Quality prescribing in Ireland: 
*The Programme of Preferred Medicines*

Dr Helen Flint
Medicines Management Programme
Clinical Strategy and Programmes Directorate
Health Services Executive, Dublin, Ireland
“The prescribing of medicines is the commonest healthcare intervention in developed countries”

National Medicines Information Centre, 2004
Drugs have changed the world…..

- Morbidity and mortality
- Eradication of diseases
- Childhood vaccination
- People can recover readily from illnesses and events that were previously life-threatening
- People can avoid illnesses and events
- Levels considerations of socio-economic status
Prescribing medication

- Relatively safe
- Relatively cheap
Number of prescriptions

- No published Irish studies relating to the number of prescriptions written here on a daily basis
- Difficult to capture that information as details of purely private prescriptions (i.e. where the patient does not make a claim under the DPS) would be recorded only on individual GP records
- Annual report from the PCRS details the number of prescription items that pharmacists were reimbursed for on the GMS, DPS and LTI scheme
- This could be used as a guide to the number of prescriptions written under these community schemes
Approximately 10,000 medicinal products authorised for use in Ireland

- this includes products authorised nationally and through EU assessment procedures, with no national licenses issued for some of the latter, which is how the IMB count
- the figures relate to product authorisations (licences), rather than to substances, so includes a significant number of generics as well as ‘product families’, i.e. different strengths and formulations of the same brand/substance etc., as each is the subject of an individual authorisation (licence)
- includes parallel product authorisations (PPAs), where licences are granted for products which are already the subject of an authorisation, but there is parallel importation of version for sale, usually because of price
“The annual cost to the State of supplying medicines exceeds €2.24 billion – a greater than six-fold increase has occurred over a decade. This level of growth in expenditure is unsustainable”

Tilson and Barry, 2010
Where does taxpayer invest?

- Lipid modifying agents - €160M
- Acid Related Disorders - €127M
- Renin-Angiotensin system - €75m
- Drugs for Obstructive Airways Disease - €110M
- Clinical Nutritional Products - €52M
- Psycholeptics and Psychoanaleptics - €149M

The above groups accounted for 36% (23m) of all prescriptions and 53% of all drug costs under the GMS / DPS / LTI schemes in 2008
Disinvestment: new drugs for old

“...the funding of new, expensive medicines relies increasingly on releasing funds by displacing other treatments

Hughes and Ferner, 2010
Unsupervised sources of medicines

- Over-the-counter medicines
- Medicines purchased overseas
- **Counterfeit medicines.** They include products without active ingredients, or with the wrong active ingredients, or with insufficient active ingredients, or with fake packaging. Sometimes they contain substitutes, or are diluted with foreign or toxic bodies, to increase the quantity of the original medicine
- Medicines purchased on the Internet
Non-adherence

- “A worldwide problem of striking magnitude” (WHO, 2010)
- Improving adherence has become a priority
- 30-50% of patients do not take their medication for chronic conditions as prescribed
- Cost of non-adherence is a missed opportunity for treatment gain
- Unused or unwanted medicines £million annually
- 75% reported a visit to community pharmacy in last 6 months
Potentially inappropriate prescribing (PIP)

- One third of the Irish population aged ≤70 years were prescribed at least one potentially appropriate medicines.

- Significant association between polypharmacy and PIP.

- Most frequent PIPs:
  1. Proton pump inhibitors max therapeutic dose <8 weeks
  2. NSAIDs for <3 months
  3. Benzodiazepines> one month
  4. Drug duplication with the same therapeutic class

- Total expenditure on potentially inappropriate drugs was €45,631,319 in 2007 or 9% expenditure on aged ≤70 years.

  Cahir et al, 2010
Medicines in older people

- **Excessive**
  overuse

- **Inappropriate**
  irrational use

- **Inadequate**
  under-use
  failure to prescribe an effective drug
Older people and mental health

“In our studies, dementia is overwhelmingly and consistently the largest contributor to disability”

Sousa R et al, November 2009
General guidance

“Medicines should be prescribed only when they are necessary, and in all cases the benefit of administering the medicine should be considered in relation to the risk involved”

British National Formulary 2011
Medication management cycle

There may be a problem at any point in the process
Medical profession
Medical undergraduates knowledge

2,413 25 UK medical schools

- 38% felt ‘confident’ about prescription writing
- 35% had filled in a hospital prescription more than three times
- 74% felt that the amount of teaching was ‘too little’ or ‘far too little’
- 56% disagreed with the statement that their assessment ‘thoroughly tested knowledge and skills’

Heaton A, Webb DJ and Maxwell SR
Transcribing

- Widespread practice
- Doctor from Doctor
- Nurses from medical officer
- Serious risks of inadvertent transcription errors or duplication of medicines
- Essential to actively use the “analytical” (system 2) decision-making process to check prescriptions before transcribing them
- Not accredited or audited
- Only guidelines available from An Bord Altranais Guidance to Nurses and Midwives on Medication Management (2007)
Factors influencing physician’s prescribing behaviour

- Personal formulary (Robertson et al., 2001)
- 70-90 medicines
- Experience rather than evidence-base (McFarlane et al., 1997)
- Prescribing cascade (Rochon and Gurwitz, 1997)
- Errors occur more frequently with medicines with which prescribers are familiar
- Patient expectation
- Medication review
- Nurse prescribing: September 2007
Figure 3.2 Medication by ATC categories between sites 2002

ATC categories by site 2002

No. drugs per ATC categories

ATC categories

SITE A
SITE B
SITE C
SITE D
Patient expectation

- Patient adopts the “sick role”
- Receiving a prescription legitimises the illness
- Receiving a prescription implies a cure for the condition
- Medicines that are freely available are perceived as less important because they are accessible to everybody
- Cost is becoming a significant factor
Effect of patient payment status

- 80% antibiotics prescribed by GPs
- Recent study compared GMS with private
- GMS 54 years: private 34 years
- Antibiotics prescribed at 3,407 consultations
- Private patients were 23% more likely to receive a prescription for antibiotics overall
- Private patients were more likely to receive a delayed or deferred prescription
- In general patient <65 years less likely to receive a prescription
- Private patients present at a later stage or unwillingness to return for a second visit due to cost
- Authors suggest patient expectation

NMIC, 2011
Nursing profession
Nurses knowledge

- The amount of time nurses in clinical practice spend on aspects of care related to medication is not reflected by the amount of time devoted to pharmacological teaching (Ashurst, 1993)

- Nurses have a limited understanding of pharmacology (King, 2004). Dissatisfaction with graduates knowledge base in pharmacology (Bullock and Manias, 2002)

- Lack of teaching hours in the UK curriculum: 18 DipHE, 26 ANG accelerated nursing for graduates, 28 DCN degree combined with nursing (Morrison -Griffiths et al, 2002)

- Nurses are more likely to learn the effects of medications through experiential learning and sometimes through medication errors (Wolf et al, 1995)
Pharmacy profession
Pharmacy profession

- Traditional compounding and dispensing role
- Various other services available
- Traditional training pathway until recently
- Public perception
- Inter-professional perceptions
- Customer advice and services at different levels
- Confidentiality
- Funding still primarily tied to dispensing and drugs margins
Irish Medicines Board Patient Survey 2012

- Almost three in four of those surveyed claim to read product information (on the leaflet and label) before taking a prescription medicine for the first time.

- Among those who do not read the product information, the vast majority qualified this by explaining that their GP or pharmacist give them the necessary information.

- 67% read the product information before taking an over the counter medicine for the first time.

- One quarter of adults (25%) use the internet as a source of information about medicines. Of the 1 in 4 consumer who do go online 30% are attempting to diagnose health symptoms (self-diagnosis).

- Half (49%) of those surveyed always seek advice from a healthcare professional—typically a pharmacist—before taking a new over the counter medicine.

- GPs (68%) and pharmacists (25%) are by far the most trusted sources of medicines advice.
Pharmacy Ireland 2020 Working Group

- The emphasis for pharmacists has now shifted to assume responsibility for pharmacotherapeutic outcomes

- Frontline role of the community pharmacist

- Minor ailments scheme

- Switching of medicines so that they are more readily accessible to patients: new legal category “Pharmacist Prescriber”

- Health screening advantages of reach, accessibility and cost effectiveness
Pharmacist extended role

- 2003, Dutch Healthcare Inspectorate
- USA, Canada, UK indicators for drug-related morbidity in primary care
- Portugal, community pharmacies
- East Anglia, community pharmacist intervention did not lead to reductions in hospital admissions in contrast to those found in trials of specialist nurses in heart failure (Holland et al, 2007)
- 2009 National Audit Office evaluation of National Chlamydia Screening Programme found that local commissioning of opportunistic screening had led to duplication of efforts and costs (pharmacy least effective)
Medicines Use Review

- Structured meeting between an accredited pharmacist and a patient
- Identify any problems a patient may be experiencing with their medicines
- Provide information and support to improve the patients knowledge, understanding and use of their prescribed medicines
- Research has been done to assess the uptake of MURs by community pharmacists (Bradley et al, 2008) and pharmacist attitudes to performing them (Latif and Boardman, 2008)
- No studies have yet evaluated whether MURs improve adherence to medication
- Early evidence indicates that asthma targeted MURs are beneficial
NICE clinical guideline 76: medicines adherence

- Adapt your consultation style to each patient’s needs

- Establish the level of involvement the patient wants in decisions about treatment with medicines; encourage and support patients, families and carers to keep an up-to-date list of prescription and non-prescription medicines and allergies or adverse reactions

- Establish the patients perspective by asking what he/she knows and believes about a medicine. Discuss the aims of the treatment and any concerns that they have before prescribing and when reviewing
Prescribing by Dentists

- 2010, 5.1 million prescription items, at a Net Ingredient Cost (NIC) (i.e. basic price of a drug) of £12.4 million were prescribed by dentists and dispensed in the community.
- 4.8% rise in prescription items and a 19.7% rise in NIC when compared to 2009.
- Prescription forms do not identify the Primary Care Trust of the prescriber or patient.
- Neither the number of dentists prescribing nor the number of patients treated is available.
- Ireland 2009: €0.79 million in respect of Dental Treatment Services prescriptions (1,570 agreements).
Programme Preferred Medicines
Clinical Strategy and Programmes (CSP) Directorate

defining how health services are delivered, measured and resourced

... established to improve and standardise patient care throughout the organisation by bringing together clinical disciplines and enabling them to share innovative solutions to deliver greater benefits to every user of HSE services

To improve:

- **quality** of care we deliver to all users of HSE services
- **access** to all services
- **cost** effectiveness

---

Dr. Barry White,
National Director, Clinical Strategy and Programmes
“...it is evident that we are facing new challenges in funding very high-cost medicines with insufficient evidence to prove cost–effectiveness”

Barry et al., 2010
Programme Preferred Medicines

- Agreement from all consultants on PPMs
- Although there are no head-to-head trials, clinical experts do not consider there to be clinically significant difference between the currently authorised agents
- Guidelines for good medication management would involve selecting the cheaper of two options
- In line with list of interchangeable drugs
- Open discussions with patient representatives
- **Preserve clinical freedom: however, prescribing which is not evidence-based should be the exception rather than rule**
National Clinical Care Programmes developing guidelines

- Developing clinical evidence-based questions
- Systematically searching for the evidence
- Incorporating health economic advice
- Distilling and synthesising the evidence and writing recommendations
- Grading the evidence statements
- Agreeing the recommendations
Sources of concern with algorithms for therapy

- Irish health service is not used to working within strict parameters
- USA: Funding depends on adhering to standards (BTA)
- UK: Funding directed by NICE which has statutory powers (BTE)
- The argument is “medicine by numbers”
- Clinicians to evaluate both the evidence and the intellectual arguments
Mission statement

- **Strategic overview**
  Clear leadership to enable the delivery of safe, effective, evidence informed medicines usage in the context of patients care pathways

- **Develop and deliver patient focused services that optimise the use of medicines**
  Provide patient focused services that ensure the safe, cost-effective and best value use of medicines

- **Medicines expertise**
  Obtain and apply core knowledge and skills to ensure the legal, safe, cost-effective and best value use of medicines

- **Support and develop the workforce in a team approach**
  Ensure appropriate skill mix so that health and social care professionals are supported and competent in the roles that they are undertaking in relation to medicines

*Adapted from National Prescribing Centre, 2011*
“prescribing is a technically difficult and morally complex issue”

Royal Pharmaceutical Society, 1997
“…better is possible. It does not take genius. It takes diligence. It takes moral clarity. It takes ingenuity. And above all, it takes a willingness to try”

Atul Gawande