Standards for Medicines
Management: A Better Pill to Swallow?

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Drivers for change

- Change in patient profile
- Change in disease profile
- Change in the nature of the health service
- Proliferation of medicines
- Patient adherence
- Changes in roles and responsibilities
- Cost and cost-effectiveness
  - Knowledge
  - Access
  - Safety
Three Paradoxes

- Medicine has never before been able to do so much for patients but the health service is still criticised and people are unhappy.

- Society has never spent so much on health care but health care is still short of resources.

- People have never lived so long but the prevalence of disease and disability has never been higher.
Polypharmacy

- Common in Ireland
- One-in-five people ≥50 years take five or more medicines
- One-in-two people ≥75 years take five or more medicines (Dublin TILDA, 2011)
- Patients taking two medicines have a 13% risk of adverse drug-drug interactions (an avoidable cause of adverse drug reactions)
- Four medicines = 38% risk
- Seven or more = 82% risk
- Associated with increased risk of adverse drug reactions
- Prescribing cascade
- Falls
- Non-compliance
Older people use four times more medicines than other age groups. Elsewhere in Europe older age groups take 2.3 times more (Barry et al, 2006).

The median number of medicines prescribed for people in nursing homes was 11. Half of them were being prescribed 8–14 daily medicines each (Patterson et al, 2010; Byrne et al, 2011).

In Ireland 13% prescribed medicines were potentially inappropriate. 73% of residents were prescribed one or more of these medicines in ROI and 67% were prescribed one or more of these in NI. (Byrne et al, 2011).

In Ireland 16.5% and in NI 21.9% of residents had three or more instances of potentially inappropriate prescribing (Byrne et al, 2011).
Polypharmacy is an expression that has been commonly used for many years in medicine. It is generally understood as referring to the concurrent use of multiple medication items by one individual. The term has been used both positively and negatively. In the past, polypharmacy has been considered something to be avoided. It is now accepted that in many circumstances polypharmacy can be therapeutically beneficial.

In the report, they propose the terms ‘appropriate polypharmacy’ and ‘problematic polypharmacy’. This recognises that polypharmacy has the potential to be beneficial for some patients, but also harmful if poorly managed.

Appropriate polypharmacy is defined as prescribing for an individual for complex conditions or for multiple conditions in circumstances where medicines use has been optimised and where the medicines are prescribed according to best evidence.

Problematic polypharmacy is defined as the prescribing of multiple medications inappropriately, or where the intended benefit of the medication is not realised.
A Double-Edged Sword

“Any symptom in an elderly patient should be considered a drug side effect until proved otherwise.”

Brown University Long-term Care Quality Letter, 1995
Medication-related mortality

- Although there are no published data in relation to medication-related mortality in Ireland, USA sources estimate that 5% of deaths may be medication-related.

- In 2009, Irish mortality data reported all cause mortality of 28,894 registered deaths.

- If USA estimates are applied to Irish mortality data that would suggest that 1,445 deaths per annum in Ireland might be medication-related.
National Adverse Event Management System (NAEMS) is a national web-based database for the reporting of adverse clinical incidents and ‘near misses’ formerly Starsweb.

In 2009, 83,847 incidents were reported with medication errors account for about 10% of these reported incidents, including:

- incorrect doses (1,569 events),
- missed medication (1,006),
- administration of incorrect medication (818),
- incorrect directions or labelling (562)
- administration of medication to the incorrect patient (176)

However these are only the reported incidents and do not account for the unreported cases. Houses of the Oireachtas Joint Committee on Health and Children found that only 10% of medication errors are actually reported, clearly suggesting that a startling 90% of medication errors go unreported.
Are interventions to reduce interruptions and errors during medication administration effective?: a systematic review

- There is weak evidence of the effectiveness of interventions to significantly reduce interruption rates and very limited evidence of their effectiveness to reduce medication administration errors.
- Policy makers should proceed with great caution in implementing such interventions until controlled trials confirm their value.
- Research is also required to better understand the complex relationship between interruptions and error to support intervention design.

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Nursing 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)
Drug Allergies

Significant number of allergy-related drug errors

**DRUG ALLERGIES**

Drugs must NOT be administered unless this box is signed by a Doctor

A. Does the Patient have a drug allergy? Yes ☐  No ☐  Was this transcribed from a previous drug chart Yes ☐  No ☐

Doctor’s Signature ___________________________  Date ____________

Drugs Name/s ___________________________  Nature of allergy ___________________________

Please complete B only if the allergy status changes during the patient’s treatment

B. Does the Patient have a drug allergy? Yes ☐  No ☐  Doctor’s Signature ___________________________  Date ___________

Drugs Name/s ___________________________  Nature of allergy ___________________________
What happened?

**Nurse:**
- ✔ Knew of patient’s penicillin allergy
- ✗ Did not know that Magnapen® contained penicillin
- ✗ Administered drug while patient slept

**Coroner:**
- “If each of these three had checked as they should, if the band had been noticed, we would not be here today”

**Family**
- “If the Nurse didn’t know what was in the drug why was she administering it?”
- “If Consultant didn’t have Teresa's notes he should have asked"
Adverse reactions

- Adverse drug reactions (ADR) are ranked as some of the major causes of patient morbidity and mortality
- Spontaneous reporting of ADRs has remained the cornerstone of pharmacovigilance and is important in maintaining patient safety
- Survey 500 nurses, 91% had never reported an adverse reaction
  

- Reporting of adverse drug reactions by nurses.
  
Medication non-adherence frequently leads to suboptimal patient outcomes. Primary non-adherence, which occurs when a patient does not fill an initial prescription, is particularly important at the time of hospital discharge because new medications are often being prescribed to treat an illness rather than for prevention.

It is expected that patients under the care of a nurse or midwife will receive their medicines.

Access to medicines nationwide variable.
Persistence at 1 year: Irish Health care system

- Tamoxifen for breast cancer: 78%
- Oral hypoglycaemics: 62%
- Dementia: 56%
- Osteoporosis-F: 64%
- Osteoporosis-M: 49%
A better pill…..

- Those that keep the patient well and improve day-to-day quality of life e.g. analgesics, thyroxine or anti-anginals. In some cases, if these medicines are stopped, the patient may become ill or unable to function. However, some drugs may be able to be stepped down, stopped or used on an as required basis (prn) e.g. a proton pump inhibitor (PPI).

- Those that are used for the prevention of illness in the future e.g. statins, aspirin, warfarin or bisphosphonates. A decision about whether to stop medicines such as these should include consideration of the risks and benefits of treatment for that particular patient, the length of time required for benefit and the life expectancy of the patient.
Guidance to Nurses and Midwives on Medication Management

JULY 2007
Nurses and midwives medicines management


- 2000: Guidance to Nurses and Midwives on the administration of Medical Preparations (2003)

- 2005 Nurse Prescribing identified as a high priority with first cohort autumn 2007

- 2007: Guidance to Nurses and Midwives on Medication Management

- NMBI/ONMSD joint initiative
Current status of medicines management

- Fitness to Practice
- Number and nature of medicines enquiries to NMBI
- National Adverse Event Management System (NAEMS)
- ONMSD medicines enquiries
- Nursing/midwifery survey
- Targeted facilitation
- Medicines Safety feedback
- HSE audits + published literature + medicines metrics
- Literature review
Standards for medicine management

“The administration of medicines is an important aspect of the professional practice of persons whose names are on the Council’s register. It is not solely a mechanistic task to be performed in strict compliance with the written prescription of a medical practitioner… It requires thought and the exercise of professional judgement…”

Nursing & Midwifery Council
Medicines Management: Standards for Nursing and Midwifery

- 12 standards
- Authorative statements
- Advise, help, guide and support
- Patient-centredness
- Recognise complex care settings and challenges
- Each standard is supported by practice guidance
- On-line learning programme with relevant patient scenarios
- Looking forward and upwards……..
An apple a day......