Publications on multimorbidity
(Updated on February 22, 2018)

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Section A – Publications of the research team


Aarts S, van den Akker M, Tan FE, Verhey FR, Metsemakers JF, van Boxtel MP. Influence of multimorbidity on cognition in a normal aging population: a 12-


Haggerty J, Fortin M, Beaulieu M-D, Hudon, C., Loignon, C., Prévillé, M., Roberge, D. At the interface of community and healthcare systems: a longitudinal cohort study on evolving health and the impact of primary healthcare from the patient's perspective. BMC Health Services Research 2010;10:258. [Full text]


Soubhi H, Colet NR, Gilbert JH, Lebel P, Thivierge RL, Hudon C, Fortin M. 


Hudon C, Fortin M, Soubhi S. Conditions musculo-squelettiques chroniques et comorbidités en soins de première ligne. Can Fam Physician 2008;54 74-75. [Full text]


Soubhi H, Fortin M, Hudon C. Perceived conflict in the couple and chronic illness management: Preliminary analyses from the Quebec Health Survey. BMC Family Practice 2006;7:59. [Full text]


Bayliss EA, Bayliss MS, Ware Jr JE, Steiner JF. Predicting declines in physical function in persons with multiple chronic medical conditions: what we can learn from the medical problem list. Health Qual Life Outcomes 2004;2:47. [Full text]


Section B – Publications by subject

1. THEORETICAL & REVIEW ARTICLES AND PROTOCOLS


Fitzgerald SP, Bean NG, Ruberu RP. A method of decision analysis quantifying the effects of age and comorbidities on the probability of deriving significant benefit from medical treatments. Journal of Comorbidity 2017;7:50–63


Salive ME. Multimorbidity in Older Adults. *Epidemiol Rev.* Jan 31 2013.


Lupari M, Coates V, Adamson G, Crealey GE. We're just not getting it right'—how should we provide care to the older person with multi-morbid chronic conditions? *J Clin Nurs* 2011;20.


Iezzoni LI. Multiple Chronic Conditions and Disabilities: Implications for Health Services Research and Data Demands. *Health Serv Res*. 2010;**45**(5 Pt 2):1523-40.


2. DEFINITION / CONCEPTUALISATION


3. CLINICAL AND EPIDEMIOLOGICAL STUDIES

3.1 Prevalence


### 3.2 Aetiology


3.3 Correlation with biological markers


### 3.4 Interactions and patterns


Ng SK: A two-way clustering framework to identify disparities in multimorbidity patterns of mental and physical health conditions among Australians. Stat Med. 2015;34(26):3444-3460


Wee, H.L., et al., The impact of diabetes mellitus and other chronic medical conditions on health-related Quality of Life: is the whole greater than the sum of its parts? Health & Quality of Life Outcomes, 2005. 3(1): p. 2.

3.5 Socio-demographic, socio-economic, and psychosocial variables


Ranstad K, Midlov P, Halling A. Socioeconomic status and geographical factors associated with active listing in primary care: a cross-sectional population study accounting for


McLean G, Guthrie B, Mercer SW, Watt GC: General practice funding underpins the

Implications of comorbidity for primary care costs in the UK: a retrospective

Sinnott C, Mc Hugh S, Fitzgerald AP, Bradley CP, Kearney PM. Psychosocial complexity in
multimorbidity: the legacy of adverse childhood experiences. Fam Pract. Jun

Lee JT, Hamid F, Pati S, Atun R, Millett C. Impact of Noncommunicable Disease
Multimorbidity on Healthcare Utilisation and Out-Of-Pocket Expenditures in Middle-

Jason KJ, Carr DC, Washington TR, Hilliard TS, Mingo CA. Multiple Chronic Conditions,
Resilience, and Workforce Transitions in Later Life: A Socio-Ecological Model.

Sinnott C, Mc Hugh S, Fitzgerald AP, Bradley CP, Kearney PM. Psychosocial complexity in
multimorbidity: the legacy of adverse childhood experiences. Fam Pract. Jun

Lee JT, Hamid F, Pati S, Atun R, Millett C. Impact of Noncommunicable Disease
Multimorbidity on Healthcare Utilisation and Out-Of-Pocket Expenditures in Middle-

Jackson CA, Dobson A, Tooth L, Mishra GD. Body mass index and socioeconomic position
are associated with 9-year trajectories of multimorbidity: A population-based study. Prev

Brett T, Arnold-Reed DE, Troeung L, Bulsara MK, Williams A, Moorhead RG.
Multimorbidity in a marginalised, street-health Australian population: a retrospective

Habib RR, Hojeij S, Elzein K, Chaaban J, Seyfert K. Associations between life conditions
and multi-morbidity in marginalized populations: the case of Palestinian refugees. Eur J

McLean G, Gunn J, Wyke S, Guthrie B, Watt GC, Blane DN, Mercer SW. The influence of
socioeconomic deprivation on multimorbidity at different ages: a cross-sectional study. Br

Banjare P, Pradhan J. Socio-Economic Inequalities in the Prevalence of Multi-Morbidity

Yoon J, Zulman D, Scott JY, Maciejewski ML. Costs associated with multimorbidity among

Greene R, Dasso E, Ho S, Frank J, Scandrett G, Genaidy A. Patterns and expenditures
of multi-morbidity in an insured working population in the United States: insights for a
sustainable health care system and building healthier lives. Popul Health Manag. Dec
2013;16(6):381-389


3.6 Variables related to hospitalization


### 3.7 Resource utilisation


van den Bussche, H., et al., Patterns of ambulatory medical care utilization in elderly patients with special reference to chronic diseases and multimorbidity - Results from a claims data based observational study in Germany. BMC Geriatrics, 2011. 11: p. 54.


3.8 Quality of life and functional level


Hodek JM, Ruhe AK, Greiner W. Relationship Between Health-Related Quality of Life and Multimorbidity. *Gesundheitswesen.* 2009 Sep 29. [Epub ahead of print]


Kusek, J.W., et al., Cross-sectional study of health-related quality of life in African Americans with chronic renal insufficiency: the African American Study of Kidney


### 3.9 Psychological distress, depression, and cognition


Thomeer MB. Multiple Chronic Conditions, Spouse's Depressive Symptoms, and Gender within Marriage. J Health Soc Behav. 2016;57:59-76.


Gallo JJ, Hwang S, Joo JH, Bogner HR, Morales KH, Bruce ML et al: Multimorbidity, Depression, and Mortality in Primary Care: Randomized Clinical Trial of an Evidence-Based Depression Care Management Program on Mortality Risk. J Gen Intern Med. 2015.


3.10 Medication


Richardson, K., et al., Variation over time in the association between polypharmacy and mortality in the older population. *Drugs Aging,* 2011. 28: p.:547-60.


3.11 Social support


3.12 Other clinical variables


Woo J, Leung J. Multi-morbidity, dependency, and frailty singly or in combination have different impact on health outcomes. *Age (Dordr)*. Apr 2014;**36**(2):923-931.


Landi F et al. Disability, more than multimorbidity, was predictive of mortality among older persons aged 80 years and older. J Clin Epidemiol. 2010. 63(7):752-9.


3.13 Generalisation of clinical trials / Guidelines


Rothwell, P.M., External validity of randomised controlled trials: "to whom do the results of this trial apply?" Lancet., 2005. 365: p. 82-93.


3.14 Other subjects


Adams ML. Differences Between Younger and Older US Adults With Multiple Chronic Conditions. Prev Chronic Dis. 2017;14:E76.


Chan CL, You HJ, Huang HT, Ting HW. Using an integrated COC index and multilevel measurements to verify the care outcome of patients with multiple chronic conditions. *BMC Health Serv Res*. 2012;12:405.


Wong A, Boshuizen HC, Schellevis FG, Kommer GJ, Polder JJ. Longitudinal administrative data can be used to examine multimorbidity, provided false discoveries are controlled for. J Clin Epidemiol 2011;64(10):1109-17.


### 4. ECONOMIC STUDIES


5. METHODS TO MEASURE MULTIMORBIDITY AND COMORBIDITY


Charlson, M., et al., Validation of a combined comorbidity index.


Katz, J.N., et al., Can comorbidity be measured by questionnaire rather than medical record review? Medical Care., 1996. **34**: p. 73-84.


Ware JE, Bayliss MS, Rogers WH, Kosinski M, Tarlov AR. Differences in 4-year health outcomes for elderly and poor, chronically ill patients treated in HMO and fee-for-service systems. Results from the Medical Outcomes Study. JAMA 1996; 276(13):1039-1047.


6. EDITORIALS / OPINION ARTICLES


Wise J. Patients with multimorbidity need longer GP consultations, says RCGP. BMJ. 2016;355:i5961.


Tinetti ME, Basu J. Research on multiple chronic conditions: where we are and where we need to go. *Med Care.* Mar 2014;52 Suppl 3:S3-6.


Richardson WS, Doster LM. Comorbidity and multimorbidity need to be placed in the context of a framework of risk, responsiveness, and vulnerability. *J Clin Epidemiol.* Mar 2014;67(3):244-246.


Haggerty JL. Ordering the chaos for patients with multimorbidity. *BMJ.* 2012;345:e5915.


Hawkes N. Better training is needed to deal with increasing multimorbidity. *BMJ.* 2012;344:e3336.


Shepherd DJ. We need a system that accounts for multimorbidity at practice level. *BMJ.* 2012;345:e5464.

Kamerow D. How can we treat multiple chronic conditions? *BMJ.* 2012;344:e1487.


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7. QUALITATIVE RESEARCH


van Dongen JJ, de Wit M, Smeets HW, Stoffers E, van Bokhoven MA, Daniels R. "They Are Talking About Me, but Not with Me": A Focus Group Study to Explore the Patient Perspective on Interprofessional Team Meetings in Primary Care. Patient. 2017.


Slightam CA, Brandt K, Jenchura EC, Lewis ET, Asch SM, Zulman DM. "I had to change so much in my life to live with my new limitations": Multimorbid patients' descriptions of their most bothersome chronic conditions. Chronic Illn. 2017:1742395317699448.


de Vos A, Cramm JM, van Wijngaarden JD, Bakker TJ, Mackenbach JP, Nieboer AP. Understanding implementation of comprehensive geriatric care programs: a multiple perspective approach is preferred. *Int J Health Plann Manage.* 2016.


8. INTERVENTION IDEAS


patients with depression comorbid with diabetes or cardiovascular disease. *BMJ.* 2015;**350**:h638.


Braithwaite RS, Fiellin D, Justice AC. The payoff time: a flexible framework to help clinicians decide when patients with comorbid disease are not likely to benefit from practice guidelines. Med Care. 2009 Jun;47(6):610-7.


9. OTHERS

9.1 Physical activity


Loprinzi PD. Sedentary behavior and medical multimorbidity. Physiol Behav. Nov 1 2015;151:395-397.


9.2 Continuity of care


DuGoff EH. Continuity of Care in Older Adults With Multiple Chronic Conditions: How Well Do Administrative Measures Correspond With Patient Experiences? J Healthc Qual. 2017.


9.3 Self-care


9.4 Medical errors / Medical Education


