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Medicines Optimisation and Pharmacy: Guidelines in the Modern NHS - Challenges and Opportunities: An Executive Summary of presentations given at a workshop

Introduction

The following provides an Executive Summary of presentations given at a workshop held in early 2015 with a group of senior pharmacists who had responsibility for the development of medicines optimisation.

The medicines management era was heavily cost driven but the focus of medicines optimisation is on value. Pharmacists are ideally placed to be the healthcare professional with the holistic view of the patient. They can validate whether the number of medicines and interventions to which the patient is exposed is appropriate.

Medicines optimisation was seen to be a driver for innovation.

Medicines optimisation and coordinating the patient treatment pathway

A key challenge is to ensure that the principles of medicines optimisation are fully integrated into guidelines – particularly for long-term conditions. Case studies were presented to demonstrate how each of four principles for medicines optimisation had been used to steer development:

Principle 1: Aim to understand the patient's experience
An Area Prescribing Committee had re-defined the therapeutic pathway for patients with inflammatory bowel disease. The journey from diagnosis through advice and access to specialist care fell short of patient expectations but patients were satisfied with their treatment once they were initiated on a monoclonal antibody.

Principle 2: Evidence based choice of medicines
A value-based approach, rather than one based solely on cost, had been shown to result in benefits related to quality/outcome measures and patient experience as well as financial parameters. NICE quality standards are a good reference point and provide a concise set of prioritised statements designed to drive measurable quality improvements within a particular area of health or care. An analysis of value assessment in the area of COPD had indicated that the most money is sometimes spent on the least-valuable intervention.

Principle 3: Ensure medicines use is as safe as possible
This was considered in the context of multi-morbidities and polypharmacy. Many guidelines, whilst clinically correct, rarely take into account the fact that patients often have co-morbidities. Guidelines often focus on one condition rather than multiple conditions and do not address the 'whole patient'. For example, if a patient is diabetic and also suffers from depression, HbA1c levels are more likely to be controlled if the mental health problem is appropriately treated.

It is only at the patient level that all guidelines converge.

Communicating effectively across the interface between secondary care and primary care to improve the use of biologics

Biologics are responsible for a high level of expenditure within some Clinical Commissioning Groups (CCGs).[1] Implementing recommendations relating to biologics would result in benefits for all stakeholders (e.g. patients, CCGs, Acute Trusts).

From a CCG's perspective, aspects such as a high-growth rate of expenditure on biologics, NICE guidance and clinician feedback regarding inefficiencies in the current system provide a stimulus guideline development. These factors can be assessed against opportunities for service improvement, the evidence base and ensuring access to cost-effective treatments.

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The over-arching objectives for the development of new guidelines from a CCG perspective are to prioritise patient needs, improve efficiency and deliver on outcomes measures.

The engagement of pharmacists with rheumatologists is pivotal to the development of new guidelines. The aim is to transfer patients from IV to sub-cutaneous formulations of biologics products, if appropriate for the patient. The Acute Trust may lose some direct income from fewer IV infusions within the hospital but the principle of 'gain-share' incentivises an Acute Trust to adopt the new guideline and share in the savings achieved by the CCG.

By employing a dual approach of appropriate financial incentives together with effective communication between primary and secondary care, outcomes for patients can be improved.

Rheumatoid arthritis biologics guidelines – an example of medicines optimisation

NICE guidance supports the use of biological therapies in inflammatory arthritis.[2,3,4,5,6,7] Despite the biologic drugs being funded, an acute Trust had no funds available for the infrastructure required to deliver the service and ensure NICE compliance.

The aim of the service redesign was to review all patients being treated with a biologic agent, assess continued benefit, drive implementation of NICE guidance, improve quality of care, identify eligible patients for research and achieve savings. A 'gain-share' agreement facilitated the commissioners and providers to work closely together in order to achieve these goals. CCG funding of extended biologic appointments was agreed.

Prioritising patients to ensure they receive the highest standard of care was the overall driver; all patients were to be transferred to a dedicated biologic clinic with one dedicated rheumatology consultant, a biologics pharmacist, a specialist nurse and a trained musculoskeletal ultrasonographer.

In the biologic clinics patients received a longer appointment time to enable education messages to be reinforced, to address patient concerns regarding their disease and to assess co-morbidities (e.g. cardiovascular and fracture risk). In addition to the clinical assessment all patients with peripheral arthritis also undergo musculoskeletal ultrasound of their hands and feet to provide an objective measure of disease activity alongside the more conventional Disease Activity Score (DAS). Non-responders are rapidly identified and switched to more effective and potentially less expensive medications. Each patient assessment is recorded in the biologic database, in addition to the patient's medication history, smoking and employment status and co-morbidities.

A patient contract was implemented in which patients accepted responsibility for their treatment; if they do not attend a clinic appointment or do not attend to have their blood checked as required, their medication is suspended.

The homecare service was also revised to maximise efficiency; the quantity of drug delivered was reduced to a maximum of one month's supply, patients were telephoned pre-delivery to check if they actually needed additional drugs and patient training visits were increased to limit waste. Finally, in line with the Hackett report, all of the electronic homecare biologic prescriptions go through the pharmacy department.

The Acute Trust can now access a detailed report of patients currently on biologic therapy, including details of compliance with NICE Guidance, and can provide accurate, quarterly reports to commissioners.

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REFERENCES

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2. NICE TA 130. Adalimumab, etanercept and infliximab for the treatment of rheumatoid arthritis - Includes a review of technology appraisal guidance 36. Published October 2007
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6. NICE TA 225. Golimumab for the treatment of rheumatoid arthritis after the failure of previous disease-modifying anti-rheumatic drugs. Published June 2011
7. NICE TA 280. Abatacept for treating rheumatoid arthritis after the failure of conventional disease-modifying anti-rheumatic drugs (rapid review of technology appraisal guidance 234). Published April 2013

PRESCRIBING INFORMATION RoActemra® (tocilizumab) in Rheumatoid Arthritis (RA): Please refer to RoActemra SPC for full prescribing information.

Indication: RoActemra, in combination with methotrexate (MTX), is indicated for the treatment of moderate to severe active rheumatoid arthritis (RA) in adult patients who have either responded inadequately to, or who were intolerant to, previous therapy with one or more disease-modifying anti-rheumatic drugs (DMARDs) or tumour necrosis factor (TNF) antagonists. In these patients, RoActemra can be given as monotherapy in case of intolerance to MTX or where continued treatment with MTX is inappropriate. RoActemra has been shown to reduce the rate of progression of joint damage as measured by X-ray and to improve physical function when given in combination with MTX.

Dosage and Administration: Patients should be given the Patient Alert Card. ***IV:*** 8mg/kg IV infusion given once every 4 weeks. Doses exceeding 800mg per infusion are not recommended. ***Sub cut:*** 162mg once every week.

Dose Adjustments: In the event of raised liver enzymes, low absolute neutrophil count (ANC) or low platelet count: ***IV:*** reduce dose to 4mg/kg or interrupt. ***Sub cut:*** reduce dosing to once every other week or interrupt. RoActemra should not be initiated in patients with ANC count below $2x10^9$/L.

Contraindications: Hypersensitivity to any component of the product; active, severe infections.

Precautions: *Infections:* Cases of serious and sometimes fatal infections have been reported; interrupt therapy until controlled. Caution in patients with recurring/chronic infections, or other conditions which may predispose to infection. *Tuberculosis (TB):* Screen for and treat latent TB prior to starting therapy. There is a risk of false negative tuberculin skin and interferon-gamma TB blood test results, especially in patients who are severely ill or immunocompromised. Patients should be instructed to seek medical advice if signs/symptoms of a tuberculosis infection occur during or after therapy with RoActemra. *Hypersensitivity reactions:* Serious hypersensitivity reactions have been reported and may be more severe and potentially fatal in patients who have experienced hypersensitivity reactions with previous treatment even if they have received premedication with steroids and antihistamines. Appropriate treatment should be available for immediate use if anaphylaxis occurs during IV treatment. If an anaphylactic reaction or other serious hypersensitivity/serious infusion related reaction occurs, permanently discontinue RoActemra. *Hepatic disease/impairment:* Use with caution in patients with active hepatic disease/impairment. Transaminase elevations: Not recommended in patients with ALT or AST >5xULN; caution in patients with ALT or AST >1.5xULN. *Haematological abnormalities:* Caution in patients with platelet count $<100x10^3/\mu L$. Continued treatment not recommended in patients with ANC $<0.5 \times 10^9$/L or platelet count $<50x\ 10^3/\mu L$. *Lipid parameters:* If elevated, follow local guidelines for managing hyperlipidaemia. *Vaccinations:* Live and live attenuated vaccines should not be given concurrently. *Combined with other biologic treatments:* Not recommended. *Viral reactivation:* Has been reported with biologics. *Diverticulitis:* Caution in patients with a history of intestinal ulceration or diverticulitis. Patients with symptoms of complicated diverticulitis should be evaluated promptly.

Interactions: Patients taking other medicines which are individually adjusted and metabolised via CYP450 3A4, 1A2, or 2C9 should be monitored as doses may need to be increased.

Pregnancy and Lactation: The potential risk for humans is unknown. Should not be used during pregnancy unless clearly necessary. Women should use contraception during and for 3 months after treatment. A decision on whether to continue/discontinue breastfeeding should take into account relative benefits to mother and child.

Undesirable Effects: Prescribers should consult SPC for full details of ADRs. IV: *Very common ADRs (≥ 1/10):* URTI, hypercholesterolaemia. *Common ADRs (≥ 1/100 to < 1/10):* cellulitis, pneumonia, oral herpes simplex, herpes zoster, abdominal pain, mouth ulceration, gastritis, rash, pruritus, urticaria, headache, dizziness, increased hepatic transaminases, increased weight and increased total bilirubin, hypertension, leukopenia, neutropenia, peripheral oedema, hypersensitivity reactions, conjunctivitis, cough, dyspnoea. *Medically significant events: Infections:* Opportunistic and serious infections have been reported, some serious infections had a fatal outcome. Impaired lung function may increase the risk of developing infections. There have been post-marketing reports of interstitial lung disease, some of which had a fatal outcome. *GI perforations:* Primarily reported as complications of diverticulitis. *Infusion reactions:* Clinically significant hypersensitivity reactions requiring treatment discontinuation were reported and were generally observed during the 2nd – 5th infusions. Fatal anaphylaxis has been reported. *Other:* Decreased neutrophil count, decreased platelet count, hepatic transaminase elevations, lipid parameter increases, very rare cases reports of pancytopenia and Stevens-Johnson Syndrome in the post marketing setting. ***Sub cut:*** The safety and immunogenicity was consistent with the known safety profile of IV. Injection site reactions (including erythema, pruritus, pain and haematoma) were mild to moderate in severity.

Legal Category: POM
Presentations and Basic NHS Costs:
IV: (per vial) 80mg in 4mL, £102.40, 200mg in 10mL, £256.00, 400mg in 20mL, £512.00. Sub Cut: (per pack of 4 pre-filled syringes) £913.12.
Marketing Authorisation Numbers:
IV: EU/1/08/492/01 (80mg), EU/1/08/492/03 (200mg), EU/1/08/492/05 (400mg).
Sub Cut: EU/1/08/492/07 (prefilled syringe).
Marketing Authorisation Holder: Roche Registration Limited, 6 Falcon Way, Welwyn Garden City, Herts, AL7 1TW.
RoActemra is a registered trade mark.
Date of Preparation: August 2014 RCUKMEDI00027

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Adverse events should be reported.

Reporting forms and information can be found at www.mhra.gov.uk/yellowcard. Adverse events should also be reported to Roche Products Ltd. Please contact Roche Drug Safety Centre by emailing welwyn.uk_dsc@roche.com or calling +44(0)1707 367554.

As RoActemra is a biological medicine, healthcare professionals should report adverse reactions by brand name and batch number.

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