A Guide to Good Practice
OUTPATIENTS
Edited by Margaret Rennocks
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Foreword to the third edition by Dr Frank Atherton, Chief Medical Officer NHS Wales.

I am pleased to present this third and revised edition of the Guide to Good Practice produced by 1000 Lives Improvement and an Expert Reference Group from staff working in the NHS in Wales. It sets out a vision for sustainable good practice within NHS Wales in the management and provision of outpatient services. Case studies are included that showcase examples of work to redesign services, make better use of technology, and redesign clinical pathways.

Demographic shifts and changing lifestyles are leading to substantial changes in the health of the people of Wales, with many people living longer, in many cases, with multiple and more complex conditions.

Outpatient services are often the first point of contact for many of us when we need specialist care. The performance of outpatient services has a major impact on the public’s perception of the overall quality, responsiveness and efficiency of health boards. They form a critical first impression for many patients, and their successful operation is crucial in the delivery of services to patients.

The current system has failed to keep pace with the needs of an ageing population, the changing burden of disease, and rising patient and public expectations. Fundamental change to the system is needed.

This document will help staff to manage capacity and demand, improve processes and systems, and make best use of resources. Case studies provide examples that are helping to transform outpatient services, underpinned by the concept of Prudent Healthcare which aims to rebalance the healthcare system by strengthening primary and community-based care; secure improved health outcomes and greater value from healthcare systems for patients; support the establishment of a more equal relationship between patient and professional and remove waste from NHS systems and processes.

We have seen welcome improvements in some waiting times in Wales and evidence of systems changing so that improvements can be sustained. We have made a good start – now we need to spread the improvements that have been achieved so far and take the next step. This should help to ensure that more people receive the right care, from the right person, at the right time, in the right place, helping to create an improved outpatient service reflecting the emphasis on the Quadruple Aim, adapted for Wales and supportive of the requirements of the Wellbeing of Future Generations (Wales) Act 2015.

We have a challenging agenda ahead of us that will take time to deliver – there is no magic bullet. Working together we can help to build a healthier, happier and fairer Wales – transforming outpatient services that provide access to specialist advice, diagnostics and treatment that will be needed in the future.
This ‘Guide to Good Practice – Outpatients’ provides a suite of principles and tools to enable improved management of waiting lists and delivery of outpatient services. The Guide will help to manage capacity and demand, improve processes and systems, and make best use of resources. The Guide is based on a previous edition that has stood the test of time – the tools are as relevant today as they were in the original version.

An additional chapter that focuses on transforming outpatients has been added, along with case studies that showcase service improvements, redesigned services, use of technology and redesigned clinical pathways. The Guide will support the NHS in Wales to take outpatient services into the 21st Century.

The Prudent healthcare principles should be incorporated into the changes to outpatient services:

- Eliminate treatments which provide no clinical benefit or do harm.
- The minimum possible treatment should be performed to achieve the desired results.
- All staff in NHS Wales should operate at the top of their clinical competence.
- Treatment decisions should be based on the individual’s clinical needs.
- Create a new relationship between the public and NHS Wales, based on openness and sharing information.

The Guide has been co-produced by 1000 Lives Improvement and an Expert Reference Group from staff working in the NHS in Wales in response to a recommendation from Welsh Audit Office report ‘NHS waiting times for elective care in Wales’ January 2015. This report states “The main reason for long waiting lists is the inability, despite a lot of effort, to sustainably match supply with patient demand.....Based on performance to date it is unlikely that NHS Wales could achieve and sustain low waiting times if it tries to do more of what it has done in the past”. This Guide is based on evidence of what works and contains examples of good practice, tools and techniques and links to other resources. The case studies, embellish the content of the Guide and are designed to encourage adoption and spread across NHS Wales helping to create an improved outpatient service which reflects the emphasis on Prudent Healthcare and the Institute for Healthcare Improvement’s Triple Aim of improving population health, enhancing the experience of care and reducing the cost of healthcare.

The Guide is intended to support the NHS in Wales to improve and transform outpatient services: moving away from the historical model of ‘a one size fits all’ response to referrals and embracing the second Prudent healthcare principle of meeting need with an appropriate response. This will help to ensure that the NHS does not over-provide for the low risk, while under providing for those at highest risk.
Chapter 1 examines two of the biggest issues in the outpatient system: patients being seen out of order and the effects of ‘did not attends’ on the smooth running of outpatient clinics.

Chapter 2 deals with waiting list management: validation, prioritisation and the calculation and use of Primary targeting lists, patient focused booking, management of referrals, pooling and appointment booking.

Chapter 3 focuses on person centred care, and provides an overview of co-production, shared decision making, self management support, health literacy and service user feedback.

Chapter 4 discusses some useful tools and concepts essential to improved process change in the management of outpatient services. This includes process mapping, analysis of activity, backlog, capacity and demand, understanding, measuring and reducing follow-up demand, constraints and bottlenecks, flow models and Carve Out.

Chapter 5 provides some insights into the opportunities for transforming outpatient services and the way in which we understand, diagnose and manage care. This chapter will be of particular interest to clinicians and managers. It is intended to be thought provoking and challenges some existing practice.

Who should use this guide?
The Guide is aimed at NHS Staff who are involved in the management and provision of outpatient services. This includes senior management, outpatient managers and managers of clinical services. It also includes clinicians: medical and nursing staff, professions allied to medicine, and diagnostic staff.

Chapters 1–4 will be of particular interest to clinic administrators and managers.

Chapter 5 will be of particular interest to clinicians and managers.

How should this guide be used?
Each chapter or tool may be used independently to suit the needs of your service, or as a part of an overall service improvement programme.
CHAPTER ONE: INTRODUCTION

The Welsh Government is committed to ensuring that people receive an appropriate response from the NHS with reference to the Prudent healthcare principles. The NHS should not make the assumption that all referrals to specialists will require an outpatient appointment; other ways of managing some patients are more appropriate – this is addressed in more detail in Chapter 5.

Achieving better waiting times will require a fundamental rethinking of the way in which outpatient services are provided.

The Guide is aimed at managers, clinicians and staff in outpatient services and provides a suite of principles and tools to support NHS Wales in the management and provision of waiting lists and delivery of sustainable outpatient services.

THERE ARE SIX CORE PRINCIPLES BEHIND THIS DOCUMENT:

1. Patient choice
Patients should always be offered a reasonable choice in their appointment. Whilst patients have the right to make choices relating to their appointment, this may influence their waiting time. Patients should be given any information that is needed when making choices about their appointment to ensure that an informed choice is made.

Reasonable patient choice as set out in Rules for Managing Referral to Treatment Waiting Times means that where an option is available, the patient has the right to choose that option.

2. An agreed appointment
The patient will have the opportunity to agree the date and time of an appointment with the health board, either in person, by telephone or electronically. This initial patient contact is an opportunity to update information. From the point that patients are added to a waiting list, they should be available for an appointment and provide reasonable information about any dates that they are not available.

3. Separate patient choice from health board performance
There will be times where patient choice conflicts with the health board’s efforts to meet targets or operate efficiently. Patients may choose a date that exceeds waiting time targets. The key principle in such a case is that patient choice is respected but that health board performance is not adversely affected.

4. Patients will be treated in turn within agreed clinical priority
Patients are usually assigned a clinical priority when a referral is received or they are placed on a waiting list. Wherever practicable, patients should be seen in priority order. Rules for Managing Referral to Treatment Waiting Times targets are maximum acceptable waiting times; patients should be treated as their clinical need dictates.

Within each clinical priority, patients should be seen in chronological order i.e. the date they were placed on the list.
Aims and principles 1.3

CHAPTER ONE: INTRODUCTION

5. An integrated set of policies
Health boards should have an integrated set of policies for the management of waiting lists and patient access to outpatient services.

The policy should reflect procedures across all working practices in the health board and be consistent with other health board policies such as patient record policies, admission and discharge policy, staff leave policy, cancelled operations policy and cancer minimum standards policy. The integrated policy should include a statement which describes the purpose behind it and should cross-reference to procedures that support the operational management of waiting lists, such as scheduling. Clinicians, managers and GPs should all be involved in the development, on-going review and administration of the policy. The policy should be signed off by the health board Executive accountable for waiting list management and be formally adopted by the health board.

6. Health boards should aim to continually improve services
What is good practice in Wales today will be standard practice tomorrow. Organisations should never see good practice as a final goal.

Health boards should continuously improve services always seeking to reduce variation in services and remove waste in the system. ‘Good practice’ is a commitment to continuous improvement across the organisation.

TARGETS
Rules for managing referral to treatment waiting times describes the detailed guidance used in Wales to manage waiting lists. It states “The underlying principle of the target is that patients should receive excellent care without delay. For other than complex clinical reasons they should start their required treatment no later than 26 weeks from referral, with a maximum of 36 weeks to allow for clinically complex cases.” This Guide will help health boards achieve the targets set by Welsh Government. 1000 Lives Improvement recommends that health boards set long term goals that reflect local need. These internal goals may be different to Welsh Government targets; both are equally relevant. They should be ambitious and guide action for continuous improvement. Internal targets or goals should be seen as the ultimate point to aim for; the point at which to say this is a service that meets all the needs of our patients and which has achieved waiting times that cannot be improved.

IMPROVEMENT GOALS
1000 Lives Improvement recommends that improvement efforts focus on six domains of healthcare quality. (source: Institute of Medicine 2002; Crossing the Quality Chasm; A New Health System for the 21st Century. NATIONAL ACADEMY PRESS Washington, D.C. https://www.nap.edu/read/10027/chapter/1). We believe that these six domains apply equally to the NHS.

Safety
Healthcare is not safe, either in absolute terms or in comparison to other industries or activities. The NHS must continually strive to make healthcare and hospitals safer for patients.
Aims and principles 1.3

CHAPTER ONE:  
INTRODUCTION

Timely
Care should be provided in a timely fashion. Reducing waits and harmful delays is central to improving services.

Targets have been implemented since December 2009 that no patient in Wales will wait more than 26 weeks from GP referral to treatment, including waiting times for any diagnostic tests or therapies required.

Timeliness also applies to the administrative process. Standards should be set for time taken to respond to letters and for process times within the health board. Administrative procedures should not waste staff time and workflow through the clinical system should happen as quickly and smoothly as possible.

Effective
The NHS should continually work to improve the effectiveness of clinical services:

- Administrative processes and procedures must ensure that the right patient receives care from the right professional in the most appropriate way to meet their needs
- Where there is evidence that a procedure or treatment is effective, that treatment should be offered to those that need it
- Where there is little or limited evidence that a procedure or treatment is effective, the procedure or treatment should not be offered

Efficient
Money wasted in the health care system could be used to treat patients. Health boards have an obligation to provide patient care in a way that is efficient, reducing non-productive practices and waste to a minimum. Quality should be built as a system across the whole process. For example, it is not easy to deliver high quality clinical care in an environment that does not practice quality in administrative practices.

Patient centred
All care should be centred around the patient, with the patient being an equal partner in all decisions about their care and treatment. Care should be respectful of and responsive to individual patient preferences, needs and values. This is discussed in more detail in Chapter 3.

Improvement efforts should include patients as active members of the team. Groups that set policy should involve patients. Patient views and concerns should be incorporated into all stages of any redesign of services.

Equitable
This Guide supports the premise of equitable high quality care for all patients across Wales. Care should be based on need and not vary in quality because of personal characteristics such as socio-economic status, ethnicity, geographic location or gender.
The cost of quality
The impact of poor quality in the NHS can be measured in a number of ways, including human costs, the cost of care, wasted resources, poor investment and variation in care. Whilst the NHS continues to improve the quality of services, it is important to demonstrate the financial impact of improvement. This will help to facilitate achievement of the Institute for Healthcare Improvement’s Triple aim of improving population health, enhancing the experience of care and reducing the cost of healthcare.
There are a number of points of good practice throughout this Guide. Here we present the points as a summary of good practice.

**STANDARD INTEGRATED PROCESS**
There should be an agreed set of principles for making all appointments within an NHS organisation. This should include new and follow-up outpatient appointments, elective inpatient and day case events.

**TARGETS AND GOALS**
Goals set within a service should be aspirational and meaningful to patients.

**IMPROVEMENT GOALS**
Health boards should aim to continually improve services to patients.

Improvement should focus on:

- **Patient safety**
- **Provision of clinically effective services**
- **Services centred on patients**
- **Services provided in a timely way**
- **Efficient provision of services**
- **Equitable care**

**WAITING LISTS**
Under the *Rules for Managing Referral to Treatment Waiting Times*, the waiting period begins on the date that an organisation receives a referral. However, a patient should only be placed on a waiting list when the referral has been accepted and prioritised by an appropriate clinician. On the occasions where a referral is not considered to be appropriate for secondary care, feedback should be given to the referrer. Consideration should be given to the provision of advice to the referrer as an alternative to the provision of an outpatient appointment. This is discussed in more detail in Chapter 5. It is good practice for a health board to have a standard for the time from receipt of a referral to the patient being placed on a waiting list.

**VALIDATION**
All waiting lists should be validated, initially when the patient is placed on the waiting list, then at regular intervals. Both clerical validation and clinical validation should take place. The longer the waiting period, the more frequently each patient will be validated. Chapter 2 gives more information on validation.

**PRIORITISATION**
Clinical prioritisation increases waiting times for lower clinical priority patients. Where clinical prioritisation is necessary, the fewest number of categories should be used. This is described in detail in Chapter 2.
PRIMARY TARGETING LISTS
Wherever patients are being selected from a waiting list, the waiting list must be prioritised and sorted. Waiting lists should be sorted first by clinical priority and then by the date the patient was added to the list. Patients should be removed from the top of the list with longest wait; urgent suspected cancer first then urgent and finally routine. This is covered in detail in Chapter 2.

PATIENT FOCUSED BOOKING
The key requirements of patient focused booking are that the patient is directly involved in negotiating the appointment date. This is dealt with in more detail in Chapter 2.

GENERIC REFERRALS AND POOLING
Referrals into health boards should usually be pooled within specialities. Referrals to a specific consultant by a GP should only be accepted when there are specific clinical requirements, or stated patient preference that has been agreed by the health board. Chapter 2 covers this in more detail.

PATIENT CENTRED CARE
Patients should be involved as partners at all points of the outpatient pathway. This is covered in more detail in Chapter 3.

COPYING LETTERS TO PATIENTS
Communications between health professionals regarding referrals should usually be copied to patients. Alternatives to a face-to-face appointment should have correspondence copied to GP or other health professional. Patients must be given the right to opt out of receiving letters.

MANAGING CAPACITY AND DEMAND
Staff managing services in health boards should have a clear understanding of the capacity of their service, the activity levels provided by the service, the demand on the service and the backlog of work in the system. Chapter 4 covers this in more detail.
There are many reasons patients wait. Traditionally, it has been assumed that waiting times are caused by a mismatch of capacity and demand – too many patients and too few resources. We will examine issues about capacity and demand in Chapter 4. But there are other reasons for waits. In this chapter we examine two of the biggest issues in the outpatient system: patients being seen out of order and the effects of ‘did not attends’ (DNAs) on the smooth running of outpatient clinics.

**WAITING FOR AN APPOINTMENT**

All too often patients experience their appointment being cancelled on at least one occasion – and at short notice. This may be the result of clinics being cancelled or reduced by the health board; data collection is not robust everywhere making it difficult to quantify this issue. It is recognised that this has an impact on the efficiency of the service as well as patients.

Figure 1.1 shows all routine referrals made to one Consultant in a typical speciality during one month. Urgent appointments have been excluded. The range of waiting times is from less than one week up to 42 weeks. There is also a cyclical nature to the booking process; as referrals are received, they are processed in batches, affecting the ‘next available clinic’ time, which may change between batches as adjustments are made to clinics.

The extreme waits are due to clinic cancellations; these are people who have missed an appointment because either they or the hospital has cancelled their appointment and they have been re-booked. The red line marks the 13 week point; more people are seen within 13 weeks than outside.

The average (mean) wait is 10.8 weeks (the blue line). The median wait is 9 weeks; there are 32 patients waiting over 13 weeks and 119 waiting less than 13 weeks.
Why patients wait 1.5

WAITING IN A CLINIC
The most common complaints relating to outpatient appointments are for the time between GP referral and the hospital appointment and the time people spend in the clinic waiting to see a clinician. Typically a large number of people are waiting at the start of the outpatient clinic; there are always a lot of people in the waiting room and the clinics run late.

Why is this?
Consider a typical outpatient department. Assume each patient spends 10 minutes with the consultant, or 15 minutes with a registrar. Over the course of a busy 3 hour clinic, at best 30 patients could be seen by these two doctors (the actual figures are not important at this stage).

On average 15% of patients do not attend (DNA) their outpatient appointment. Because there are long waiting times for new referrals, and medical staff are a scarce resource, the clinic is overbooked by 15% to account for the DNAs, otherwise medical staff will be under-utilised. This means that there are now 35 patients booked into 30 slots for the afternoon.

WHAT EFFECT DOES THIS OVERBOOKING HAVE ON THE SMOOTH RUNNING OF THE CLINIC?
Firstly, although on average there are 15% DNAs, crucially there is no way to know which patients these are. A worst case for the clinic would be for several patients to DNA their appointment at the start of the clinic and all the ‘overbooked’ patients to be booked at the end of the clinic. This would mean that the consultant time would be wasted and staff would have to stay late.

To counteract this, extra patients are booked at the start of the clinic to ensure that there is always a steady supply of patients waiting to see the consultant. This makes sense from the point of view of protecting a scarce resource, but it leads to overcrowding in waiting rooms and long waits, because it is a rare event that the DNAs are all the first patients booked.

Of course, it is a rare event that the DNA rate for a clinic is 15%; this figure is an average and averages can be dangerous.

What is the effect of overbooking by average amounts?
Some clinics will be overbooked by 15% and have 15% DNAs. In theory the right number of patients will attend but NOT at the right times. However, in the worst case scenario from the staff’s perspective, some days there will be no DNAs and they will be faced with an afternoon of full waiting rooms, long waits and finishing late. This could be counter balanced by changing the hours that some staff work but is this the answer to this problem? There will still be complaints from patients and clerks will be blamed for overbooking clinics.

Surely this will be balanced by the good days; if the average DNA is six patients and sometimes it is none, then surely there are days when twelve patients don’t attend the clinic? But the chance that all twelve DNAs will be at the end of the clinic is as rare as the chance that all will be at the beginning and because these are unannounced non-attendances, even if they were all at the end, you would not know until after the clinic should have concluded. So everyone stays until the end after all. The overrun days cannot be balanced out by days when the clinic finishes early; there are no good days to balance the bad.
An example...
This is illustrated in figure 1.2 (below). The data here comes from an ENT Consultant and represents 50 consecutive outpatient clinics. The clinics are all for new patients. The average DNA rate for the 50 clinics used in this example is 14.5%. 19 of the 50 clinics have DNA rates of less than 10%, so with an overbooking rate of 15%, these 19 clinics were overbooked by at least 5% and up to 15%. Another 16 clinics had DNA rates of 10% to 20%, giving slight overbooking or underbooking and 15 clinics had DNA rates above 20%. In these cases the clinic was substantially underutilised, because the ‘average’ overbooking of 15% was not sufficient to compensate for the DNAs in that clinic. In the worst case, half the patients for one particular clinic do not attend!

What are some other consequences?
Patient surveys have shown that waits in clinic are a major concern. Fortunately patients are no longer asked to all come at 2pm for the clinic, but sometimes it still seems that way. Faced with long waits, ‘experienced’ patients may try to arrive early, to beat the queue, adding to the front-loading problem. Health boards should avoid reinforcing this behaviour by seeing patients at their appointment time rather than arrival time.

Overall, the negative effect of a poorly designed clinic system is most seen in people’s attitudes. Patients get disgruntled, staff become demoralised.

CLINIC FLOW RATES
In a perfect world there would be no waits in clinic – this could be achieved if the flow of patients arriving for an appointment was synchronised to the flow of patients leaving following their appointment.

It is important to understand how an overbooked clinic runs under various situations and compare these to how a clinic would run if there were no DNAs. To illustrate this, five clinic scenarios are presented as a series of work flow charts, figures 1.3 to 1.5. Before explaining the figures, it is important to understand the assumptions that they are based on.

The clinic described in these figures is three hours long (2pm until 5pm) with each patient taking approximately 10 minutes with the sole Clinician. For each patient, an ‘actual time’ of between 5 minutes and 15 minutes has been randomly allocated. These average out to 9 minutes, well within the ten minutes the appointment slots allow.
No patient is late or early for their appointment. There are no breaks in the clinic and under each scenario, it is assumed that the clinician does not go faster or slower to cope with the changed workload (which is what normally happens). This scenario presents a simplified view of clinic structure to make the interpretation of the effect (overbooking) easier to observe.

It is also assumed that on average the clinic has a DNA rate of 20%. In a clinic of 18 patients, five extra have been added to compensate for these DNAs. As already discussed, there is no advantage to these additional patients arriving later than a patient who DNAs, so in work-flow graphs figures 1.3 to 1.5 the extra five patients are booked early in the clinic; two at 2pm, one each at 2:10pm, 2:20pm and 2:30pm.

On the work-flow graphs, each patient is represented by a horizontal bar. The start of the bar (a black line) represents the patient appointment time. A pink bar represents a patient wait and the purple portion represents the time that the patient spends with the Clinician. If a bar shows only the black portion, the patient at that time was a DNA.

Figure 1.3 (left) represents a normal clinic. The clinic is 20% overbooked, but five patients DNA, so the number in the clinic is the correct number for the total time available. There are several lengthy waits early in the clinic, but these reduce over time and the clinic finishes a fraction over time, at 5:03pm. The average wait for all patients is only 7 minutes and the longest wait for a patient is 21 minutes.
**CHAPTER ONE: INTRODUCTION**

Why patients wait 1.5

*Figure 1.4 (below left) represents one of those ‘good’ days. Although five extra patients are booked, ten do not turn up. The DNAs are randomly allocated through the clinic.*

What impact do these five extra DNAs have? The average wait is reduced slightly, from 7 minutes to 5 minutes. The longest wait for a patient is reduced from 21 minutes to 15 minutes. The major effect is that the clinician has 42 minutes unoccupied. The clinic finishes at the same time!

What happens, if instead of five fewer patients, five extra turn up and there are no DNAs. *Figure 1.5* shows the impact.

*Average patient waiting goes from 7 minutes to 38 and 17 patients wait half an hour (two others wait 29 minutes). The longest wait goes from 21 minutes to 52, but most dramatically, the total time spent by patients in the waiting room goes from 2 hours 16 minutes up to 14 hours 38 minutes!*  

Crowding also increases. In *figure 1.3* (p.15), the maximum number of patients in the waiting room shortly after 2pm was four, but this dropped rapidly. In *figure 1.5* (below right) this remains at six for most of the afternoon. The clinic finishes 43 minutes late.
Why patients wait 1.5

What happens if the clinic is booked with slightly shorter appointment times, staggering the additional patients rather than front loading them? This would spread the increasing waits through the clinic, catching up each time there is a DNA. But as figure 1.6 (below left) shows, when there are no DNAs the waits get steadily longer throughout the afternoon. This scenario also doesn’t cope well if there are several DNAs early in the clinic.

The final clinic presented here is figure 1.7 (below right). This clinic has 18 patients (the optimum amount). It allows 10 minutes per patient as do figures 1.3 to 1.5. However, the average wait is only 3 minutes. The longest wait is 8 minutes and the total patient waiting time is 54 minutes. No DNAs have been planned for. It has been assumed that every patient will attend and patients have been booked accordingly. There is no front loading of the clinic to compensate, no shortening of appointment slots to allow for the extra patients.
CHAPTER ONE: INTRODUCTION

Why patients wait 1.5

Figure 1.8 (below) summarises the statistics for these five examples. Figures 1.9 and 1.10 (both below) show the relationship between DNAs and time waited with increased or decreased numbers of attenders in an overbooked clinic.

Figure 1.9 shows that as the number of DNAs goes down, the total amount of patient wait time increases exponentially.

Figure 1.10 shows that the effect is similar but less pronounced for average and maximum patient waits.

<table>
<thead>
<tr>
<th>Number of patients seen</th>
<th>Total patient/clinician contact time</th>
<th>Total clinician wait time</th>
<th>Average patient wait</th>
<th>Maximum patient wait</th>
<th>Total patient wait time (all patients)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20% overbooked 20% DNAs</td>
<td>18 2hr 57min 6min 7min 21min 2hr 16min</td>
<td></td>
<td></td>
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<tr>
<td>20% overbooked 40% DNA</td>
<td>13 2hr 21min 42min 5min 15min 1hr 7min</td>
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<tr>
<td>20% overbooked No DNAs</td>
<td>23 3hr 43min nil 38min 52min 14hr 28min</td>
<td></td>
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</tr>
<tr>
<td>20% overbooked staggered, no DNAs</td>
<td>23 3hr 43min nil 19min 37min 7hr 4min</td>
<td></td>
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</tr>
<tr>
<td>No overbooking No DNAs</td>
<td>18 2hr 59min 3min 3min 8min 54min</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Figure 1.9 Impact of varying DNAs on total waiting time for clinics with 20% overbooking and 18 patient slots

Figure 1.10 Impact of varying DNAs on average and maximum waits and utilisation of consultant time
It is clear from these examples that the NHS has historically taken a mistaken approach to the problem of DNAs. The NHS has accepted DNAs as a normal fact of hospital life, and has worked out strategies to accommodate them. The approach has dealt with the symptom of the problem, rather than dealing with the root cause. What must be addressed is the reason for DNAs. DNAs should be avoided. Only then will the NHS get out of the morass that DNAs and strategies to ‘fix’ them have created.

The **Rules for Managing Referral to Treatment Waiting Times** sets out the requirements for managing DNAs.

The **Rules** state 'If the patient does not attend (DNA) an agreed appointment without giving notice, the patient should be removed from the waiting list and responsibility for ongoing care returns to the referrer. Appropriate notification of removal must be given to the patient and the referrer. If the consultant responsible for the patient considers that they should not, for clinical reasons, be removed from the pathway following a DNA, they remain on the pathway.'

Systems should be in place to enable clinicians to make effective and efficient decisions about the clinical need for a follow-up appointment, rather than all patients who DNA being given another appointment. This will help to reduce pressure on the system and reduce wait times.

Reliable system design is needed to provide appointments that meet patients clinical needs, and give confidence to clinicians and managers. This will help to facilitate a proactive approach to avoiding DNAs. Patients should have clear unambiguous information about the consequences of not attending their appointment for them individually and for the service. In Aneurin Bevan University Health Board ‘text and remind’ is used to improve productivity of appointment slots by reducing DNAs from 9.2% to 7.2%. Read the case study.

The DNA rate is often higher for follow-up appointments than new appointments. Patient involvement in the discussion about follow-up is essential in avoiding appointments that the patient does not value or could be provided in an alternative way, such as by receiving results of an investigation by letter or phone when appropriate.
Sometimes it seems that the NHS is primarily about waiting lists. Public perception focuses on waiting lists. Waiting lists provide media headlines. For those working within the NHS, it seems that too often the real work of providing a quality service for the people of Wales is lost in a concern for waiting times and targets.

What can be done to reduce waiting times? Chapter 2 deals with basic waiting list management: validation, prioritisation and the calculation and use of Primary Targeting Lists (PTL), rates and scores, patient focused booking, management of referrals, pooling and appointment booking.

PRINCIPLES
Some fundamental principles apply to the management of all waiting lists.

- The number of waiting lists should be kept to a minimum for each patient pathway or specialty through the use of pooling of referrals. This is dealt with in more detail in Chapter 2.6.

- Regular planning meetings should take place involving staff from across the whole patient pathway. The meetings should consider the demand on the service, the available and resourced capacity, the backlog and activity and variation in the service provided.

- The default position for the provision of outpatient services should be that follow-up is not provided unless clinically appropriate. There should be agreement with primary care about service provision and which conditions should be managed by primary care. Patients should be fully informed of service provision at the point of their referral to specialists.

- Alternatives to face to face follow-up should be available and included in reporting of activity e.g. virtual follow-up or letter to patient.

- Clinic cancellations should be avoided through the robust implementation of leave policies requiring six-week notification for clinical staff for all planned leave, including holiday and study leave. Short notice leave such as sickness, can have a significant impact on services and should be proactively managed.

- Sustainable service provision should be created across organisational boundaries that make best use of scarce specialist resource.

- The use of ‘see on symptom’ or ‘patient initiated’ appointments should be widely available, where clinically appropriate to enable patients to have control of their health and wellbeing and avoid the provision of appointments that do not meet patient needs.
Managing waiting lists 2.1

- Health boards should have organisationally agreed procedures about the application of the ‘Rules for the management of referral to treatment waiting times 2017’.

- Staff involved in the management of waiting lists should have access to an accurate waiting list on a daily basis.

- All patients on a waiting list should receive fair and equitable treatment, including those with adjustment to their pathway.

- A patient should only be placed on a waiting list if they are eligible to receive the service and the patient’s needs could be met tomorrow if no waiting list existed.

- Patients should be fully informed of what to expect from a service from the outset; this will help to manage expectations and meet the needs and goals of the patient.

UNDERSTANDING THE DEFINITIONS

The Welsh Government uses ‘Rules for Managing Referral to Treatment Waiting Times 2017’ to monitor waiting times across Wales.

VALIDATION

Validation of waiting lists, both administrative and clinical should be routine. 2.2 covers the principles of validation.

CLINICAL PRIORITISATION

Clinical prioritisation is a key factor in managing waiting lists. 2.3 looks at this in more detail.

PRIMARY TARGETING LISTS

PTL involve the ordered treatment of patients by referral date. Section 2.4 covers how PTL help to reduce waiting times.

PTL implementation is an important tool in the performance management process in Wales. There are waiting lists in the NHS because the management of lists could be improved. Additionally, demand for outpatient appointments outstrips capacity. Alternative ways of managing some patients needs to be further developed.
Over time, waiting lists become out of date. Patients may need an outpatient appointment when they are first added to the list, but circumstances may change. They may choose to have treatment at another location (either in the NHS or in private practice). They may move to another area. Their condition may improve so that treatment is not required. They may die. Systems must be in place to ensure that these patients are removed from the waiting list.

WHAT DOES VALIDATION ACHIEVE?
Validation ensures that the number of patients waiting for an appointment is an accurate figure. Health board performance may appear to be worse than it actually is if waiting lists contain high numbers of people who are not actually waiting for treatment. It may affect information given to patients, who will think that they may have a longer wait than is actually the case. It may also lead to wasted clinical time if patients not needing to be seen are given appointments for treatment.

PRINCIPLES
- Validation letters must be clear and unambiguous.
- Validation should start at the point of referral and be repeated at every patient contact whilst the patient remains on the waiting list.
- There is a need to balance the gains from validation against the time and cost of undertaking it.
- The longer the waiting time for each patient, the more frequently each patient should be validated.
- Patients who do not engage in the validation process should be removed from the waiting list; the patient and referrer should be informed.
- Telephone validation should be scripted.
- Validation is an opportunity to learn from the process to facilitate improvement to the system.
- At the point of first contact, the type of contact the patient prefers should be established. The validation can be by letter, phone, email or using other technology.

PATIENT FOCUSED BOOKING AND SELF-VALIDATION
In patient focused booking, there is an opportunity to engage patients in self validation by inviting them to contact the health board to update personal information while the patient is on the waiting list. This should be done in the initial letter to the patient notifying them that they have been added to the waiting list. This will ensure that records are kept up to date. Patients should be advised to discuss any change in their health with their referring GP.

While patient focused booking will validate patients before they are called for treatment, it does so when the patient reaches the top of the waiting list. Where waiting times are long, waiting lists will remain inflated if the lists are not validated at interim stages.

However, it is also important, where validation is done, to get the best value for the money spent.
Validation letters must be clear and unambiguous. The validation process involves removal of patients from the waiting list if they do not respond to the validation letter and this should be made clear to the patient. Patients and the referrer should be informed of removal.

Telephone validation should be scripted. Questions should be phrased such that the desired information is elicited; asking a patient whether they wish to remain on the waiting list will result in fewer removals than questions that ask if the patient is still having clinical problems; this should be asked in a way that the patient will understand. Clinical terminology should be avoided. It is also important to make clear to the patient that there are mechanisms for getting back on the list if their condition worsens within a specific time period.

Each contact or attempt to contact a patient should be recorded and available for subsequent audit.

**Patient responses to validation**
Validation can be an imposition on patients and too frequent validation may lead to patient complaints. If the only communication that a patient receives from a health board is a regular letter asking whether they wish to remain on the waiting list, they may have a negative impression of the health board. The more frequent the validation and the longer the list, the more patient perception of the process will become a problem.

**Timing of validation**
There are two ways in which validation can be timed – in bulk or continually. The health board may decide to do bulk validation at regular periods; for example all ENT validation in February and August. This approach has disadvantages. The validation workload is intensive and if done episodically, will lead to significant peaks in workload. Additionally, the purpose of validation is to link it to the patient process and if a speciality undertakes three monthly validation exercises, patients will be validated at less than three months on the list, or may wait up to 5 months before being validated. For this reason, where bulk validation is the only option, it needs to be done more frequently, although each patient should receive a limited number of validation letters.

Continual validation can be generated by the Patient Administrative System (PAS). Procedures in the PAS should automatically generate validation letters at the point where the wait hits specified time frames such as 6 weeks and 12 weeks. The advantage of this is that there are small numbers of letters generated every week, rather than very large numbers every few months and the validation process can be handled as part of the ongoing work of the department, rather than as an infrequent additional task.

Continual validation also ensures that small numbers of patients are removed each week, rather than large numbers at the end of a longer period. Infrequent ‘bulk’ validation will lead to artificial peaks and drops in patient waiting list numbers, where continual validation will not.

Frequent validation will have diminishing returns, with fewer removals each time the validation is performed. Most removals come from the first validation. There will be a high removal rate for this validation. There is no need to do validation close to the appointment time.
Placing the patient on the outpatient waiting list
When a new referral is received, the first step should be to avoid duplicate referrals for the same reason.

As part of the patient focused booking process, it is necessary to contact patients by mail and sometimes by phone. At the point of first contact, the type of contact the patient prefers should be established; this can include text where appropriate, email, phone or mail. It is vital that up to date information is stored on the PAS to allow that contact to happen. On receipt of a referral from a GP, the referral must be checked by clerical staff to ensure that all necessary information is included. Where it is not, the GP must be contacted and the full demographic information requested. Patients should not be added to waiting lists with incomplete demographics.

Where a referral is incomplete and not flagged by the GP as urgent, it should be recorded as received but returned to the GP practice requesting the remaining information. Where the referral is flagged as urgent, it should be processed as complete but the GP practice should be contacted by phone for the outstanding information.

Administrative validation
Administrative validation is undertaken by mail or by phone and is undertaken by management and clerical staff. It is primarily designed to determine whether the patient details are correct; whether the patient wishes to remain on the waiting list and review of the patient pathway in relation to Welsh Government Rules for Management of Referral to Waiting Times.

Every contact with the patient is an opportunity to discuss if any action is required to facilitate the patient pathway being reinstated as appropriate.

Particular care is required in the validation of a patient who is on more than one waiting list; validation of both lists should be completed in parallel.

Despite on-going validation of waiting lists, Betsi Cadwaladr University Health Board identified an issue with clerical errors that resulted in inflated waiting lists. Training was undertaken to resolve this issue resulting in a 35% reduction in their follow up waiting list. Read the case study

Clinical validation
Clinical validation is a more complex and more time consuming process. The purpose of clinical validation is to determine whether the patient’s clinical condition has changed in any way that may lead to their removal from the waiting list or re-prioritisation.

In the tertiary paediatric cardiology service in Aneurin Bevan University Health Board, there was a problem with 147 patients who had not received a follow up appointment within the timeframe that the Consultant had originally requested i.e a missed target date for their follow-up appointment. Clinical review of patient notes reset the order of who needed to be seen based on their clinical priority. Within 6 months there were just 8 patients on the ‘follow-up’ list without a date. Read the case study
Clinical validation can be undertaken by GPs or by health board staff. In the case of outpatient referral waiting lists, it is by default the GP who will need to undertake the validation. The health board may supply the practice with practice-based lists of patients waiting for an outpatient appointment and the medical records of those patients are reviewed to ensure that the patient still requires the appointment. Although the review process is undertaken in primary care, any contact with the patient advising them that their status has changed should be undertaken by the health board which has requested the validation.

In the case of validation of diagnostic or treatment lists, the clinical validation can be performed in the health board, or in primary care, or both.

Health board based validation can be either a review of the notes, or a clinical reassessment of the patient. Review of patient notes will have limited value, as it is unlikely that any information will be included in the record that will not have already been acted upon. Each organisation is best placed to decide on the need for clinical assessment. Likewise, GPs are best placed to consider the value of each patient remaining on a waiting list dependent upon the individual patient’s circumstances. Clinical validation should be undertaken during pathway re-design as patients may need to be moved within services.
Traditionally patients on waiting lists are prioritised according to a simple system: they are either 'Urgent Suspected Cancer' or 'Urgent' or 'Routine'. These terms are fundamental to the development of waiting lists.

THE ‘TRADITIONAL DEFINITIONS’
For outpatients, ‘urgent’ has traditionally meant that the patient needs to be seen within four weeks and ‘routine’ patients should be seen and start their treatment within 26 weeks and 36 weeks for complex cases. Newly diagnosed cancer patients that have been referred as ‘Urgent Suspected Cancer’ (USC) and confirmed as such by the specialist, should start definitive treatment within 62 days from receipt of referral at the health board. More information is available in the Cancer specific additional guidance 2017.

There is a fundamental flaw in all prioritisation methodology. As soon as prioritisation is used to ensure that one patient receives treatment ahead of another based on any criterion other than time waiting, some patients will wait longer. ‘Jumping the queue’ no matter that it is for the best of reasons, means that those at the back of the queue will have to wait longer. The higher the degree of prioritisation used, the longer those at the back of the queue will wait.

Overall, the best way to ensure that all patients wait the shortest average time is to have no clinical prioritisation at all, and to see each patient strictly in turn according to when they were added to the waiting list. However, unless there is a very short waiting time, there is always going to be clinical risk if some patients wait too long. In these situations, a level of prioritisation should be used.

PRINCIPLES
- The best form of prioritisation, if it must be used, is one with the fewest categories. The simple, ‘Urgent Suspected Cancer’, ‘Urgent’, ‘Routine’ is in fact a good degree of prioritisation to use in most situations where there are long waiting times.
- Prioritisation categories should be agreed with clinicians and applied consistently across a specialty or pathway within a health board. The waiting time for each category should be agreed with consideration of clinical risk and service provision.
- Patients within each category should be seen in referral date order.
- Peer review of prioritisation should be undertaken where there are concerns about length of wait for patients with high clinical risk.
- Systems should be in place to enable GPs to raise concerns about a patient waiting for an appointment without the need for re-referring patients for the same reason. Robust communication with GPs is vital in the provision of high quality services.

Finally, the important thing to remember about clinical prioritisation is that it is all about patients waiting. Prioritisation is a way of ensuring that no harm comes to those who have to wait. The best and most reliable way of achieving that goal is to have no waits.
One of the key principles of good management of waiting lists is that patients of equal clinical priority should be treated in order of their referral date. In this section we look at how to order your waiting list and how to check if your waiting list is being managed to keep overall waiting times to a minimum.

Primary targeting rate (PTR) and Primary targeting list score (PTLS) are generally used to monitor effective management of routine patients. Where there is a large backlog of urgent patients, it may be useful to separately monitor PTR and PTLS for urgent patients but this should be for a limited period of time.

**PRINCIPLES**

- Wherever a waiting list exists, Primary Target Lists (PTL) should be used to allocate appointments to patients in order of clinical priority and referral date.

- Primary Targeting Rate (PTR) is the percentage of patients being seen in the appropriate chronological order.

- Primary Targeting List Scores (PTLS) is the percentage of the longest waits being seen in the appropriate chronological order.

- Health Boards should work towards a target PTLS of 80%; this flexibility allows for issues related to patient choice and clinical freedom without adversely affecting performance to the target.

Imagine you have a waiting list of 25 patients and 10 routine patients are seen (or treated) in a month.

In order to keep overall waiting times down, it is useful to know how many of those 10 routine patients have been seen in appropriate chronological order, i.e. in order of patients waiting longest.

If you organise your routine waiting list so that patients are in order of waiting time, how many of the 10 that were actually seen would be in your top ten on your list?

If 4 patients seen would be in your top ten, then only 40% were seen in appropriate chronological order.

This is your **Primary Targeting Rate**. A PTR of 100% would indicate that for a particular month, the patients were seen in the appropriate chronological order. This isn’t likely to happen in real life, due to patient choice and subspecialisation.

Rather than simply counting patients, it may be useful to factor in how long they’ve been waiting. This is particularly useful where there is a wide range of waiting times.

Taking the same waiting list and same 10 patients that were seen, look at how many days they have collectively waited and compare it to the patients in your top 10 and their collective length of wait.
Calculating and reporting primary targeting list scores 2.4

In this example, the 10 patients seen waited a collective 355 days. However, the patients in the top 10 had waited a collective 628 days. If your patients were seen in an appropriate chronological order then this is how much time that would have been removed from the waiting list.

As a percentage of the collective time that could have been removed from the list, only 57% were removed from your waiting list.

This is your Primary Targeting List Score (PTLS). It is more difficult to calculate (perhaps your information teams could help) but this complements the PTR to indicate how well the waiting time is being kept to a minimum. Having used an example to introduce these measures, the calculation for both measures is outlined below.

**PRIMARY TARGETING RATE**

The Primary Target Rate (PTR) figure 2.1 is a simple measure that illustrates the ratio of the number of patients seen or treated compared to the number of patients who could have been removed from the waiting list if all were seen in the appropriate chronological order.

1. Identify all routine patients treated during the month
2. Obtain an extract of the current routine waiting list
3. Add the routine patients treated during that month to that list
4. Sort the list by the ‘receipt of referral date’
5. Count how many routine patients were seen during the month (B)
6. Count this number places from the top (longest wait) of your waiting list and draw a line
7. Now count how many of the seen patients fit into this group (A)
8. Divide A by B and multiply by 100

The PTR is calculated as follows:

\[
\text{PTR} \times 100 = \frac{\text{Number of routine patients seen from the group at the top of the list (A)}}{\text{Total number of routine patients removed from the waiting list (B)}} \times 100
\]

Figure 2.1
PRIMARY TARGETING LIST SCORE
The Primary Targeting List Score (PTLS) takes into account the time a routine patient has spent on the waiting list. The number of days on the list is used for the calculation. It therefore distinguishes between picking patients from the top of the list (with longest wait) and picking patients close to the end of the list (with shortest wait).

The PTLS is calculated as follows:

1. Identify all routine patients treated during the month, and calculate the total number of days those patients have waited: see figure 2.3 for an example.
   a. Days waited per patient = ‘appointment (or treatment) date’ minus ‘receipt of referral date’
   b. Total days waited = sum of days waited for treated routine patients; see figure 2.2

2. Obtain an extract of the current routine waiting list.

3. Add the routine patients treated during that month to the list. Sort the list by the ‘receipt of referral date’

Example

<table>
<thead>
<tr>
<th>PATIENT TREATED</th>
<th>DAYS WAITED</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>210</td>
</tr>
<tr>
<td>B</td>
<td>142</td>
</tr>
<tr>
<td>C</td>
<td>130</td>
</tr>
<tr>
<td>D</td>
<td>123</td>
</tr>
<tr>
<td>E</td>
<td>213</td>
</tr>
<tr>
<td>F</td>
<td>132</td>
</tr>
<tr>
<td>G</td>
<td>141</td>
</tr>
<tr>
<td>H</td>
<td>220</td>
</tr>
<tr>
<td>I</td>
<td>137</td>
</tr>
<tr>
<td>J</td>
<td>154</td>
</tr>
</tbody>
</table>

\[
\text{Total number of days removed from the waiting list} \times 100 = \text{PTLS \%}
\]

\[
\text{Total number of days which could have been removed from the waiting list}
\]

Figure 2.2

Figure 2.3
4. Calculate how many days **could have** been removed from the routine waiting list. To do this, calculate how many routine patients were treated that month and count that many places down from the top (longest wait) of the list. For example, if 10 routine patients were treated in that month, count down 10 places from the top of the list. Now calculate days waited for each of these patients, based on a hypothetical assumption they were seen mid-month (e.g. 15th of the month) see **Figure 2.4**

5. Calculate the PTLS as total number of days removed from the waiting list, divided by total number of days which **could have** been removed from the waiting list, multiplied by 100 (to get a percentage) That is: (Step 1b ÷ Step 4) × 100 = PTLS%; see **Figure 2.6**

<table>
<thead>
<tr>
<th>PATIENT FROM PTL</th>
<th>DAYS WAITED</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>231</td>
</tr>
<tr>
<td>2</td>
<td>230</td>
</tr>
<tr>
<td>3</td>
<td>230</td>
</tr>
<tr>
<td>4</td>
<td>220</td>
</tr>
<tr>
<td>5</td>
<td>217</td>
</tr>
<tr>
<td>6</td>
<td>213</td>
</tr>
<tr>
<td>7</td>
<td>210</td>
</tr>
<tr>
<td>8</td>
<td>210</td>
</tr>
<tr>
<td>9</td>
<td>209</td>
</tr>
<tr>
<td>10</td>
<td>208</td>
</tr>
</tbody>
</table>

Possible total no of days removed from waiting list 2,178

Create a ‘total days wait’ for these patients by adding them all together. see **Figure 2.5**

Calculate the PTLS as:

\[
\frac{1,602}{2,178} \times 100 = 74 \% 
\]
Calculating and reporting the Primary Targeting List Scores 2.4

It is possible to get a relatively high score even though there were less than half of those patients treated within the top group of patients.

This is because no patients were taken from the shortest waiting part of the list; although the list was targeted imperfectly, in general patients were removed from the top of the list, not randomly throughout.

If more patients with a much shorter waiting time are removed the PTLS will be lower.
This section looks at a number of different aspects of outpatient booking. The total approach to booking is referred to as 'patient focused booking' and this phrase should be used whenever possible.

WHY PATIENT FOCUSED BOOKING?
The Prudent Healthcare principles recognise the importance of patient involvement in the booking of hospital appointments. 'Create a new relationship between the public and NHS Wales, based on openness and sharing information.' Active involvement of a patient in the booking process, enables them to take some responsibility for their own health and well-being. 1000 Lives Improvement recommends that all appointments between patients and health boards be made by agreement. This is also stipulated in the Rules for Managing Referral to Treatment Waiting Times 2017 and will help to avoid DNAs. In some cases, this means that appointments are made while the patient is present (for example, some follow-up outpatient appointments) while in other cases it means that appointments are made by telephone. In some cases, it will mean that an appointment with another health provider is made at a previous appointment. For example, a secondary care outpatient appointment may be made while the patient is at their GP surgery.

Patient focused booking applies to full booking, automated booking, direct booking and partial booking.

Full booking
The key principle of full booking is that the patient leaves an appointment knowing the exact date and time of their next appointment. Full booking requires a date to be negotiated with the patient no matter how far into the future an appointment will be.

IMPORTANT With a 6 week policy for leave, it is not possible to give the patient a reasonable assurance that the health board will be able to keep an appointment made several months into the future.

Partial booking
Under the partial booking process, an acknowledgment should be sent to the patient when the referral is accepted. This should explain the booking process that will be used for their appointment. A second letter, text or email should then be sent to the patient four weeks before it is anticipated they will be seen, asking them to phone and make an appointment within the next 10 days. In some cases the second (phone) correspondence, will include a proposed appointment date. The patient should be informed about their options and timeline to change this appointment.

Where partial booking is used which relies on the patient phoning to arrange their appointment, health boards should have efficient booking systems that enable patients to access the service in a timely way.
Abertawe Bro Morgannwg University Health Board identified problems with patients phoning to book appointments – they often had to wait ‘on the line’ for long periods of time only to be ‘cut off’ or ‘hang up’. A new telephone flow system improved the patient experience. The percentage of calls answered has risen from 86% to 96%. Read the full case study.

Patients should be informed of the importance of arranging their appointment in a timely manner and the consequence of not doing so.

**Direct booking**

If a patient is to be seen within six weeks a direct booking system should be used. Direct booking can take place in two ways. An appointment can be either booked in person with a patient or during a telephone conversation. The appointment being booked should be no more than six weeks into the future. Electronic booking, as an enabler of direct booking, may also be used.

**Automated booking**

Fully automated systems send the patient a letter, text or telephone call offering an appointment date. A process should be in place to allow the patient to play an active role in changing the appointment if it is not mutually agreeable. Cardiff and Vale University Health Board has seen a reduction in DNA from 13% to 5% and an increase in the re-utilisation of cancelled appointment slots since the introduction of fully automated booking. Read the case study.
Traditionally in the NHS, referrals have been made from a GP to a named Consultant. Patients seeing a specific Consultant have been placed on that Consultant’s waiting list. Patients seen in one location are usually followed up in the same location. Patients seen on one site will often have their diagnostic procedures performed on that site. Patients referred to secondary care, tend to be seen by a clinician with a specialist and possibly sub-specialist interest. All of these factors can increase waiting times and all can be addressed through generic referrals and pooling.

PRINCIPLES
Some basic principles are fundamental to the management of referrals:

- Referrals should not be graded by the referrer unless a red flag criteria applies; this ensures that clinical prioritisation is applied appropriately and consistently.

- Guidance should be agreed between GPs and specialists for clinical management of any condition. This will avoid referral to specialists of cases that could be managed by primary care.

- In each specialty there should be agreement about case mix for clinicians to avoid any imbalance within clinical teams.

- Pooling should be used for all waiting lists unless clinical exception exists and is agreed.

- Processing of referrals, from receipt of the referral to clinical prioritisation and adding the patient to the appropriate waiting list, should take place within an agreed timeframe. Electronic methods should be used in the management of referrals where possible.

- The most appropriate person should triage; multiple triage should be avoided unless clinically appropriate.

- Patients should be informed about their pathway from the outset. Information should include prioritisation, who they will see, where they will be seen and any options about choice of where they will be seen that are available to the patient.

- Patients should be involved in making decisions about all available treatment options, taking account of individual goals and be fully informed of the referral process.

- Patients should be seen as close to home as possible. The most convenient option for minimising travel should be discussed. Venues a distance from the patient’s home will be considered reasonable if this was explained to the patient when they were referred or in the receipt of referral acknowledgement.

WHAT ARE WAITING LISTS?
Waiting lists are simply queues and a lot can be learnt about managing waiting lists from how other organisations manage queues.
UNDERSTANDING QUEUES
Queuing theory is a well developed science in mathematics and fortunately one does not need to understand it in depth in order to make progress on managing waiting lists. The one thing it is important to know is that a single queue in front of multiple ‘windows’ will have shorter overall waiting times than a series of short queues in front of each window.

The basic unit of the queue is the PTL described in 2.4. Rather than each Consultant having a single outpatient waiting list, there should be a single list for the speciality. Eventually, outpatient lists should be managed as a single process on a single list. This is the same as having a single queue in a bank and the customer going to the next available window.

MANAGEMENT OF SUBSPECIALISATION
Unfortunately, waiting lists are not bank queues. There are multiple priorities within waiting lists and there are multiple subspecialties within a speciality. Multiple priorities within a list are easily managed through the use of PTLS, as illustrated in section 2.4. Management of subspecialisation is more of a problem, but it is one that must be resolved. There are three possible solutions.

1. Maintenance of a ‘pooled’ list
The simplest solution to the problem of pooling in subspecialties is to maintain a generic pooled list in addition to each Consultant’s own subspecialty list. All patients who need to be seen within a subspecialty are added to the individual Consultant list, while those able to be seen by any Consultant are added to the pooled list. The pooled list should be managed at the same level of priority as the individual lists.

2. ‘Hidden’ pooled lists
It may be preferable to ‘hide’ the descriptors that indicate which list patients are on. This solution is the best option where it can be implemented electronically, or where waiting lists are maintained centrally. It is harder to co-ordinate lists where each clinician or their secretary maintains the list.

Step 1: In this method, separate lists are maintained on the IT system; one for each subspecialty and one for the generic patients. Patients are added to the bottom of each list. See figure 2.7.

Figure 2.7
Step 1: Three different lists

Consultant A  Consultant B  Generic Lists
Step 2: When the lists are displayed, the subspecialty lists are merged with the generic list in referral date order. Patients from the generic list (the blue cases in figure 2.7 – see page 35) are shown on each list. The patients have not been added to both lists — they still exist on a third actual list, so they are not duplicated although they appear to be. They are simply shown in the new ‘virtual’ lists as demonstrated in figure 2.8.

When the lists are displayed, it is important not to distinguish on screen between the generic patients and the subspecialty patients. Each Consultant will see a single waiting list of their own patients merged with the generic patients, with no visible distinction between the generic and the subspecialty patients See figure 2.9. This avoids any preference for particular patients.

The reason that this method works best when implemented electronically or through a centralised waiting list management team is that otherwise there is the possibility for a patient to be picked from the list by more than one Consultant. In an electronic system using virtual lists, record locking protocols will prevent multiple picking, while in a centralised environment management procedures can be put in place to have the same effect.
3. The Matrix approach
What if it is not possible to implement a generic list either electronically or centrally? What about situations in large health boards where there may be multiple consultants in each subspecialty, making the implementation of the ‘hidden’ pooled list more complex? A number of health boards use an approach of adding each new referral to the shortest waiting list, using a matrix to determine which waiting lists are available.

**Step 1:** sit down with the clinical staff in the speciality, list all the conditions on the waiting list and all the staff available to see or treat those patients. A matrix is then constructed; figure 2.10.

**Step 2:** Then, with the involvement of clinical staff, each cell of the matrix is filled in so that every condition has at least one Consultant marked.

Where there is not a Consultant, it must be determined who is available to see those patients, or what the health board policy is for managing those patients. There must be no blank rows on the matrix; see figure 2.11.
**Step 3:** Each row of the matrix can now be considered as a ‘clinical care or pathway group’, i.e. a group of patients who can be managed by a specific group of clinicians. Some Consultants may appear in several clinical care groups with different colleagues; see [figure 2.12](#).

**Figure 2.12**
Step 3: Identify the clinical care group (CCG)

Each Consultant will have their own entirely unique waiting list. The patient is added to the shortest waiting list within the clinical care group.

**What do we mean by shortest?**
There are many definitions of ‘shortest’ when describing waiting lists. Each has potential problems.

**Fewest patients on the waiting list**
This definition does not take into account the rate at which patients are removed. A Consultant who manages a lot of complex cases will take patients off the waiting list at a slower rate. A Consultant who has many outpatient clinics will remove outpatient referrals at a faster rate than one who has few clinics.

**Shortest wait**
The Consultant with the shortest maximum waiting time may seem a sensible definition of shortest, but it is defining shortest future wait on the basis of shortest historical wait and will not take account of changes in circumstances.

A better definition, which is prospective rather than retrospective, is clearance time. This is calculated on the basis of the number of patients on the waiting list divided by the rate at which patients are being removed. The clearance time in weeks is the number of patients on the list, divided by the number expected to be removed each week. In effect, this is the time that it would take to clear the list if no new patients were to be added, or the time that a patient added today could be expected to wait.

Clearance time will only be accurate as long as circumstances do not change, but will be adjusted automatically if circumstances do change. It does take some account of casemix on the list, as casemix will affect removal rates. Counting on the basis of casemix would be even more accurate.
Who owns the pooled list?
There is one final question: who has clinical responsibility for a pooled or generic list? It is a requirement of the Welsh Government that every patient waiting on an outpatient list is allocated to a specific Consultant in terms of clinical responsibility. Where a matrix approach is used to allocate patients to lists, generic or pooled lists do not exist so this is not an issue. Where ‘hidden’ pooled lists are used, or even the simple pooled lists mentioned first, there needs to be a named Consultant for the pooled list.

In most cases in Wales, the Clinical Director of the service has taken on responsibility for the pooled list and is recorded as the named Consultant. The important thing to keep in mind is that the named Consultant for a pooled list has responsibility for the patient while they are waiting. Once the patient has been booked for surgery with a Consultant, they become that Consultant’s responsibility.

The impact of pooling
Pooling will have its biggest impact when there are significant differences between the length of waiting lists (either by Consultant or site). Where lists are relatively even, the effect of pooling on waiting times will be less. However, the use of pooling and generic referrals is good practice and should be encouraged even when the impact on waiting lists would be minimal.

Why generic referrals?
Generic referrals are referrals sent to the health board, rather than a named Consultant. In most cases, the referral will be to a ‘Dear Doctor’. Generic referrals are good practice. They recognise that the health board delivers a service, not solely the Consultant and they allow the health board and primary care to determine how the service should best be provided (either pooled Consultant lists, or alternative practitioners). Generic referrals will promote equity of access as waiting times will be based on the date referred rather than the Consultant referred to.

Cost savings will be found when the use of generic referrals means that patients can be seen, where appropriate, by staff other than a Consultant. This will reduce the cost per case, allowing greater volume through the system.
This section deals in detail with the booking process: how and why partial booking works.

PRINCIPLES
Some fundamental principles apply to the booking process:

- The preference for the type of communication the patient prefers should be identified at the outset of the booking process, along with confirmation that the patient is on the waiting list and how long the expected wait is.

- Whichever type of booking process is used, the rules related to ‘reasonable offer’ should be followed.

- At least 80% of all patients should be booked for appointment in chronological order of the date of referral being accepted; the remaining 20% should include specified exceptions.

- Appointments should be mutually agreed with patients (new and follow up).

- If the patient is asked to phone to make an appointment, the consequence of not phoning promptly should be included i.e. other patients may take the available appointment slot.

- Patients with Urgent Suspected Cancer should be seen and treatment commenced within Welsh Government targets. More information is available in Cancer specific additional guidance 2017 Booking systems must be set up to ensure that these patients will be seen within the required time.

- The health board leave policy requiring six weeks notification of any planned leave that will affect an outpatient clinic, should be proactively managed to avoid the cancellation of patient appointments.

PATIENT FOCUSED BOOKING BASICS
1000 Lives Improvement recommends the phrase patient focused booking, which incorporates the entire booking process. This document defines partial booking as part of the overall booking process.

Partial booking is not, in itself, a form of booking. It is a way of managing the waiting list to ensure that when booking takes place, it is done with the active involvement of the patient.

A reasonable offer to a patient is defined as any date mutually agreed between patient and organisation.

Abertawe Bro Morgannwg University Health Board introduced partial booking to enable patients to have more choice over their appointment – this has helped to reduce DNAs.
The average variance between the two years (pre partial booking and after) shows a reduction in the DNA rate of 1.14%; 11% of patients who received letters were removed from the waiting list for either not responding or requesting removal – potential savings of £200,000 of wasted appointment time. Read the case study.

Partial booking is a set of processes and procedures to manage the waiting list (such as the integration of primary targeting lists into the patient letter generation process); a set of principles for patient booking (such that no appointment is made without the direct involvement of the patient either by phone or in person); a set of practices, such as the use of an appointment centre to provide a single and central point of contact for patients within the health board and to make efficient use of available appointment slots.

In summary, if the appointment is going to occur within the next six weeks, then full booking should be used. If it is going to be further than six weeks into the future, then partial booking should be used.

The acknowledgement letter
As a patient is registered and prioritised, a letter, text or email is generated telling the patient the approximate wait and to expect another communication closer to the time. A letter, email or text should be sent to the patient four weeks before they need to attend, asking them to phone and make an appointment. An explanatory leaflet (hard copy or electronic) on the process should be provided to the patient with the acknowledgement.

Management of 'Do Not Attend'.
If the patient ‘does not attend’ (DNA) an agreed appointment without giving notice, the patient should be removed from the waiting list. The patient and referrer should be notified. If the Consultant responsible for the patient considers that the patient should not be removed for clinical reasons they remain on the waiting list but their ‘clock’ will be reset. Systems should be in place to enable clinicians to make effective and efficient decisions about the clinical need for another appointment, rather than all patients routinely offered another appointment. The DNA reset may be applied a maximum of two occasions in any given pathway. Notification of reset should be sent to patient and referrer.
Person centred care has become a key element of health policy and recent health reform. Person centred care principles aim to move the conversations and focus between health professionals and individuals, from “What’s the matter with you”? or “How can I help you”? to “What matters to you”?

Person centred care is used to describe different principles and activities. One definition of person centred care is: “A basic philosophy of care, centred around the individual – in which the needs and resources of the individual define the process. Individuals are supported and encouraged to make informed decisions about their treatment and health management; it is a process that is not only responsive to the individual’s physical abilities and medical needs, but also to the individual’s social and psychological abilities, preferences and lifestyle”. (source: E. Rasmussen et al. 2014. Person Centred Care: Co-creating a healthcare sector for the future. DNV GL and Monday Morning/Sustainia).

The difficulty in definition is in part because person centred care is still an evolving and emergent area, and because person centred care depends on the needs, circumstances and preferences of the individuals receiving care.

PRINCIPLES
The Health Foundation has identified a framework of four principles which underpin person centred care (Figure 3.1):

- Affording people dignity, compassion and respect
- Offering coordinated care, support or treatment
- Offering personalised care, support or treatment
- Supporting people to recognise and develop their own strengths and abilities to enable them to live an independent and fulfilling life

Figure 3.1: The Health Foundation’s Four Principles of Person Centred Care (reproduced with permission)
Person centred care is a relationship in which health care professionals and patients work together to:

- Understand what is important to the person
- Make decisions about their care and treatment
- Identify and achieve their goals

When care is person centred it will involve a combination of these principles.

**APPROACHES TO PERSON CENTRED CARE**

*Approaches to person centred care include:*

**Co-production**

Co-production enables citizens and professionals to share power and work together in equal partnership, to create opportunities for people to access support when they need it and to contribute to social change. [View more information on case studies in Wales.](#)

**Shared decision making**

Shared decision making supports individuals to make a specific decision. For example, to choose between different types of surgery, or take a course of medication. It can often involve decision support materials that are designed to assist individuals in assessing their options.

**Making Choices Together** is a movement to encourage open conversations between patients and their Clinicians to make decisions together about the right care for the patient, informed by good evidence and responsive to the needs and wishes of the patient.

**Self management support**

Self management support helps individuals to develop and increase their capacity, knowledge, confidence, and self-efficacy to manage their own health and wellbeing and/or recover from an episode of ill health. The model in Wales is primarily a patient based model that seeks to enable patients through individual or group based education. Education Programme for Patients (EPP) Cymru offers a range of health and wellbeing courses and workshops for people living with, or caring for, someone with a health condition.

Many of the staff and volunteers who are involved with EPP Cymru in Wales have personal experience of either living with, or caring for someone with a health condition. Find out more on the [EPP Cymru website](#).

**Health literacy**

Identifying the personal characteristics and social resources needed for individuals and communities to access, understand, appraise and use information and services to make informed decisions about their own health and care. [Find out more](#).

**Service user feedback**

Putting in place a range of methods to understand what it feels like to be a service user and using that feedback to improve services, experiences and an individual’s care.
WHY IS PERSON CENTRED CARE SO IMPORTANT?
Many people want to play a more active role in their health care, and there is growing evidence that approaches to person centred care such as shared decision making and self management support can improve a range of factors, including patient experience, quality of care and health outcomes. The active involvement of patients is an essential element of improving and transforming outpatient services. Examples include the following:

- Supporting patients with long-term conditions to manage their health and care can improve clinical outcomes. When people play a more collaborative role in managing their health and care, they are more likely to follow their treatment plans.

- Patients who have the opportunity and support to make decisions about their care and treatment in partnership with health professionals are more satisfied with their care, are more likely to choose treatments based on their values and preferences rather than those of their clinician, and tend to choose less invasive and less costly treatments.

- Individuals who have more knowledge, skills and confidence to manage their health and health care, are more likely to engage in positive health behaviours and to have better health outcomes.

- Person centred care is good for health care professionals too. As patient engagement increases, staff performance and morale see a corresponding increase.

Care that is person centred should also represent better value for money because it ensures that services are built on the needs and preferences of the people who use them, rather than on the convenience of providers.
Staff working in clinical departments should understand a number of key elements of the services they are responsible for. This section discusses some useful tools and concepts essential to improved process change in the management of outpatient services.

This chapter deals with these essential tools.

**PRINCIPLES**

- Staff managing services in health boards should have a good understanding of the capacity of their service, the activity levels provided by the service, the demand on the service, and the backlog of work in the system.

- Managers should understand how patients proceed through the service.

- Managers should understand the flow of work through the service, and be able to identify rework within the system, constraints and bottlenecks, and unnecessary process steps.

**Process mapping**

It is important to understand how patients proceed through the service. This is covered in more detail in section 4.2.

**Analysis of activity, backlog, capacity and demand**

This helps to understand how the service can cope with patient demand. This is covered in more detail in section 4.3.

**Understanding follow-up demand**

Understanding the demand for services is fundamental to knowing how to deal with them. This is covered in more detail in section 4.4.

**Measuring follow-up demand**

Follow-up patients are one of the main demands on outpatient services. Before we can reduce follow-up demand, it is important to understand it and measure it. See section 4.5.

**Reducing follow-up demand**

There are a number of tools to manage and reduce the demand on outpatients created by follow-up appointments. This is covered in detail in section 4.6.
Constraints and bottlenecks
It is necessary to understand two other concepts in order to manage capacity and demand: constraints and bottlenecks. This is covered in section 4.7.

Flow Models
Flow models are a way of analysing the service constraints and bottlenecks found during the mapping process, and looking at them from the perspective of the service; they also help in determining whether work is scheduled around the constraint. Further details can be found in section 4.8.

Carve out – understanding queues
Patient experience is often about waiting and has been described as long periods of waiting, punctuated by short periods of activity. Understanding the principles behind queue management will reduce queues and improve waiting times and ultimately the patient experience. This is described in more detail in section 4.9.
Process mapping is ubiquitous in the NHS improvement movement. Understanding the process from the patient perspective is essential if services are to be improved.

There are two stages to process mapping. First, understand what happens to the patient, where it happens and who is involved. Then examine the process map to determine where there are problems such as multiple hand-offs, parts of the process that are unnecessary or do not add value, or parts of the process which could flow better if undertaken in a different order. These problems can be addressed by designing a new more streamlined process.

Second, use process mapping to determine where bottlenecks and constraints occur. Is use of the constraint maximised? Do the patients flow through the system without delays? This approach is covered in Chapter 4.8.

Patient processes in healthcare
Patient processes have evolved over time within the NHS with many new systems being bolted on to current processes without an overall analysis of how the whole system functions. There can be many layers to a patient’s journey and no one professional has a detailed overview of that journey. It is therefore essential to any improvement work that current systems are mapped by the staff on the ground floor who are directly working within those systems, and with the involvement of patients and carers who experience the whole journey from a very different perspective.

Benefits of process mapping
Process mapping is a simple exercise, and ensures any improvement work is based on a realistic analysis of current working systems, as opposed to how local policies determine they should be working. It provides a clear indication of where there may be impact on other parts of the service when changes are made, as well as the opportunity to get multi-disciplinary teams from across the healthcare community together to promote a culture of ownership and continuous improvement. Staff are often not aware of the complexity of a patient’s journey and this provides an opportunity for staff to understand how their work impacts on other parts of the system.

The final map itself can be used as a training tool; for communication purposes as well as identifying areas for continuous improvement. The map should be updated when changes are made to ensure current processes are being captured.

The high level process map
When choosing which patient groups to map, the group should be of high volume and share common characteristics. This provides the opportunity to have the greatest impact. This stage of the process map can be used to standardise care or treatment. (see figure 4.1 on page 48)
Choose clearly defined start and end points; for a referral process these may be the arrival of a referral letter in the health board through to the appearance of the patient in the outpatient clinic. The important thing is to be clear which parts of the process are within the scope of the map and which are not.

At this stage a quick mapping exercise by a few staff may be useful to determine who will be involved in a more detailed mapping exercise. It is essential to have representatives of all staffing groups involved in the process at the main mapping exercise, and a quick high level map will help ensure no staff group is forgotten. Do not forget to involve patients in the detailed mapping process.

Organising the mapping event
Once you have a high level process map of the journey you wish to analyse, check you have a list of all staff groups that are involved in the patient’s journey. This will ensure that further down the improvement process when changes are to be implemented, you will already have the staff groups that are involved in the process on-board and will not have to spend time engaging staff who have not been involved from the start.

Mapping workshops should be at least a half-day event with all members of staff invited for the whole session, although a drop-in session can be useful where it is impossible to get all staff groups together. In this situation it is vital that all staff involved have an opportunity to validate the final map. If you can get all the staff together there may be time for some action planning at the end of the session, to agree the next steps to the improvement process and how they should be involved.

It is advisable to use an independent facilitator to run the event, and it may be useful to run the session off-site, to facilitate neutrality. At the outset of the session, ground rules should be set with the group, for example:

- Freedom for everyone to be open and honest.
- Mapping reality versus what should be happening.
- Focus on what usually happens for most patients.
- Don’t make assumptions about people’s knowledge.
- Clarity over what is being mapped.
5 minute ruling — if there is debate over a certain step, note the issues and move on after a 5 minute discussion.

The session is looking at processes not people.

Throughout the session it may be useful to reiterate some of these rules, and it is essential that there is a blame free culture present. It is a human response to be defensive when groups are looking at the way people work, and the group needs to ensure all staff are focusing on the processes and not the staff involved in those processes.

At the mapping workshop, use ‘post-it’ notes to capture the information about the patient journey down to the level of one person, one place and one time’. See figure 4.2. This will ensure that hand-offs, multiple staff, changes in location, and loops in the process are all captured. Capture any issues or suggestions for improvement that are made on a separate flip-chart to circulate with the map when finalised for comments. Arrange the ‘post-its’ into order, and look for:

- Things that are done more than once.
- Steps that do not add to the patient outcome — ask “Why is this being done?”. 
- Count the number of hand-offs.
- Identify where there are delays, queues, and waiting built into the process.
- For each step ask whether the action is being undertaken by the most appropriate staff member.
- Look for ‘re-work loops’ where activities are taken to correct situations that could be avoided.
Process mapping: understanding the whole system 4.2

It may be useful to re-draw the process map to look at a specific issue. For example, a process map can be drawn with each staff group in a different row or column to identify the hand-offs — a hand-off occurs each time the process map moves across to a different column. (see figure 4.3 below left)

**Focusing in on the problem**

Once the overall process map has been drawn and the staff agree with the process, it is useful to identify where there are bottlenecks, constraints and steps that do not add value in the process.

Which step causes the most delays? This step can then be mapped in more detail, expanding out the process. This can be done several times, each time expanding and getting to a greater level of detail. (see figure 4.4 right)

Any level of mapping is useful, and it is rare for a group to undertake process mapping without identifying at least one step that some members of staff were unaware of. The best way to learn process mapping is to do it.

Some simple tips:
- Try photographing key steps of the process and illustrating the map for a staff presentation.
- Walk through the process with a patient to check that all steps/events are included.
- Only consider what usually happens.
- Involve all staff groups and patients.
Next steps:
Process mapping is the first stage, helping to identify where to start making improvements. The use of Plan Do Study Act (PDSA) cycles of improvement provides a structured approach and framework for developing, testing and implementing changes. View more information on process mapping.
When identifying potential areas for improvement look for the following:

- Reduce the number of hand-offs and steps within the process.
- Co-ordinate the scheduling of appointments for patients with complex needs.
- Create trigger systems so that booking diagnostic tests trigger an appointment for results where appropriate.
- Reduce the number of times a patient has to attend hospital.
- Reduce or eliminate batching; this often creates delay in a process.
- Reduce the number of queues to be managed; see section 4.9 for more information.
- Extend staff roles to encourage flexibility.
An understanding of the dynamics of waiting lists is essential to managing them. There are four key measures that must be understood and monitored on a continuous basis if waiting lists are to be managed effectively. It is also important to understand the two key types of limitations in the system: constraints and bottlenecks.

**Backlog**
The backlog for outpatients is the number of patients on the waiting list.

**Capacity**
The capacity of the system is the time that the resource is available. For outpatients, capacity is staffed clinic sessions.

**Demand**
The demand on the service is all the patients referred into the service from all sources.

**Activity**
Activity is the throughput of the system – the number of patients seen in clinic.

Consider the following scenario: waiting lists are increasing, and it is necessary that they are reduced. The demand is 5000 patients per annum, and only 4500 patients are seen in clinic. Waiting lists are going up by 500 patients per annum. What should be done? The health board is asked to fund an additional 500 cases.

Consider another scenario: there is an increase in waiting times for CT scans. The wait has gone from 12 weeks to 18 weeks over the past two years. The data supports the impression that there are more referrals. What should be done? The health board asks for an additional CT scanner. There is an unstated assumption behind both of these scenarios. The consultant in clinic works 100% of the time. The CT scanner is utilised 100% of the time.

Capacity is the ability to do work, not the amount of work done. It may be true that the CT scanner is working at 100% capacity, but without data for both activity and capacity, that assumption cannot be made.
The NHS collects data on activity, but rarely on capacity. To understand capacity, we need to understand the relationship between activity and capacity. (see figure 4.5 below)

Capacity and activity should be measured in a common unit of measurement to understand how they relate to each other. Time is often used.

**Activity**
Activity is the actual work carried out and usually measured in patient numbers. However, it is not possible to compare two items measured in different units. So if the intent is to compare activity to capacity, both activity and capacity should be measured in time. In the case of outpatient activity, this is the time it takes to see each patient (usually longer for new patients than follow-ups) and the number of new and follow-up patients attending, multiplied by those times. Activity is measured as the total number of patients processed, multiplied by the time taken to process each patient.

**Capacity**
Capacity is the resource available, multiplied by the time it is available. In practical terms, outpatient capacity is a combination of physical capacity, staffed capacity and clinician capacity.

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**Figure 4.5**
The four key measures

![Diagram showing the relationship between demand, capacity, activity, and backlog.](image)
Demand
In simple terms, demand is the volume of referrals. However this doesn’t take into account patients removed from the waiting list other than for treatment. Derived demand resolves this issue as it is calculated using the following formula: Waiting list on date B – Waiting list on date A + activity occurring between date A and B.

Backlog
Backlog is the previous demand that has not yet been dealt with, showing itself as a waiting lists or backlog of work or waiting list.

So why do waiting lists and waiting lists or backlog of works form?
The main reasons why waiting lists or backlog of works develop is the mismatch between variation in demand and capacity at specific times, because the right people or equipment are not always available to deal with the demand in a timely manner. Every time the demand exceeds the capacity, a waiting list or backlog of work is formed.

The waiting list is also measured in terms of time. Estimated times for each treatment/appointment can usually be obtained. The appropriate time can then be allocated to each patient on the waiting list, and the total waiting list expressed in appointment minutes can be captured at the end of each month. Be careful not to use the average appointment time.

The common graph
Figure 4.6 shows the four measures for one such list, plotted on the same graph. The relationship between the four measures can now be seen. However, including the backlog can hide the detail of the other measures – if the activity, capacity and demand lines are very close together, consider removing the backlog. In this graph capacity remains constant each month. In reality there may be changes in capacity depending on the availability of staff, clinic rooms and other resources.
Waiting lists and waiting times build up because of variation in demand and capacity, (where demand temporarily exceeds capacity). The mismatch or variation in capacity and demand is one of the main reasons why waiting lists and waiting times increase.

Once demand, capacity, activity and backlog have been measured the data and patterns that emerge can be used to start predicting demand and managing capacity, activity and backlog at the bottleneck.

Looking at, and matching capacity and demand is a key approach to removing some of the visible and hidden backlogs along the patient pathway.

Variation is a normal part of all processes and clinical processes are no different. Accounting for variation is important when identifying the throughput (total activity) of a service and matching the capacity to manage the demand. Averages hide some of the variation. When calculating throughput do not use averages; using average appointment time to calculate the waiting list will usually underestimate actual demand.

Rather than using the arithmetic average or mean (50th percentile) you could use the 80th percentile.

To calculate this, for example take 100 patients. The 80th percentile can be found by sorting the patients by the length of their appointment then counting to the 80th patient. There are software packages that will calculate percentile.

By using the 80th percentile, you are likely to have underestimated the time needed on only 20% of occasions. It is far less likely that you will have a run of patients over the estimate. Using the arithmetic mean or average length of appointment, will generally be shorter than this and therefore could be more likely to underestimate the time needed. See Figure 4.7.
Understanding the demand for services and how it balances against the activity the system is producing, is fundamental in understanding where waiting lists come from and how to deal with them. This section addresses issues of activity levels, changing demand and how to relate one to the other.

**Seasonal variation**
Are referral rates stable across the year? In some clinics, referrals increase at certain times — typically medicine referrals increase in winter, as do those for orthopaedics. Referrals in dermatology increase in summer. Some specialities such as ophthalmology do not have obvious trends. Seasonal trends are important as they can skew the analysis — if you do not look at the whole year, is the increase you have detected a real increase, or is it due to a summer bulge? When looking at long term trends it is useful to compare years on the same graph, so that changes between months can be separated from the year to year changes. An example can be found in figure 4.8 where waiting lists for several years are compared. Note that the newest line is stable — compared to an upward slope for the same months of previous years.

**Conversion ratios**
It is important to treat the elective process as an integrated whole. Increased activity at outpatient clinics may affect the flow on to the surgical waiting list, but simple conversion ratios may not give accurate predictions of future surgical demand.

With long waiting lists, an initiative clinic to remove patients from the tail of the waiting list where PTLS has not previously been used, may deliver lower conversion ratios due to the nature of the patients who tend to accumulate at the end of waiting lists. Conversely, pre-screening of orthopaedic referrals by a physiotherapist may considerably reduce the number of new referrals onto the consultant outpatient waiting list. However, if the consultant continues to see the same number of outpatients, the ratio requiring surgery and thus the number flowing onto the inpatient waiting list, will increase substantially as those patients unlikely to proceed to surgery have been screened out.
Many health boards and specialities have a problem with seeing outpatients at short notice. In response to the need to fit patients into full clinics two or less weeks into the future, health boards have traditionally set aside appointment slots, or overbooked clinics at the last minute.

Understanding the workload.
Clinics are often overbooked and capacity is often exceeded by demand, leading to overcrowding and patients not being seen within the timeframe that is clinically appropriate. This is often referred to as ‘follow up not booked’. Figure 4.10 shows that there are no available slots for the next seven weeks! Even where information about the number of empty appointment slots is available when booking, one vital piece of information is missed out: how many more patients will be added to that clinic between now and the clinic taking place?

One way to understand what the demand will be on future services is to prospectively record every follow-up appointment made for a time period (preferably several months) and keep track of how many one week, two week, three week etc. appointments are made each week. An alternative is to estimate the demand based on historical data. By analysing all the appointments made over an 18 month period, and calculating the time between the appointment and its predecessor, an estimate of appointment frequency can be made. The distribution for one ENT service is shown in figure 4.11.

Note that 5% of appointments are made for one week, 5% for two weeks, 5% for three weeks etc. 25% of appointments are made for less than six weeks. In order to leave room for these patients, at six weeks the clinic should be only 75% full.
The clinic in figure 4.10 (see page 57) is already full for the next seven weeks. Where will these patients be placed?

There needs to be a way to look at clinics and take account of the work that will come in, not only the work that has already come in. If this information is made available to clinicians, then they will be better able to make decisions about when to bring patients back — balancing clinical need with clinic availability; helping to avoid ‘follow up not booked’.

**Step 1: Plot the distribution...**
As long a time frame as possible should be used for this exercise; the shorter the time you choose, the more under-represented the longer appointments will be, as either the first or the second appointment will be missing from the sample. Use a sample size of 18 months; more would be better! See figure 4.12.

**Step 2: Convert to a cumulative graph...**
The lower area represents the proportion of the clinic that should be filled, based on the distribution in the first graph. The upper area is the proportion needed to deal with the appointments ‘in the future’. The boundary between the upper and the lower is the proportion of the clinic that should be filled at any time. The boundary line represents ‘full’ if there is to be space available for any appointments in the future. Figure 4.13
Step 3: Plot your ‘actuals’...
The jagged line represents the ENT clinic seen overleaf. As can be seen, there are times when it is above the boundary line — the clinic is overfull. There are also times when the clinic is underfull for that week or month. Figure 4.14

Step 4: Simplify the presentation...
The last graph ‘flattens’ the boundary line, setting it as ‘100%’; see Figure 4.15. The jagged line becomes the series of vertical bars, showing over and underbooking against the new profile. This graph could be given to consultants or clinic staff to show where problems are predicted.

Understanding demand for follow-up appointments will assist booking, and it will go a long way to improving the current chronic overbooking found in many clinics.
Proactive management of follow up appointments is as important as new appointments, both in terms of volume and management of clinical risk. Every follow-up appointment uses valuable resource and should be avoided where clinically appropriate. This will help to reduce overall demand. This in turn could facilitate improved management of clinical risk by enabling patients to be seen within the timeframe that is clinically appropriate.

There are many ways to reduce follow-up demand, this in turn will improve productivity of appointment slots and create capacity for ‘new’ appointments which should reduce waiting times.

PRINCIPLES

- The use of patient initiated follow up appointments for individuals with chronic disease or recurring problems facilitates the patient having control over their health and well being.

- Understanding each clinic profile is an essential part of managing the service.

- An understanding of frequent attenders helps to facilitate improvements in managing these individuals.

- All departments should develop follow-up protocols for their major patient groups, and monitor their use.

- An outcome should be recorded within the Patient Activity System (PAS) for every patient interaction.

- Implementation of clinical pathways that pro-actively avoid follow-up.

Understanding your clinic

It can be difficult to see the wood for the trees. Sometimes it is necessary to step back and review what is happening in outpatient clinics as a concerted exercise, rather than relying on perception and anecdotal evidence.

One way of doing this is to create a ‘Week in the life of a clinic’ to determine just what happens during a typical week.

The basic technique is to set up a data collection tool that can be applied to every patient seen in a department in a typical week. The data can be collected from the PAS, from patient records, and from checklists completed by staff during the clinic. Each of these will give a part of the picture:

**From the PAS**

Patient demographics including age, gender, postcode analysis, referrer analysis.

**From the patient record**

Diagnosis and co-morbidities, number of times the patient has attended in the last year.

**From a checklist or electronic outpatient activity system**

Who saw the patient, action taken, tests ordered, when the next appointment will be.
The information collected from these sources over a typical week should give enough data to be significant. Combining the data into a single database will allow collation across the different sources. The aim of the collation exercise should be to provide a picture of a typical cross section of patients seen in the department, and should help in answering a number of questions such as: what proportion of patients are local? What is the level of co-morbidity? What disease groups make up the highest proportion of frequent attenders? How many of the follow-up appointments were seen by junior staff, and what were the decisions taken?

The analysis may not provide any quick answers, but it will contribute to any subsequent improvement process. Without knowing the nature of the thing that is to be improved, there is a danger of concentrating on what seems obvious, or what ‘everyone knows is the problem’. Having good data on the current situation is the first step to improvement.

This exercise can take a significant resource. Collection will involve looking at patient notes, and staff completing checklists for every patient they see during the week. The benefits are well worth the effort.

Frequent attender analysis
From at least a year’s data download from the PAS, do a frequency analysis of attendances by patient. The only data required for this is the patient number and the date of the outpatient appointment. Within a spreadsheet, a pivot table can be used to count the number of attendances by each patient. The pivot table can then be used to count the number of patients who had one appointment, two appointments and so on.

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<th>Cumulative % of patients</th>
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This is likely to show that the number of patients with significant multiple appointments is low, but that the number of appointments taken up by those patients is significant. In figure 4.16 (page 61), which represents data for two years, one patient had 28 appointments, and three had 24 or 25 (one every month). In all, 18 patients (0.20%) accounted for 343 appointments (1.81%), below line ‘A’ while 125 patients (1.40%) had 10 or more appointments over the two years, representing 1,615 appointments (8.53%) below line ‘B’. The graph in figure 4.17 shows the same data.

What can be done with this data? Pulling the patient records of the 18 patients and doing a clinical review may reveal changes to the care which would result in fewer appointments. Are these patients best managed in outpatients? Would there be benefit in meeting with the patient’s GP? By focusing on patients who are frequent attenders it may be possible to customise their care and improve the outcome, while also reducing the demand on outpatients. The key is identifying the small number of patients who are consuming relatively large amounts of clinic time, and then seeing if they can be managed in a different way.

Use of patient initiated appointments
Many departments now use self referral for follow-up rather than fixed appointments. This can be effective in reducing both follow-up appointments and DNA rates for some patient groups. ‘Seen on symptom’ (SOS) appointments can be used for patients with a recurring problem, where a procedure is being followed up, or where monitoring of a chronic condition can be undertaken in part by the patient.

Recurrent problems
This is the most common use of SOS appointments. There is little point in regular follow-up of a condition which flares up from time to time, which does not usually coincide with an appointment. It is preferable to have rapid access to an appointment when the problem recurs.
Reducing follow-up demand 4.6

**Procedure follow-up**
In many situations it is common to recall patients while they are recovering from a procedure. Often appointments are made on a regular basis, until the patient reports no further problems. This will always result in one more appointment than necessary (when the patient attends to report no symptoms) and often more than one appointment.

Informing the patient about the progression of recovery (through a patient pathway), and allowing the patient to make an appointment quickly if there is a deviation from the pathway or if the patient has any concerns, will mean that patients on the normal recovery path will not take up clinic time, which can then be devoted to those patients with problems.

A value based approach to healthcare that uses resource wisely, avoids wasteful follow-up appointments will help to reduce waiting times.

**Chronic condition monitoring**
Patients with chronic conditions can also use SOS appointments, with the possibility of less frequent scheduled review. This type of appointment helps to give the patient control over their own health and well being.

In Aneurin Bevan University Health Board patients with multiple sclerosis were given the opportunity to use SOS appointments to help manage their condition. This reduced the follow-up waiting list from 333 to 92 over a three year period and the number of follow-up waiting beyond target date reduced from 249 to 16. Read the case study.

In the case of chronic conditions, as with procedure follow-up, it is essential that the patient understands what events should trigger an SOS appointment and instructions on how to make an appointment.

**Follow-up referral protocols**
Agreement amongst clinicians and the utilisation of protocols for follow-up appointments will help to avoid unnecessary follow-up appointments.

In Aneurin Bevan University Health Board patients with rheumatoid arthritis are managed jointly between GPs and secondary care – reducing the number of follow-up appointments required in hospital and allowing patients to be seen closer to home by their GP. Prior to a 3 year transformation programme, routine patients were waiting beyond 28 weeks, contravening NICE Quality standards. Now nearly 85% patients with suspected inflammatory arthritis are seen and treated within 6 weeks of a GP Referral. Read the case study.

**Attendance outcomes**
An outcome should be recorded within the PAS for every patient interaction, whether the patient is present or not. This should help to reduce the need for administrative validation, and appointments that are not required.
Two other concepts help to manage capacity and demand: constraints and bottlenecks.

**Constraints**
The constraint in the system is the factor that ultimately restricts the capacity of the system, i.e. the rate at which patients go through the system. In outpatients, the constraint may be physical space, equipment or skilled staff to provide appointments or procedures. The constraint is not easily removed without substantial investment in terms of staffing, or facilities.

Once identified, the constraint should become the most important part of the process. Work should be scheduled so that the maximum use is made of the constraint. Resources at the constraint should not be used for jobs that other staff-resource could do.

**Bottlenecks**
A bottleneck is the part of the system that restricts the activity. A backlog tends to happen just before a bottleneck and clear after the patient has gone past that stage.

A typical bottleneck in outpatients may be patients booking in at reception. The entire system stops while waiting for a patient to move from the reception because of a shortage of reception staff or queuing to use a technical solution for booking in.

Distinguishing between the constraint in the system and the bottleneck currently limiting activity is essential. **Constraints limit capacity (resource available) and bottlenecks limit activity (number of patients processed).** By removing bottlenecks it is possible to increase activity until it gets close to the capacity of the system.

**Constraints and bottlenecks: a three step process**

**Step 1.** Identify the constraint in the system. Use process mapping to determine where the constraints are.

**Step 2.** Determine whether the process is scheduled around the constraint. Use patient flow modelling to determine this.

**Step 3.** If not, use PDSA cycles to eliminate a bottleneck or redesign the system to maximise the constraint. Then repeat Step 2.

When the point is reached where the use of the constraint is maximised, capacity should be analysed to determine whether it is sufficient. If it is not, then it is time to consider resources, but now the data is available to support the business case.
Flow models look at the care process from a clinical unit perspective, bringing together a number of patient process maps to look at work flows through the unit.

**Principles**

Flow models are the best way to analyse the work of a unit, such as an outpatient clinic. The process of building up the model is simple if all the steps are followed.

1. **Map and agree the process**
   The process must be mapped to a high level of detail.

2. **Time the steps**
   For a session, record the times for each step of the process.

   See **figure 4.18** The flow data

3. **Identify the constraint**
   The constraint is that part of the process which is the ultimate restriction on the amount of work that can be done.

4. **Draw the flow model**
   Using graph paper, or a spreadsheet programme, draw each patient as a horizontal bar one above the other. Set the horizontal axis to represent time, with the start of the session on the left, and the end on the right. Colour each stage of the process a different colour — it may help to colour the constraining process red. The length of each line will now represent the time each step of the process takes, and multiple patients will show as a series of horizontal lines. Add up the total of the red sections, and calculate it as a proportion of the total time.

**Figure 4.18**
The flow data

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<th>start of appointment</th>
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5. **Ask Why...**
Over the course of the outpatient day, appointments took up 38% of the available time (actually even less, because the session ended 18 minutes early). This is not a good utilisation of a very expensive resource. Why are there long periods when there is no clinic taking place? What else is happening during this time?

6. **Ask How...**
How can the situation be improved? It should be possible to schedule the clinic in such a way so as to maximise the use of the scarce resource, which is a clinician seeing a patient. What is currently being done in clinic that could be done elsewhere? Can tasks be undertaken in parallel?

7. **What is possible?**
It is possible to put together an ‘ideal’ flow model scheduling around the constraint. Use estimated time for each stage based on the 80th percentile time for each step of the process. This will make it possible to estimate the optimum use of the constraint and give a target to the improvement project. **Figure 4.19** the ideal flow model.

**Conclusion**
This analysis tool will not show what should be done, or even what the causes of the delays are. Process mapping will provide that information. The tool will show how well scarce resources are used, and how much room there is for improvement.
'Carve out' is an insidious process that steals capacity before our eyes, while appearing to protect the capacity for those patients who need it. In complex processes like health, some carve out is inevitable, but it must be eliminated where it can be, and managed where it cannot.

What is carve out?
Carve out is a term given to circumstances where reserving some of a resource for one group reduces the resource available to another group. Carve out is seen every day. It is present in supermarket car parks (parent with child parking), in the supermarket itself (basket only queues), on the road (bus lanes) and in health. Health is the natural home of carve out. The NHS has adopted it as a solution to a problem, and in doing so created an even bigger problem.

Carve out should be reserved for urgent patients and subspecialisation.

How many queues are there?
In a typical outpatient clinic there are many queues. There are slots for new patients; there are slots for urgent new patients. There are post-operation slots and there are soon review slots. In some clinics the number of slots can run well into two digits. These slots are created in an attempt to balance out the capacity to match the patients coming through the clinic. The odds that every week (or any week for that matter) the exact proportion of patients will match the available slots are minute. What happens instead is that there are empty slots, and then the clinic is overbooked to fit the extra patients in. The schedule goes out of the window, and the flow of work is totally disrupted.

What is the impact of carve-out?
Figure 4.20 represents an outpatient clinic with a high degree of carve out; separate slots for each patient type, different clinics for different conditions. The lower, red line shows what the waiting list would have been if each patient was booked into the next available slot instead of the allocated speciality slot.
Dealing with carve out
Some carve out is necessary and has benefits in spite of the negative impact on waiting times. Two such examples are carve out to reserve space for urgent patients in partial booking, and carve out to allow for essential clinical subspecialisation. The important thing is to allow the benefits and manage the carve out to minimise its effects.

Dealing with the 10 day waits
Partial booking allocates patients to clinics about four weeks before the appointment. There is a need to reserve some capacity for those patients that the health board does not know about four weeks from the date of the clinic.

There are ways of managing this carve out so that it does not affect the waiting times for non-10 day patients. The key to resolving carve out in this case is to manage the impact of carve out.

Managing subspecialisation
Chapter 2 provides a methodology that allows health boards to deal with carve out caused by subspecialisation. Subspecialisation has benefits in improving skill mix in specialist areas. Carve out caused by subspecialisation must be managed, rather than trying to prevent it.

Prioritisation and carve out
It is important to distinguish between clinical prioritisation and carve out. While there are issues with the type of prioritisation used, if waiting lists are longer than a few weeks, some degree of prioritisation will be essential. The degree of prioritisation should be minimised, so that as few categories are used as are required to meet the need to see patients within clinical priority.

Accepting clinical prioritisation does not mean allocating carved out slots to each category of prioritisation. This is the key to managing carve out caused by prioritisation; prioritise a single list of patients, and then allocate those patients from the top of the list into non-differentiated slots in the clinic. ‘Urgent’ patients do not go into ‘urgent’ slots; and ‘routine’ patients are not booked into ‘routine’ slots. Instead all ‘urgent’, and ‘routine’ patients are booked into generic outpatient slots. The ‘urgent suspected cancer’ (USC) patients are allocated to the 2 week slots; the volume required should be based on previous demand and should be regularly reviewed to ensure that the number of slots matches the required demand. **Figure 4.21**

**Figure 4.21**
From a prioritised list to generic slots

<table>
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<th>USC</th>
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See in 2 weeks

- 2 week slots

Prioritised List

Generic slots
The current system has failed to keep pace with the needs of an ageing population, the changing burden of disease, and rising patient and public expectation. Fundamental change is needed. This requires implementation of new models of care and decommissioning of outdated models of care. Case studies of good practice from the Compendium of outpatient improvement plus other examples, have been used to illustrate the content of this chapter and encourage adoption and spread across the service.

The transformation process starts with challenging the concept of both what an ‘outpatient’ is and what ‘outpatient services’ are and to transform the way in which we understand, diagnose and manage care. This should help to ensure that more people receive the right care, from the right person, at the right time, in the right place.

This final chapter will be of particular interest to clinicians and managers. It is aimed at supporting NHS Wales to transform outpatient services and is underpinned by the concept of Prudent healthcare which aims to rebalance the healthcare system by strengthening primary and community-based care; secure improved health outcomes and greater value from healthcare systems for patients; to support the establishment of a more equal relationship between patient and professional and remove waste from NHS systems and processes. The Prudent healthcare principles need to be incorporated into the changes to outpatient services and include:

- Do no harm – eliminate treatments which provide no clinical benefit or do harm.
- Carry out the minimum appropriate intervention – the principle that treatment should begin with basic proven tests. The minimum possible treatment should be performed to achieve the desired results.
- Organise staff by the ‘only do what only you can do’ principle, where all people working for the NHS in Wales should operate at the top of their clinical competence.
- Work to the principle that it is the individual’s clinical need that matters when it comes to deciding treatment by the NHS.
- Create a new relationship between the public and NHS Wales, based on openness and sharing information.
In addition to these principles, the work of the All Wales Outpatient Transformation Steering Group has helped to inform this chapter.

Two examples are provided as an illustration of how care could be provided in the future, see Figure 5:1.

**Figure 5:1 Examples of models of care**

**21 year old male with Type 1 diabetes.**
A secure technology solution approved by the NHS, provides the patient with their health record & care plan, connects with wearable activity devices and communicates with the patients’ health network.

Glucose monitoring and adjustment of insulin dosage is undertaken by technology and is linked to the patient health record. The technology provides real time information to the patient with information to facilitate appropriate action, including self management. This information is based on a care plan that has been agreed with the appropriate health professional.

The health professional receives all health monitoring data from the technology at the same time as the patient; alerts are activated by the technology using information agreed between the patient and health professional. Remote monitoring on a routine basis is undertaken by the health professional and to facilitate appropriate care management which can be reviewed at agreed timeframes with the patient. The health professional makes contact with the patient using the agreed method of communication to facilitate ongoing care management. The patient has control of their health record; this enables the patient to give access to relevant parts of their record to others including, health professionals, family and carers.

**50 year old female with angina.**
The GP discusses treatment options with the patient, including lifestyle changes and self management and signposts the patient to information about angina which can be accessed by the patient via their online health record. The patient uses his/her online health record to monitor symptoms and capture lifestyle adjustments.

The GP makes an e-referral using email to the secondary care specialist (having checked the online referral criteria first). The secondary care specialist reviews the referral and prioritises the patient; the GP and patient receive electronic notification. The specialist requests diagnostic tests.
The booking centre contacts the patient to agree an appointment using the patients preferred method of communication. Confirmation of the date/time is sent to the patients’ online health record.

The patient attends the appointment; diagnostic tests are undertaken before the patient sees the specialist and results are available for the consultation. Treatment options are discussed with the patient and pre surgical assessment is undertaken during the outpatient appointment.

The patient gives access to health monitoring information to the specialist health professional team who monitor symptoms; alerts are activated by the technology using information agreed between the patient and health professional. This information can be downloaded into the patient administration system. Detailed information about the surgical procedure is provided to the patient via their online health record.

The booking centre contacts the patient to agree a date for surgery and the patient receives electronic confirmation. Initial pre-assessment is undertaken via the online health record. Anaesthetic assessment is undertaken on the day of admission. Surgery progresses without problem and the patient has a timely discharge. Communication between the GP and specialist is enabled via one patient administration system. Remote monitoring by the appropriate health professional continues post operatively for an agreed timeframe. The health professional makes contact with the patient using agreed method of communication to facilitate ongoing care management as an alternative to face to face follow-up appointment.
PRINCIPLES
In addition to the Prudent principles, the following principles have been identified as useful in transforming outpatient services:

- Patients will be seen by the right person in the right place at the right time
- Optimising e-Health and digital opportunities
- Care is community focused with the primary focus on prevention and health promotion
- Care should be tailored to meet individual needs, owned and led by the individual (patient) with goals that are agreed with the patient, included in care plans
- Information should be accessible, easy to understand and facilitate sharing of information between professionals and with individuals
- Evidence based pathways are in place; treatments with limited evidence should not be used and value is added at every stage. Peer review is used to facilitate comparison of clinical outcomes
- Service delivery is outcome focused and monitored against agreed measures

REDESIGN OF SERVICES
Services should be designed around the needs of the patient, whilst using resources efficiently to ensure that demand is in balance with activity. This may require reconfiguration of services, including:

- Moving services from a secondary care setting to primary or community services provides the opportunity to move away from traditional models of care and provide care that is local to the patients' own home. In Cwm Taf University Health Board audiology services have been reconfigured and are provided by a Primary Care Practice Nurse. This has reduced demand on specialist services with 2000 patients removed from the Ear, Nose and Throat waiting list; £42k cost savings to the service; waiting list reduced from 7 months to 4 weeks. Read the case study.

- The ‘One stop’ model in which patients have one appointment that consists of diagnostic tests being undertaken immediately before their consultation, has improved patient satisfaction and reduced waiting times. In Betsi Cadwaladr University Health Board, this model is used for patients referred with suspected endometrial cancer and has facilitated compliance with national cancer diagnosis targets. Read the case study.
CHAPTER FIVE: THE VISION FOR 21ST CENTURY OUTPATIENTS

The vision for 21st century outpatients 5.1

■ ‘Straight to test’ approach involves the co-ordination and delivery of appropriate diagnostic tests to patients, without an initial out-patient clinic appointment. The Accelerate, Coordinate, Evaluate (ACE) Programme is an early diagnosis of cancer initiative focused on testing innovations that either identify individuals at high risk of cancer earlier or streamline diagnostic pathways. This is an example of one of the Prudent Healthcare principles ‘Carry out the minimum appropriate intervention – treatment should begin with basic proven tests.’ Read the report.

■ To enable GPs to avoid referring to secondary care where appropriate they need:

➢ Access to digital imaging software/virtual mediums/diagnostics to help them to manage the clinical needs of patients where appropriate. Results from these diagnostic tests will inform the decision to refer to secondary care. The ACE Programme projects at Croydon and Homerton University Hospitals Trusts explored a diagnostic route directly from primary care for routine colorectal referrals. The findings show diagnostic interval is shortened in time from GP referral to first diagnostic test and onwards to a confirmed diagnosis by around 1–2 weeks. Read the report.

➢ Access to a multidisciplinary team that provides services locally, and are responsive to the needs of the local population. The Neath Cluster Network has implemented a triage system that helps to direct patients to the most appropriate person to manage their needs. Read the case study.

➢ Up to date information about local service provision to signpost patients to services that help to improve or maintain health and wellbeing. This will include peer support or community support groups as alternatives to traditional services. Many Health Boards in Wales have a directory of hospital and community services with a similar directory provided by local authorities in the area. See the directory here.

➢ Access to specialist advice and support in managing appropriate patients. E-advice in cardiology at Cardiff and Vale Health Board started in response to recognition that an alternative to referral to a specialist for routine outpatient appointment was needed for non-emergency GP concerns. The e-advice service has grown from 4 requests a week to an average of 14 each week. In a lot of cases this is simple advice such as reassurance that the patient’s ECG is normal, along with advice for continued management in the community. This avoids a prolonged wait for diagnosing the patient and has resulted in 10% of referrals being managed by advice to the GP. Read the case study.
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TRANSFORMING ACCESS TO CLINICAL SERVICES

As the NHS moves away from traditional approaches to providing appointments, patients need to be informed and reassured about changes in service provision. The involvement of clinicians in changing the way patients are managed is crucial to success. These changes could include:

- **Follow up appointments** to be the exception rather than the norm. Protocols that are agreed between clinicians facilitate consistent practice with the emphasis on providing follow up appointments that add value to the patient pathway and improve management of clinical risk by seeing patients within the timeframe that is clinically appropriate.

- **Technology solutions** that facilitate communication between the health professional and patient provide an alternative to face to face appointments. One such example can be found here.

- **Referral criteria** that have been agreed by both primary and secondary care, which takes account of the needs of the local population and local services, help to ensure that appropriate patients are referred to secondary care services. Aneurin Bevan University Health Board recognised that some patients did not require specialist haematological investigation or follow-up. This way of working has reduced the waiting list to 12-14 weeks, compared to 6-7 months before the improvement was introduced. Read the case study.

- **Specialist advice to GPs** enables GPs to manage patients that may otherwise be referred to secondary care. In the Cardiff and Vale area the only route available for GPs to refer non urgent patients to a specialist was by referral to a consultant outpatient clinic. The provision of secure email advice from a specialist, enables GPs to continue to safely and confidently manage patients without the need for an outpatient appointment. This model is being rolled out across Cardiff and Vale. A GP survey of this service had an overwhelmingly positive response. The Health Board anticipates that over a third of referrals will be managed through the provision of advice to GPs. Read the case study.
- **Condition specific guidance** agreed by a professional peer group, which triages patients to the right clinician first time and reduces unnecessary delay. The rheumatology department at Aneurin Bevan University Health Board has developed a number of pathways. Read about an example.

- **Better access to clinical decision making support and specialist advice** will enable appropriate patients to be managed by primary and community services. This will have a significant impact on patients getting the right treatment. The specialist resource can be focused on more complex patients; this change in the anticipated complexity of patients in secondary care should be recognised and factored into job plans and the management of activity. In the Cardiff and Vale area this model has been implemented and helped to secure 35% reduction in referrals to secondary care. Read the case study.

- **Shared care arrangements between primary and secondary care** can help to provide care closer to home and improve access to specialist services. This model helped the rheumatology service in Aneurin Bevan University Health Board to see and treat 85% patients with suspected inflammatory arthritis within 6 weeks of referral. Read the case study.
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ENHANCING THE ROLES OF PATIENTS AND COMMUNITIES

Engaging patients in making decisions about their treatment and care is beneficial to both health services and individuals. This should start at the earliest opportunity and continue throughout the patient pathway.

■ **Shared decision making** is a process in which patients are encouraged to actively participate in selecting treatments or management options. It is appropriate in any situation when there is more than one way to treat a health problem, with different risks and benefits to each option. A Cochrane review found moderate quality evidence that shared decision-making reduced antibiotic prescribing for acute respiratory infections in primary care in the short term. [Read the review.](#)

■ **Making Choices Together** is a movement to encourage open conversations between patients and their clinicians to make decisions together about the right care for the patient, informed by good evidence and responsive to the needs and wishes of the patient. Clinical staff have access to training and guidance on how to have ‘better conversations’. [Visit the website.](#)

■ **Patients should be fully informed of what to expect from a service** to avoid unrealistic expectations. Additionally, GPs and other referrers should have up to date information about service provision and waiting times that can be shared with patients. Abertawe Bro Morgannwg University Health Board has developed a webpage to provide this type of information. [Visit the website.](#)

■ **Patients should be actively encouraged to improve their ability to manage their health and wellbeing** and improve their quality of daily life. This can be facilitated by signposting to information, voluntary organisations and community groups that provide support services. Take a look at one organization that supports people with arthritis: [www.arthritisare.org.uk/our-services-and-support](#)

■ **Social prescribing** is a means of enabling GPs, nurses and other primary care professionals to refer people to a range of local services. Recognising that people’s health is determined primarily by a range of social, economic and environmental factors, social prescribing seeks to address people’s needs in a holistic way. It also aims to support individuals to take greater control of their own health. A number of projects are using ‘link worker’ social prescribing schemes to signpost people to accessing a range of services such as weight reduction programmes as an alternative to health and social care, with the aim of improving health and wellbeing. [Read more here.](#)
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- **Self management** plays a crucial role in improving health and wellbeing, by improving an individuals’ ability to manage their health condition and confidence. Education Programme for Patients (EPP) Cymru offers a range of health and wellbeing courses and workshops for people living with, or caring for someone with a health condition. Read more here.

- **Informed patients** are more likely to make healthy choices and comply with their care plan. Information should be easily understood and given to patients at every contact. The rheumatology department in Aneurin Bevan University Health Board provides a range of patient information. Read more here.

- **Brief intervention training** is available for many topics and enables staff to discuss positive health behaviour with patients in a positive, non-confrontational way. For example primary care brief interventions for promoting physical activity are estimated to cost £20–£440 per year of healthy life gained as a result of the intervention. In comparison, statin treatment to treat high cholesterol costs between £10,000 and £17,000 per year of healthy life gained (Department of Health, 2012). Read the report.

- **‘See on symptom’ (SOS) appointments** have the potential to avoid follow up appointments that the patient does not value; and may reduce ‘did not attend’ rates. SOS allows the patient to arrange a follow-up appointment as needed, can be used for individuals with chronic condition/s or recurring conditions and facilitates the individual having control of their own health and wellbeing. Patients who have access to this provision should be given information about the ‘criteria’ for making a follow-up appointment. The process of making an appointment should be as easy as possible for the patient or carer. Abertawe Bro Morgannwg University Health Board have used this approach for podiatry service to improve flexibility of available appointments to meet unplanned patient need and reduce DNA rates to less than 1%. Read the case study.

- **Alternative ways of providing results to patients that avoid face to face appointments** provides an attractive option where clinically appropriate. This will include the use of technology as well as more traditional forms of communication. Aneurin Bevan University Health Board remotely monitors patients with Chronic Lymphocytic Leukaemia. It is estimated that this allows 240 clinic appointments/year to be used for other patients and saves approx £42k. Read the case study.
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Systematic measurement and reporting of patient preferences should be embedded into the provision of outpatient services of the future. Patient feedback helps to improve the quality of services and ensures that the patient is the focus of everything that we do. Patient Reported Outcome Measures (PROMs) and Patient Reported Experience Measures (PREMs) can help NHS Wales to gain a better understanding of the ‘value’ of services by providing patients with the opportunity to provide feedback about their health status and experiences of care. The national PROMs, PREMs and Effectiveness Programme is supporting all NHS Wales organisations to collect PROMs and PREMs across a range of specialities, providing insight into the effectiveness of treatments provided by NHS Wales. Read more here.

CHANGING PROFESSIONAL ROLES
Changing and modernising professional roles and boundaries is key to making best use of scarce resources. With increasing demands on the NHS in Wales, it is important to maximise the scope of roles and make the most of scarce staffing resources. Innovative change is needed to provide a sustainable workforce in the short term and long term.

The skills of the workforce should be adapted to meet the needs of the patient and/or service. This should include up-skilling staff to facilitate changes in responsibilities, which will help to improve and transform services. The Sexual Health Service at Wrexham Maelor hospital made changes to the responsibilities of Health Care Support Workers, enabling registered nurses to concentrate on preventing onward transmission of infection. Read the case study.

Communication across services and between professional groups should be robust to avoid duplication and improve the patient experience. Aneurin Bevan University Health Board changed the way referrals for low back pain were managed and made changes to job plans, facilitating service redesign. Read the case study.

Combating the present and future difficulties in recruiting GPs and specialist staff is essential to creating a multi-professional model of care, thereby releasing GP/specialist time enabling them to manage more complex medical cases and co-morbidity presentations. Betsi Cadwaladr University Health Board has appointed Advanced Physiotherapy Practitioners as the first point of contact for musculoskeletal conditions in primary care thereby relieving GPs (and secondary care where appropriate) of this caseload with 2868 fewer referrals into secondary care and cost savings of £372840. Read the case study.
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RETHINKING THE LOCATION
Rethinking the location of services, with close to home as the default, will enable different models of provision to be developed.

■ Changing the way services are provided – moving services away from secondary care into the community helps GPs to consider if a patient’s needs could be managed in primary/community setting. Cwm Taf University Health Board faced an increasing demand of patients referred by General Dental Practitioners for dental extractions. A community service was developed, resulting in significant reduction in demand on secondary care oral surgery; Patient feedback indicated that 98% were happy with the quality of care received. Read the case study.

■ An integrated care model with secondary care and primary care working together facilitates local provision of services with support from specialists. This model provides care ‘closer to home’ for patients and helps to improve the skill set for GPs through the provision of advice and support for the management of individual patients. In Cardiff and Vale University Health Board paediatric services have introduced such a model, that provides rapid, designated, specialist support to health professionals working in primary care. Read the case study.

■ Community setting should be used with co-located services where possible. This helps to move away from the ‘medical model’ of care to a more holistic approach, focused on health and wellbeing. Services could include housing, health, voluntary sector and social care. Abertawe Bro Morgannwg University Health Board is providing audiological assessment and advice in primary care. 44% of patients have been managed solely by the primary care audiologist, reducing demand on GP and ENT clinics. Positive feedback using the Patient Enablement Index has been received. Read the case study.
USING NEW INFORMATION AND TECHNOLOGIES

We need to harness digital technology in the provision of services, engage with patients and help make the best use of resources.

As the NHS moves away from traditional approaches to providing appointments, patients need to be informed and reassured about technology.

- **Technology can help to improve support to primary care** and ensure that appropriate patients are managed by specialists and others are managed in primary care with specialist advice. In Cardiff and Vale University Health Board referrals with dermatological images are reviewed by consultants; more than 30% are managed solely with advice to the GP, avoiding a delay in diagnosis for the patient and avoidable outpatient appointment; 3500 outpatient appointments have been avoided – with savings of £525,000. Read the case study.

- **Technology can also be used as an alternative to traditional forms of appointments**; test results can be provided by text, e-mail or web tools, rather than follow up appointments, and consultations can be provided using web-based management software which enables consultation in the patient’s own home or near to home. Betsi Cadwaladr University Health Board is using virtual consultations for frail, elderly patients. Patients saved on average 66 minutes of travel time (42 miles) to and from the clinics; over 83% of patients would recommend this approach. There were also savings in both time and money on Consultant travel. Read the case study.

- **Transfer of care** involving multiple staff can create challenges with communication for both staff and patients. Here is an example of using a patient-controlled, online medical records system to combat some of these challenges. See here.
Web-enabled devices, including smart phones and iPads, can be used by individuals for monitoring of symptoms and results. Patient self-scheduling tools/software and patient i-triage assessment allows the patient to access care when required. This could be used to live stream patient data and provide anticipatory care. Secure text messaging is one way of providing additional support to patients and facilitates monitoring of symptoms. The ‘Flo’ text messaging service was used at City Hospitals Sunderland to support the management of gestational diabetes. Benefits included; achieving target blood glucose, achieving a positive weight loss, a reduction in cigarette consumption and a reduction in outpatient appointments. Read more here.

Technology can be used to support individuals to improve their health and wellbeing through the provision of health information, interactive coaching tools and mobile phone apps. This can improve access and provide a more flexible approach for patients who live in rural areas or have difficulties accessing services. Powys Teaching Health Board provided ‘Online Self Management Programmes for Long Term Conditions’ to help create a sustainable service and reduce the wait for a course; on average participants received the intervention 38 days from their first appointment. Read the case study.

Digital health technologies/wearable devices which enable remote monitoring and supports the patient to self-manage, could be used as an alternative or supplementary to follow-up appointments for some patient groups. Go to this website for an example for cardiac patients: www.medtronic.com/us-en/patients/treatments-therapies/remote-monitoring/mycarelink-connect-website.html

Technology can be used to improve efficiency and productivity of appointment slots. Aneurin Bevan University Health Board use text reminders for outpatient appointments. This is helping to reduce did not attend (DNA) rates from 9.2% to 7.2% and to improve productivity – 44,128 appointments potentially released. Read the case study.
INTELLIGENT USE OF DATA AND MEASUREMENT OF OUTCOMES

Measuring the quality of health care for individuals as well as populations and using those measurements to promote improvements in the delivery of care is key to improving outcomes.

■ Health Boards should have a basket of measures that facilitate monitoring the performance of a system as well as Welsh Government targets. This information should be readily available to managers and clinicians and routinely discussed to monitor performance and inform service development.

■ Creating the infrastructure to facilitate regular discussions between managers, clinicians and departments is crucial to securing improvements across a whole pathway.

■ Patient self-monitoring enables individuals to monitor their health and wellbeing. This could include test results or symptoms. This data could be used to produce tailored health messages and information for local population/individuals. Read more here.

■ Comparison of health outcomes across a health community facilitates learning between organizations and sharing of good practices. ICHOM has developed a range of standards, such as osteoarthritis. Read more here.

■ Value based healthcare provides the opportunity to alter how healthcare is designed – with an emphasis on outcome collection. Aneurin Bevan University Health Board is using this approach to drive radical service redesign. Read more here.
### Glossary 6.1

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>26 week referral to treatment target</td>
<td>The Welsh Government waiting times target established December 2009, that no patient should wait more than 26 weeks from referral to treatment.</td>
</tr>
<tr>
<td>Activity</td>
<td>Activity is the throughput of the system – the number of patients seen in clinic.</td>
</tr>
<tr>
<td>Agreed appointment</td>
<td>The patient will have the opportunity to agree the date and time of the appointment, either in person or by telephone, text or email.</td>
</tr>
<tr>
<td>Backlog</td>
<td>The backlog for outpatients is the number of patients on the waiting list.</td>
</tr>
<tr>
<td>Bottleneck</td>
<td>The part of the system that restricts activity.</td>
</tr>
<tr>
<td>Capacity</td>
<td>The capacity of the system is the time that the resource is available – the ability to do work.</td>
</tr>
<tr>
<td>Cancer target</td>
<td>The Welsh Government waiting times target for cancer treatment: Newly diagnosed cancer patients that have been referred as urgent suspected cancer (USC), and confirmed as urgent by the specialist to start definitive treatment within 62 days from receipt of referral. Newly diagnosed cancer patients not included as USC referrals (NUSC) to start definitive treatment within 31 days of a decision to treat.</td>
</tr>
<tr>
<td>Carve out</td>
<td>Reserving resource for one group which reduces available resource to another group.</td>
</tr>
<tr>
<td>Constraint</td>
<td>The factor that ultimately restricts the capacity of the system.</td>
</tr>
<tr>
<td>Consultant</td>
<td>A person contracted by an NHS organisation who has been appointed by an Advisory Appointment Committee. He/she must be a member of a Royal College or faculty. This includes General Practitioners (GP) in cases where a GP is responsible for patient care and has an arrangement with a NHS organisation. For diagnostic departments, this includes a non-medical scientist of equivalent standing to a consultant.</td>
</tr>
<tr>
<td>Could not attend (CNA)</td>
<td>Any patient who contacts the organisation to notify that they will be unable to attend an agreed appointment is recorded as ‘could not attend’ (CNA).</td>
</tr>
<tr>
<td>Demand</td>
<td>The demand on the service is all the patients referred into the service from all sources.</td>
</tr>
<tr>
<td>Did not attend (DNA)</td>
<td>Patients who have not kept an appointment at any stage along the pathway and have not notified the organisation in advance are identified as ‘did not attend’ (DNA).</td>
</tr>
</tbody>
</table>
**Direct booking**  Booking methodology where an agreement of appointment is made through a direct communication between the organisation and patient.

**Hand-off**  Work is passed from one person to another.

**Health Board (HB)**  The statutory NHS body.

**Partial booking**  A two stage process: initially an acknowledgement is sent to the patient at the point when the referral is accepted. A second correspondence is sent to the patient four weeks before it is anticipated they will be seen, asking them to phone and make an appointment within the next 10 days.

**Person centred care**  A philosophy of care, centred around the patient — in which the needs and resources of the individual define the process.

**Plan Do Study Act (PDSA) cycles of improvement**  A structured approach and framework for developing, testing and implementing changes.

**Primary Targeting List (PTL)**  Used to allocate appointments in order of clinical priority and referral date.

**Primary Targeting Rate (PTR)**  The percentage of patients being seen in the appropriate chronological order.

**Primary Targeting List Score (PTLS)**  The percentage of the longest waits being seen in the appropriate chronological order.

**Process measures**  These measures are the specific steps in a process that lead — either positively or negatively — to a particular outcome metric.

**Referral guidelines**  Predetermined written criteria for referral that are formalised and agreed between the healthcare professionals making and receiving the referral.

**Referral protocols**  Agreements reached and documented locally to identify accepted sources for referrals to specific services.

**Referral to treatment**  The period between a referral being made for a particular condition and treatment being commenced for that condition.

**Self-referral**  The process whereby a patient initiates an appointment with a secondary care service, without referral from either a primary or secondary care clinician.

**Seen on symptoms (SOS) clinics**  Patient initiated appointment using agreed criteria for the respective speciality/service.
Treated in turn
Management of the waiting list to ensure that patients are seen and treated in appropriate order, based on their clinical need and length of wait.

Urgent suspected cancer (USC) referral
A referral where a suspicion of cancer is stated by the GP and confirmed by the specialist. This is not restricted to designated USC-only referral methods.

Validation
Validation ensures that the number of patients waiting for an appointment is an accurate figure. Administrative validation is a process of clarifying with the patient that they wish to remain on the list. Clinical validation requires clinical review of the medical record or of the patient to determine if the patient should remain on the list.
Other resources 6.2


References


The Oxford Cancer Centre works with Patients Know Best to improve care for Leukaemia patients, Patients Know Best Manage Your Health. [ONLINE] Available at: https://www.patientsknowbest.com/oxford.html [Accessed 30 October 2017].


**Case studies**


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