Medicines Management Collaborative Programme Wales
PDSA’s - A Guide to Improved Medicines Management in Wales 2006
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by the Programme Director Medicines Management Collaborative – Wales

This guide has been produced for a number of purposes and is therefore divided into 3 sections. Although the target audience is primarily the organisations and project teams who participated in the collaborative improvement programme, we hope that it will be of benefit and interest to others working to improve medicines management in Wales and further a field.

Firstly, it is a brief reference guide to the collaborative improvement methodology and change management principles that have been applied to catalyse improvements within the Medicines Management Collaborative programme – Wales (MMCW). Secondly, it provides information about the overall goal, key aims and national measures of the programme. Finally, and most importantly it is a source of some of the shared improvement learning as tried and tested by participants of the MMCW programme in the form of 'PDSA cycles'.

Each Plan-Do-Study-Act example is noted for its relevance to one or more of the key aims of the collaborative programme by an ‘Aim box’ e.g. Aim 2 & 3

Each example is also highlighted for its potential relevance to one or more of the following NHS development areas i.e.

nGMS = new General Medical Services Contract
nPhS = new Pharmaceutical Services Contract
CDM/LTC = Chronic Disease Management/Long Term Conditions
PPI = Public and Patient Involvement
WFD = Workforce Development
Mod = Modernisation of services

This publication completes the series of formal documents produced from the MMCW programme. It compliments the MMCW handbook provided to the programme participants at the start of the programme and the programme evaluation report published in March 2006 and available from the National Leadership and Innovation Agency for Healthcare (NLIAH) www.nliah.wales.nhs.uk.

Special thanks are extended to all the members of the MMCW programme (particularly the individual Project Facilitators) who have shared their medicines management teams learning and ‘Plan-Do-Study-Act cycles’ so that others may learn from their experience of improving medicines management.

Breeda Worthington
Section 1

Collaborative improvement methodology

Collaborative improvement methodology originates from work undertaken in the mid 1990s by the Institute for Healthcare Improvement in the USA. The methodology uses evidence to drive improvement so that participating teams spread their own evidence based practice. The collaborative framework has been used to develop service improvement programmes throughout the UK via the NHS Modernisation Agency, National Primary Care Development Team, National Prescribing Centre in England and the National Leadership and Innovations Agency for Healthcare (NLIAH) in Wales.

The improvement teams brought together in ‘Collaboratives’ use a simple but tightly defined improvement method, which has been demonstrated to achieve ‘breakthrough’ accelerated change in some complex organisations. They can enable organisations to achieve pre-existing objectives more rapidly and more effectively through a number of tried and locally tested steps or inputs. These steps include:

■ Developing a set of principles, ideas and actions that would, if replicated across all those involved in delivery of that care, secure greatest gain.

■ Presenting these ideas in conjunction with change management methods to the participating sites.

■ Enabling the teams to apply learning to their own situation through rapid and inclusive change management approaches.

■ Sharing the learning achievements and failures.

■ Sharing and encouraging the adoption of change management approaches across the wider NHS

Improvement journeys based on these steps are shared and learnt from by the use of programme measures. These form an essential ‘sharing’ across the collaborative teams, as they allow teams to seek new and innovative experiences from other participant teams based on the individually shared data produced by nationally shared measurement.
**Change management principles**

**The four essential factors**

Before staff will encompass change there are four factors that must be present:

**Dissatisfaction** - Staff must be unhappy with the process as it currently is. No one will want to change something that they think is working well.

**Vision** - There must be a view that things can be better, and an agreed vision of how things could be. We do not give up what we have without a clear idea of what we will put in its place.

**Capacity** - There must be capacity to change. There must be a commitment from management to the change process and to providing the resources that will be necessary to implement the change.

**First steps** - There must be a clear understanding by all of what will happen first. Overcoming inertia is easier if there is a clear plan, with manageable first steps.

**What is in it for me? (WIIFM)**

The best way to move people is to identify what is in the change process for them. Everyone will have some motivation for either adopting or resisting change. Everyone will have something about the current process that they do not like. The key of good change management is to identify and use these drivers. Ensure that solutions to problems meet the needs of the staff, and they will be much easier to implement.

**Transitions**

Every change destroys something that has gone before, and some people will regret that loss even if they are happy with the new process.

Transitions start with an ending, go through a period of uncertainty, and end with a new beginning.

**Managing the ending**

Before you can start something new, you must end what used to be. To do this effectively you must understand who is losing what? What is over? You must positively acknowledge the losses and be clear what is over and what isn’t.

**Managing the neutral zone**

Neither the old ways nor the new ways seem to be working. This is the dangerous time, where anxiety rises and motivation falls. There will be more illness, but it is also a more creative time — redefine it and use it constructively. Create temporary systems to manage through this stage.

**A new beginning**

This is the easy part, especially if the endings have been managed. Clarify and communicate the purpose, painting a picture of how it will be, create a plan and show everyone their part in the future. After analysing and identifying the problems, comes the moment of truth. What can be done to improve the service with minimum disruption and ensures success?
Model for Improvement

The Model for Improvement has been used by organisations and agencies worldwide, by improvement programmes in Wales and in particular by the Collaborative Programmes facilitated by the Modernisation Agency and the National Prescribing Centre in England. The technique has been proven to allow an ongoing change programme to exist in a clinical environment so that staff feel confident and patients are not disrupted.

What is the Model for Improvement?
Change can sometimes seem threatening or over-whelming for busy people doing demanding work. The Model of Improvement is a technique that allows you to test rapid cycles of change in your own environment. This model is a way to break down change into manageable chunks and test ideas for improvement quickly and easily to ensure improvements are being achieved and that no effort is wasted. It uses simple measurements to monitor the effect of change over time and encourages starting with small changes, which can either build into larger improvements or ‘breakthrough’ the change/implementation barrier.

The Model for Improvement has two parts: it starts with three fundamental questions and is followed by a series of improvement cycles in response to the questions, namely ‘Plan-Do-Study-Act’ (PDSA) cycles.

Fundamental improvement questions
1. What are we trying to accomplish?
The start of the improvement process should be a statement of the objectives of the activity. It is impossible to reach a goal without knowing what needs to be achieved to get there. The goal statement and objectives should be clear, specific, aspirational and measurable.

2. How will we know that a change is an improvement?
The key to an effective evidence based improvement process is measurement. Without effective measures there is no way to know whether a change is improving a situation. Selection of a realistic and relevant range of measures for improvement should be central to any improvement process.

3. What changes can we make that will result in improvement?
The PDSA cycles are a method of testing suggested improvements in a controlled environment. The changes that are developed in response to question 3 are the changes that the cycles will test. Changes can come from staff suggestion, from other sites that have looked at the same problems, or from the literature.

The PDSA Cycle
The PDSA cycle is a repeated process of four stages.

Plan
Define the question that you want answered in this cycle, including what you would expect the outcome to be. Design an activity to test the question, covering the ‘who, what, when, where and how’ of the cycle, along with the measures that will be used to determine the success of the activity (and its relation to the objectives and overall goal).
Do
Do the activity, ensuring your specified data has been collected. Record what went wrong, and what went well. Were there any unexpected outcomes?

Study
Get the improvement team together to look at the data. What has been learned? Do the outcomes agree with the predictions? Are there circumstances where the outcome might be different?

Act
Decide what to do next. Should the change activity be implemented more widely? Can it be extended to more patients, or is something else necessary? What will be the objective of the next PDSA cycle? If the change was unsuccessful, and can not be adapted to make it better, it should be abandoned and something different tried for the next cycle — there should not be pressure to adopt every change.

A series of cycles
Improvement is the result of a continual series of cycles building on previous experience and results. Each PDSA cycle is short, making small improvements to the status quo. The result is a steady improvement in process over time. One ‘ramp’ of cycles relating to one process may be undertaken in parallel with another series dealing with a different problem, but the key is to have a series of changes, made in a systematic fashion, with evidence of the results from each cycle, over a period of time.

Advantages of PDSA
The PDSA model is ideally suited to introducing change in a complex clinical environment, where there is a high element of risk. Small changes are more acceptable to staff and patients, and there is far less disruption than the more traditional ‘major redesign programme’. The process also promotes the philosophy that change is a normal continuous process that the staff are involved in, rather than a major event that ‘happens’ to people.
Section 2

Goal and Aims of the Medicines Management Collaborative programme in Wales

Goal:
To optimise prescribing; improve health outcomes and patients experiences when medicines are involved.

Aims:
1. To identify and address unmet pharmaceutical need.
2. To help patients make better use of their medicines thereby achieving real improvements in health.
3. To develop innovative approaches to medicines management that have the patients need uppermost whilst coupling service efficiency and reducing waste.
4. To provide convenient access to a range of medicines management services in difficult environments through multidisciplinary working, building on the strengths of pharmacists.

Participating LHB sites

Fifteen Local Health Boards (LHB’s) were successful in their applications to join the Medicines Management Collaborative Programme - Wales. These were located throughout Wales:

**North Wales**
- Flintshire LHB & Wrexham LHB (joint)
- Conwy LHB

**South East Wales**
- Blaenau Gwent LHB
- Caerphilly LHB
- Cardiff LHB
- Monmouthshire LHB
- Vale of Glamorgan LHB

**Mid & West Wales**
- Bridgend LHB
- Carmarthenshire LHB
- Ceredigion LHB
- Neath Port Talbot LHB
- Pembrokeshire LHB
- Powys LHB
- Swansea LHB
National Programme Measures

The measures designed for the MMCW programme were drawn from the English medicines management programme - with some local development by an expert reference group. Each participant site was expected to use the measures to show their improvement experiences as described within their change activity e.g. PDSA cycles. The programme measures functioned on two levels. Firstly ‘organisational’, which entailed the LHB committing to measurement across its population to develop its organisational learning and improvement in medicines management. Then secondly at ‘practice’ level, which entailed the core practices that made up the MMCW improvement team, being involved in discovering and developing their own tried and tested methods for improving the medicines management services to the population served by the specific practice team.

Organisational Measures – were to be reported by all GP practices in the LHB. Each Organisational Measure was intended to be reported as one figure representing the collection of data from all GP practices in the Local Health Board area.

1. The percentage of patients in registered care homes who have had a documented clinical review of their medicines (according to an approach agreed with the LHB) in the last twelve months

2. The percentage improvement from baseline in a locally agreed disease and therapeutic area using a Value for Money marker

3. The percentage improvement from baseline in a locally agreed disease and therapeutic area using a Health Improvement Outcome marker

4. The percentage of practices receiving discharge medication information from their local hospital trust for 90% of their patients in advance of a request for a repeat prescription

Organisational measures 2 and 3 were based on locally defined objectives and were therefore different for most LHB’s due to the diverse nature of the populations they served. However, the data reported for collaborative comparison was the ‘percentage of improvement from their baseline’ (often using prescribing data provided by CASPA). This enabled comparison due to the nature of the measurement reflecting the local team’s range of movement rather than the actual number/count.

Practice Measures – were to be reported by GP practices in the programme improvement team.

1. The percentage of patients aged 65 years or over, who regularly take four or more items of medication, and who have had a documented clinical review of their medicines within the last twelve months

2. The percentage of those documented reviews where the patient was given an explicit opportunity to raise questions and highlight problems about their medicines with an appropriate healthcare professional

3. The percentage of requests for repeat prescriptions that do not include all of the regular repeat items for a patient

4. The percentage of patients leaving the surgery each month with a prescription form for one or more items that do not have specific dosage instructions.
Section 3

PDSA cycles tried and tested

Improving Specific Dosage Instructions

**PLAN – Objective**
To test the use of a practice-based intervention form (designed by project team GP – adapted from a pharmacy intervention form originally produced by a collaborative LHB).

Why: to improve the use of specific dosage instructions within the practice.
Where: In practice
Who: Practice staff to complete form, GPs to check and agree changes, Staff to make agreed changes
When: December 2004

**DO - How:**
- Baseline data collected as part of MMC for Practice Measure 4 and continued monthly – ‘% of pts leaving surgery each month with a prescription form where one or more items do not have specific dosage instructions’.
- All staff were given instructions on how to complete the form:
  - Review patient repeat list when a repeat request is made.
  - Complete intervention form identifying any changes needed to repeat list – e.g. dosage instructions missing.
  - Attach completed intervention form to prescription and pass to GP to sign prescription and check and agree changes on intervention form (signature of GP to agree).
  - Form is returned to staff member to make agreed changes. Staff signs to confirm completion.

**STUDY – Results**

<table>
<thead>
<tr>
<th>% of scripts with 1 or more items with no specific dosage instructions</th>
<th>Sept 2004</th>
<th>Oct 2004</th>
<th>Nov 2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of scripts with 1 or more items with no specific dosage instructions</td>
<td>26.88%</td>
<td>29.37%</td>
<td>29.63%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Results</th>
<th>Dec 04</th>
<th>Jan 05</th>
<th>Feb 05</th>
<th>Mar 05</th>
<th>Apr 05</th>
<th>May 05</th>
<th>Jun 05</th>
<th>Jul 05</th>
<th>Aug 05</th>
<th>Sep 05</th>
<th>Oct 05</th>
<th>Nov 05</th>
<th>Dec 05</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of scripts with 1 or more items with no specific dosage instructions</td>
<td>27.04</td>
<td>20.2</td>
<td>18.33</td>
<td>19.5</td>
<td>10.4</td>
<td>14.41</td>
<td>16</td>
<td>13.04</td>
<td>7.6</td>
<td>3.75</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>
Initial concern that the form would prove to be very time consuming was realised as not to be the case.

By using the form for short periods of time, improvement can be made and sustained as directions will remain on patient’s repeat medications once initially added.

Fluctuations in the percentage levels were due to the practice taking breaks in using the form.

All members of the practice need to be involved and on board so that the system doesn't fail. GPs need to ensure all new items of medication include specific dosage instructions in order to reduce risk of returning to previous baseline level.

**ACT – Next steps:**
Consider including section to recommend removal of repeat items not issued for some time. This would help tidy up patient repeat lists.

**Some experienced improvers in this PDSA:**
Caerphilly LHB
Cardiff LHB
Carmarthenshire LHB
Monmouthshire LHB
Neath Port Talbot LHB
Powys LHB
Swansea LHB
Wrexham and Flintshire LHB's
Improving the safety of the prescribing process using developed training material for prescribing clerks

PLAN – Objective:
To develop the skills of repeat prescribing clerks in Medicines Management

Why: to acknowledge the important contribution that practice staff make to a safe repeat prescribing system
Where: In their practice but there may be some occasions when they will have to be done at home
Who: Nominated repeat prescribing clerks in each project practice. For example: 16 candidates in total (7 Advanced, 7 Standard and 2 Basic)
When: By the end of March 2005

DO – How:
■ Design and develop workbook based learning for repeat prescribing clerks
■ Incorporate appropriate ‘levels/stages’ i.e. Basic, Standard and Advanced to recognise differing scope of practice

STUDY - Results
There was some difficulty finding candidates for all the levels of training pack so in two practices the Prescribing leads undertook the advanced packs

ACT – Next steps:
Training material to be further developed and spread across LHB.
Accreditation to be secured

Some experienced improvers in this PDSA:
Bridgend LHB
Cardiff LHB
Neath Port Talbot LHB
Pembrokeshire LHB
Swansea LHB
Vale of Glamorgan LHB

| nGMS | nPhS | CDM/LTC ✔ | PPI | WFD ✔ | Mod ✔ |
Improving the safety of taking Methotrexate

**PLAN** – Objective:
Design a questionnaire for patients to complete to ensure that we are reducing errors associated with Methotrexate through clear instructions, rationalizing quantities and informing the patient about this drug

Why: Improve patient safety and awareness by questioning the patient
Who: Practice and Project facilitator
Where: Practice
When: November 2004

**DO** – How:
Questionnaires distributed to all patients and practices asking them to complete and return:
- Do you have clear dosage instructions?
- Does your quantity of tablets fall within a month's cycle?
- Do you need advice about taking your medication?
- Does your dosage inst. have "as directed" or "weekly"?
- Do you take folic acid with your medication?
- Do you have regular blood tests?
- Does your pharmacist check dosage & strength of tablet?
- Would a patient-held monitoring doc. be useful to you?
- Have you got a leaflet?
- Is this useful to you?
- Are you satisfied with the care you receive?

**STUDY** – Results:
High number of patients completed the questionnaire.
From the results of the questionnaire 80% of patients found that they had clear instructions and quantities followed a monthly cycle. The questionnaire also highlighted that patients found the leaflets and posters on Oral Methotrexate useful and informative.

Even though 80% of patients state that they had clear instructions and quantities followed a monthly cycle, we need to look at doing another audit on Oral Methotrexate to find out why 20% did not. From the returned of questionnaires this shows that patients are interested in their medication and are happy to help with research.

**ACT** – Next steps:
Questionnaire to be used to measure other processes involving patient safety.
Review in 3 months starting from step 1 with clear instructions and quantities following a month cycle.

**Some experienced improvers in this PDSA**
Caerphilly LHB

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**nGMS ✔**  **nPhS ✔**  **CDM/LTC ✔**  **PPI ✔**  **WFD ✔**  **Mod ✔**
Simvastatin and ‘take at night’ dose instructions

**PLAN** – Objective:
To increase the percentage of patients prescribed Simvastatin with correct dosage instructions (dose to be taken at night).

Why: Simvastatin only licensed for use at night (more effective).
Where: In practice
Who: GP
When: October 2004

**DO** - How:
- Search EMIS system to identify current patients prescribed Simvastatin on repeat. Record number of patients.
- Review patient notes/repeat screen to identify if dose instruction states ‘to be taken at night’ for Simvastatin. Record number of patients with incorrect dosage instruction.
- Amend patient record to include appropriate dose instruction of ‘to be taken at night’. Send patient information leaflet to patient informing them of the alteration.
- Repeat PDSA in two months to review if adhering to recommended dose instruction.

**STUDY** – Results:

<table>
<thead>
<tr>
<th>Practice</th>
<th>Month</th>
<th>Total No. of Pts prescribed Simvastatin</th>
<th>No. of pts without appropriate dose instruction of ‘to be taken at night’</th>
<th>% of pts with inappropriate dose instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practice</td>
<td>October</td>
<td>470</td>
<td>79</td>
<td>16.81%</td>
</tr>
<tr>
<td>Practice</td>
<td>December</td>
<td>470</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

Along with incorrect dose instructions, other improvements could be made, e.g. brand to generic and dose optimisation to help improve compliance.

Important to inform all GPs in practice to ensure adequate and correct dosage instructions are recorded for all patients prescribed Simvastatin in the practice.

**ACT** – Next steps:
Review dose instructions for patients prescribed other statins (excluding Atorvastatin). Repeat PDSA regularly to monitor adherence by all GPs.

**Some experienced improvers in this PDSA:**
Wrexham and Flintshire LHB’s
**Improve the support to patients to reduce the use of Benzodiazepine**

**PLAN** – Objective:
To reduce the number of patients on benzodiazepines by producing evidence of an improvement from baseline of the number of patients prescribed hypnotics and anxiolytics items (per 1000 patients).

Why: To ensure that patients prescribed Benzodiazepines are considered for reduction and to reduce the medication successfully and with as little disruption to the patient. Ensuring that patient confidentiality is respected throughout these procedures.
Where: Within LHB at identified practices
Who: Pharmacy technician and 2 practices
When: During course of MMCW programme

**DO** – How:
- A benzodiazepine Project Pack was developed locally
- All patients taking these medications were identified by running a report on the computer systems.
- The GP for each practice was asked to identify patients who would be suitable for withdrawal.
- Letters were sent out to patients inviting them to attend a consultation with the Pharmacy Technician.
- The patient was seen by the Technician and was asked if they were willing to withdraw from their medication, and literature was given to assist them with the withdrawal process.
- The patients that agreed to withdraw were told that their next prescription would have the first planned step down and that they should attend another consultation in one month’s time.
- The patient was asked again at the second consultation if they would be willing to reduce further. They were informed that a note would be placed on their computer records with the plan of withdrawal.
- A patient questionnaire will also be sent to those who attended the consultations asking for feedback and this will be reported at a later date.

<table>
<thead>
<tr>
<th>Practice</th>
<th>No' patients identified</th>
<th>No' patients sent letters</th>
<th>No' patients attending clinics</th>
<th>No' patients prepared to withdraw</th>
<th>No' patients attending 2nd clinics</th>
<th>% Of patients agreed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practice 1</td>
<td>136</td>
<td>56</td>
<td>15</td>
<td>10</td>
<td>5</td>
<td>7%</td>
</tr>
<tr>
<td>Practice 2</td>
<td>10</td>
<td>7</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>30%</td>
</tr>
<tr>
<td>LHB TOTAL</td>
<td>146</td>
<td>63</td>
<td>18</td>
<td>13</td>
<td>7</td>
<td>9%</td>
</tr>
</tbody>
</table>
**STUDY** – Results:

A lot of patients did not attend the 2nd round of clinics. Therefore held telephone consultations with those that did not attend the 2nd round of clinics. No financial indications identified.

**ACT** – Next steps:

The local health board has added this measure to the prescribing incentive scheme the target that practices have to obtain is a 30% reduction or 1800 Defined Daily Dose quantity per 1000 patients. There are also plans to provide similar support to non project practices to help them obtain this target by running technician lead benzodiazepine clinics.

**Some experienced improvers in this PDSA:**

Blaenau Gwent LHB

<table>
<thead>
<tr>
<th>nGMS ✓</th>
<th>nPhS</th>
<th>CDM/LTC ✓</th>
<th>PPI ✓</th>
<th>WFD ✓</th>
<th>Mod ✓</th>
</tr>
</thead>
</table>

Timely repeat prescribing process

**PLAN** - Objective:
Test how long the turn-around time is for patient repeat prescriptions is in a practice

Why: To target GMS contract  
Who: Reception staff  
Where: Practice  
When: January 2005

**DO** – How:
Add a post-it with a date and time of printing to the next 30 repeat prescriptions.

**STUDY** – Results:
Results are more favourable than planned  
All the prescriptions were completed within 24 hours  
No change necessary

**ACT** – Next steps:
No change necessary  
To test to see if all different ways requests are received are dealt with as efficiently

Some experienced improvers in this PDSA:
Conwy LHB

| nGMS ✔ | nPhS | CDM/LTC ✔ | PPI ✔ | WFD ✔ | Mod ✔ |
Reduce the repeated waste in repeat prescriptions

PLAN - Objective:
National TV Advert to support and raise patient awareness of waste campaign

Why: To draw people’s attention to the fact that millions of pounds are wasted in Wales every year on patients ordering medication on their repeats that they never use.
Who: Patients and each LHB (facilitated by the MMCW Project Facilitators)
Where: TV
When: April 2005

DO – How:
The idea, design and coordination of the ‘TV advert’ were lead by the Project Facilitators in the MMCW. (Including communication and financial sponsorship of £1000 per each LHB)
The advertisement used the traffic light as its logo throughout this campaign with
- Red – Stop, before automatically ordering all repeat prescription items
- Amber – Think, are all repeat prescription item needed
- Green, Go Ahead, and order only what is needed

The advertisement was aired on HTV Wales and S4C (translated into Welsh)
The TV ad was supported by 2 radio interviews with facilitators (BBC Wales and Radio Cymru), and press releases in Western Mail and Pharmaceutical Journal. The TV advertisement also caught the attention of the BBC News website where a 2 page report was run.

STUDY – Results:
Raised awareness of cost and safety of waste to patients, media and WAG AM etc
National collaboration working met aims (i.e. all 22 LHB’s involved)
Test and Evaluated-Questionnaires were completed by 460 patients (in one LHB), 47% saw advert, 60% who saw the advert indicated it will change the way their order they prescription and 20% of total never had advice on repeats.
820,000 viewers, 40% were over 60yrs and it worked out less than 3p per patient.

ACT – Next steps:
From the perceived success of the initial PDSA the activity has been repeated across Wales in April 2006.

Some experienced improvers in this PDSA:
All the MMCW and collaborating LHB’s

<table>
<thead>
<tr>
<th>nGMS</th>
<th>nPhS</th>
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</thead>
</table>

PDSA’s - A Guide to Improved Medicines Management in Wales 2006
Reducing the use of Co-proxamol

**PLAN** – Objective:
To reduce the use of Co-proxamol by using posters and leaflets.

Why: Local team objective to reduce unnecessary expenditure on Co-proxamol
Who: Project facilitator, Practice Pharmacist & GP
Where: Practice
When: August 2005

**DO** – How:
- PF to create poster and leaflet in agreement with GPs at Practice
  To educate patients as to why they should change from Co-proxamol
- Patients were sent a letter from the practice pharmacist along with a leaflet to explain why they should no longer be prescribed Co-proxamol
- Specific patients were offered a face to face consultation with GP or Pharmacist, to explain and support change, in addition to the Patient Information Leaflet.

**STUDY** – Results:
Data collected was number of patients on repeat. Started with 90 patients.
At end of month down to 0 patients.
Direct approach worked in conjunction with the leaflets and allowing pharmacist to see patients to explain

**ACT** – Next steps:
In future any mass changes in medication will be tackled in a more methodical approach with leaflets as this was done.

Some experienced improvers in this PDSA:
Bridgend LHB
Conwy LHB
Swansea LHB
Improving medicines service efficiency

**PLAN** – Objective:
Increase the generic prescribing rate in GP practices

Why: To improve patient care through appropriate cost savings
Where: Practice
Who: Pharmacy Technicians
When: 2005

**DO** – How:
- Inform patients of changes using information leaflets
- Support GP education regarding changes and LHB protocol
- Identify patients via electronic clinical system
- Change medication as per LHB protocol

**STUDY** – Results:
Increase in use of generic rates was observed. There were variations in cost savings from practice to practice. A related reduction in prescribing budget has been observed.

**ACT** – Next steps:
Spread support and activity across LHB

Some experienced improvers in this PDSA:
Carmarthenshire LHB

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Improving specialist medicines efficiency

**PLAN** – Objective:
Rationalise gluten free products as per LHB guidance

Why: Reduce waste
Who: Practice, GP and Pharmacist
Where: Practice
When July 2005

**DO** – How:
- Identified 7 patients by doing a search on the computer system
- A letter for the patient was designed.
- 2 patients were changed, by swapping sweet products for essential products as per the LHB guidelines e.g. bread and pasta.
- The patients’ screens have been limited to 10 products only.

**STUDY** – Results:
No problems were found with the 2 patients.
The final 5 patients were changed later in the month
The approximate saving for the 7 patients per month was £1,200.00.

**ACT** – Next steps:
Ongoing

Some experienced improvers in this PDSA:
Swansea LHB

| nGMS ✔ | nPhS ✔ | CDM/LTC ✔ | PPI ✔ | WFD ✔ | Mod ✔ |
Improving access to medicines and system efficiency

PLAN – Objective:
To improve the efficiency of repeat prescribing system by implementing a web based repeat prescribing service

Why: To increase patient access opportunities – they will be able to request medication directly without a visit to the practice.
Where: Practice.
Who: Practice staff and GP’s supported by practice already using web based repeat prescribing service
When: 2005

DO – How:
■ Following presentation at Learning Workshop, contact made with practice in England who has a web based repeat prescribing system in place.
■ Visits and shared learning exchanged including contact with web site expertise.
■ Patient information shared with practice population prior to launch

STUDY – Results:
There are almost 400 patients now registered to use the service in the LHB, with a proportion being over 60 years of age.

ACT – Next steps:
Support to spread across LHB and MMCW programme.

Some experienced improvers in this PDSA:
Cardiff LHB
Ceredigion LHB

PDSA’s - A Guide to Improved Medicines Management in Wales 2006
Increasing aligned (synchronised) prescriptions to reduce waste and improve safety.

**PLAN** – Objective:
To increase the number of patients synchronised via appropriate reviews

Why: To improve safety and efficiency of repeat prescription process
Who: Prescribing support team/Nurse (trained by pharmacist)
Where: Practice
When: December - January 2005

**DO** - How:
- Identify targeted patients for synchronisation
- Increase the number of level 1 medication reviews performed by the prescribing support team in an attempt to synchronise repeat prescriptions
- Increase number of level 1 medication reviews by practice nurse synchronisation process
- Attach a leaflet explaining synchronisation to patients prescriptions

**STUDY** – Results:
More patients ordering their medicines once a month.
Patients are reading the leaflets and acting upon them.
Using Practice Measure 3 figures December data was 31% - February data was 16%

**ACT** – Next steps:
Target the remainder again at a later date and build process into nurse-led medication review clinics

**Some experienced improvers in this PDSA**
Conwy LHB
Carmarthenshire LHB
Caerphilly LHB

| nGMS ✔ | nPhS ✔ | CDM/LTC ✔ | PPI ✔ | WFD ✔ | Mod ✔ |
Streamlining Re-authorising Scripts

**PLAN** – Objective:
To improve time management for re-authorising scripts and to reduce paper flow in the practice.

Why: - Previously, repeat requests requiring re-authorisation were bundled according to the day they were received and placed in a tray for GPs to action. 2 GPs were assigned the task but often one would think the other would do it and vice-versa and in the end the job didn't get done at all; the next day the task was doubled and we would then start to get phone calls from patients saying their script wasn't ready for collection. Also, if we needed to check if we had received a request we would be searching through huge bundles of requests before we found (or not) the re-order form. Sometimes the pt would receive a separate script for the re-authorised item because this took longer than the other repeat issues; naturally the pt would phone the surgery wondering why an item hadn't been dispensed etc.

Who: GP and receptionist
Where: Practice (using Vision system)
When: June 2005

**DO** – How:
- A section in the GPs appointments slot for the day is assigned to re-authorising scripts. Reception staff enters pt details and items that require re-authorisation into the comments box of the appointment window. The receptionist still actions the other items on the re-order form but does not print. The paper slip is then retained in date order for a short period but not put in any tray; the GP does not require this slip as the relevant detail is on computer.

- The GP then enters the pt record via the appointment screen, checks the medications requiring re-authorisation and takes appropriate action. (This will include a med review, and might mean a pt has to come in before a full re-auth is given, the usual sort of thing). The GP then prints off the script; items already prepared by the reception staff will also be included on the slip. The GP then signs the script and places it ready for collection by the patient.

**STUDY** – Results:
The activity took place as planned. The practice has roughly 450 repeat requests per week, with approx. 150 re-authorisations per week.

- Turn-round of scripts reduced to 24 hours (in many cases).
- Better time management of re-authorisations observed.
- Less calls to the practice from pts chasing up scripts.
Advantages:
- Task is shared equally via appointment slots and GPs can help each other out if they have spare time as the task is visible to all staff.
- No paper floating about. Reception staff are able to search appointments quickly if a query is made (can give an accurate estimate of when the GP will look at the task).
- GP can quickly access the pt record via the appointment slot.
- Task is visible to all staff so GP less likely to be interrupted with other work.
- Less calls from pts saying they are missing items off their re-order request.
- Speeds up process of re-authorising so pt received script quicker.
- Appointment slot acts as a reminder of the task so GP less likely to overlook.

**ACT – Next steps:**
PDSA Cycle to include requests for sick notes and acutes in process.

**Some experienced improvers in this PDSA:**
Wrexham and Flintshire LHB’s

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Increasing the time available to complete medication reviews

**PLAN** – Objective:
Provide more time to enable more face to face reviews to be performed

Why: To reduce time and effort wasted in aspects of repeat prescribing
Who: Doctor
Where: Practice
When: December 2004

**DO** – How:
- Remove scripts not issued for > 7 months (exception being hay fever RX)
- Remove acute scripts inadvertently put on as repeats
- Remove unissued scripts from repeat screen
- Make sure when review is done correct box is checked

**STUDY** – Results:
Patients on repeats 4533 46.9% of practice
371 had review but incorrectly marked.
Patients thought NOT to have had Medication review did in fact have them done, but were not recorded correctly due to idiosyncrasy of software.

**ACT** – Next steps:
To carry out the housekeeping duties regularly to ensure safety i.e. acute scripts on repeats, efficiency i.e. remove unissued scripts from the screen and accuracy as above.

Some experienced improvers in this PDSA
Neath Port Talbot LHB

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PDSA’s - A Guide to Improved Medicines Management in Wales 2006
Improving medicines management services through community pharmacy intervention

PLAN – Objective:
To improve medicine management through pharmacists assessing prescriptions whilst they are being dispensed for possible intervention and subsequent amendment by the patient’s GP.

Why: To improve safety and efficiency of repeat prescription process
Who: Designated Community Pharmacists & Practices
Where: GP’s & Pharmacists
When: June 2005

DO - How:
The method used is that the pharmacist assesses the repeat prescriptions as they are being dispensed for any appropriate interventions, which may include;

■ High strength substitution
■ Non-synchronised quantities
■ Pack size errors
■ Discontinued items
■ Missing dosage instructions
■ Inappropriately repeated items
■ Duplicate items on repeat

Where the pharmacist considers an intervention is appropriate he/she will complete a self-carbonating form for forwarding to the patients GP. The GP will review the suggestions and implement any changes that he/she considers appropriate. These will be recorded on the form and in the patient’s medical records and the form then returned to the pharmacy

STUDY – Results:
Twelve pharmacies initially took part and each received £50 for attending an evening training session. An additional payment of £2 was then made for each intervention actioned by the GP.
Total Cost = £300 claimed for training session
Intervention Costs = £467 claimed.
Savings made against prescribing budget = £600

ACT – Next steps:
Consider intervention scheme as part of new Pharmacy Contract e.g. enhanced services

Some experienced improvers in this PDSA
Monmouthshire LHB
Conwy LHB
Increasing the number of Care Home medication reviews completed by the Doctor

PLAN – Objective:
Increase the number of Care Home medication reviews by a Doctor

Why: To improve patient safety and reduce cost of wasted medicines
Who: Doctor/Pharmacist/Practice
Where: Care homes
When: May 2005

DO – How:
■ Appoint a GP to help with this initiative. We sent out letters to all practices within LHB inviting them to work with us on this pilot. We received 3 replies allowing this to be done in their practice.

■ Arranged for GP to carry out these reviews for the practices that agreed. Project Facilitator first visited the practices and identified a list of patients who had not had a medication review in the past 12 months and who were on a suitable number of medicines. Computer records were printed for each patient, which included a full medication history, significant medical history and a summary list. It was then arranged with the Care Homes for GP to visit and complete these reviews with the Care Home staff.

■ GP did 6 sessions and was able to visit two homes per session and complete up to 32 reviews over 2 sessions. A proforma was developed to facilitate the medication review and was completed for each patient. This proforma was then returned to the practices and the recommendations looked at by a GP from that practice.

STUDY – Results:
183 recommendations made as a result of the reviews.
Using calculations for the items that have been recommended to stop which were for 45 interventions, the total was £925. This saving calculated over 12 months is £11,103. The cost for a locum for two session plus travel expenses was £874. This was for only 32 patients. There are approximately 468 care home patients in the LHB, which could have an estimated saving of £346 per patient per annum!

ACT – Next steps:
LHB will need to consider whether it is able to support the possibility of addressing this issue on an annual basis.

Some experienced improvers in this PDSA
Blaenau Gwent LHB
Caerphilly LHB
Swansea LHB
Increasing the number of level 3 medication reviews completed by the Doctor

**PLAN** – Objective:
Increase face to face medication reviews for all patients aged =/>65, on =/> 4 medication items.

Why: To improve patient safety, improve concordance and reduce waste
Who: Doctor and Practice Manager/Pharmacist/Practice Nurse
Where: Practice
When: February 2005

**DO** – How:
- The first step - identify the target group by a computer search.

After investigation, the practice decided that level 3 medication reviews would become part of the GPs day-to-day workload and all patients on repeat medication would have annual level 3 medication review.

- Second step - the practice has a computer system for repeat medication, which highlights when a review is required from the number of scripts issued. The practice would use this system to highlight patients for a review e.g. once the patients medication issues have reached 12 or just before, the patient would be notified to make an appointment to see GP for level 3 review. Once patient attended review then GP would re-authorise 12 more items.

**STUDY** – Results:
Very simple way of incorporating level 3 reviews in practice. The measure of improvement has been change to all patients on repeat medication.
Measure: Number of patients on repeat medication receiving a level 3 medication review/ Total number of patients on repeat medication - **before: 46% after: 82%**
As a result of participation in MMCW some of the practices appreciated the value of Medication Review and tried to incorporate it more.

**ACT** – Next steps:
ONGOING.

Some experienced improvers in this PDSA
Blaenau Gwent LHB
Caerphilly LHB
Cardiff LHB
Swansea LHB

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Increasing the number of medication reviews by Community Pharmacists for housebound patients

**PLAN** – Objective:
To improve access to reviews for specifically vulnerable patients

Why: - improve patient access, safety and reduce waste in prescribed medicines
Who: GP, Community Pharmacists and patients
Where: Patients home or Residential Home
When: March 2005

**DO** – How:

**STUDY** – Results:
Worthwhile exercise – will inform potential new Pharmacy Contract services.
There was some opposition from homes. In one LHB reviews were completed.

**ACT** – Next steps:
ONGOING.
One practice employed part-time Pharmacist based on the benefit experienced in this PDSA.

**Some experienced improvers in this PDSA:**
Carmarthenshire LHB
Caerphilly LHB

Increasing the number of level 3 medication reviews completed by the Nurse

**PLAN** – Objective:
Increase face to face medication reviews for all patients aged ≥65, on ≥ 4 medication items.

Why: To improve patient safety, improve concordance and reduce waste
Who: Practice Manager and Practice Nurse
Where: Practice
When: February 2005

**DO** – How:
- Medication Review template attached to a prescription when the computer system alerts staff that a patient is due for a medication review. This then goes to the GP for authorisation.
- At the same time, the template notifies the GP to check patient records to see whether blood tests are required before a medication review, appointment is made. If blood tests are required or not then the GP will use the form to instruct staff.
- Once checks are completed staff informs the patient that they need to make the relevant appointment.

If patients do not make an appointment, then repeat medication is not re-authorised until they have made or attend an appointment, this can be with either nurse or GP.

**STUDY** – Results:
With the introduction to the new system, from July to Sept the practice nurse has completed 83 level 3 medication reviews, with approx 150 templates being used.

Some of the results of 35 medication reviews are as follows:

**Side effect:**
25 patients had no side effects with their medication.
10 patients reported side effects.

**Compliance:**
3 patients medication was stopped.
4 patients had instructions and dosage change.
25 patients had compliance to medication and BP checks.
1 patient had some of medication items stopped on repeat
3 patients had no compliance with medication

**Monitoring:**
3 patients need another review date for monitoring
5 patients had a discussion on monitoring
2 patients referred to GP
5 patients had blood taken in clinic
7 patients needed Lipids/renal checks
Advice:
21 patients had advice on medication
3 patients were requested for Blood Test
7 patients had advice on health issues
2 patients were referred to GP
1 patient was suggested to go on Simvastatins
1 patient was referred for BP monitoring

ACT – Next steps:
This example demonstrates how a medication review process seeks to involve the patient and health professional. Level 3 review gives many benefits to the patients and the practice to discuss the patient’s medication for example to find out if the patients, had any side effects. One of the most positive aspects in this service is the partnership between the practice nurse and GP to help resolve patient’s medication problems and because of this, the practice will continue with this service.

Some experienced improvers in this PDSA
Caerphilly LHB
## Plan - Do - Study - Act template

### PDSA Report

**Date cycle completed**

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<tr>
<th>What are we trying to accomplish?</th>
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<th>What changes can we make that will result in an improvement?</th>
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**Medicines Management Collaborative Programme Wales**
PDSA Report
Questions to be answered (predictions)

**Plan**

Details of the plan:
Who
What
Where
When

**Do**

Carry out the plan.
Collect the Data. Begin the analysis of the data as it is collected
Observations in carrying out the plan:

What was unplanned?

**Study**

Complete analysis and synthesis
Do the results agree with the predictions made in the planning cycle?

Under what circumstances could the conclusions from this cycle be different?

**Act**

Summarise what was learned
Are we ready to implement a change?

List other processes that may be affected by the change.

Objectives of the next PDSA cycle.
Useful resources for change for improvement

Medicines Management Services Collaborative Programme – Wales: Evaluation Report
*National Leadership and Innovation Agency for Healthcare, 2006 ISBN 1905456034*

**Government Publications**

Designed for Life: Creating world class Health and Social Care for Wales in the 21st Century
*Welsh Assembly Government, 2005*

A Guide to Good Practice: Elective Services in Wales

A Guide to Good Practice: Day Surgery in Wales

The Review of Health and Social Care in Wales
*Report of the Project Team advised by Derek Wanless. Welsh Assembly Government, 2003*

Improving the Health in Wales: A Guide for the NHS with its Partners
*Welsh Assembly Government, 2001*

**Healthcare Improvement**

To Err is Human: Building a safer health system

Crossing the Quality Chasm

Modernisation Agency: Improvement Leaders Guide Updated Boxed Set
*12 separate guides available as boxed set Modernisation Agency, 2005*

10 High Impact Changes for Service Improvement and Delivery

The Improvement Guide: A Practical Approach to Enhancing Organisational Performance

The Memory Jogger Plus+ and Featuring the Seven Management and Planning Tools
*Michael Brassard, 1989. ISBN 1879364417*
Managing Transitions: Making Sense of Life's Changes
William Bridges, 1981. ISBN 0201000822

Medicines, management and modernisation, a huge macabre?

Websites
www.nliah.wales.nhs.uk
The website of the National Leadership and Innovation Agency for Healthcare.

www.content.modern.nhs.uk
This is the website of the English NHS Modernisation Agency, and provides a gateway to all their other sites and documents.

www.ihi.org
The Institute of Healthcare Improvement website.

www.dh.gov.uk
The Department Health in England Website

www.nice.org.uk
The National Institute for Clinical Excellence website.

www.ihm.org.uk
The Institute of Healthcare Management website

wwwnpc.nhs.uk/mms
The National Prescribing Centre – Medicines Management Services
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