Multimorbidity, polypharmacy and realistic medicine

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What we will cover

• Multimorbidity/polypharmacy epidemiology
• NICE multimorbidity guidance
• Prescribing safety as an exemplar
• Interventions to improve prescribing safety
• Informatics to support implementation of polypharmacy guidance
Applicability of evidence
Adapting clinical guidelines to take account of multimorbidity

Percentage of patients with this condition who also have this condition

- Coronary heart disease
  - ChD
  - Hypertension
  - Heart failure
  - Stroke
  - Atrial fibrillation
  - Diabetes
  - COPD
  - Painful condition
  - Depression
  - Dementia
  - No other condition

How should health services respond?

1. Ensure health system retains strong generalism
2. Focus on holistic management and care co-ordination for people with very high need
3. Focus on specific problems that are common and important to people with multimorbidity
4. Focus on high-volume processes predominately used by people with multimorbidity
Realistic Medicine
Realistic Medicine

REALISTIC MEDICINE

CAN WE:

1. Build a personalised approach to care?
2. Change our style to shared decision-making?
3. Reduce harm and waste?
4. Reduce unnecessary variation in practice and outcomes?
5. Manage risk better?
6. Become improvers and innovators?

REALISING REALISTIC MEDICINE

‘REALISTIC’

1. Having or showing a sensible and practical idea of what can be achieved or expected.
2. Representing things in a way that is accurate and true to life.

CREATING CONDITIONS

COMMUNICATE

CONNECT

COLLABORATE

CULTURE

THE VISION

By 2025, everyone who provides healthcare in Scotland will demonstrate their professionalism through the approaches, behaviours and attitudes of realistic medicine.

NICE Multimorbidity Guideline

https://www.nice.org.uk/guidance/ng56

• Limited evidence in this population
  – Comprehensive Geriatric Assessment
  – Stopping preventive medicines

• Who needs a different approach to care?

• Assessing frailty

• Principles of care

• Reviewing treatment
Multiple acute and chronic primary care contacts, specialist nursing care at home, attends five out-patient clinics, multiple hospital admissions, complex social care package

Acute use of primary care and community pharmacy

Increasing complexity of care (more services/clinicians involved) and/or more risk of fragmentation and dilution of responsibility

Increasing need for an approach to care that accounts for multimorbidity

Increasing severity or complexity of conditions

Single condition or non-interacting or easily managed conditions
- Type 2 diabetes
- Hay fever and asthma

Multiple conditions, more complex interactions
- COPD and heart failure
- CHD, asthma, PVD, CKD

Multiple conditions, complex interactions
- CHD, psychosis, COPD
- T2DM, depression, blindness, rheumatoid arthritis, frailty
Clinical Frailty Scale*

1. Very Fit — People who are robust, active, energetic and motivated. These people commonly exercise regularly. They are among the fittest for their age.

2. Well — People who have no active disease symptoms but are less fit than category 1. Often, they exercise or are very active occasionally, e.g. seasonally.

3. Managing Well — People whose medical problems are well controlled, but are not regularly active beyond routine walking.

4. Vulnerable — While not dependent on others for daily help, often symptoms limit activities. A common complaint is being “slowed up”, and/or being tired during the day.

5. Mildly Frail — These people often have more evident slowing, and need help in high order IADLs (finances, transportation, heavy housework, medications). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation and housework.

6. Moderately Frail — People need help with all outside activities and with keeping house. Inside, they often have problems with stairs and need help with bathing and might need minimal assistance (cuing, standby) with dressing.

7. Severely Frail — Completely dependent for personal care, from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months).

8. Very Severely Frail — Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness.

9. Terminally Ill — Approaching the end of life. This category applies to people with a life expectancy <6 months, who are not otherwise evidently frail.

Scoring frailty in people with dementia

The degree of frailty corresponds to the degree of dementia. Common symptoms in mild dementia include forgetting the details of a recent event, though still remembering the event itself, repeating the same question/story and social withdrawal.

In moderate dementia, recent memory is very impaired, even though they seemingly can remember their past life events well. They can do personal care with prompting.

In severe dementia, they cannot do personal care without help.


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Assessing frailty

• When assessing frailty in primary and community care settings, consider using one of the following:
  – an informal assessment of gait speed (e.g., time taken to answer the door, or walk from the waiting room)
  – self-reported health status (that is, 'how would you rate your health status on a scale from 0 to 10?', with scores of 6 or less indicating frailty)
  – a formal assessment of gait speed, with more than 5 seconds to walk 4 metres indicating frailty
  – the PRISMA-7 questionnaire, with scores of 3 and above indicating frailty.
Principles of care

• Follow these steps when delivering an approach to care that takes account of multimorbidity:
  – Discuss the purpose of an approach to care that takes account of multimorbidity.
  – Establish disease and treatment burden.
  – Establish patient goals, values and priorities.
  – Review medicines and other treatments taking into account evidence of likely benefits and harms for the individual patient and outcomes important to the person.
Principles of care

• Agree an individualised management plan with the person, including:
  – Goals and plans for future care (including advance care planning)
  – Who is responsible for coordination of care
  – How the individualised management plan and the responsibility for coordination of care is communicated to all professionals and services involved
  – Timing of follow-up and how to access urgent care.
Medication review

• Review medicines and other treatments taking into account evidence of likely benefits and harms for the individual patient and outcomes important to the person
  • Lack of evidence in this population
  • Many or most will have polypharmacy
  • Polypharmacy is associated with high-risk prescribing and both over- and under-treatment

• Easy to say, hard to do…
No. of drug classes dispensed in last 84 days in 1995

- Percentage of patients receiving specified number of drugs
- Age group

Guthrie B et al. BMC Medicine 2015
Safer but more people at risk...

- People on warfarin prescribed NSAIDs, anti-platelets, high-risk antibiotics, oralazole antifungals
  - 16.0% in 1995 (258/1611)
  - 10.7% in 2010 (538/5006)
- ‘Safer’ but more people are at risk...
- Even if increasing prescribing is more effective, it creates increasing risk that needs managing
Improving prescribing safety

• Focus on indicators of high-risk prescribing
  – Many available indicators of varying specificity

• Focus on people at particular risk
  – Most commonly people with polypharmacy

• Focus on prescribing systems
  – Medicines reconciliation at transitions
  – Repeat prescribing systems
High-risk prescribing

• Prescribing is a high benefit, high risk, high cost activity
• 6.5% of hospital admissions are related to ADEs
  – ADE directly leading to admission in 80%, half preventable
• Mostly due to ‘appropriate’ drugs that guidelines tell us to prescribe more of
  – Warfarin, aspirin, (non-steroidal anti-inflammatory drugs), ACEI/ARB and other renal toxic drugs, hypoglycaemic drugs, blood pressure lowering drugs
• High-risk or potentially inappropriate prescribing is not a never event, but needs regular review
  – The correct level is NOT zero
High risk prescribing – variation between practices

Guthrie B et al. BMJ 2011;342:d3514
High risk prescribing – variation between patients

<table>
<thead>
<tr>
<th>No. of chronic drugs</th>
<th>% getting a high risk prescription</th>
<th>Adjusted OR</th>
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<tr>
<td>0 drugs</td>
<td>4.3</td>
<td>Reference</td>
</tr>
<tr>
<td>1-2 drugs</td>
<td>11.0</td>
<td>2.7</td>
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<tr>
<td>3-4 drugs</td>
<td>12.7</td>
<td>3.2</td>
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<tr>
<td>5-6 drugs</td>
<td>14.5</td>
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<tr>
<td>7-8 drugs</td>
<td>18.3</td>
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<td>9-10 drugs</td>
<td>21.5</td>
<td>6.1</td>
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<tr>
<td>11+ drugs</td>
<td>26.6</td>
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</tbody>
</table>

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Conclusion

• Aging populations and better survival from acute events are increasing multimorbidity
  – The price of success

• Multimorbidity makes single disease approaches increasingly problematic
  – Uncertainty of benefit/risk
  – Treatment burden
  – Futility in the frail and dying

• Multimorbidity is all of life
  – Needs a multifaceted approach; need to define facets
Thank you!

Questions?