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Multimorbidity: a priority for global health research

20 June 2018

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Background - project rationale

- October 2015 – roundtable event with Fellows and experts

- **What we knew:**

    - Multiple chronic diseases among older people is the norm rather than the exception in high-income countries including the UK.

    - As populations age, the number affected by multimorbidity conditions is expected to rise.

    - It is likely that middle-income countries are facing the same issue, albeit at an earlier stage of development.

Background – project rationale

- However, while well-recognised by HCPs, multimorbidity had received less focus from research community

- **Issues**:

  - The existing body of evidence about multimorbidity is small

  - Mostly cross-sectional, mostly high-income countries

  - No consistent definition – difficult to develop a coherent body of research

Background – project rationale

In order to address the challenge of multimorbidity, we must understand the problem better.

- Better evidence needed across a broad range of areas including:

    - Epidemiology: trends and patterns

    - Burden: health, social, economic

    - Mechanisms of disease clustering

    - Patient preferences and priorities

    - Prevention

    - Current patterns of care

    - New approaches to management

Aims of the project

- **To summarise**:

  - Definitions of multimorbidity used in research to date.

  - Evidence about the prevalence, burden and determinants of multimorbidity in global populations.

  - Evidence about effects of prevention and treatment strategies among individuals with multimorbidity.

- **Make recommendations for future research by**:

  - Proposing standardised approaches to research on multimorbidity

  - Identifying and prioritising the most significant gaps in the evidence

Expert working group

- Chair: Professor Stephen MacMahon AO FAA FMedSci

  Principal Director, The George Institute for Global Health
  Professor of Medicine, University of Oxford

- Members: 15 experts from various disciplines

- Global expertise including in South Africa, China and India

- Observers

Workshop in South Africa

'Addressing the global challenge of multimorbidity: Lessons from South Africa'

- Johannesburg, 2 -3 November 2016
- Funded by the Global Challenges Research Fund
- In partnership with the Academy of Sciences of South Africa
- Major focus on multimorbidity with infectious and non-infectious conditions: HIBV, TB, CVD, kidney disease, diabetes
- Report published
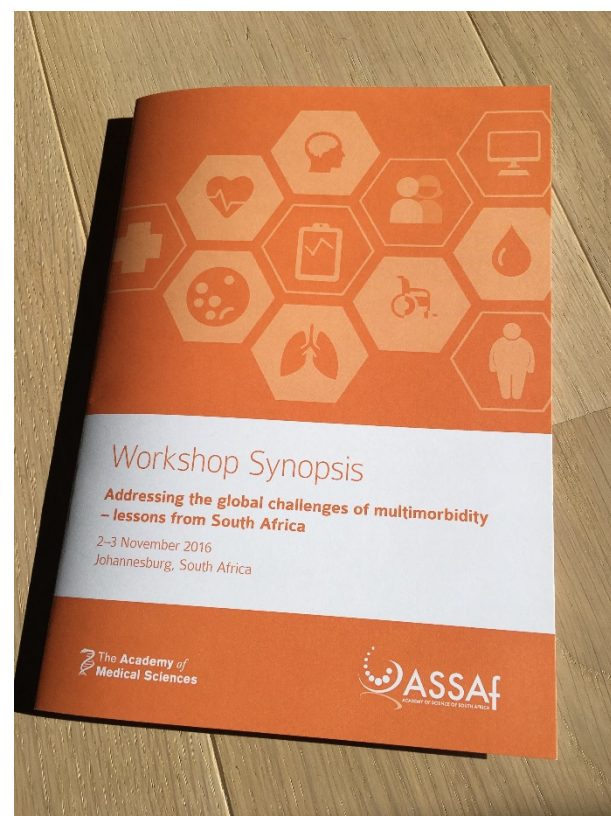
Workshop in London

'Addressing the global challenge of multimorbidity: Lessons from the BRICS countries'

- London, 27 – 28 March 2017
- Funded by the Global Challenges Research Fund
- Worked closely with Academies in the five BRICS countries

- Identified common themes and shared lessons across countries

Final project report

- Summarises the available evidence about multimorbidity

- Highlights key knowledge gaps

- Suggests six priorities for research

- Recommends a standardised definition and reporting system

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Research Priority 1

What are the trends and patterns in multimorbidity?

- Which clusters of conditions are most common in specific populations?

- Do the most common clusters vary with age?

- How has the age-specific prevalence and incidence of multimorbidity changed over time?

- Do trends and patterns differ between concordant and discordant multimorbidity, and between mental and physical multimorbidity?

Research Priority 2

Which multimorbidity clusters cause the greatest burden?

- Which clusters have the worst prognosis in terms of death and disability, as quantified by metrics such as 'years of life lost' (YLLs) and 'years lost due to disability' (YLDs)?

- Which clusters have the greatest impact on patient- and carer-centric outcomes, such as treatment burden and quality of life?

- Which clusters result in the greatest healthcare utilisation and the greatest costs?

- Is the impact of clusters of conditions on these outcomes greater or less than that which would be predicted from the cumulative impact of the individual diseases?

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Research Priority 3

What are the determinants of the most common clusters of conditions?

- What are the behavioural, environmental, sociodemographic and biological factors associated with the major clusters of multimorbidity?

- Which of these factors are causally related to multimorbidity?

- How do these factors interact to influence the risk of multimorbidity clusters

- Are there associations of factors with multimorbidity that are not wholly explained by their associations with the individual component diseases?

Research Priority 4

How do we prevent of multimorbidity?

- Are there strategies for the prevention of disease clusters that generate benefits greater than those predicted by effects on the individual component conditions?

- What approaches should be taken to prevent the most common discordant morbidities as opposed to those taken to prevent the most common concordant conditions?

- How might chronic mental health conditions be prevented among those who have a chronic physical condition, and how might chronic physical conditions be prevented among those who have a chronic psychological condition?

Research Priority 5

How can we maximise the benefits and limit the risks of treatment?

- Can tools be developed to assist healthcare professionals (HCPs) to deliver comprehensive integrated care to multimorbid patients that takes full account of the relevant clinical guidelines for the management of component conditions?

- Can strategies be developed to maximise the benefits and minimise the risks associated with the multiple treatments often received by patients with multimorbidity?

- How can patient and carer priorities be better captured and incorporated into care plans for patients with multimorbidity, and do these optimise clinical and patient-centred outcomes?

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Research Priority 6

How can healthcare systems be better organised?

- What strategies can be deployed to improve the integration of services for patients with multimorbidity?

- Do any such strategies improve clinical outcomes, patient-centred outcomes, and cost effectiveness?

- Does the composition of the healthcare team affect outcomes among patients with multimorbidity? How should the roles of generalist and specialist HCPs be defined to maximise the effectiveness and safety of care?

- Can incentive systems be developed to support better care for those with multimorbidity?

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Standardised definition & reporting system

- **Definition**

  The co-existence of two or more chronic conditions, including **physical conditions, mental conditions or infectious diseases**, defined using a standardised disease classification system such as ICD-10

- **Reporting system**

  1. **Other co-existing conditions** such functional deficits, disabilities, and frailty, using standardised classification systems, such as the WHO Disability Assessment Schedule 2.0 (WHODAS 2.0) or the International Classification of Functioning Disability and Health (ICF).

  2. **States of poor health and health-related behaviour**, using classification systems such as the Comparative Risk Assessment component of the Global Burden of Disease Project

Launch – wide-spread coverage

- Top health story on BBC Radio 4's Today programme
- More than 10 other radio reports
- Print coverage in all major UK newspapers

Launch – wide-spread coverage

- BBC breakfast – live television

What's next?

- Engagement with funders, other stakeholders and researchers to implement report findings
- Establishment of a major new research stream focussed on multimorbidity
- Global outreach to high, middle and low income countries