that is, those tasks which add no value to a patient's care. In Lean[18] terms these wasted activities are characterised by:

- Transport - moving the patient and their information about.
- Inventory - managing stacks of materials or notes, or waiting lists or queues of patients waiting for services.
- Motion - staff moving around, often 'hunting and gathering' – looking for information, medicines, equipment.
- Waiting - patients, staff, machines waiting for something to happen.
- Over-processing - performing tasks that are not required (e.g. unnecessary tests.
- Over-producing - doing too much e.g. the history and examination being repeated 3 times by junior doctors in A&E, in an assessment unit and on the main ward after admission.
- Defects - tasks where the output is defective in that the downstream customer cannot implement the request e.g. incorrectly filled in request forms, haemolysed samples, incorrect prescriptions.

The Patient Flow programme[19] is supporting health boards in Wales to identify and reduce these 'Wastes'. The dividend is saved healthcare resource and less discomfort and risk for the people who experience these delays, as evidenced by a Health Foundation programme tracking patients through the emergency care process at Sheffield and Warwick Foundation Trusts[20].

The Health Foundation's findings showed that much of the delays for emergency patients getting the right care on time are caused by the inefficiency (or wasted tasks identified above) of what happens during an admission (from presentation at A&E to discharge home i.e. no care package required).

In Warwick, one patient tracked his hospital stay and analysis of his experience demonstrated that only 18 per cent of his 10-day stay was actually providing value

[17] R.L. Howard, et al (2006) *Which drugs cause preventable admissions to hospitals? A systematic Review.* British Journal of Clinical Pharmacology

[18] See www.theleansixsigmacompany.co.uk/lean-six-sigma/what-is-lean.php

[19] See www.1000livesplus.wales.nhs.uk/flow

[20] The Health Foundation (2013) *Learning report 'Improving Patient Flow. How two Trusts focussed on flow to improve the quality of care and use available capacity effectively'* London: The Health Foundation. www.health.org.uk/publications/improving-patient-flow

– diagnosis, treatment and recovery time. The rest was spent waiting for tests, decisions and treatment. Due to these delays he developed complications which resulted in further delay and a poor service experience.

By eliminating repeated junior doctor assessments and consultant reviews in A&E, an assessment unit and the specialist ward to just one junior doctor assessment, followed immediately by the consultant geriatricians review, a team at Sheffield were able to discharge 30 per cent of patients back to their GP (with a clear diagnosis and management plan) on the day they were referred or attended hospital as an emergency.

Junior staff were freed up to provide better cover in the evenings and weekends and consultant staff were able to offer real time teaching. The impact on bed occupancy was immediate and profound. An acute ward was closed, because it was not needed, and the nursing staff moved to support wards who were shorthanded and dependent on agency or overtime.

What about the wishes of service users? Are they properly taken into account? What does the evidence tell us? If we placed more emphasis on this, wouldn't that further escalate our funding problem?

A review published by The Kings Fund in 2012[21] examined these questions in some detail. It showed that the rate of operating or giving chemotherapy for many commonly seen conditions fell dramatically (typically by between 10 and 40 per cent) when people were appropriately informed about their condition and supported to exercise their preference.

The authors point to the huge potential opportunity that would come from delivering the right care, in the right place, every time to everyone. A recent review of the cost implications of this approach cautions against overly optimistic forecasts of resultant savings but certainly did not conclude that doing less would cost more[22].

When people who use NHS Wales services were asked to list their concerns in the preliminary meeting before the prudent healthcare workshops, they identified many of the issues that meshed with the Lean principles outlined above or reflect a focus on what the organisation can offer rather than what the person needs. For example, in one health board patient concerns included:

- The length of waiting times before being seen.
- Not seeing the same clinician on each appointment, resulting in having to repeat explanations.
- Lack of communication on options available in or outside the NHS.
- Aspects or symptoms reported by the person being ignored by the clinician, which could be regarded as a defect in the system under the Lean definition. This perceived failure to gather relevant information about the person's

[21] Mulley, A., Trimble, T., ELwyn, G. (2012) Patient's Preferences Matter - Stop the silent misdiagnosis. London: The King's Fund. Available to download at www.1000livesplus.wales.nhs.uk/sitesplus/documents/1011/patients-preferences-matter-may-2012.pdf

[22] Walsh, T. et al. (2014) *Undetermined impact of patient decision support interventions on healthcare costs and savings: systematic review.* British Medical Journal.

condition implies an imbalanced relationship and would mitigate against genuine co-production.

Issues raised by people invited to contribute their experience of receiving healthcare in a different workshop covered much the same ground. People also highlighted the problem of "being viewed as a 'condition' rather than a whole person." This is an attitudinal issue rather than an issue of professional capability, but it could have a major impact on a professional's ability to deliver care oriented around the individual's goals and needs. If there is a set pathway or procedure to deal with a 'condition', which is enacted regardless of the desires of the person, then this could lead to unwanted 'over-treatment'.

Patients make different choices when well informed
'Patients' preferences matter', published by The King's Fund and The Dartmouth Centre, outlines the body of research that shows how increased information changes the perception and desires of patients[23].

The King's Fund report notes that the value of including people in their healthcare decisions is not necessarily to cut costs, but to ensure people receive the care they would value most. However, "far more studies show a decrease rather than an increase in consumption of services."

Clinicians and patients 'Choosing Wisely'
'Choosing Wisely' aims to promote conversations between clinicians and patients by helping patients choose care that is supported by evidence, not duplicative of other tests or procedures already received, free from harm, and truly necessary.

In response to this challenge, the American Board of Internal Medicine (ABIM) Foundation's initiative asks national organisations representing medical specialists to 'choose wisely' by identifying five tests or procedures commonly used in their field, whose necessity should be questioned and discussed.

The resulting lists of "Five Things Physicians and Patients Should Question" will spark discussion about the need—or lack thereof—for many frequently ordered tests or treatments.

The focus on helping clinicians and patients to engage as partners in conversations about unnecessary tests, treatments and procedures, and to help clinicians and patients make smart and effective choices to ensure high-quality care can lead to care that is truly patient-centred and minimal avoidable harm.

Interest in implementing the campaign has been expressed by the Netherlands, Germany, United Kingdom, Denmark, Italy, New Zealand, Australia and Israel, and Choosing Wisely Canada has recently launched.[24]

[23] Mulley, A., Trimble, T. ELwyn, G. (2012) *Patient's Preferences Matter - Stop the silent misdiagnosis.* London: The King's Fund.
[24] More information is available from www.choosingwisely.org and www.choosingwiselycanada.org/materials

How well do we currently manage the system?

In his book 'Designing Care'[25], Richard Bohmer describes why healthcare is poorly managed in the developed world. Management and care have traditionally been separate. The clinicians have provided the care and the managers allocated the resources for that care. They worked in parallel but not in partnership. When care became too expensive, managers and leaders first focussed on reducing the costs of existing services. Gradually, there has been a realisation that we need to look at what is being delivered for that cost. In delivering care, do we know what to do, do we apply knowledge when we have it, are we reliable at doing what we intend?

His conclusion is that organisational systems and skills need to be redesigned and to become much more sophisticated if they are to deliver best value (attending to doing the right thing for the least cost) especially in a sector where the work is a very complex mix of certainty and uncertainty.

There have been many excellent improvement projects in Wales and internationally which have delivered islands of change but which have not changed the overall system of management.

A move to prudent healthcare principles is an opportunity to co-ordinate organisational change to deliver the new way of working within lean systems that can respond rapidly to change. Indeed, it will be a prerequisite.

Again, according to Bohmer, "Motivating individuals to do better, through either financial or non-financial incentives will never be sufficient on its own to guarantee better health outcomes. Rather, the work of care and the operating systems that support that work must be explicitly designed for that purpose, and not just left to accrete by chance and happenstance." [26]

The Nuka System of Care
The Nuka System of Care developed by Southcentral Foundation in Alaska is recognised as one of the most successful and innovative primary care systems in the world.

It has achieved its success through delivering a community-led model of 'customer-ownership', where those relying on the services help to set priorities for those services.

Alongside many positive organisational outcomes, including raising the quality of services and fully engaging staff, the health outcomes of the community have been significantly improved. The reorientation of services around the customer-owner has also proved cost-effective.

[25] Bohmer, R. (2009) *Designing Care: Aligning the Nature and Management of Health Care*. Harvard Business Press.
[26] Bohmer, R. (2009) *Designing Care: Aligning the Nature and Management of Health Care*. Harvard Business Press.

Southcentral Foundation spends more on primary care per person, but spends less in total on healthcare per person, while delivering higher quality healthcare than is experienced in most other parts of the USA.

The use of a new terminology, specifically 'customer-owner' instead of 'patient' or 'service user', underlines the organisation's commitment to listen to citizens and act on feedback.

Through the Nuka System of Care, access to medical advice has been reduced from an average of four weeks to same-day consultations. Previously, the majority of entries into the healthcare system were through the secondary care emergency department. The restructured service has alleviated the pressure on emergency departments and resulted in people receiving treatment more quickly in a more suitable environment.[27]

Why is healthcare imprudent?

"Every system is perfectly designed to get the results it gets."[28] The implication of this quote attributed to Paul Batalden is that we need to understand why things are happening before we can change the outcome.

If we are to change the experience of providing and receiving healthcare, we must understand why and how it is going wrong. As part of the workshop briefing, some of the likely causes were reviewed. While error or poor intent cannot be ruled out, most problems are caused by the way the system works.

These reasons for imprudent healthcare are grouped around the principles as defined following the outcome of the workshops:

- Minimise avoidable harm.
- Carry out the minimum appropriate intervention.
- Promote equity between the people who provide and use services.

Minimise avoidable harm

Harm occurs in the system in two main ways, but is hard to spot.

When harm happens insidiously or in a different place

Human beings are good at preventing harm occurring to others when we can use our intuition or, conversely, if we have time to think and plan. We are less good if this is not embedded in routine practice and we don't get helpful prompts.[29]

For example, it is estimated that 37,000 people die in UK hospitals each year because of potentially treatable sepsis.[30] The main problem is that the intervention

[27] See www.1000livesplus.wales.nhs.uk/nuka
[28] Carr, S. (2008) *A quotation with a life of its own.* Patient Safety and Quality in Healthcare
[29] Kahneman, D. (2011) *Thinking, fast and slow*. New York: Farrar, Straus and Giroux.

must be early on in the development of the condition and at a time when the person may not seem very unwell. The urgency of the situation may not be apparent and so action is not always triggered. Similarly, the extent of harm caused by prescribed medicines is generally not well understood because the harm is dealt with in a different place to where the prescribing is done.

NHS Wales has made good advances in logging and acting on untoward incidents through systems like DATIX and there is a good history of clinical audit. However, these tend to focus on contemporaneous or short term events and it is fairly uncommon for systems to actively monitor for harm which happens after an 'episode' or intervention. This dilemma was well expressed by the Welsh Orthopaedic Society[31] in their evidence to the one day inquiry into venous thromboembolism prevention in Wales. Orthopaedic surgeons considering the evidence based use of heparin have to weigh the immediate risk of additional bleeding at the time of an operation against the larger but less apparent risk of post operative-thrombosis.

The workshops identified ways to remove this 'compartmentalising' effect of healthcare that obscures harm. Suggestions included:

- Improving medicines management through ensuring continuity of care, e.g. patients see the same GP, use the same community pharmacy.
- Creating a treatment pathway for patients with ear wax problems to provide a single consistent service for people.
- Using a single access referral service for a person with lower back pain, linking primary care, secondary care and physiotherapy services.

When the potential benefit is more obvious than the harm
Modern antibiotics have saved countless lives and sped recovery from serious illness. Unfortunately they have also brought risks such as *Clostridium difficile* infections and resistant *Staphylococcus aureus*. These risks may not seem pressing in the presence of an infection when the decision to seek or give treatment is taken. Would a better explanation of these risks change the decisions?

The Kings Fund report[32] shows how many patients, if they are made aware of the risks of surgery or drug treatment, will opt for alternatives. Without that awareness, the less prudent choice is made with greater risk and, often, higher cost.

The workshop examining prudent prescribing identified over-prescribing and long-term use of proton pump inhibitors as carrying risks that were not always appreciated by clinicians. The workshop recommended a review of proton pump inhibitor usage and integrated prescribing guidelines.

[30] For more information see the UK Sepsis Trust website: http://sepsistrust.org/info-for-the-public/

[31] Davies A. (2012) *National Assembly for Wales Health and Social Care Committee: Inquiry into Venous Thromboembolism prevention in Wales - Submission from the Welsh Orthopaedic Society*. Cardiff: Welsh Government http://www.senedd.assemblywales.org/documents/s7982/Consultation%20response%20VTE%2016%20-%20Welsh%20Orthopaedic%20Society.pdf

[32] Mulley, A., Trimble, T. ELwyn, G. (2012) *Patient's Preferences Matter - Stop the silent misdiagnosis*. London: The King's Fund.

Carry out the minimum appropriate intervention

There are several reasons why over-treatment and inappropriate treatments are offered to people.

When practice becomes a habit

Healthcare professionals spend many years training and learning in formal educational settings and then move into practice. In spite of dramatically increased postgraduate professional development, it can take several years to universally change practice to incorporate new knowledge or evidence. This is especially because most change will require a co-ordinated change by people across a number of different professional 'communities of practice' that have inherent boundaries.

A recent survey by NICE examined the difficulties faced by clinicians implementing new evidence.[33] It found that the overwhelming reason was the difficulty in gaining consensus (more problematic than lack of time of money) which suggests that change often falls at the first hurdle: the desire to make a change, before issues such as skills or facilities are considered.

But even simple changes that are about one person are difficult to achieve. Hand hygiene rates remain low even though the case is self evident and the consequences of failure are well known. It is probable that the established science that shows how the conditions to support behaviour change can be set, should be systematically employed within the NHS in Wales. It is clear that approaches to achieve this need to be at more than the individual level if the approaches are to succeed.[34]

Examples identified in the workshops where applying prudent healthcare principles would challenge habitual imprudent practice include:

- Establishing nationally agreed standards for drug ordering and collection systems.
- Considering alternatives to prescribing, e.g. lifestyle advice.
- Launching a one stop clinic for managing balance disorder and dizziness, including routine balance rehabilitation provided by audiologists with ongoing referral to ENT for complex cases.

When capacity drives demand

All health boards and trusts have prepared three year plans which describe pressures on current services and priorities for future change. The challenge in creating such plans is how to ensure that knowledge of health needs and epidemiology play a stronger role in shaping plans rather than necessarily maintaining the *status quo*.

The Public Health Wales Observatory carried out a study[35] of access to revascularisation and angiography services for people who had suffered a heart attack. People in some communities were four times more likely to access services

[33] Leng, G. (2014) *NICE and Wales* [Presentation at the March 2014 Team Wales meeting].
[34] Roberston, R. & Jochelson, K. (2006) *Interventions that change clinician behaviour: mapping the literature.* London: NICE (National Institute for Health and Care Excellence)
[35] Cosh, H., Childs, A., Lester, N. (2009) *Equity in the provision of coronary angiography and revascularisation in Wales.* Cardiff: National Public Health Service for Wales (now Public Health Wales).

than those living elsewhere. There were also striking differences in mortality and unfortunately variation in access was often inversely related to need.

Many factors may be at play in causing these differences including social disadvantage which may reduce access to an intervention or delay access and therefore reduce the benefit. But geography and service capacity also play their part. The authors observed that areas of north and mid and west Wales where people had to travel furthest to a centre were less likely to be seen than their equivalents in south and east Wales. This conclusion was strengthened because the provision of extra resources in some areas started to correct the imbalance.

The implication is that future planning of these services (and presumably many others) needs to be informed by knowledge of need. We cannot just assume that the current distribution is right.

The workshop analysing audiology services recommended the establishment of walk-in open access clinics for the public who have hearing loss or tinnitus. These clinics need not be at a central location. The same clinical teams could work in different communities on different days.

There could also be more appropriate use of technology, for example, linking primary and secondary care better by using telephone virtual clinics.

When we turn healthcare into procedures rather than care
Care has been described as a social value: it is heedfulness or mindful vigilance. People need help in making choices for individual decisions but they probably need more support in making a series of choices based on their own values.[36]

The Kings Fund report[37] speculates as to how previous government policy in England and Wales has driven doctors into a market philosophy of providing more and more interventions. Arguably, subspecialisation has also resulted in some healthcare professionals carrying out procedures while there is no one who is providing continuous care. The changes in primary care provision have also meant that out of hours services are more likely to be provided by people who do not hold the person's 'story' and who will not be responsible for following up a treatment or decision.

The Minister's describes this as: "The traditional way that people think of health services [...] as an escalator in which we are always pushing people up the levels of intervention and somehow the higher up the intervention levels you go the more prestigious it becomes and the more you feel you've got something good out of the health service."[38]

Richard Bohmer says that performance measures such as clinic volumes or procedures per operating-room day have reinforced an individualistic perspective

[36] Emanuel, E., Emanuel, L. (1992) *Four Models of the Physician-Patient Relationship*. JAMA Vol 267, No. 16
[37] Mulley, A., Trimble, T. ELwyn, G. (2012) *Patient's Preferences Matter - Stop the silent misdiagnosis*. London: The King's Fund.
[38] Welsh NHS Confederation Conference, 16 January 2014.

among doctors.[39] In these circumstances, who is able to partner a person and be heedful for them, ensuring that they make the right choices? Again the result may be that our system rather than their best interests may be driving people to have more procedures than they would otherwise want.

The workshop on audiology services explicitly recommended “decisions made on evidence and clinical need (not ‘needs’ of clinicians)”. This was in reference to NICE guidelines, but it applies in this situation as well. People matter more than pathways.

The workshop that looked at improving care for people with chronic back pain included the recommendation for a regular ‘pain review’ to assess if treatment is suitable. Regardless of whether a person has received all the ‘correct’ procedures, if they are still in pain, then there is still a problem. It’s not enough to just check the boxes on the list of elements in the pathway and assume that the job is done.

When our rules get in the way

NHS Wales is full of rules. They were introduced with the intention of improving performance, preventing poor practice and achieving targets but they have unintended consequences. Prudent healthcare will only be possible if such rules are changed to measure clinical outcomes and patient experience rather than process.

One of the main themes arising from the prudent healthcare workshops was the need for better communication between all healthcare providers and between healthcare providers and patients. This is often prevented by rules introduced to prevent the inappropriate sharing of confidential information. While patient information must be protected, information governance concerns are often a block to closer collegiate working between primary and secondary care and to providing patients with their own health information on which to make decisions.

Shared electronic prescribing and discharge procedures would reduce the risk of harm, improve follow-up care thereby reducing readmissions and complications, and therefore make an impact on patient outcomes. Many of the objections to introducing this sort of service focus on the rules about data handling. These rules need to be reassessed in the light of what is best for patients, rather than organisational information governance concerns taking priority.

There needs to be a mechanism to grant ‘licence’ for flexibility and a general learning to ensure rules and policies are patient-centred.

[39] Bohmer, R. (2013) *Leading Clinicians and Clinicians Leading.* The New England Journal of Medicine.

Virtual clinics – a new way of working
Dr Khalid Khan is a cardiologist at the Wrexham Maelor Hospital and won a Health Foundation SHINE award to study the feasibility and value of a virtual clinic. The aim was to reduce delays and provide a better service to GPs by operating a nurse triage and a responsive email and phone service.

The majority of patients avoided the need to attend a conventional hospital appointment and definitive decisions regarding diagnosis and management were made much more quickly (usually within 48 hours of referral) based on expert advice. Importantly it also built strong bridges across primary and secondary care and was highly valued by GP colleagues as a means of professional development. It also freed consultant time to run additional specialist clinics.

On the downside, the project showed how difficult it is to establish a new service if it does not fit with the way professionals have got used to working. It also demonstrated problems with 'the rules'.

As Dr Khan increasingly saw the complex patients who remained and who most needed his expertise, the "new to follow up" ratio for his clinic reduced and gave the appearance that he was not discharging patients effectively. Furthermore, the virtual clinic did not fit any established ways of counting work so it appears he was 'seeing' far fewer patients than in reality when he was running the new pilot.[40]

When our management information does not tell us what is happening
The County of Jönköping in Sweden has become world renowned for its focus on the quality of care.[41] Their 'moment of truth' came from a realisation that all of their information systems were geared to functions (finance, human resources, capital) or places (outpatients, pharmacy, pathology, wards). Their advances have come from a realignment of that information to pathways of care which tell them something about how to use resources. This area is further described in the white paper, 'Improving Quality Reduces Costs'.[42]

Put simply, it is little wonder that we do not make best use of resources if we do not know how those resources are being used. If that is true across organisations, it is also true at the time when people make individual decisions. Staff and patients do not usually know what the cost of alternative decisions are.

One proposal from the prudent healthcare workshops was to raise cost awareness of different treatments, especially among staff. Costs could also be shared with the public. It was felt this would make a difference to the use of resources and options chosen by service users and providers.

[40] More information is available from the Health Foundation's website: www.health.org.uk/areas-of-work/programmes/shine-ten/related-projects/betsi-cadwaladr-university/
[41] Gozzard D., Willson A. (2011) *Quality, Development and Leadership - Lessons to learn from Jonkoping*. Cardiff: 1000 Lives Improvement,
[42] MacArthur H., Phillips C., Simpson H. (2012) *Improving Quality Reduces Costs*. Cardiff: 1000 Lives Improvement.

Promote equity between the people who provide and use services

Safeguarding equity is not easy and there are several things that thwart it.

When the better choice is less attractive or available

The Minister for Health and Social Services spoke about the need to help people avoid destructive lifestyles. "We have to work harder to explain to people the responsibility they have for creating the conditions for health in their own lives."[43] This is mirrored in the discussion report published by the Welsh NHS Confederation that says: "By looking after our own health, we can take care of the NHS."[44]

Obesity rates in all age groups are increasing, problems from excessive alcohol are more prevalent, smoking rates have generally plateaued and participation in exercise is below ideal rates. Change requires individuals to change their lifestyle. The excellent work of the Caerphilly Prospective Study (CAPS) showed that, even though they understand that they could gain significant increases in health and longevity, many people choose not to change.[45]

At the same time, there are rapidly increasing rates of the use of prescribed medicines which could mask or distract people from the warning signs of unhealthy lifestyles. There is a very public debate about whether this is true of lipid lowering drugs in respect of lifestyle choices potentially leading to heart disease. 18 per cent of Welsh adults receive a full daily dose of lipid lowering drugs, so this question is worth asking, particularly when there are wide variations of use between practices and health boards across Wales.

The workshops all identified the tendency for people to want to be 'fixed' by the NHS or to go for the 'easier option' but they all recognised the importance of lifestyle advice, supporting self-management of illness or disability, and increasing people's knowledge and understanding of their conditions and the treatment they were receiving.

When choice isn't choice

In preparing for the workshops and discussing the ideas of prudent healthcare with users and providers of services, several people described an inadvertent deception created by our system.

If a person goes to their GP they may be referred for a specialist opinion. That involves a wait before assessment in a hospital clinic. Very often, of course, the right things happen and best care is achieved. However, sometimes it's assumed that because a person is waiting to see a specialist, they are waiting for a particular procedure.

For example, a patient with knee pain is referred to a joint specialist. The joint specialist assumes that they are being referred for assessment for a knee operation

[43] Welsh NHS Confederation Conference, 16 January 2014.
[44] Welsh NHS Confederation (2014) *From Rhetoric to Reality – NHS Wales in 10 years' time*. Cardiff: Welsh NHS Confederation. 7
[45] Elwood, P. et al (2013) *Healthy lifestyle reduce the incidence of chronic diseases and dementia: Evidence from the Caerphilly cohort study*. San Francisco: PlosOne. www.plosone.org/article/fetchObject.action?uri=info%3Adoi%2F10.1371%2Fjournal.pone.0081877&representation=PDF

and, working under that assumption, starts the process to book the person in for the operation. The professionals at either end of the waiting time assume that the other one has worked through all the options with the person concerned whereas neither has. This phenomenon was explored in two of the workshops.

Vanguard Consulting have called this phenomenon ‘Following the flow’. Their March 2014 report describes how this assumption affects service provision:

> “People in need are frequently subjected to repeated ‘assess-do-refer’ cycles both within and across the various services (health, social care, benefits, housing, police, etc) that deal with them. It is also clear that most of these ‘points of transaction’ are in practice referral rather than action points – ‘assess-refer’ rather than ‘assess-do’. An applicant rarely obtains a service at the first transaction point, instead being referred on to ‘bounce around’ from one agency to another until a decision is made. [..] Assessment is seen as the key mechanism for rationing access to services, prioritising those most in need. In practice, its effect is to amplify demand rather than control it.” [46]

When we don’t remember the person
There has been improvement in the person-centredness of public services and NHS Wales has seen many good examples. However, much of that effort has been targeted at higher levels of planning and decision-making with relatively little to support people engaged in consultations and personal decisions.[47]

The lack of patient-centredness is starker if people are used for logistical purposes. For example, people may be admitted to hospital unnecessarily early ahead of elective surgery, in order to ‘save a space’ that would otherwise be given to someone else. Other examples include:

- Asking people to attend somewhere in order that a test can be read or an opinion given when it could have been done without their attendance.
- People being admitted to hospital sooner than is necessary to ensure they get a bed.
- People being kept in hospital so that they stay in a queue for a procedure rather than have to go to the back of a new queue following discharge from their hospital bed.

If NHS Wales supported people to stay at home longer, this would reduce their risk and save costs.

[46] Vanguard (2014) *Saving money by doing the right thing* [online] Available from: http://locality.org.uk/wp-content/uploads/Locality-Report-Diseconomies-web-version.pdf (accessed 2 June 2014)
[47] Coulter A, Parsons S, Askham J. (2008) *Where are the patients in decision-making about their own care?* Policy brief. WHO European Ministerial Conference on Health Systems: "Health Systems, Health and Wealth". Tallinn, Estonia. http://www.who.int/management/general/decisionmaking/WhereArePatientsinDecisionMaking.pdf See also Hardman, W., Daunt, K., & Kitchener, M. (2014) *Value Co-Creation through Patient Engagement in Health Care: a micro-level approach and research agenda.* Public Management Review (published online) http://dx.doi.org/10.1080/14719037.2014.881539

The learning from the workshops

1000 Lives Improvement assisted four NHS Wales health boards examine the principles of prudent healthcare and identify ways these could be applied in very specific areas.

The four workshops and their clinical focuses were:
- Cardiff and the Vale University Health Board – Adult pain management.
- Cwm Taf University Health Board – Medicine prescribing.
- Abertawe Bro Morgannwg University Health Board – Adult hearing loss, dizziness and tinnitus.
- Aneurin Bevan University Health Board – Knee and hip problems.

The health boards all contributed time and personnel to consider these issues in workshops. The ideas generated and challenges identified are summarised in the appendixes.

The workshops generated commitment, enthusiasm and a range of proposals for change. More detail is given in Appendix 2 of this paper and full reports are online: www.1000livesplus.wales.nhs.uk/prudent-healthcare

There is much to do to develop and scope these proposals. This work is underway within each health board and with external support from 1000 Lives Improvement and other agencies.

Taken on their own, they offer meaningful change to many people's experience of the health service. More significantly, they illustrate the huge potential for change when recipients and providers of services are brought together and invited to apply principles which are different to current experience.

What could be done to change the system?

The workshops have demonstrated the power of the approach: engaging with providers and recipients of health services across a pathway to co-design new ways to deliver better outcomes, experience and value. The principles were an excellent framework for that discussion. However, if their conclusions are to be delivered and developed, there will need to be support which deals with the systemic factors which have created the problem. Achievement of better value needs a changed system.

In respect of the three outline principles, what changes will make a difference?

Minimise avoidable harm

The discussions about harm in the workshops recognised the difficulty of recognising and avoiding it. Staff treating people do not always see the harm that may result. For example, a surgeon may consider a surgical procedure has been successful, with a good outcome for the patient, but once the patient is recovering has no idea whether the patient later developed a post-surgical infection.

The 'invisibility' of harm is therefore a problem. 1000 Lives Improvement has helped raise awareness of harm, and supported teams to actively reduce possible causes of harm, especially in hospital. For example, 'Ask about Clots', a new campaign launched in April 2014 to reduce hospital acquired thrombosis addresses a common cause of avoidable harm.

Public Health Wales could revise the Jader report[48] to scope the current known causes of avoidable harm in healthcare and extend its remit to show where harm could be detected, measured and monitored. There then needs to be political will and organisational commitment to target identified causes of harm to reduce the risks of harm in healthcare.

An exemplar project has been undertaken by the All Wales Therapeutics and Toxicology Centre and Betsi Cadwaladr University Health Board which are looking to develop admission codes to raise awareness of medicine-related hospital admission. Medicines as a potential cause, or contributory cause, of admission are not always considered during acute or out of hours care and medicines-related admission information is not routinely identified. This is in spite of their contributing approximately 7 per cent of hospital admissions[41] and 4 per cent of bed capacity[42].

The project used literature to suggest where the harm exists, direct study to count and classify it and is now working with NHS Wales Informatics Services (NWIS) to develop coding approaches.

The aim of the programme is:

- To promote the identification and reporting of medicine-related hospital admissions. That is, where medicines are suspected/considered to have contributed to the need for admission.
- To share learning, raise awareness and promote best practice in order to reduce medicine-related harm and hospital admissions.

Armed with reliable information about the occurrence of harm, clinicians and managers will be able to redouble efforts to ensure harm is minimised and to monitor the efficacy of those efforts.

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[48] Jader, L. et al. (2007) *An NPHS review to inform the patient safety initiative in Wales.* Cardiff: National Public Health Service (now Public Health Wales).
[49] Howard, R. et al (2006) *Which drugs cause preventable admissions to hospitals? A systematic Review.* British Journal of Clinical Pharmacology.
[50] Pirmohamed, M, et al. (2004) *Adverse drug reactions as cause of admission to hospital: prospective analysis of 18,820 patients.* British Medical Journal.

Carry out the minimum appropriate intervention

There need to be several approaches to achieving this principle.

Evidence
The available evidence of efficacy and provision needs to be presented in a way that guides planning as well as individual decisions. Precedents such as the Dartmouth Atlas of Healthcare[51] have shown the powerful effect of an openly available and well-designed information tool. In Wales, there is excellent material available, for example from the Public Health Wales Observatory, but its use is limited. At present, most available 'performance' data used in health board reports and delivery planning is comparative or against delivery targets.

The right approach will require co-design between the providers and users of data and investment in appropriate systems. The solution must be designed with the point of use as the dominant concern and it must capitalise on user accessible tools which support local adaptation. It should also incorporate advice on expected levels and impact.

This will require investment in design, provision and training. The reward is to move from a situation where we observe inexplicable variation through occasional retrospective report to one where this becomes a proactive management and clinical priority. Simple process reports could give real-time indicators if non-evidenced or superseded treatments and procedures are being used in an organisation.

Information and data
Clinicians are operating in the absence of data which describe what happens to people. Clinical data tend to focus on clinical episodes and sectors do not join up. Clinicians need to be able to see their work and commitment of resources in the context of a whole patient pathway. This approach has delivered benefits for acute stroke patients in Wales and is now being applied by the South Wales Cancer Network.

These small initiatives need strategic level support if they are to become the way in which data are provided and used.

> "Data remain the single most important motivator and tool for a clinical leader. High quality, comparative, unit-level and individual-level clinical and financial data..."[52]

The Nuka System of Care[53] put an emphasis on data, which is used to drive performance.

The Bevan Commission has published two papers[54] on data including 'The Visible Hand' that promotes the idea of using performance data to improve performance.

[51] See www.dartmouthatlas.org/
[52] Bohmer, R (2013) *Leading Clinicians and Clinicians Leading*. The New England Journal of Medicine.
[53] See www.southcentralfoundation.com/nuka/index.cfm

A new data framework, based on principles described by Meyer et al[55] linking process and outcome and applying learning from the Premier Collaborative[56] in the US, is being developed by 1000 Lives Improvement at the request of Chairs and Chief Executives of NHS Wales.

> "Better outcomes are a consequence of effective intervention and thus cannot be managed directly. Management by purpose enables learning and improvement, as opposed to outcome-based management that drives dysfunctional behaviour, fosters cheating and hides failure."[57]

Again according to Bohmer[58], effective use of data within an organisation is one of the determinants of success. He says: "Moreover [they] integrate their measurement activities with other organisational priorities such as pay for performance, annual target setting, and improvement activities, making measurement an integral part of accountability and performance management."

The new data framework will be available for use by March 2015. Its design will be distinct from the needs of regulators and funders because its aim is to support the running of healthcare. In the words of Meyer[59]: "Balanced to meet the need of end users to judge quality and cost performance and the need of providers to continuously improve the quality, outcomes and costs of their services; and parsimonious to measure quality, outcomes and costs with appropriate metrics that are selected based on end-user needs."

Care pathways and flow

Data and information must be used purposefully to help all staff make prudent decisions in predictable and unpredictable healthcare settings. Care pathways are the most effective tool for predictable settings. They should combine evidence-based essential aspects of care, with regard for local variation and self-determination for the service user. A pathway may specify a certain action, but the action will only take place if it can be carried out safely with available equipment and trained staff, and whether the person receiving care desires the procedure.

Pathways must be underpinned by data tools and support local teams in improving the service they provide. There are many good examples in Wales for example developed as part of the 'Focus On' programme and by the regional networks. Often they do not require extra information to be collected, just a different use of the available data.

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[54] The Bevan Commission (2013) *Data and Information in NHS Wales: The good, the bad and the ugly!* Cardiff: The Bevan Commission

[55] Meyer, G. et al. (2012) *More quality measures versus measuring what matters: a call for balance and parsimony*. British Medical Journal.

[56] See www.premierinc.com/wps/portal/premierinc/public/home

[57] Vanguard (2014) *Saving money by doing the right thing* [online] Available from: http://locality.org.uk/wp-content/uploads/Locality-Report-Diseconomies-web-version.pdf (accessed 2 June 2014)

[58] Bohmer,R. (2011) *The four habits of high-value health care organisations.* New England Journal of Medicine

[59] Meyer, G. et al. (2012) *More quality measures versus measuring what matters: a call for balance and parsimony*. British Medical Journal.

Pathway improvement work being undertaken by the South Wales Cancer Network[60] seeks to reduce the time between first referral for an urgent investigation or procedure and the first definitive treatment. Combining data from each step of the pathway is supporting a new level of team working between institutions and departments and also driving change by testing new, often simple improvements.

The focus for management needs to be on acting on data related to outcomes, experience and flow of people through health systems. This is the most effective way of ensuring that resources are not wasted and people are not put at risk from delays. Measuring targets of performance does not support purposeful management action.

These are new skills for our health services which require intensive training and support. However, they are potentially transformational as they focus on the timeliness and appropriateness of people's experience rather than static counts at fixed points. This approach is now being applied to unscheduled care in Wales and it could certainly be adapted to scheduled care services.

Improvement skills

NHS Wales has made a commitment to ensure that its entire workforce is trained to apply improvement skills over a four year period. The ambitions of the workshops must be accompanied by an up-skilling of all clinicians and managers in making change happen.

Already, over 10 per cent of the NHS workforce has been trained in improvement quality techniques through the national programme, Improving Quality Together. Most health boards have advanced plans for the development of a local faculty or improvement centre. The rate of training now being delivered will ensure that the whole 80,000 workforce is trained every 5 years. Staff must also be allowed the time to engage in improvement activity with the aim of all having two jobs: that is, doing their job to the highest standards and every day improving the job they do.

The Minister has said, "Our destiny really does lie in the skills, the experience, the commitment of staff at all levels in the NHS".[61]

A combination of well designed data systems and improvement energy will deliver improvement. "Clinicians will need to define which elements of clinical data are most relevant, sensitive, and valid for driving improved performance; help interpret the results of clinical performance measurement; and then design effective responses."[62]

International evidence demonstrates that health systems which share the same improvement method and language are best at achieving change. NHS Wales needs to sustain its commitment to Improving Quality Together[63] and build the central

[60] See www.wales.nhs.uk/sites3/home.cfm?orgid=983
[61] Welsh NHS Confederation Conference; 16 January 2014.
[62] Bohmer, R (2009) *The shifting mission of health care delivery organisations.* New England Journal of Medicine
[63] See www.iqt.wales.nhs.uk/home

curriculum so that it develops a focus on continuously improving outcomes, experience and value.

Understanding cost

Budgetary planning, control and analysis need to support clinicians in delivering prudent healthcare. Clinicians need to be able to understand and reduce costs incurred and be supported to make choices which are based on best value. The format of current functional budgets gives rise to arbitrariness in the way savings are made.

This is not a new problem.[64] Concepts such as service line reporting have been around for a long time but they have not been widely applied. There may be a need for simpler techniques such as Time-Driven Activity-Based Costing (TDABC)[65] which offer pragmatic solutions and clinicians must be given wider responsibility for the resource consequences of their decisions. In general, increased responsibility should be preferred over piecemeal incentives.

A Wales-wide approach is needed urgently. It should focus on supporting local teams in delivering prudent principles as well as providing system level information. An ambitious but achievable timescale must be established to meet the Minister's challenge.

The objective of TDABC in healthcare is to make costs visible to those who make resource decisions and to understand which costs drive outcomes and which could be redirected. The approach needs clear information on outcomes so that value can be assessed. Cost reduction without regard to outcomes can actually increase cost and limit effective care.

A move to process-mapping linked to time based activity costing has the benefit of showing clearly both the 'component' costs of any care pathway or cycle. This includes what we spend in theatres, outpatients, on the wards etc as well as better matching skills and costs to individual services and the needs of their users.

This approach to value can be applied to care outcomes, the process of care and the sustainability of health.

Expressed simply, the aim of TDABC is to:

- Understand our costs better for individual service and service users.
- Understand our outcomes better for individual service and service users.
- Understand the link between costs and outcomes.
- Make both visible to clinicians.

[64] MacArthur H., Phillips C., Simpson H. 2012) *Improving Quality Reduces Costs*. Cardiff: 1000 Lives Improvement
[65] Kaplan R. & Porter M. (2011) *How to solve the cost crises in health care*. Harvard Business Review.

Promote equity between the people who provide and use services

For many who attended the workshops, this principle offered the opportunity to transform outcomes, experience and value and the most fundamental development of health service practice. It requires a new focus on delivering outcomes valued by people, ensuring that service users and providers are able to engage in effective conversation as equal partners and changing people's approach to managing their own health and lifestyle choices.

Focus on patient outcomes
There should be rapid development of Patient Reported Outcome Measures (PROMs) to guide clinicians and patients in decisions especially for "preference sensitive conditions"[66]: that is those conditions where we know from the literature that informed decision making will affect the rate of uptake. Joint replacement, back surgery and mastectomy are examples.

An example of this is an orthopaedic and trauma surveillance and outcomes system, partly based on work done in Melbourne Australia, which has been piloted in Wales.

It used telephone assessments after surgery to gather outcome data and also used linked records within the Secure Anonymised Information Linkage (SAIL) database in order to track people from their GP referral all the way to the post-operative period.

Even at pilot stage, the work has generated useful insight into current practice. If implemented routinely, it is suggested that this approach will have several benefits:

- Ongoing quality improvement in orthopaedic care.
- Providing outcome information to inform shared decision making.
- Maintaining the highest standards of clinical activity and professional development by providing ongoing comprehensive outcomes data that can be used by clinicians for audit, appraisal and revalidation.
- Early warning of emerging problems through timely monitoring of trends.
- Linking resource input to evidence of outcome to help inform decisions about the appropriate provision of high quality, evidence based care to the population of Wales.

Developing PROMS is urgent work and needs to be implemented rapidly. There are international precedents which Wales can follow and it needs to be part of the work to take forward prudent healthcare. The Health Foundation have recently provided an excellent review[67] of the literature in this developing area and publicised practical approaches to implementation, for example the work of Dr Alf Collins[68,69] in Taunton. There are also specialist groups and international links such

[66] Bohmer, R. (2009) *Designing Care: Aligning the Nature and Management of Health Care.* Harvard Business Press.
[67] The Health Foundation. (2014) *Helping measure person-centred care. A review of evidence about commonly used approaches and tools used to help measure person-centred care.* London: The Health Foundation. Available from: www.health.org.uk/public/cms/75/76/313/4697/Helping%20measure%20person-centred%20care.pdf?realName=lnet6X.pdf
[68] See Dr Alf Collins' video on www.1000livesplus.wales.nhs.uk/prudent-healthcare

as the International Consortium for Health Outcome Measurement (ICHOM)[70] which may offer value for Wales.

Decision support

"It begins, I believe, in recalibrating the relationship between the citizen and the state or between the patient and the Service"[71] the Minister for Health and Social Services notes.

There is urgent need to support people in their meeting with clinicians and discussing options and risks: many people describe these skills as health literacy. The MAGIC[72] work which has been running in Cardiff as well as Newcastle seeks to support people to prepare for consultations and train healthcare professionals in conducting such conversations.

The 30 option grids currently published by the Option Grids Collaborative[73] are evidence-based and available for use. This work needs to be accelerated and given higher priority.

Clinicians also need support with this different way of working. Experience from a programme run by 1000 Lives Improvement suggests that these approaches are welcomed but that they need to be spread on a far wider scale than they have so far.

1000 Lives Improvement has facilitated a number of workshops in Powys with General Practices to support them to embark on this new way of working. The objective was to move the professional to the position of coach, supporting people to find solutions that will work for them in the context of their lives, resisting the urge to offer solutions that for many clinicians is a medical solution that may not always be the most cost effective or most appropriate.

Theoretically all are committed to the ideals and principles of co-production but the practicalities of translating this into practice in busy and time-limited consultations has proved difficult to achieve. The workshops therefore focused on developing confidence, building knowledge and confirming the current skills/practice which will support the change required.

The emphasis of the learning was to move people to action – from theory to practice, providing skills on: using confidence scaling, active listening, reflection to build relationships, problem solving, goal setting and action planning

Importantly, professionals were supported to move away from their existing role as the problem solver with all the answers to one of facilitating patients to actively seek their own solutions (an approach that achieves prudent healthcare principles).

[69] Collins, A. (2014) *Measuring what really matters.* London: The Health Foundation. Available from: www.health.org.uk/publications/measuring-what-really-matters/?dm_i=4Y2,2FIX5,9OFPUR,8U516,1
[70] See www.ichom.org/why-we-do-it/
[71] Welsh NHS Confederation Conference, 16 January 2014.
[72] See www.health.org.uk/areas-of-work/programmes/shared-decision-making/
[73] See www.optiongrid.org/

A sea change with the five practices involved was witnessed. Firstly, the awareness that they did not already work in this way and then, more importantly, their commitment to change. All could see the benefits in terms of health outcomes and in efficiency and effectiveness (doing it right first time – and addressing the causes of ill health not just the symptoms).

Between workshops the practice teams started applying these new skills. Time was the biggest barrier and unfamiliarity with the models. By workshop three all the teams wanted to continue this change and have requested action learning to review, reinforce and cement learning in order that they can promote and convince colleagues to adopt this new way of working.

Similarly, the 'Choosing Wisely' initiative has developed and disseminated materials for patients through user groups to help them engage their clinicians in conversations about their care and to empower them to ask questions about what tests and procedures are right for them. A suite of communication tools, education modules, resources and workshops are also available to help providers engage in these conversations with their patients.

Quality assured health information content should be co-ordinated nationally and stored in a national online repository to ensure provision is clear, accurate, balanced, evidence-based, up-to-date and available in a variety of formats and languages. This approach would bring economies of scale in terms of cost and resource, improve quality and reduce risk.

Consideration should be given to utilising third sector content in place of developing content in-house which is an approach followed by health information services in England[74] and Scotland[75], given the rigorous quality assurance mechanisms which are followed by many such organisations. Local information should be reduced to a minimum and agreement on what may be produced at a national and local level clarified in a framework document.

Health and well-being

As the Minister for Health and Social services points out in his 2014 Welsh NHS Confederation speech "Thirty years of public health education has succeeded hugely in changing peoples' attitudes. [...] People know what they should do and have intentions to do things differently. What it has not succeeded in doing is changing actions. [...] In a prudent medicine world we have to change the way we think and about public health and population based health too. We have to move from education to motivation." [76]

The 'Transforming Health Improvement in Wales'[77] review published in 2013 has helped to ensure that the current investment achieves best effect. However, there is a great deal more to do and that includes understanding how the health service

[74] Information Prescription Service (IPG). See www.nhs.uk/IPG/Pages/AboutThisService.aspx
[75] NHS Inform. See www.nhsinform.co.uk
[76] Welsh NHS Confederation Conference, 16 January 2014.
[77] Public Health Wales (2013) *Transforming Health Improvement in Wales. Working together to build a healthier, happier future*. Cardiff: Public Health Wales.

itself can avoid reinforcing or supporting destructive lifestyle choices and plans to collate international expertise in a further report by summer 2014.

Making prudent healthcare routine in NHS Wales

Delivering this agenda will require ambition, consensus and delivery.

The Premier Collaborative in the USA[78] is perhaps the best international example of ambition. Following a shared 'audacious goal' to out-perform the rest of the US in terms of safety, quality and cost, the original group of 157 hospitals used a measurement framework and quality support system to do just that. After four years, they reported cumulative reduction of 30,000 deaths, $6.9billion and 105,000 more care episodes following evidence based pathways.

As described earlier, Chairs and Chief Executives in NHS Wales have already decided to follow the example of the Premier framework to connect measurement (and therefore effort) at all levels to identify waste and opportunities to improve care. The opportunity now exists to use prudent healthcare principles linked to the new measurement framework and to set an ambition to outperform other UK nations in their progress on key quality metrics. QualityWatch[79] and the Nuffield Foundation's four Nations report[80] offer the opportunity for external benchmarking. NHS Wales should decide to make faster progress on reducing harm, controlling costs and improving patient outcomes than other nations. A four year timescale has been achieved elsewhere and could apply to Wales.

The successful experience of delivering the 1000 Lives Campaign[81] demonstrates the value of consensus building. That campaign was preceded by six months of discussion and building of will which allowed interested groups to understand what was required and interpret that for their own setting. Whilst there has been a great deal of publicity and senior leadership discussion of prudent healthcare, that is very different from an understanding and ownership by a wide variety of professional and public groups. A period of three months between formal agreement of the principles and formal launch would enable this to happen.

Finally, this paper has described a series of enabling actions. Some of these can be taken forward by Public Health Wales and supported by 1000 Lives Improvement. However, there is a range of required actions needing coordinated delivery across the system. The proposals included in this paper must form part of an action plan which is delivered by the NHS in Wales with and for its population.

[78] See www.premierinc.com/wps/portal/premierinc/public/home
[79] See www.qualitywatch.org.uk/
[80] Bevan G., et al (2014) *The four health systems of the United Kingdom: how do they compare?* London: The Nuffield Trust. Available from: www.nuffieldtrust.org.uk/sites/files/nuffield/140411_four_countries_health_systems_full_report.pdf
[81] See www.1000livesplus.wales.nhs.uk/1000-lives-campaign

Conclusion

Consideration of prudent healthcare principles by users and providers of services in four different settings demonstrated high levels of acceptability, relevance and power to make a difference. The workshops have demonstrated the Minister's challenges in his speech to the Welsh NHS Confederation – could we achieve better value in healthcare by doing some things less, avoiding unnecessary interventions, doing more to ensure patients are involved in choices and decisions about their care – can be met by NHS Wales.

NHS Wales can adopt prudent healthcare principles and order its services along prudent lines. There is a lot of work to do, but with support, it is achievable, particularly if developed in genuine co-productive partnership with the people who use NHS Wales services.

There is a clear benefit to working more closely with the public with several workshops exploring the benefits in detail. For example, the workshop examining chronic pain services recommended medication reviews to safeguard against harm caused by long-term use of medication at a high dosage.

Improving the information given to people about medicines was a major recommendation of the workshop examining prescribing. The prescribing of proton pump inhibitors (PPIs) was discussed in detail. These medicines are used to treat a wide range of gastro-oesophageal conditions. Prescribing of these drugs is increasing steadily in Wales, but their long-term side-effects include potential harm.

There is a lifestyle cause or contributory factor for a large number of people who are prescribed PPIs. In a co-productive relationship, many people would benefit from expert lifestyle advice on improving their symptoms without the need for a prescription. The workshop concluded people would be willing to try this route it they were more aware that PPIs have side-effects and should therefore not be taken long-term. Prescribing clinicians also need to be encouraged to have conversations around lifestyle and not automatically consider pharmaceutical options.

There is wastefulness in the many systems that operate within the NHS, but this can be tackled. The workshop discussing adult hearing services concluded that agreed pathways integrating primary care and specialist services will mean that people get seen by the right clinicians, reducing the number of inappropriate appointments that bring no benefit to the person needing help. Walk-in clinics would reduce delays and speed up diagnosis and treatment.

Self-management by people with chronic pain can help reduce unnecessary delays in the system. The person becomes the expert on their condition in this scenario, rather than having to wait for the clinical expert to be available. This can help speed up treatment and reduces problems of deterioration.

NHS Wales need to ensure people receive the minimum appropriate intervention, instead of 'over-treating', which often leads to harm and poorer patient experience. The orthopaedic workshop in particular looked at 'stopping the conveyor belt' which sees people moved along a process towards a knee operation. The person may not want a knee operation, but this is what the process is set up to deliver, so that is what they end up receiving.

Other interventions could deliver what the person wants without the need for surgery. Improved decision-making and patient information can take into account patient expectations and wishes. Goal-oriented Shared Decision Making is a helpful tool for staff to use to advise people on the options they have.

The workshop looking at hearing services noted: "There is an expectation that clinicians do 'something' just because they feel they must be seen to be doing something." This culture can be challenged and changed by offering alternatives. Clinicians need a range of acceptable options to present to people. New pathways, including walk-in clinics, can help develop this change in culture.

Many of the suggestions arising from the workshop revolve around staff working closely with the people using their services. This needs to happen on a wider level as well with the public who are not using services at present. Prudent healthcare principles need to be clearly stated, communicated, understood and owned by everyone. Their wording and use must describe opportunities to deliver best outcomes and experience and avoid any unwarranted suggestion of cost cutting or criticism of staff.

The workshops are a model to take forward and to drive similar discussions in other organisations and other clinical settings. There will be those who feel that individual workshops did not go far enough and all of them require follow up work.

Traditional healthcare systems have separated management from the delivery of clinical care. Current application of managerial influence and control has resulted in top down systems which are designed to assure the top of an organisation about process and cost. The findings of the workshops have challenged these assumptions.

The workshops confirmed the importance of knowledge and power being vested in those who receive and provide services. To deliver change, patients, citizens and clinicians need to be supported with new skills, information and techniques. NHS Wales also needs to be progressively divested of top down controls which are unhelpful or counterproductive.

The prudent healthcare principles are timely, shared and welcome. The challenge for NHS Wales will be to successfully apply the principles of prudent healthcare as a mandate for purposeful organisational change.

Appendix 1: Principles of prudent healthcare

In a speech at the Welsh NHS Confederation's annual conference in January 2014, the Minister for Health and Social Services, Professor Mark Drakeford AM, explained how prudent healthcare was a pressing need for NHS Wales. He said:

> "We have to find new ways of prioritising the services we provide, and to align them, and access to them, more directly on clinical grounds."[82]

The Minister went on to outline three principles that underpinned the prudent healthcare approach:

- Do no harm - minimum appropriate intervention consistent with the seriousness of the illness and the patient's goals.
- Resources should be expended wisely and ethically, determined by clinical need and clinical prioritisation.
- Equity - matching need and spending so we put our maximum resources where our needs are greatest.

These principles were also expressed in a letter[83] from Welsh Government dated 24 January and which established the workshops. It described three underpinning principles as follows. Any service or individual providing that service will:

- Do no harm.
- Carry out the minimum appropriate intervention.
- Promote equity between professionals and patients.

The Bevan Commission has been established to advise the Minister for Health and Social Services on promoting health and health services improvement in Wales.[84] The Minister for Health and Social Services asked the Bevan Commission to define prudent healthcare principles, and the Commission did this concurrently with the prudent healthcare workshops.

The Bevan Commission formulated six principles[85, 86]:

- Equity based care, treating greatest need first.
- Do no harm.
- Do the minimum appropriate, to achieve the desired outcomes.
- Choose the most prudent care, openly together with the patient.
- Consistently apply evidence based medicine in practice.
- Co-create health with the public, patients and partners.

Of the three versions, the first two are the simplest. Of course those, the first two principles are similar. The third, though concerned with equity in both cases, are different. Equity as a measure of spending meeting need is an external, largely

[82] Welsh NHS Confederation Conference, 16 January 2014.
[83] Hussey, R. (2014) *Letter to Adam Cains (Cardiff and the Vale University Health Board CEO)*, dated 24th January 2014
[84] See www.bevancommission.org/home
[85] Aylward, M., Phillips, C., Howson, H. (2013) *Simply Prudent healthcare - achieving better care and value for money in Wales - Discussion paper*. Cardiff: The Bevan Commission.
[86] Bevan Commission (2014) *Prudent healthcare - The Underlying Principles.* Cardiff: The Bevan Commission.

retrospective measurement. Equity of status 'between professionals and patients' is a principle which can be applied at the point of care.

Within the workshops, the most frequent questions were about whether the motive for the principles was actually about cost-cutting. There were also concerns about whether there was implicit criticism of the standards of work of some clinicians or clinical groups.

There was relatively little comment from delegates about the specific wording or framing of the principles in any form. Participants did affirm that the prudent healthcare principles need to be clearly stated, communicated, understood and owned by everyone. There was also agreement that operationally the definition of the principles should build upon Welsh Government's letter to the service and that it would be preferable to use terms other than patients and professionals. Workshop participants also acknowledged that work will be required to ensure that the public and professionals are ready, able and willing to engage in prudent healthcare.

The principles were well understood by all the groups represented in the audiences. Based on that understanding, the workshop participants were able to develop detailed discussions and suggestions about how services could be improved to deliver greater value.

This response is a very positive endorsement of the principles to take forward a new approach to creating prudent healthcare.

There are some important considerations regarding prudent healthcare principles. These are:

- The principles need to be decided and clearly stated, so that the meaning of the term 'prudent healthcare' is consistently understood by all stakeholders.
- The principles should avoid any element which is time-limited, ensuring that there are no internal conflicts between individual principles and that they do not appear to over claim their utility in addressing complex individual choices.
- The expression of the principles needs to be positive and free from any implied criticism of individual performance or motives
- Principles which are effective in complex systems need to be simple and memorable. This will allow all that they affect to embrace them and interpret them to their settings and values. For example, the principles of the NHS are known to most people who provide and use it (the health service will be available to all and financed entirely from taxation, which means that people pay into it according to their means). Three rather than six principles appear closer to that aim.

In effect, the consideration is whether amplifying the three principles to six adds to or detracts from their value.

The simplest version of the principle would seem best suited to their purpose: guiding peoples' decisions and actions in complex situations. Hence, an amended version would be:

Any service or individual providing a service will:

- Minimise avoidable harm.
- Carry out the minimum appropriate intervention.
- Promote equity between the people who provide and use services.

Appendix 2: Case studies

1000 Lives Improvement assisted four NHS Wales health boards examine the principles of prudent healthcare and identify ways it could be applied in very specific areas.

The case studies included here feature the work of:

- Cardiff and the Vale University Health Board - How would prudent healthcare affect the treatment of 'chronic pain'? Dr Graham Shortland and Dr Sharmila Khot
- Cwm Taf University Health Board – How would prudent healthcare affect prescribing? Mr Stephen Harrhy and Mr Brian Hawkins
- Abertawe Bro Morgannwg University Health Board – How would prudent healthcare affect services related to adult hearing problems? Mr Hamish Laing and Mr Andrew Phillips
- Aneurin Bevan University Health Board – How would prudent healthcare affect services related to knee surgery? Dr Paul Buss and Mr Peter Lewis

The health boards all contributed time and personnel to consider these issues in workshops facilitated by 1000 Lives Improvement. The ideas generated and challenges identified are summarised under each heading.

The full case studies are available to download from www.1000livesplus.wales.nhs.uk/prudent-healthcare

How would prudent healthcare affect the treatment of 'chronic pain'?

Cardiff and Vale University Health Board workshop summary

Introduction

The prudent healthcare workshop was arranged and facilitated 1000 Lives Improvement. The main aim of the workshop is to test the principles of prudent healthcare.

Cardiff and Vale University Health Board was tasked with a prudent workshop involving the chronic pain service. In preparation, the service identified and contacted patients who could represent the service user group. A pre-workshop briefing event was organised and attended by the patient group

The chronic pain service is based in University Hospital of Wales, Cardiff. It is a consultant-led service consisting of five consultants specialising in Anaesthesia and Pain Medicine, one palliative care consultant and four clinical nurse specialists. A significant proportion of patients referred into secondary care suffer chronic back pain. However patients suffering from chronic back pain are seen and managed by several different specialities across Cardiff and Vale University Health Board. Therefore the service invited clinical staff across several specialities to attend and contribute to the chronic pain service prudent workshop

Workshop

Patients were offered a pre-workshop, one-day meeting prior to the main meeting, which was important in preparing them to contribute to the workshop. In this meeting, they were briefed about the principles behind prudent healthcare and the expectations of the workshop.

The patients presented their concerns with the service. These included concerns about the length of waiting times before being seen, not seeing the same clinician on each appointment, lack of communication on options available in or outside the NHS, some aspects or symptoms reported by the patient are ignored by the clinician.

The workshop itself had a wide group of Cardiff and Vale University Health Board clinical staff, management and Welsh Government/public health representatives, as well as five patient representatives who had attended the patient workshop and were representing that group. A wide range of work was presented with regard to initiatives that are already in place and the need to test those against prudent healthcare principles was discussed.

The workshop was attended by approximately 30 people in total. The group was facilitated through a structured set of exercises and presentations by 1000 Lives Improvement staff to come up with ideas for service improvement which would be supported by the prudent healthcare principles.

Prudent Ideas
After an initial brainstorm of ideas, three ideas were explored in some detail amongst the clinician group separately and thereafter discussed with the patient group in the workshop to provide an agreed view on the ideas produced.

- Single point of entry for back pain services, which suggests the patient will access the specialist team of most immediate and direct benefit to patient's presentation at the time. This avoids the revolving door phenomenon raised by the patients. The professional view was that with further work the real benefit to this could be demonstrated to patients.

- Structured routine of medication reviews for patients. This would involve a discussion by clinician and patient of the benefits of current prescribed medication and the levels / dose administered. It is suggested that people who are on high dose of medication for initial therapeutic effect may be able to reduce or change product for better long term effect (no harm).

- Self management: clinician and patient education on treatment as co-production. This involves the patient becoming an expert on their condition and the GP being able to support them rather than the consultant in secondary care as the GP is easily accessible. The GP can then refer directly to the type of service needed for opinion or therapy.

Discussion with the delegates
The patient group felt the first idea was similar to what was there already; it missed the point of a whole pathway as it focuses on the first step only.

It appeared that patients consider their point of entry into secondary care as *the* single point of entry whereas clinicians attending prudent healthcare workshop from a wide spectrum of services offering chronic back pain treatment and management were acutely aware that the point of entry into secondary care for persistent back pain could be one of several available including directly for surgical management. It was discussed that getting the point of entry correct for each individual patient would perhaps assist in getting the right treatment at the right time to the right patient.

However as the point of entry is an ill-defined concept currently it was generally accepted that in general the idea lacked clarity on the day and will need further work and discussion with patient representatives to get clarity on what is involved.

The second idea was well received by patients as the GP is far more accessible than the consultant in hospital.

The third idea was welcomed by the patient group but was thought by clinicians to open the door for GPs to refer patients on to secondary care too easily and perpetuate current practice of multiple speciality referrals for same condition in same patient. However there was general agreement within both groups that early education in self management principles for chronic back pain would be beneficial to patients and clinical staff.

How can the ideas be taken forward

Idea 1: Single point of referral
The pain service group was asked to take this idea away and work on the details in this idea and provide clarity so it would be clear what the benefits to the patient pathway would be from a patient perspective. In addition whilst there are examples of this in place there exists the opportunity to roll out further examples across Cardiff and Vale University Health Board and publicise further across Wales.

Idea 2: Structure for periodic medication review
It will be further developed to roll out across the board and support all GPs at implementing (rollout model could be similar as the Diabetes service model where the consultant supports a group of GP practices). There is considerable learning from the diabetes project that can be used for both the health board and wider.

Idea 3: Self management / patient education / treatment as a co-production
The detail of this will be developed in joint working with the pain service and other clinical boards.

Next steps

For Cardiff and Vale University Health Board
An outline of the approach to prudent healthcare, including the plan for detailed work-plans for the three initiatives identified, will be presented to the Board Meeting in May.

The health board will need to use knowledge of supply and demand to change the way the system works. 1000 Lives Improvement will work together with the in-house service improvement team. All felt that these ideas have the potential to make a real difference.

For NHS Wales
To develop a template of service review to facilitate the discussion around how services should prepare and respond to prudent healthcare principles

How would prudent healthcare affect prescribing?
Cwm Taf University Health Board workshop summary

Prescribing a medicine is the most frequent NHS healthcare intervention. In Wales 74.2 million prescription items were written and dispensed in primary care in 2012-2013 at a cost of £514m. The number of prescriptions dispensed has risen by 11.4 per cent over the last 5 years.

As the population grows older it consumes a disproportionately greater amount of prescribed medicines. Therefore it is reasonable to assume that this increase in the number of prescriptions will continue for the foreseeable future.

Medicines deliver great quality benefits but also have significant potential for harm. Adverse effects of medicines account for 7 per cent of acute hospital admissions.

While Cwm Taf University Health Board has the highest prescribing rate in Wales, although this is offset by it having the lowest rate of increase in prescribing.

Current prescribing databases generally look at prescribing costs and volume relative to size of population. It does not generally consider perceived need derived from deprivation, morbidity, disease prevalence and other factors that influence prescribing. It is also not currently linked with health outcomes. More inclusive, informative prescribing data would lead to more informed decision making. This is a key action point to take forward.

There is little guidance or agreed evidence on what would be an optimal level of prescribing in primary care. However, there is much published evidence on what should constitute good practice in prescribing; some key principles are illustrated below.

- Considers risks and benefits (with the involvement of the patient) before prescribing any medicine.
- Do no harm.
- Prescribe cost effectively.
- Involve the patient at all stages of the process.
- Regular monitoring and review of the effectiveness and safety of therapy.

Medication review is an essential element of a safe repeat prescribing system. The national prescribing centre (NPC) has published guidelines on medication review (NPC 2002 Room for review, Guide to medication review 2008).

The National Service Framework for Older People in Wales (NSF 2006) included within its objectives that older people receiving four or more medicines are offered an annual medication review. As part of the Quality & Outcomes Framework (QoF) of the GP contract there are two requirements to carry out medication review.

The Medicines Use Review (MUR) consists of an accredited community pharmacist undertaking a structured adherence-centred review with patients on multiple medicines, particularly those receiving medicines for long term conditions as part of their contract.

The discharge medicines service, launched in 2012, provides support to patients recently discharged between care settings by ensuring that changes to patients' medicines made in one care setting (e.g. during a hospital admission) are enacted as intended in the community helping to reduce the risk of preventable medicines related problems and supporting adherence with newly prescribed medication.

Up to 50 per cent of all prescribed medicines are not taken as intended. Medicines waste is therefore a significant issue, both in terms of the acquisition cost of medicines not used, and the loss of health benefit to patients from not taking the

medicine properly. Effective medicines management is a challenge, and a number of approaches are required. Indeed, much work has already been done in Cwm Taf and across Wales to address the issue.

Clinicians need to understand more effectively the reasons why patients do not take medicines as intended. Conversations about drugs need to develop from information transfer to patient education to motivation and culture change.

Ideas from the workshop
A series of workshops were held that asked how current practice, systems and processes could be improved to implement the principles of prudent healthcare. Numerous ideas and comments came forward from the groups. These are listed below categorised into several themes emerged from the discussions.

Patient and citizen engagement: Better engagement between patients, citizens and providers of health care is essential to the delivery of prudent healthcare.

Process change: It was recognised that many of the current processes and contractual arrangements (e.g. GP and community pharmacy contracts) may actually be barriers to the delivery of prudent healthcare.

Evidence-based prescribing: Medicines that have not been approved by NICE or AWMSG should not be used.

Different models of care, health promotion and lifestyle: Consider alternatives to prescribing, eg lifestyle advice.

Costs of medicines: The cost and value of medicines is not always understood. Patients and the public and some healthcare professionals are generally unaware of the costs of prescribed medication. Being more cost aware may help that a greater value is placed on prescribed medicines, eg, put the prices of medicines on prescriptions/labels.

Communication, multi-professional and multidisciplinary engagement: In order to deliver prudent healthcare, it is essential that there is good communication and engagement between all health care providers.

Better use of Information Technology (IT): Electronic prescribing and discharge should be normal practice in secondary care, and would allow quicker, safer and cost-effective transfer of prescribing information. Health records for Out-of-Hours, secondary care, community pharmacy and GP systems need to be integrated to allow appropriate and necessary access.

Continuity of care: NHS Wales should explore the benefits of continuity of care, eg, patients see the same GP, use the same community pharmacy).

Opportunities
The workshop identified a number of key areas which offered opportunities to pursue prudent healthcare.

The 'Your Medicines, Your Health' campaign in Cwm Taf is a long term campaign to support citizens living in the Cwm Taf area to manage their prescription medicines more effectively. The campaign will have a number of different strategies and has focussed initially on encouraging all residents of Cwm Taf to clear out old and unwanted medicines at home, and to tell their Doctor or pharmacist if they have problems or have decided not to take prescribed medicines. 'Take them if you can, tell us if you can't'.

'Your Medicines, Your Health' could be rolled out on an all-Wales basis. Alongside a communications campaign, NHS Wales staff should be recruited as advocates – the NHS is a major employer and has tremendous reach through its staff into local communities, including schools, community organisations and faith groups.

Repeat prescribing accounts for 60 to 75 per cent of all prescription items in primary care. Efficient systems and processes are essential to enable GPs and community pharmacists to manage their workload effectively and help ensure patient safety and cost effective use of medicines.

Ideas for improvement include:

- Developing shared access to health records across all sectors and professions.
- Better and increased use of medication review (all sectors).
- Increased communication between GP and community pharmacies, secondary care and Out of Hours.
- Electronic prescribing and discharge information from secondary care.
- Review of ordering and collection systems: A set of nationally agreed standards would be helpful. These could also be designed to be patient-held.
- Patient registration is essential to an improved repeat prescribing service.

One of the emerging themes from the initial group work was the development of different and new models of care, including alternatives to prescribing. In many cases prescribing of medicines may not be the most effective intervention.

Cwm Taf University Health Board has the highest rate of anti-depressant prescribing and the highest related costs of any of the Health Boards in Wales. The health board has undertaken work to identify potential solutions.

The Welsh Institute of Health and Social Care has assessed whether an alternative approach could lead to reduced prescribing, create cost savings and better meet local needs. The report identified a tailored support service could deliver a 20 per cent reduction in anti-depressant usage.

The new service would 'wrap around' existing statutory service provision such as Primary Care Mental Health Services, Pharmacy and GP practices who would all be crucial in utilising the new range of interventions as alternatives (wherever appropriate) to current prescribing practice.

One therapeutic class of medicines that was discussed in detail was the prescribing of proton pump inhibitors (PPI).These medicines are used to treat a wide range of gastro-oesophageal conditions. Prescribing of these drugs is increasing steadily in

Wales and it is estimated that one in eight residents of the health board are prescribed a PPI.

These drugs are effective in providing symptom relief and are generally well tolerated, however there are some questions being raised as to the consequences of long-term use and their effect on other conditions. They are often prescribed to relieve the symptoms of poor lifestyle choices.

For a large number of patients prescribed PPIs, there is a lifestyle cause or contributory factor, eg smoking, obesity. In these circumstances it would be beneficial for patients to be referred for a consultation for lifestyle advice on improving their symptoms without the need for a prescription. Patients should also be informed that PPIs have side-effects and should therefore not be taken long-term.

The following are some suggested next steps based on the output of the workshop.

Action 1: Develop and deliver a programme of awareness-raising events amongst the prescribing and medicines management community. There were a number of specific areas where action could be taken to test and enact the principles of prudent healthcare. These were:

- Increasing public and patient engagement and awareness.
- Process and contractual change:
  - Repeat prescribing
  - Community pharmacy contract
  - Patient registration
  - GMS Contract
  - IT and communication (including shared access to records)
- Different models of care
  - Practice support pharmacists and medicines coaches
  - Well-being model of care
- Prudent prescribing of Proton Pump Inhibitors

All of these ideas require further development.

Action 2: Look to roll out the principles and ideas from ‘Your Medicines, Your Health’ on a wider scale, regionally or nationally.

Action 3: A small working group should be established to take forward the issue of developing an integrated repeat prescribing process. This would require input from all other relevant stakeholders.

Action 4: To inform and engage with Welsh Government and other relevant stakeholders regarding any required changes to the contractual frameworks and regulations

Action 5: Work and engage with NHS Wales Informatics Services (NWIS), NHS Purchasing and Supply Agency (PASA) and other relevant agencies about the needs

for changes and improvement to IT and communication systems and ensure that they are given sufficient priority.

Action 6: To improve current information sources and databases by working with AWTTC, PASU, PHW and other relevant agencies about the need for changes and improvement that incorporate multiple elements that influence prescribing and links with outcome data.

Action 7: To work with Royal Pharmaceutical Society to progress on the work examining community pharmacy patient registration models, and any other work that looks at alternative models of care (for example, medicines coaches).

Action 8: Develop and implement local, integrated prescribing guidelines for PPI prescribing in Cwm Taf which link in with national advice and good practice (eg AWMSG support material). Review model and develop further on a national basis.

How would prudent healthcare affect services related to adult hearing problems and dizziness?

Abertawe Bro Morgannwg University Health Board workshop summary

This workshop considered the adult hearing loss, tinnitus and dizziness/imbalance services provided by Abertawe Bro Morgannwg University (ABMU) Health Board. The current service and plans for development are outlined below.

The audiology service treats patients with hearing loss, dizziness and tinnitus referred from GPs in Primary Care and from Ear, Nose & Throat (ENT) surgeons. An audit of services across Wales shows that very few services have fully implemented the 'Focus On' pathways that indicated adults with hearing loss should be referred primarily to audiology services.

The ENT department within ABMU offers a range services covering a wide geographical area with outpatient clinics held in Singleton, Morriston, Neath Port Talbot and Princess of Wales Hospitals. The service is led by 11 consultants as well as a team of specialist doctors and clinical nurse specialists.

Around 25 per cent of ENT outpatient referrals are currently for patients with hearing loss, dizziness and tinnitus. Very few of these receive medical or surgical treatment but are seen in ENT outpatient clinics and then referred to audiology for management.

Issues in audiology services across Wales include long waiting times for re-accessing services, fitting of hearing aids to one ear only. An audit was undertaken by the ABMU ENT service of outpatient referrals.

The prudent healthcare workshop held in ABMU highlighted the following barriers that were felt to apply in audiology services:

- A survey from NICE identifying barriers to the implementation of guidelines notes the commonest problem was difficulty in getting consensus amongst colleagues.
- There is an expectation that clinicians do ‘something’ just because they feel they must be seen to be doing something.
- Capacity may in some instances drive demand. Short waiting lists get referred to. Hyper-specialisation of service delivery can in some cases lead to a lack of clarity as to who is taking an overview of the patient, particularly where a patient has multiple concurrent health problems.

Patient groups in the previous workshops had identified further themes. Seeing the same clinician at each clinic appointment can provide a sense of continuity which is valued by patients, but seeing someone fresh may provide new insights or treatment options. A recurring theme was the problem of being viewed as a ‘condition’ rather than a whole person. The role of patient diaries as a tool for keeping a sense of control was also highlighted.

In the workshop, Andy Phillips, Director of Therapies and Health Sciences described the application of prudent healthcare principles to an audiology service in Berkshire:

Co-create health with the public, patients and partners

- Commissioners noted that a high volume of patients referred into ENT with hearing loss, balance disorder or tinnitus had no treatment from ENT.
- Many patients gave feedback that after being seen in ENT they did not have a result that they valued, i.e. better hearing, less dizziness or reduced annoyance from tinnitus.
- High proportion of patients referred from ENT to Audiology for treatment.

This led to the co-creation of a new pathway:

- Agreed criteria with GPs for e-referral of all adult and child patients with hearing loss, balance disorder and tinnitus direct to audiology.
- Only conditions requiring medical or surgical treatment were excluded.
- All referrals considered by consultant or principal clinical scientist, less than 2 per cent were directed to ENT.
- Agreed referral by audiology for imaging.
- Agreed support from neuro-radiology.
- Agreed onward referral pathways.

Do no harm

- Routine audit and discussion with ENT.
- All patients needing medical or surgical input were seen in ENT.
- No adverse incidents reported from missed pathology.
- Patients always seen in ENT if that was their preference.
- Attention paid to minimising patient distress.

Do the minimum appropriate to achieve the desired outcomes

- Significantly reduced cost of service by reducing ENT outpatient clinics, surgical intervention, diagnostic tests.
- Improved delivery of outcomes valued by the patient, better hearing, less dizzy, reduced tinnitus distress.
- Changed skill mix in audiology, using more assistants and more advanced practitioners.
- Patients maintained Independent living.

Choose the most prudent care, openly together with the patient

- Developed a co-creating health framework. Use option grids in communications with patients.
- Small number of patients chose to have medical or surgical intervention.
- A significant number of patients chose not to have any intervention.
- Patients reviewed and reassessed at their request.
- Prudent service was financially very successful for both the NHS organisation and the Commissioner.

The workshop identified five main ideas to improve audiology services using the prudent healthcare principles. These were:

1) Walk-in open access clinics for the public who have hearing loss or tinnitus (two groups). Clinics would be provided in accessible locations close to people’s homes, be led and delivered by audiology and would be a one-stop shop for:
   - Information – resources, support, clinical conditions, prevention, self-help.
   - Advice – tinnitus management, care of hearing aids, ear hygiene, etc.
   - Equipment - hearing aids, batteries, spare parts.

2) Rapid access models with the more appropriate use of technology, linking primary and secondary care better using telephone virtual clinics, perhaps for a cluster of GP practices at the same time.

3) A treatment pathway for patients with ear wax problems to provide a single consistent service for people with these problems, manage referrals across primary and secondary care, reduce inappropriate referrals to ENT and improve access and outcomes for the patient.

4) A one-stop clinic for managing balance disorder and dizziness including routine balance rehabilitation provided by audiologists with ongoing referral to ENT for complex cases.

5) Applying a co-creating health framework that supports clinicians to engage patients in making decisions about their own options. This would include the use of option grids.

How would prudent healthcare affect services related to knee and hip problems?

Aneurin Bevan University Health Board workshop summary

Aneurin Bevan University Health Board held a prudent healthcare workshop focussing on the elective orthopaedic knee services provided by the organisation. The health board's Directorate of Trauma and Orthopaedics covers trauma, paediatrics, foot and ankle, hands, hips and knees, spines, shoulder and elbows.

There are 29 consultant surgeons (one vacant post) – 14 of who provide care for hip and knee patients. There are nurse specialists on all hospital sites and two surgical care practitioners in two hospitals. Hip and knee teams also have physiotherapy support.

The workshop was an opportunity to frame ideas for developing knee surgery that could also permeate beyond orthopaedics, for prudent healthcare in surgery and beyond.

Services for patients can be 'conveyor belts' that inexorably move forward without a pause button. Surgeons recognise their role is not just to operate, but to advise the patient and often advise against surgery.

Surgery takes place in a broader service context with the pathway starting in the community. Although this workshop examined elective orthopaedics the conclusions could be applied across elective surgical care and beyond. The proposals were:

- **Radical redesign of access to orthopaedic services**, recognising that 90 per cent of musculoskeletal work takes place in primary care, patients wait too long for secondary care services, and there is duplication and waste. The redesign would include:
  - Developing alternative means of accessing expert advice e.g. via email.
  - Develop instant feedback on referrals to GP.
  - Managing follow ups, particularly non-surgical (no intervention) cases e.g. by discharging patients and giving them the option to decide when/if they need to be seen again.

- **Goal-oriented Shared Decision Making** with condition-specific quality of life and decision making tools to aid information and decision making, referral and to establish the outcome measurement of successful treatment. Improved decision-making and patient information will improve 'demand management' and take into account patient expectations and wishes. There are a number of ways this can be done, but it will require some IT support. This could also give opportunities for holistic intervention such as weight reduction or smoking cessation.

- **Improved information exchange between primary and secondary care.** This would include structuring referrals to include key points to identify

patients that will benefit the most, giving people the option for advice only instead of attending an outpatient clinic, and process information such as real-time waiting lists.

The workshop recommended consolidating all referrals to orthopaedic outpatients through GPs with special interest in musculoskeletal disorders. This would reduce the volume of referrals to orthopaedic outpatients (currently 16,000 per year) and improve the quality of GP referral letters.

- **Introduce patient-reported outcome measures** for:
    - Quality of Life
    - Ability to Work
    - Maintenance/restart of independence

  These would reduce the risk of harm, provide evidence of equity of care and the maintenance of standards.

- **To develop more effective outcomes measurements.** This would require system support for data collection, in terms of hardware, software and analysts. Eventually this could provide patient-level costing.

- **A lifestyle management programme** linked primarily to primary care rather than secondary care, accepting referrals from patients with musculoskeletal disorders.

These proposals can be further summarised as:

- Development of GP IT systems to support condition specific conversations with patients.
- Standardisation of referral processes:
    - Improvement of patient and GP information regarding progress of referral.
    - Development of specific outcome measures for the service.

Full details of how these proposals would work in practice are available online at www.1000livesplus.wales.nhs.uk/prudent-healthcare

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He worked for five years in Norway where he led the equivalent of NICE, worked for the National Prioritisation Council, completed a PhD on medical education and led a project to encourage evidence-based public health. Prior to this he worked in and led an international project to promote evidence-based practice and critical appraisal (CASP International). He started his career in the NHS as a doctor in general practice and child health.

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For further information on prudent healthcare, visit:
www.1000livesplus.wales.nhs.uk/prudent-healthcare