Pragmatic Prescribing
Lessons from Scottish Polypharmacy Programme

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Care of the Elderly Consultant,
Raigmore
NHS Highland
Polypharmacy in Scotland

- History lesson
- Key concepts structural and clinical
- Discussion
Polypharmacy Guidance
March 2015

Multimorbidity: clinical assessment and management

NICE guideline
Published: 21 September 2016
nice.org.uk/guidance/ng56
NHS Scotland Poly APP !!
App Download and Analytics Report

[Map showing global download analytics]
To stimulate, promote and support innovation across the EU in the management of appropriate polypharmacy and adherence in the elderly
We are not alone ......
Polypharmacy Management by 2030: a patient safety challenge
“Across Europe people are living longer and more people are being treated with multiple medicines. This adds pressure to the health and care system and may put patients at risk of harm. Care becomes more complex, and waste and costs may increase.

“What we want to do is change the management of polypharmacy – use of multiple drugs – to deliver better outcomes for patients across Europe and cost effective use of resources.”

Shona Robison
Cabinet Secretary for Health and Sport
So this is good but....

• We need to remember that it is complicated
  – Everyone overnight does not get expert at balancing medications

• We need to be really careful about the drivers
  – Cost Saving
  – Saving Docs time
    • Much louder in media than adult specific benefit
Experts believe that vulnerable elderly people often take too many drugs. GPs will receive half the money saved when they cut the number of drugs given to elderly patients in care homes under a scheme that has been condemned by doctors’ leaders. Bosses in Oxfordshire want to give GP surgeries a “financial incentive to reduce prescribing costs” by sharing savings from giving fewer medicines to the frail elderly. Patient leaders criticised the plan as a “bribe” and doctors said that it was wrong to focus on cost-cutting rather than patient needs.
Disclaimers

• Stopping drugs is **not** the primary goal

• Thinking openly and carefully is the goal

• Saving money is NOT the primary goal
Quick History

• 2010 to 2012
  – Local areas develop polypharmacy guidelines
    • Highland, Tayside

• 2012 1st Edition National Guideline

• 2014/15 Polypharmacy introduced to QOF

• 2015 2nd Edition
  – Most downloaded doc on SIGN website.
Scotland has a well developed polypharmacy review programme. The National Polypharmacy Guidance (2015) has been adopted by all 14 health boards (100%), with each board developing plans to identify priority patients who have potentially inappropriate elements to their polypharmacy, and to implement reviews for those patients at highest risk of harm. Introduction of mobile app has sustained acceleration.

http://www.polypharmacy.scot.nhs.uk/

Management of polypharmacy using the Scottish multi-disciplinary approach helped develop therapeutic partnerships between doctors and pharmacists in primary care that has been integrated into national program of work.

All 14 Scottish Health Boards use the Polypharmacy Guidance.

€20 m is being invested to increase the number of pharmacists working in GP practices.

Mobile App for clinicians developed.

Generating short term wins includes the evidence that on average one or two medicines were stopped at each polypharmacy review. There are approximately 12,000 polypharmacy reviews every year in Scotland. Of those patients identified to be at high risk of hospital admission, pilot work suggested a 40% reduction in hospital admissions following a polypharmacy review. Further reduction in high risk medication related issues is expected from roll out.

A reduction in admissions due to medicines related issues is expected following polypharmacy review.

The sense of urgency was created by highlighting that current prescribing of medicines was not fit to meet the changing needs of an aging population with increasing multiple long term conditions, particularly in terms of the increasing potential to cause harm and risk to financial sustainability of prescribing patterns.

Building the guiding coalition came from linking the pioneering work by NHS Highland and NHS Tayside with key clinical policy makers. Crucial was the early engagement of clinicians and operational leaders.

Formation of the strategic vision came through refinement of the adoptive work by NHS Lothian and the Scottish Government. Policy leadership was essential with clinical leadership to meet the needs of patients and prescribers.

Enlisting the volunteer army was exemplified by NHS Greater Glasgow and Clyde, who serve 26% of the Scottish population, and were able to implement the Polypharmacy Guidance at scale through using established means of implementation through practice pharmacist networks working with GPs.
Key Concepts:- management

• Guideline development driven by
  – Pharmacy [community and hospital]
  – Primary Care Medical (GP)
  – Secondary Care Medical (Consultant)
    • From day 1

• That remains core relationship now in management and day to day practice

• Multidisciplinary in design and delivery
Key Concepts:- marketing

• There was a clear marketing strategy
  – To clinicians
  – To management
  – To government
Key Concepts

• To clinicians

  • Awareness raising and consensus gathering in primary and secondary care
    – Large numbers of adults did not ‘fit’ into QOF/NICE/SIGN guidelines
    – QOF/NICE/SIGN guidelines inadvertently encouraged prescribing patterns few were happy with
    – Lack of latitude to allow patient centred /specific prescribing
  
  • Reassure Primary Care that Secondary Care could cope with de-prescribing in frail adults.

• This took about 2 years
Key Concepts

• To Public [before release]
  • Public involvement
    – Press releases
    – Focus groups

• To Public [before and during]
  – Great caution with terminology
  – Reinforced in clinician education
  – Ongoing need [‘Realistic Medicine’]
Key Concepts

• To Management

– Economic justification
  • Health economic argument from day 1
    – 1st Edition NHS Highland Guideline
    – All the editions of Scottish Guideline
  • Cost effective to spend money on reviews
  • Showing this on an ongoing basis

– Quality Justification
Build powerful coalition & Remove barriers

Polypharmacy national Programme: guidance: consensus 7 steps

<table>
<thead>
<tr>
<th>Domain</th>
<th>Steps</th>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aims</td>
<td>1. Identify objectives of drug therapy</td>
<td>Review patient specific information and identify (likely) therapeutic objectives with respect to:</td>
</tr>
<tr>
<td></td>
<td>2. Identify essential drug therapy</td>
<td>Management of existing health problems</td>
</tr>
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<td></td>
<td>3. Does the patient take unnecessary drug therapy?</td>
<td>Prevention of future health problems</td>
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<td>Need</td>
<td>4. Are therapeutic objectives being achieved?</td>
<td>Identify essential drugs (not to be stopped without specialist advice)</td>
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<td></td>
<td></td>
<td>Drugs that have essential replacement functions</td>
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<tr>
<td></td>
<td>5. Does the patient have ADR or is at risk of ADR?</td>
<td>Drugs to prevent rapid symptomatic deterioration</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>6. Can does the patient take drug therapy as intended?</td>
<td>Identify and review the (continued) need for drugs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>with temporary indications</td>
</tr>
<tr>
<td>Safety</td>
<td>7. Is drug therapy cost-effective?</td>
<td>with higher than usual maintenance doses</td>
</tr>
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<td>Adherence</td>
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<td>with limited benefit in general or the indication they are used for</td>
</tr>
<tr>
<td>Costs- effectiveness</td>
<td>8. Ensure drug therapy changes are tailored to patient preferences</td>
<td>with limited benefit in the individual patient under review</td>
</tr>
</tbody>
</table>

GP contract and commitment to practice based pharmacists £16.2M (Scot) + £31M in England
## Economic Case

### Table 5b: Cost avoidance from stopping repeat medication

<table>
<thead>
<tr>
<th>Cost avoidance £m</th>
<th>Age 75+</th>
<th>Age 50+</th>
</tr>
</thead>
<tbody>
<tr>
<td>assumed number of items stopped once</td>
<td>with high risk medicines</td>
<td>in a care home</td>
</tr>
<tr>
<td>assumed number of repeats stopped per item per year</td>
<td>SPARRA risk score</td>
<td>BNF sections</td>
</tr>
<tr>
<td>1</td>
<td>6</td>
<td>40%-60%</td>
</tr>
<tr>
<td>2</td>
<td>6</td>
<td>40%-60%</td>
</tr>
</tbody>
</table>

### Table 5c: Range of estimates of savings from polypharmacy reviews

<table>
<thead>
<tr>
<th>Number of patients with high risk medicines</th>
<th>Unit cost/saving Scotland</th>
<th>Age 75+, 10+ BNF sections, SPARRA 40%-60%</th>
<th>75+ group plus all care home residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost estimates based on savings per case p.a</td>
<td>£m</td>
<td>£m</td>
<td></td>
</tr>
<tr>
<td>1 med stopped; 6 repeats; 1 yr; unit cost £9.87</td>
<td>£9.87</td>
<td>£2.4</td>
<td>£3.8</td>
</tr>
<tr>
<td>2 meds stopped; 6 repeats; 1 yr; unit cost £9.87</td>
<td>£9.87</td>
<td>£4.8</td>
<td>£7.7</td>
</tr>
<tr>
<td>Lower estimate of value of medicines stopped</td>
<td>£66</td>
<td>£2.7</td>
<td>£4.3</td>
</tr>
<tr>
<td>Base-case: change medication only</td>
<td>£90</td>
<td>£3.7</td>
<td>£5.8</td>
</tr>
<tr>
<td>Upper estimate: change medication + switching to cost effective + cost avoidance measures</td>
<td>£155</td>
<td>£6.3</td>
<td>£10.0</td>
</tr>
</tbody>
</table>
Enable by removing barriers - Practice models:

Barriers were removed to enable action in terms of contractual arrangements. Polypharmacy was linked with other contractual services.

"we've linked the polypharmacy work in people's minds, whenever possible, with anticipatory care planning and anticipatory care planning for general practice was also born in Highland and these two things happened together" (GP Senior manager)

Different models tested in different boards
Key Concepts: momentum

- From Management/Government
  - Chief Exec letters
    - CELs in 2012 and 2015 instructing health boards
  - Prescription for Excellence 2014
  - QOF 2015
  - Realistic Medicine Report 2016 supportive
Designed for Integration

• Aim of improving working between
  – Community Pharmacy
  – [Prescribing support pharmacists]
  – Hospital Pharmacy
  – GP
  – Hospital Consultants

• Certain strategies designed to try and encourage this
**Medicine Sick Day Rules**

When you are unwell with any of the following:
- Vomiting or diarrhoea (unless only minor)
- Fevers, sweats and shaking

Then STOP taking the medicines listed overleaf

Restart when you are well (after 24-48 hours of eating and drinking normally)

If you are in any doubt, contact your pharmacist, GP or nurse

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**Medicines to stop on sick days**

**ACE inhibitors:** medicine names ending in “pril”  
*eg, lisinopril, perindopril, ramipril*

**ARBs:** medicine names ending in “sartan”  
*eg, losartan, candesartan, valsartan*

**NSAIDs:** anti-inflammatory pain killers  
*eg, ibuprofen, diclofenac, naproxen*

**Diuretics:** sometimes called “water pills”  
*eg, furosemide, spironolactone, indapamide, bendroflumethiazide*

**Metformin:** a medicine for diabetes
What has been successful?

- Growth in prescribing in % terms.

![Graph showing growth in prescribing in % terms for Scotland, England, Wales, and N Ire from 2010 to 2014.](chart.png)
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<tr>
<td>40,585</td>
<td></td>
<td></td>
<td>64,729</td>
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Rapid Summary Management

• Without appearing valuable and acceptable to clinicians would not have been implemented

• Without appearing valuable and acceptable to local management would not have started

• Without appearing valuable and acceptable to government would not have continued.
Before we move on to clinical

• Key messages we cannot hear and spread enough of ......

• Essential these are accepted
  – Public
  – Clinicians
  – Goverment

• We are key in spreading these messages
Number of distinct BNF paragraphs dispensed in six month period.
By five year age group. NHS Scotland
Jan-Jun 2014
Percentage dispensed 10+ BNF paragraphs + high risk drug
By age group and 2012 SIMD Quintile
Scotland Jan-Jun 2014

Source ISD
So on average

• If you are rich
  – Live longer in good health
  – Have a shorter proportion of life in poor health
  – More likely to have single pathology
  – More likely to be the sort of person that sets up healthcare system.....

• Remember the Inverse Care Law
  – Overspend tends to be in RICHEST post codes
Folk are still unrealistic about what final years will look like

Including health professionals
## Location of Death in Highland

<table>
<thead>
<tr>
<th>Location</th>
<th>% change 1997-1999 to 2010-2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHS Hospital</td>
<td>-16.5 %</td>
</tr>
<tr>
<td>Home/Private Address</td>
<td>+ 0.4 %</td>
</tr>
<tr>
<td>Care Home Services/Other Institution</td>
<td>+31.5 %</td>
</tr>
</tbody>
</table>
Place of death as a Feminist issue

- Woman **a lot more likely** to die in a care home than men.
  - Women care for men >> who die at home
  - No one to care for them

- Highland 2010-12
  - 13.1% of male deaths Care Home
  - 26.1% of female deaths Care Home
Clinical Aspects
Key Concepts - Clinical

- Development and reinforcement of structure to drug review / prescribing
  - Patient specific goals
  - Opened the box on ‘Bang for Buck’ on guideline medications
  - Focus on drug safety.
Its not just about stopping drugs

• More Polypharmacy *increases* risk of underprescribing effective meds

• Hence I don’t like *Deprescribing* term
Game changing concepts

If guideline says Prescribe X drug it is GUIDANCE not INSTRUCTION and not prescribing may well be acceptable (and often desirable) in a range of situations

One size does not fit all.....

NICE Multimorbidity Guideline
Game changing concepts

A lot of commonly prescribed medication is not as effective in a patient specific basis than the drive to get the drugs prescribed would imply.

Having a nationally recognised guideline that states that helps.
Why did you jump off a cliff?

Because the Guideline told me to.
Clinical Aspects
Polypharmacy Guidance
March 2015
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<td></td>
<td>- with limited benefit in general or the indication they are used for</td>
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<tr>
<td></td>
<td></td>
<td>- with limited benefit in the patient under review (see Drug efficacy &amp; applicability (NNT) table)</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>4. Are therapeutic objectives being achieved?</td>
<td>Identify the need for adding/intensifying drug therapy in order to achieve therapeutic objectives</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- to achieve symptom control</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- to achieve biochemical/clinical targets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- to prevent disease progression/exacerbation</td>
</tr>
<tr>
<td>Safety</td>
<td>5. Does the patient have ADR or is at risk of ADRs?</td>
<td>Identify patient safety risks by checking for:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- drug-disease interactions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- drug-drug interactions (<a href="#">see ADR table</a>)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- robustness of monitoring mechanisms for high-risk drugs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- drug-drug and drug-disease interactions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- risk of accidental overdosing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Identify adverse drug effects by checking for:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- specific symptoms/laboratory markers (e.g. hypokalaemia)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- cumulative adverse drug effects (<a href="#">see ADR table</a>)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- drugs that may be used to treat ADRs caused by other drugs</td>
</tr>
<tr>
<td>Cost-effectiveness</td>
<td>6. Is drug therapy cost-effective?</td>
<td>Identify unnecessarily costly drug therapy by:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Consider more cost-effective alternatives (but balance against effectiveness, safety, convenience)</td>
</tr>
<tr>
<td>Adherence/</td>
<td>7. Is the patient willing and able to take drug therapy as intended?</td>
<td>Identify risks to patient non-adherence by considering:</td>
</tr>
<tr>
<td>Patient</td>
<td></td>
<td>- Is the medicine in a form that the patient can take?</td>
</tr>
<tr>
<td>centeredness</td>
<td></td>
<td>- Is the dosing schedule convenient?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Is the patient able to take medicines as intended?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Might the patient benefit from the Chronic Medication Service (CMS)?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Is the patient's pharmacist informed of changes to regimen?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ensure drug therapy changes are tailored to patient preferences by:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Discuss with the patient/carer/welfare proxy therapeutic objectives and treatment priorities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Decide with the patient/carer/welfare proxies what medicines have an effect of sufficient magnitude to consider continuation or discontinuation</td>
</tr>
</tbody>
</table>
1. Identify objectives of drug therapy

• Review diagnoses and identify therapeutic objectives with respect to:
  – Management of existing health problems
  – Prevention of future health problems

The Process in this section is still described in too disease-centric a way

Patient goals
2. Identify Essential Drug therapy

- Identify essential drugs (not to be stopped without specialist advice)
  - Drugs that have essential replacement functions (e.g. thyroxine)
  - Drugs to prevent rapid symptomatic decline (e.g. drugs for Parkinson’s disease, heart failure)
3. Does the patient take unnecessary drug therapy?

- Identify and review the (continued) need for drugs
  - with temporary indications
  - with higher than usual maintenance doses
  - with limited benefit in general or the indication they are used for
  - with limited benefit in the patient under review

- Links to NNT data......
NHS Scotland Poly

Polypharmacy Guidance

Powered by Quris
INTENSIVE SULPHONYLUREA WITH INSULIN TO ACHIEVE FASTING PLASMA GLUCOSE LESS THAN 6.0MMOL/ L VS CONVENTIONAL TREATMENT WITH DIET TO AIM FOR FASTING BLOOD GLUCOSE LESS THAN 15MMOL/L

Study population:
Newly diagnosed type 2 diabetes patients - between 25-65 years.

Comments:
Mean age of patients was 54 years.  
Any diabetes-related endpoint was defined as sudden death, death from hyperglycaemia or hypoglycaemia, fatal or non-fatal myocardial infarction, angina, heart failure, stroke, renal failure, digital amputation, vitreous haemorrhage, retinopathy requiring photocoagulation, blindness in one eye, or cataract extraction.  
Diabetes-related death was death due to myocardial infarction, stroke, peripheral vascular disease, renal disease, hyperglycaemia or hypoglycaemia, and sudden death.  
Median HbA1c over 10 years 7.0% in intensive group versus 7.9% in conventional group.  
Intensive group had more hypo-glycaemic episodes per year and higher weight gain than conventional group.  
Reduction in micro-vascular events were mostly retina.

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Duration</th>
<th>NNT</th>
<th>Annualised NNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any diabetes end point</td>
<td>10 years (median duration of followup)</td>
<td>20</td>
<td>200</td>
</tr>
<tr>
<td>Diabetes related death</td>
<td>10 years (median duration of followup)</td>
<td>91</td>
<td>910</td>
</tr>
<tr>
<td>Micro-vascular complications</td>
<td>10 years (median duration of followup)</td>
<td>36</td>
<td>360</td>
</tr>
</tbody>
</table>

References:
<br>73<br>UK Prospective Diabetes Study (UKPDS) Group. Intensive blood-glucose control with sulphonylureas or insulin compared with conventional treatment and risk of complications in patients with type 2 diabetes (UKPDS 33). Lancet 1998; 352: 837-53
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<td>10 years</td>
<td>36</td>
<td>360</td>
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Achieved 7% vs 8%
Introduction

The following spreadsheet provides estimates of the effect of NICE recommended drugs, compared to placebo, on specific outcomes, in specific conditions.

The evidence used to generate these estimates is the same evidence used by NICE to develop the recommendations to use these drugs. This re-presentation of the data does not affect the recommendations. These recommendations were typically made in single condition guidelines and are not necessarily appropriate for people with multimorbidity.

This tool is designed to inform discussions between patient and clinician when considering the benefits and harms of taking long term medication.

The information here is principally designed to give an order of magnitude estimate of efficacy. A number of assumptions and caveats were necessary to generate these estimates and they should not be used beyond their limitations.

The trials from which this evidence is derived typically do not include people with multimorbidity. Users of the database should take this into account when assessing the likely benefit of a treatment for any one individual.

To access the database click on the database tab below or press "Ctrl + Page Down"

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<table>
<thead>
<tr>
<th>Condition (subpopulation)</th>
<th>Drug</th>
<th>Comparison</th>
<th>Outcome (P = positive, N = negative)</th>
<th>Median duration of studies (years)</th>
<th>Patients experiencing outcome in control group/baseline risk</th>
<th>Annualised baseline risk</th>
<th>Relative risk with treatment vs placebo (95% CI)</th>
<th>Absolute difference in outcomes if 1000 people are treated for duration of trials (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atrial fibrillation</td>
<td>Anticoagulant</td>
<td>Placebo</td>
<td>All ischaemic stroke (N)</td>
<td>1</td>
<td>3.7%</td>
<td>3.70%</td>
<td>0.33 (0.53 to 0.21)</td>
<td>25 fewer ischaemic strokes per 1000 people treated for 1 year(s) (from 17 fewer to 29 fewer)</td>
</tr>
<tr>
<td>Atrial fibrillation</td>
<td>Anticoagulant</td>
<td>Placebo</td>
<td>All cause mortality (N)</td>
<td>2</td>
<td>147/1475 (9.97%)</td>
<td>4.99%</td>
<td>0.78 (0.98 to 0.62)</td>
<td>22 fewer deaths per 1000 people treated for 2 year(s) (from 2 fewer to 38 fewer)</td>
</tr>
<tr>
<td>Chronic kidney disease</td>
<td>ACE inhibitors</td>
<td>Placebo</td>
<td>All cause mortality (N)</td>
<td>4.6</td>
<td>7.5%</td>
<td>1.63%</td>
<td>0.95 (1.06 to 0.85)</td>
<td>3 fewer deaths per 1000 people treated for 4.6 year(s) (from 5 more to 11 fewer)</td>
</tr>
</tbody>
</table>
Questions to ponder

• Is this a population treatment or an individual treatment?

• Does this individual look anything like the trial population?

• Do they have long enough to benefit?

This is particularly important if the intervention is giving ANY side effect [even mild]
4. Are therapeutic objectives being achieved?

- Identify the need for adding / intensifying drug therapy in order to achieve therapeutic objectives
  - to achieve symptom control
  - to achieve biochemical/clinical targets
  - to prevent disease progression / exacerbation
5. Does the patient have ADRs or is at risk of ADRs?

- **Identify patient safety risks by checking for**
  - drug-disease interactions
  - drug-drug interactions (see ADR table)
  - robustness of monitoring mechanisms for high-risk drugs
  - drug-drug and drug-disease interactions
  - risk of accidental overdosing

- **Identify adverse drug effects by checking for**
  - specific symptoms/laboratory markers (e.g. hypokalaemia)
  - cumulative adverse drug effects (see ADR table)
  - drugs that may be used to treat ADRs caused by other drugs
Key risk/benefit Questions

• [Postural] Blood Pressure too low?

• Blood Sugar [Hba1c] too low?

• Blood too thin [ed]?

• Kidneys too vulnerable?
6. Is the drug therapy cost-effective?

• **Identify unnecessarily costly drug therapy by**
  – Consider more cost-effective alternatives (but balance against effectiveness, safety, convenience)
7. Is the patient willing and able to take the drug therapy as intended?

- Identify risks to patient non-adherence by considering
  - Is the medicine in a form that the patient can take?
  - Is the dosing schedule convenient?
  - Is the patient able to take medicines as intended?
  - Might the patient benefit from the Chronic Medication Service (CMS)?
  - Is the patient’s pharmacist informed of changes to regimen?

- Ensure drug therapy changes are tailored to patient preferences by
  - Discuss with the patient/carer/welfare proxy therapeutic objectives and treatment priorities
  - Decide with the patient/carer/welfare proxies what medicines have an effect of sufficient magnitude to consider continuation or discontinuation
Summary :- Quality Outcomes

• Health Professionals skilled at balancing
  – Multimorbidity
  – Age and fraility
  – Social v Medical Goals
    • ie Mature Human Beings

• Multidisciplinary working / networks vital
  – Design things that help that to happen

• Concentration on educating
  – Public / Professionals/ Government on what population looks like and needs.....