Pharmacy and Integrated Chronic Conditions Management in Wales

a summary of published evidence and practice examples

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This document has been produced by RPSGB and provides evidence† and practice examples of pharmacists role in supporting patients with chronic conditions.

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† Literature searches for peer-reviewed studies covered the period up to autumn 2006

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Foreword

In Wales, health and social care stands at a critical point and fundamental changes are essential if we are to meet the challenges of modern day living. Improving the way in which chronic conditions are managed is a vital step in service re-design if the NHS and its partners are to meet the increasing demands placed on service providers.

The launch of *Designed to Improve Health and the Management of Chronic Conditions in Wales Service Improvement Plan 2007 – 2011* supports the translation of policy into practice to ensure that the development of chronic conditions management services are an integral part of mainstream service delivery.

We recognise and value the important role that the pharmacy team will need to play in improving, for example, medicines management, public health information and support, providing frontline support for self care and promoting better prescribing.

To help in this process this document draws together examples of innovative practice from across Wales. It demonstrates ways in which pharmacy practice is advancing to support the delivery of better and more sustainable services for people in Wales and provides an essential tool for ongoing improvement.

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Pharmacy and Integrated Chronic Conditions Management in Wales

Introduction

Designed to Improve Health and the Management of Chronic Conditions in Wales - an integrated model and framework[1] acknowledges that pharmacy development is one of its eight 'Foundations for Change' stating that:

> *"The correct administration and use of medicines is integral to good chronic conditions management and community pharmacists play an important role in supporting this. This includes improving medicines management, providing front line information and support for better prescribing in a community and acute setting and supporting hospital discharge. Identifying how the pharmacy contract and other developments such as enhanced services could support better patient care will need to be examined."*

This resource document provides the evidence base to support service development and integrate pharmacy into care pathways for the management of people with chronic conditions. It highlights examples of innovative practice currently happening in Wales and across the UK and should be used as a resource to help facilitate the development of pharmacy based services that can achieve the integrated model and framework.

Background

Chronic conditions are those which in most cases cannot be cured, only controlled and are often life-long and limiting in terms of quality of life.

Healthcare services in Wales are currently reactive rather than preventive. It has been found that intensive users of inpatient secondary care services have on average three chronic conditions and about six per cent of adults report having three or more chronic conditions[2] suggesting that it is just a small percentage of the population that are intensive users of secondary care services. There is a need for better management of people with chronic conditions in the community keeping people in best health for as long as possible thus reducing the need for admissions into hospital.

Almost all people with chronic conditions are routinely managed with prescribed medicines. The likelihood is that both community pharmacy and hospital pharmacy is a regular port of call for this group of people. This ongoing relationship provides an ideal opportunity for pharmacy to address the need for supporting people with chronic conditions at all levels of the Wales Chronic Condition Model (fig 1 overleaf).

Pharmacy in Wales

Pharmacy in Wales is a diverse and dynamic profession working at all levels within the NHS to ensure that patients get the best from their medicines and that healthcare professionals have access to advice and support.

The pharmacy network is varied and far reaching comprising of over 700 community pharmacies[3] providing patients with dispensing services, support in self-care and services under the community pharmacy contract. Pharmacists working within each of the Local Health Boards (LHBs) providing prescribing advice to GP's, developing pharmacy based services, undertaking chronic condition management, prison pharmacists and pharmacists working within Secondary Care providing medicines management services, therapeutic drug monitoring and in some cases running specialist clinics. This network of professionals and developments in the pharmacy profession provide an opportunity for innovation in the care of people with chronic conditions.

National Context

Tackling the challenge of chronic conditions in Wales is a critical step in achieving the aspirations set out in Designed for Life: Creating World Class Health and Social Care for Wales in the 21st Century[4].

The need for greater and more effective integration in the management of chronic conditions across all health and social care disciplines has been identified by the Welsh Assembly's designed to improve Health and the management of Chronic Conditions in Wales.

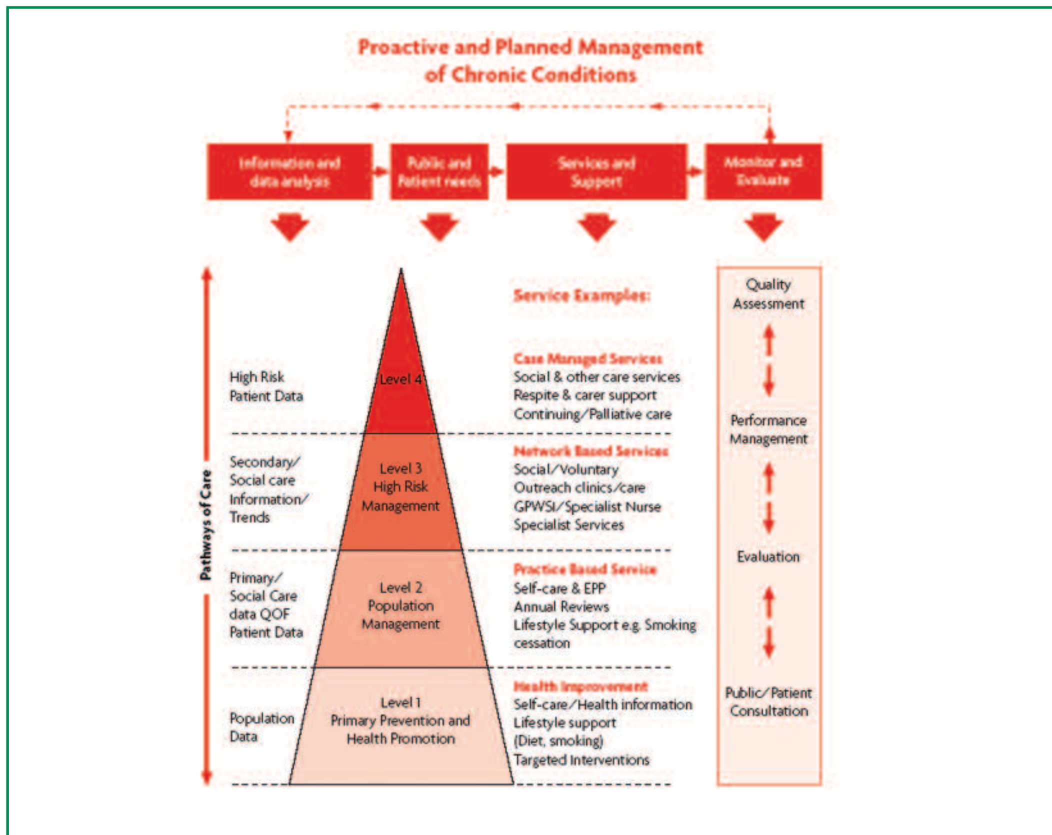

Figure 1 The Welsh Chronic Conditions Management Model

The Welsh Chronic Conditions Management Model highlighted in figure 1 builds on other similar models of care, but also recognises the important contribution of prevention and the need for an integrated, multidisciplinary approach across all tiers. This model stratifies the whole population according to increasing risk from chronic conditions and therefore allows a clearer basis to coordinate planning, service delivery, care and support.

In considering the potential contribution of pharmacy it is important to attempt to quantify and reflect on the patient profile for the most common chronic conditions. Data from the National Public Health Service for Wales (NPHS)[5] has enabled a calculation of national prevalence for a range of conditions.

Furthermore analysis of data from the Welsh Health Survey 2004[6] shows that around one third of people over sixty five years old report having more than one chronic condition and that eighty percent of adults reported using a community pharmacist in the last twelve months. Therefore the likelihood is that community pharmacists are already seeing many patients with chronic diseases, many of whom will have multiple morbidities. It is also important to bear in mind the relationship between lifestyle and chronic conditions. Community pharmacies can be of particular value in prevention because they see healthy people as well as those who are ill.

Asthma and COPD

Overview

There are some 230,000 people in Wales with asthma and 31,000 with chronic obstructive pulmonary disease (COPD)

The average community pharmacy in Wales serves around 327 people with asthma and 44 people with COPD

Eleven intervention trials were reviewed of community pharmacy-based asthma services. Most of these showed positive effects

The most effective use of community pharmacy resources will be to focus on those whose asthma is less well controlled

Several models of community pharmacy based asthma care are offered in the UK, usually on a pilot basis

A national medicines use review (MUR) service for people with asthma provided by Lloyds Pharmacy has demonstrated positive outcomes and is a model for the future

Only one published trial was found of pharmacist interventions in COPD, in community pharmacy. Patients reported improvements in symptoms but there was no change in objective clinical measures.

Problem statement

Around 230,000 people in Wales suffer from Asthma. Asthma is the only chronic disease where those most affected is the young. A recent review of asthma in the UK by Asthma UK reveals that the number of people with asthma has grown by 400,000 since 2001. Diagnosis of asthma is growing fastest among adults with growth in children slowing when compared to historical trends. We do not know why this is happening. Nevertheless one in ten children and 590,000 teenagers have a diagnosis of asthma, 6% of sufferers reported having emergency treatment in last month with 4,036 hospital admissions due to asthma in Wales. Each year there are 77 deaths from asthma in Wales.

Policy context

There is no National Service Framework for asthma, although the principles of the Long Term Conditions strategy apply.

Summary of published evidence

Work recently undertaken on behalf of the Royal Pharmaceutical Society of Great Britain (RPSGB) identified and reviewed ten studies, most of which were conducted in Europe, Canada and the USA[7] together with a 2003 review article which conducted a detailed analysis of four studies[8]. The Asheville asthma study has also been reviewed[9].

Almost all of the studies showed positive effects on patients' self-reported symptoms and some showed improvements in asthma-related quality of life. Fewer studies demonstrated significant improvements in Peak Expiratory Flow Rates.

Practice examples

Identifying sub-optimal asthma control (Tier 2) – National

Lloyd's pharmacy, in partnership with Asthma UK, co-ordinated a targeted approach in which their pharmacists identified people whose asthma was less well controlled and offered them a Medicines Use Review. The results from 200 pharmacies demonstrated that:

- Over half were using their reliever inhaler too frequently.
- Just over two thirds of the patients whose asthma was sub-optimally controlled were referred to their GP where changes to prescribed treatment were made in almost two thirds of these cases.

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Patient education in COPD and other chronic conditions (Tier 1/2/3) – Torfaen

Pharmacists working in Torfaen LHB have delivered educational sessions on medication at Structured Education Course Groups facilitated by the Long Term Conditions Specialist Nurses. These sessions have included COPD, diabetes, the cardiac exercise group and the stroke rehabilitation group. The sessions were well received by patients as they allowed for two way discussions about their disease management, and provided a opportunity for broader discussion about the pharmacy contract, the costs of medicines, branded and generic medicines.

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Coronary Heart Disease

Overview:

Wales has 233,000 people with a diagnosis of a heart condition

The average community pharmacy in Wales serves 185 people with angina, has 161 people who have had a heart attack and who will be taking prescribed treatment and 57 people with heart failure

The published literature includes several trials of community pharmacy-based services which aim to reduce risk factors for CHD

There is good evidence that community pharmacy based services result in improved lipid levels and more patients reaching lipid targets

There is some evidence that community pharmacy services can improve blood pressure control

There is good published evidence that hospital pharmacist involvement in the heart failure team leads to improved outcomes in terms of reduced hospital admissions and reduced bed days as well as improved implementation of evidence based therapy

Point of care testing for blood pressure and lipids is increasingly offered in community pharmacies but integration and use of this data within the wider NHS is unclear

The Welsh visit to Kaiser Permanente found that pharmacist were providing several services in CHD management including leading clinics to follow the progress of patients with hypertension, initiating cholesterol-lowering medication, adjusting medication doses and ordering laboratory tests, and approving patients repeat medication

Problem statement

Coronary heart disease (CHD) kills more than 8,600 people in Wales every year. More than 1.4 million people suffer from angina and 22,000 people in Wales have a heart attack annually. Around 2,300 of these deaths are premature, occurring in people under 75. An estimated 32,000 cases of heart failure are diagnosed in Wales each year and 96,000 patients needing ongoing care[10]. 10,400 people each year die from heart failure in England and Wales.

Policy context

The NHS in Wales has a National Service Framework, 'Tackling CHD in Wales'[11]. The key targets for Wales in relation to CHD are:

- To reduce CHD mortality in 65-74 year olds from 600 per 100,000 in 2002 to 400 per 100,000 in 2012.
- To improve CHD mortality in all groups and at the same time aim for a more rapid improvement in the most deprived groups.
- To reduce stroke mortality in 65-74 year olds by 20 per cent by 2012.

These figures suggest that there is scope for pharmacists to contribute to CHD management.

Summary of published evidence

An earlier review of studies published between 1990 and 2001 included four studies of community pharmacy based hyperlipidaemia management (two Random Controlled Trials (RCTs) and two observational studies)[12] that review concluded that *"The RCTs provide convincing evidence, supported by the other studies, that community pharmacists have an important role to play in managing lipid levels. Community pharmacists offer the potential to improve the use of the resources invested in and the outcomes of lipid management"*. We identified four addtional more recent studies, one of which was the final publication of an RCT included in the original review[13]. There is good evidence from intervention studies in hyperlipidaemia that community pharmacy based services result in more patients reaching their target lipid levels.

A recent Scottish study of people with heart failure and their carers found that treatment regimens were reported to be difficult to comply with. Patients thought health professionals provided little support for medication management. Pharmacists were viewed as being a good and accessible source of practical support and were also viewed as knowledgeable about the individual's heart health history. The authors concluded that an *"extended role for pharmacists in supporting patients with heart failure should be encouraged"*.[14]

Five randomised controlled trials were identified and reviewed for pharmacist input to the management of heart failure. Three of the trials were hospital based and two were community pharmacy based. All had positive findings. Both hospital and community pharmacist interventions significantly improved compliance with treatment.[15,16]

Hospital based pharmacist interventions reduced re-admissions and the number of patient bed days[17,18] and all cause mortality[19]. A recent systematic review of evidence on the contribution of different health professionals in heart failure teams concluded that *"depending on the local health care system, a pharmacist can play a role in judging and evaluating treatment guidelines and initiating appropriate evidence based therapy. In addition pharmacists can check on possible drug interactions, treat adverse events and have a possible role in the education of patients and of physicians"*[20]. The Welsh CHD policy document 'Tackling CHD in Wales'[21] also noted *"It has been shown that patients with heart failure benefit from the care of clinical pharmacists. Their inclusion in the heart failure team is essential".*

Practice examples

Pharmacist supplementary prescriber led clinic for patients with hypertension/ CVD (Tier 2/3) – Cardiff

A Cardiff community pharmacist supplementary prescriber based in a GP practice runs a Hypertension/CVD risk management clinic. Patients are identified from the practice's hypertension and CHD registers and given an appointment with the pharmacist. The pharmacists operates within a pre agreed generic clinical management plan covering the prescribing of anti-hypertensives, Statins, Aspirin and Orlistat. Patients have all the appropriate blood tests carried out prior to their appointment and the pharmacist is responsible for managing their BP and CVD risk to the best possible outcome. The pharmacist will order any follow up tests required and refer to GP's when appropriate, the clinic also incorporates elements of medication review.

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Prevention and management of coronary heart disease (Tier 1) – Pembrokeshire

The Pembrokeshire Coronary Heart Health Project includes four community pharmacies which offer opportunistic lifestyle based risk assessment for patients identified as likely to have significant risk factors for the development of CHD in the near future. The pharmacies concentrate on identifying those people who do not access their GP, thus increasing coverage of the population. Referrals to healthy eating advisors can also be made from the pharmacies. Audit of the first 40 people to participate in the scheme showed that

- Half had a CHD risk over 15%.
- With one in ten of these having a CHD risk over 30%.
- One in four had already been diagnosed with a heart condition.
- Half had a family history of heart disease.

This early data indicates that the scheme is achieving its objectives.

In another component of the project eight GP practices provide primary prevention screening for CHD. One practice employs a LHB pharmacist to manage identified areas of risk including hypertension, hypercholesterolemia and smoking cessation. The pharmacist is qualified as a supplementary prescriber and can adjust treatment according to an agreed clinical management plan. Treatment is based on CV risk with a 10 year risk of > 20% being the trigger for intensive management. Patients with less than this risk are offered advice on diet, exercise, and smoking cessation. Those patients at > 20% risk are offered similar lifestyle interventions for at least 3 months and then if appropriate medication is prescribed according to an agreed clinical management plan. The pharmacist is employed by the practice for one session per week during which he sees patients and reviews results and other information to identify patients for future clinics.

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Multi-disciplinary team support for patients with heart failure (Tier 3/4) – North East Wales

A hospital-based multi-disciplinary team comprising a pharmacist and three specialist nurses provide support for patients with heart failure in North East Wales. In addition to seeing patients who have been admitted to hospital, patients with echocardiographically confirmed heart failure are referred into the service by consultants, GPs and through the Diagnostic Heart Failure Clinic. Patients are categorised into two groups according to severity of their condition and are then offered care packages accordingly. All patients are seen initially by both a nurse and pharmacist. The pharmacist and nurses are qualified supplementary prescribers and can adjust the patient's treatment in line with an agreed clinical management plan based on relevant national guidelines for heart failure.

An audit of outcomes was undertaken in 2004, two years after the service began. The data showed substantial reductions in hospital admissions (both heart failure and all cause admissions) and hospital bed days and the local health commissioners made it a substantive service from that time.

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Multi-disciplinary GP based heart failure clinic (Tier 2/3) – Swansea

A general practice based multi-disciplinary heart failure clinic in Swansea and in Pembrokeshire. The pharmacist searches the practice computer system to identify patients to invite to the clinic. During a consultation the patient's has a medication review focusing on the effective use of ACE inhibitors and beta blockers, supported by lifestyle advice. The pharmacists are supplementary prescribers working within a clinical management plan to adjust patients' treatment, and initiate treatment where neccessary.

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Multi disciplinary Heart Failure Service (Tier 3) – Greater Glasgow

Community and hospital pharmacists in Glasgow work together with specialist heart failure nurses to support and monitor patients in primary care.

Pilot work had identified that 38 of every 1000 people aged over 65 years in Glasgow have heart failure. Of these, two-thirds were taking ACE-inhibitors but only one-third were on the correct dose. The situation was worse for beta-blockers: one third of patients were taking beta-blockers but only a third was prescribed a dose that is known to work.

Before the patient leaves hospital they have a medication review with the hospital pharmacist who ensures they are discharged on appropriate treatment. The patient's local community pharmacist is contacted by the hospital and carries out a medicines review with the patient once they are out of hospital. Education and advice are provided for the patient and the pharmacist uses the local formulary as the basis to suggest necessary adjustments in medicines and doses to the GP if this is needed. Almost all GP practices and the majority of community pharmacists participate in the scheme.

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Community pharmacy based screening and monitoring of blood pressure (Tier 1/2/3) – National

Lloyds Pharmacy provides a blood pressure measuring service where by people may have their blood pressure monitored; the service is for known hypertensive patients and ad hoc interventions. The blood pressure is measured under a Standard Operating Procedure under which appropriate people are given lifestyle advice or told to return for further measurement. In Wales to date over 16,000 blood pressure readings have been taken with just under 2,000 people being referred to their GP's surgery.

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Diabetes

Overview:

Diabetes UK estimates that there are 92,000 people with diabetes in Wales

The average community pharmacy in Wales serves 173 people with diabetes, 154 of whom will have Type-2 diabetes

The published literature includes several trials of community pharmacy-based diabetes services

Most of the trials which measured diabetes control showed positive effects

One pharmacy based diabetes care service in the UK (the Hillingdon service) had a robust evaluation. With both the trial results and the evaluation of the Hillingdon service indicating that the most effective use of community pharmacy resources will be to focus on those whose diabetes is less well controlled

Problem statement

There are an estimated 92,000 people in Wales with diabetes, 12,000 of who have Type 1 and 80,000 have Type 2 diabetes.

It is believed that between 765,000 and 1 million people in the UK are thought to have undiagnosed Type 2 diabetes. Between 1996 and 2004 the number of people with diabetes in the UK increased from 1.4 to 1.8 million. Each year 100,000 people are diagnosed with Type 2 diabetes in the UK. People from black and minority ethnic communities are six times more likely to develop the disease, suffer from a 50% increased risk of heart disease and have much higher levels of kidney disorders. One in four people with diabetes also have three or more other long-term conditions. Diabetes UK estimates that diabetes related illnesses account for 9% of hospital expenditure in Wales.

The average community pharmacy in Wales can expect to have 173 patients with diabetes, 90% of whom will have Type 2 diabetes.

Policy context

The NHS in Wales has a National Service Framework for diabetes[22] which was published in 2003 setting out a 10 year plan to improve diabetes services. The key targets in the diabetes NSF are:

- Annual reviews for everyone with diabetes to detect complications of diabetes, such as heart disease and kidney problems.
- Education and self-management training for all people with diabetes, to enable you to manage your own diabetes.
- Access for young people with diabetes to psychological support, to help them cope with living with the condition.
- Ongoing diabetes education for healthcare professionals, so that everyone who treats people with diabetes understands diabetes.

Summary of published evidence

In addition to a recently published review of community pharmacy based diabetes care[23] three more recent studies have been identified plus an evaluation report on one of the studies in the original review[24]. In total ten intervention studies have been included, six of which measured diabetes control using HbA1C levels. Three of the studies that measured control of diabetes also measured reduction in CHD risk factors, particularly hypertension and total cholesterol.

Four of the five studies that measured diabetes control using a comparison with a control group found a significant improvement. The remaining study used a before and after comparison in the same patients and found that around half of those patients achieved control of their diabetes by the end of the study.

Practice examples

Community pharmacist support for practice based clinics for diabetes (Tier 2) – Llanidloes

A primary care local enhanced service for patients with diabetes is jointly provided by a community pharmacist and a GP in the local dispensing practice in Llanidloes. The GP practice identifies patients whose diabetes control is sub-optimal and other parameters indicate room for improvement, such as uncontrolled blood pressure. They are invited to attend a monthly clinic in which the pharmacist sees each patient immediately prior to their appointment with the GP. During their consultation with the pharmacist the patient's medicines are reviewed and the pharmacist assesses how the patient is taking their medicines and what they know about them. Information and advice is then provided, the pharmacist may also suggest possible changes to treatment, after discussion with the patient. Early indications from the service have shown that:

- many patients were not regularly taking their medicines even though they were collecting them regularly.
- Almost three quarters of patients did not know the purpose of at least one of their medicines.
- The clinic has uncovered previously hidden non-compliance and the pharmacist has found that after discussion most patients are willing to restart their medicine.

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Screening for diabetes (Tier 1/2) – National

Since 2003 Lloyds Pharmacy has offered free diabetes tests without appointment to anyone who felt they were suffering from any of the most common symptoms of diabetes – tiredness, blurred vision or needing to frequently pass urine. The protocol for conducting the diabetes service and referring patients to the GP was developed in conjunction with Diabetes UK.

52,000 tests have been carried out in Wales and around 5% of people tested were referred to their GP with higher than average blood glucose readings.

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Integrated diabetes service (Tier 2) – Hillingdon

Ten community pharmacies in Hillingdon PCT are commissioned to provide a diabetes service which is integrated with other local services. Evaluation showed that diabetes control improved in almost all patients receiving the pharmacy service. In those patients whose diabetes was uncontrolled at baseline, target levels were reached in half during the first year of the service. Positive effects were also seen on blood pressure control and total cholesterol.

Arthritis and Musculoskeletal Conditions

Overview:

An estimated 325,000 people in Wales have arthritis

The average community pharmacy in Wales serves 462 patients with arthritis

Arthritis and musculoskeletal conditions account for almost 20% of all GP consultations

Pharmacist conducted medication review in osteoarthritis results in a reduction in numbers of people taking NSAIDs and improvement in pain relief for most patients

Problem statement

Arthritis and musculoskeletal conditions account for almost 20% of all GP consultations. Approximately 27,000 people living with arthritis are under the age of 25 with one in 1000 children suffering from juvenile idiopathic arthritis. The time from onset of arthritis to the disease reducing the capacity of the sufferer to work is short. It is estimated that within one decade of onset fifty one percent of patients cease employment.

Policy context

The Welsh Assembly has published Designed for People with Chronic Conditions – Arthritis and Chronic Musculoskeletal Conditions (Jan 2007)[25] This document sets out key actions to address prevention, the assessment and diagnosis, treatment and management, and facilitating and managing independence for patients:

- Commissioners will support opportunistic screening of low bone density for those at high risk of fractures and other musculoskeletal complications.
- LHB's in partnership with other relevant organisations will ensure that appropriate information, support and interventions are accessible to the general public and people with established musculoskeletal conditions.
- LHB and NHS Trusts will regularly monitor the availability and use of medicines for arthritis and musculoskeletal condition in line with national guidelines and NICE guidance.
- Commissioners will ensure that patient-centred, integrated, multi-disciplinary services are in place for people with arthritis and chronic musculoskeletal conditions across primary, secondary and tertiary care.

Summary of published evidence

Few studies have examined the impact of pharmacists in the management of chronic pain resulting from arthritis. However the medicines prescribed and resulting level of pain control are known to be sub-optimal in many cases.[26] Over half of the patients with musculoskeletal conditions in one study were found to have at least one medicine related problem and the researchers concluded that *"despite receiving a variety of analgesic medications, a majority of the patients reported experiencing moderate to severe pain"*.[27]

These findings were confirmed in a small study of pharmacist conducted medicines use reviews in rheumatoid arthritis which found that twenty seven per cent of patients needed to be referred to the GP because their current drug treatment was not effective and in 12% there was inappropriate treatment[28]. The same study provided limited evidence that medicines use review by a pharmacist resulted in improved pain control but data were only collected for 14 of the 96 patients whose treatment was reviewed.[29] Three quarters of the 106 patients in a larger and more recent study of pharmacist conducted medicines review and subsequent treatment changes reported their pain was reduced[30]. The same study also demonstrated that patients were successfully transferred from NSAIDs to simple analgesics, this reduction in NSAID use is likely to result in improved patient safety.

Practice examples

Pharmacist led clinic for patients with rheumatoid arthritis (Tier 2/3) – Cardiff

Patients with rheumatoid arthritis who have been prescribed disease modifying anti-rheumatic drugs (DMARDs) require close monitoring, individual dosage adjustment and effective patient education to ensure safe use of these "medicines of high risk".[31]

A clinic jointly run by pharmacists and nurses, was established with the aims of reducing unplanned hospital admissions, improving the patient experience, more effective use of professional skills and knowledge and, optimising the safety of patients on 'high risk' medicines. Once a patient has been started on a DMARD by a consultant at University Hospital Wales, they attend a pharmacist led clinic for subsequent monitoring of their treatment. The clinic was the first of its kind in the UK and has been a model for other areas to follow, with its shared care arrangements linking local GPs to the hospital to support patient care. On average 35 patients are seen each week.[32] The patient's blood is taken prior to their consultation with the pharmacist, who can access blood results. The pharmacist discusses treatment, progress and any side effects and assesses blood results. The pharmacists who run the clinic are now qualified supplementary prescribers and make dosage adjustments where necessary. After three months if there are no problems the patient is discharged back to the care of the GP, with a shared care protocol. Feedback from patients via a patient satisfaction questionnaire found that 90% of patients said they were satisfied with the clinic.[33]

Tackling chronic pain (Tier 2/3/4) – Fife

Rivers – relieving pain as we inspire change, impart new vision with exercise, relaxation and self-management.

A service has been developed between pharmacists and physiotherapists in Fife to support patients in tackling chronic pain. The aims of the service are to promote self management of chronic pain, to optimise pain control medication while minimising adverse effects and to increase patient activity levels through exercise. The service is run by holding group sessions with 10 to 12 patients for eight once - weekly sessions. Five programmes are run every year and patients are referred by their GP or Physiotherapist.

The first week is educational, covering the different types of pain and the types of pain-killers. Between the first and second week sessions, patients are asked to keep a pain diary. In the second week each patient has a formal medication review. The pharmacist is a supplementary prescriber and operates with a generic clinical management plan that allows the prescribing of non-opioid analgesics, opioid-analgesics, non-steroidal anti-inflammatory drugs, certain drugs for neuropathic pain, proton pump inhibitors and laxatives as necessary. The middle part of the programme comprises group activity and education run jointly with the pharmacist and a physiotherapist. Activities include exercise, sessions about relaxation, posture, driving and self help gadgets. Patients also have individual physiotherapy and pharmacy appointments before or after group work. The seventh week is a formal pharmacy follow-up developing a 'next steps' plan for each patient. The final session is held in a local leisure centre to encourage regular activity.

Initial evaluation of the service has been positive. Over 100 medication recommendations have been made, resulting in 47% of patients reporting reduced pain severity.

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Epilepsy

Overview:

Epilepsy affects around 0.7% of the population or 20,000 people in Wales

A UK-wide audit of sudden unexpected death in epilepsy found that 59% of child deaths and 39% of adult deaths could be potentially or probably avoidable

Problem statement

A UK-wide audit of sudden unexpected death in epilepsy found that 59% of child deaths and 39% of adult deaths could be potentially or probably avoidable. In a review of the case histories of patients who died suddenly and unexpectedly from epilepsy, only 11% had a structured treatment review or management plan. Therapeutic management was inadequate in 20% of adults and 45% of children. Common problems were that the prescribed medicine was not appropriate for the type of seizure, that doses were too high or too low, and that there was evidence of non-adherence in 14% of adults.

Policy context

The Welsh Assembly Government sponsored a national workshop with Epilepsy Bereaved to examine the actions needed for the future. Recommendations were made by the All Wales Policy Forum[34] among these recommendations was that each patient with epilepsy should have an annual structured review of their epilepsy, their medication and other needs.

The potential role for pharmacy in contributing to the care of patients with epilepsy focuses on review of treatment. Medicine use reviews (MUR's) conducted by community pharmacists could be used to identify patients who need clinical medication review, this could be supported by specialist pharmacists in secondary care and pharmacist with special interests. For community and hospital pharmacists who come into contact with patients with epilepsy the opportunities relate to being aware of current guidelines, local management arrangements and links to the voluntary sector.

Published evidence

We did not identify any studies of pharmacists' interventions in epilepsy.

Practice examples

Epilepsy medicines reviews in primary care (Tier 1/2/3/4) – South Huddersfield

Medicines reviews for people with epilepsy were carried out in general practices by a primary care pharmacist. A questionnaire was used to obtain feedback from patients and GPs. The results showed that the service had high levels of acceptance among both patients and GPs. Liaison between primary and secondary care improved, and changes made to tailor the doses of patients' medicines resulted in many patients becoming seizure free.

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Scottish Pharmaceutical Care Model Schemes (PCMS)

Scotland has developed and implemented a PCMS provided by community pharmacists for patients with epilepsy. The PCMS work has also included frail elderly, mental health, palliative care and asthma and will feed into the Chronic Medication Service component of the Scottish community pharmacy contract.

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Multiple Chronic Conditions

Overview:

In Wales two thirds of people aged over 65 have at least one chronic condition and one third have multiple chronic conditions[35]

Medicines are the commonest form of treatment used in the health care system. Many patients are thus taking multiple medicines and there is an associated increased risk of interactions and adverse effects. Self medication with over the counter and herbal medicines further increases these risks

Over 53 million items were prescribed by GP's in Wales during 2004, an increase of 30% since 1999, costing £576.5 million[36]

The Welsh visit to Kaiser Permanente found that medication review for patients discharged from hospital was a key pharmacist role in chronic condition management

Pharmacist support is a key component in enabling vulnerable older people on multiple medicines to live independently at home

Practice examples

Medication review in the Elderly Care Assessment Service (ECAS) (Tier 3/4) – Cardiff

The Elderly Care Assessment Service (ECAS) is a rapid access inter-disciplinary service for community dwelling older people in Cardiff. A patient is referred by an ECAS doctor to a hospital based pharmacist for a medication review if there are problems or significant changes with their prescribed medicines, or if the patient is not taking their medicines as prescribed. Prior to seeing the patient the pharmacist contacts the patient's GP to confirm details of prescribed medicines and accesses hospital laboratory test results. The pharmacist and patient then discuss the patient's medicines, including any over the counter or complementary therapies with the aim of:

- Establishing what the patient was actually taking - identify compliance problems and suggest ways to improve concordance.
- Improving the older patients' understanding of their medicines and medication devices.
- Identifying medicines administration problems such as difficulties in swallowing, poor manual dexterity, poor vision.
- Identifying medicines access issues - e.g. prescription collection, repeat ordering.

On average four reviews are conducted each week. The pharmacist makes recommendations to the GP about any changes needed and why and also provides information and education to the patient. Feedback from patients has shown that most welcome the chance to talk about their medicines. The high level of acceptance by GPs of the pharmacist's recommendations (more than 80%) indicates they find the service of benefit.

Patients who are referred to the service tend to be taking a large number of different medicines. The service was introduced in 2004 and in the pilot service the mean number of medicines per patient was reduced from ten to eight. Treatments were stopped due to side effects and, in some cases, because they were no longer needed. The pharmacist's review also showed that some patients could benefit from starting new treatments or preventative measures and these were added[37].

Patients who live alone can be referred to the CARMAS (Cardiff Medicines Administration Scheme) service for support in medicines taking.

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Home support in medicine taking for vulnerable patients (CARMAS) (Tier 3/4) – Cardiff

A joint pharmacy and social services scheme, designed to promote independence and independent living, ensures that medicines are administered safely to patients who need help. The service is provided by community pharmacists who, in liaison with home care staff, develop care plans for administration of medicines to vulnerable patients. Trained carers then administer the patient's medication in their home. A central part of the scheme is the community pharmacist's role in training and supporting domiciliary care staff.

- Pharmacist, social services or other health care professional identifies a patient needing help with their medicines administration.
- Home care manager assesses patient need and suitability.
- Patient nominates a preferred community pharmacy.
- Pharmacist analyses patient medicine information, decides administration regimen and provides medication administration record sheet.
- Pharmacist informs GP of patient inclusion and co-ordinates repeat medication.
- Pharmacist liaises with home care manager to develop medicines administration aspect of care plan for the patient.
- Trained carer administers medication, monitored by pharmacist.
- Pharmacist and home care manager carry out regular review and feedback to GP as required.

The scheme relies on good communication pathways and exchange of information about patients' medication between health care professionals, social services and care staff. Patients on the scheme benefit from a more rationalised medication regimen, accurate recording of medicines being taken, managed ordering and dispensing of repeat medication and supply of medication administration record sheets and the safe storage and disposal of medicines. It has been proposed that the scheme keeps patients in their own homes for longer, avoiding residential care and hospital admissions, and may also facilitate earlier discharge from secondary care.

Feedback from social services care managers shows that the scheme makes a difference to patients and helps to stabilise them with their medicines.

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Community pharmacists working with community matrons to support case management (Tier 3/4) – Swansea

LHB pharmacists and medicines management technicians in Swansea are an integral part of case management working closely with Advanced Primary Nurses (APNs). The case management team approach has been rolled out to all 36 practices following pilot work showing a 25% reduction in readmissions and a 10% reduction in new admissions compared with control practices. Early experience among the APNs showed that medicines management issues were a significant part of patients' problems. Feedback from hospital based pharmacists working in the Medical Assessment Unit was that significant numbers of admissions were medicines related but this was not being captured in admissions coding. The LHB and Trust are now working to improve coding. The need for greater pharmacist involvement to detect and resolve medicines management issues is clear. The LHB has responded by investing in pharmacists and medicines management technicians to work across all practices.

Pharmacists conduct a clinical medication review for each case management patient, in liaison with a nurse. These reviews are conducted within the patient's GP practice with access available to both the medical and prescribing records. The team are also working actively to review patients' medication in all the nursing and residential homes across Swansea. All of the pharmacists are qualified as supplementary prescribers and they run practice based clinics for specific chronic conditions such as heart failure. Nurses and medicines management technicians do outreach work in which they assess all of the medicines in the patient's home, find out which ones are being used and collect those which are not and where appropriate counsel the patient.

GP Practices are arranged in clusters of six, each with a pharmacist and full-time medicines management technician allocated to the cluster. Appropriate and timely data is essential to assessing patients requirements for case management each APN receives a weekly dataset on patients discharged from hospitals the previous week and work with the data and the GP to develop the active caseload. However experience is showing that there are still significant medicines management issues among patients not assessed as needing active case management intervention. This group is representative of patients that are at the upper end of the second tier of the CCM pyramid. The team is currently considering methods of addressing this need including the possibility of involvement of community pharmacists to conduct a Medicines Use Review as part of discharge follow up and refer the patient for a clinical medication review where needed.

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Torfaen Medication Administration Scheme

A scheme to support patients in their homes and maintain independent living is being piloted by Torfaen Social Services and the LHB. Problems with medicines management had previously meant that vulnerable adults were at risk of admission to secondary care or to residential care homes, and unnecessary GP call outs were also an issue. Service users who are recognised as not coping with self-administration of medication are referred to the scheme by their carer, GP, pharmacist, district nurse or community psychiatric nurse.

A pharmacist (usually one employed by the LHB) makes a domiciliary visit to the service user in presence of carer and any appropriate family member. The medication is reviewed and consent given by the service user or their relative to join scheme. A pharmaceutical care plan is drawn up and forwarded to the patient's GP with a request for the indications of the medicines to be put on the prescription.

The local community pharmacy that normally supplies the patient's medication is contacted and asked to supply further medication in individual containers with an accompanying Medication Administration Record (MAR) chart. Carers employed by Torfaen Social Services have received training in medication administration and are able to provide support in the home setting.

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Medication review in general practices (Tier 2) – Conway

The Conwy LHB prescribing team currently has the capacity to support each of the LHB's 19 surgeries one day per week. The team comprises four pharmacists and one medicines management technician. They carry out medication reviews clinics and prescribing audits in chronic disease management with a focus on diabetes and respiratory conditions. Two of the pharmacists are supplementary prescribers.

One pharmacist has been running a hypertension clinic in one practice for over 2 years. The clinic has achieved good results and is well accepted by both practice and patients. The pharmacist's blood pressure control results are at least as good as those achieved GPs. She is planning a second clinic in a different practice on weight management but this is dependent on developments within the LHB. The second supplementary prescriber is newly qualified and has started running a respiratory clinic.

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Medication review (Tier 3/4) - Caerphilly

As part of Caerphilly LHB's plan to reduce health inequalities it set up three 'provider teams' to provide direct care in the three geographical areas of Caerphilly. These teams include GPs, nurses and Pharmacists. The pharmacist's role is to provide direct care to the patient through medication review rather than the traditional 'prescribing support' role. The aim was that these pharmacists would be trained as Supplementary prescribers and run clinics.

Joint working by community pharmacists and LHB pharmacists in CCM (Tier 2/3) – North West Wales

Local LHB's are funding a service for community pharmacists to undertake medicines reviews in care homes and in patient own homes.

The positive outcomes of this service can be illustrated by the following:

During a visit by a community pharmacist to conduct Medicines Use Reviews (MUR's) for patients in a nursing home the pharmacist reviewed a patient with glaucoma and picked up that the patient had not been seen by a GP or ophthalmologist for 6 years. With the agreement of the GPs the pharmacist then went to the patient's GP surgery, and reviewed the notes of all patients with glaucoma, of which there were 77. Ten of these patients were resident in the care home and had never been reviewed whilst been under nursing home care. The GP wrote to the consultant ophthalmologist, who in turn made a visit and reviewed all the patients. The apparently simple MUR led to an improvement in patient care for residents with glaucoma and also to further support for patients.

Having initially completed a MUR, the community pharmacist then completes a clinical medication review for all patients and where necessary refers them to a LHB pharmacist, qualified as a supplementary prescriber and working in local practices, to review and adjust treatment for patients' hypertension, diabetes and COPD.

The entire pharmacy team are now fully integrated, so that when a community or LHB pharmacist or medicines management technician visits a care home, a patient's home, a GP practice, an admissions unit (medical, surgical, orthopodedics, paediatrics) or community hospital, the communication and referral routes for patient support have been clearly identified

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Community pharmacist support for patients in care homes - Newport

Medication Usage Review in Care Homes (MURCH) Study

The aim of the study was to involve community pharmacists in medicines usage review for patient in care homes, to prevent medication related hospital admissions and to prevent fractures and falls.

The community pharmacists who usually provided the patient in the care home with their medicines undertook the medication use review (MUR's). Before the MUR was carried out the community pharmacist contacted the patient's GP and the care home staff to arrange the visits.

The majority of the interventions were found to be

- Advice on the appropriate monitoring of medication.
- Advice on prevention of osteoporosis.
- Advice on vaccine prophylaxis against disease.
- Advice on how to prevent medication related falls which included reduction or withdrawal of benzodiazepines.

The pharmacist discussed the medicines with the patient in the care home setting and involved the care home staff. The patient's GP was informed of any recommended changes to the patient's medicines.

Evaluation of MURCH showed that the service was likely to reduce hospital admissions and adverse effects from medication related problems.

The medication reviews undertaken are above the requirements of the MUR and are undertaken as an advanced service of the Community Pharmacy Contract.

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Medicines support service in people's homes (Tier 3/4) - Derbyshire

Local community pharmacists can refer people of all ages having problems taking or managing their medicines to a home medicines review service provided. In the first year of the service 600 patients were referred. Feedback was obtained from referrers and showed that four months after the pharmacist's visit 87% of patients were no longer having problems taking their medicines. The service has reduced the amount of time spent by district nurses on dealing with problems relating to patients' medicines.

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Warfarin Clinic - Neath Port Talbot General Hospital

This is a service where pharmacists in secondary care manage a Warfarin clinic. They have approximately 1500 INR patients with indications ranging from simple Atrial Fibrillation to Valve replacement as well a range of less well known conditions that require anticoagulation. The clinics run on a daily basis and can vary from 50 to 140 patients per clinic.

The pharmacy department has also provided out-patient anti- coagulation DVT services since 1998. Prior to this service being implemented the initial treatment of DVT involved five days inpatient treatment.[38]

There is also secondary care pharmacy input to the Cardiac and pulmonary rehab sessions.

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