Publications on multimorbidity

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Publications by subject

1. THEORETICAL & REVIEW ARTICLES AND PROTOCOLS


Lee ES, Koh HL, Ho EQ, et al. Systematic review on the instruments used for measuring the association of the level of multimorbidity and clinically important outcomes. BMJ Open 2021;11(5):e041219. doi: 10.1136/bmjopen-2020-041219


Gustafson DH, Sr., Mares ML, Johnston DC, et al. A Web-Based eHealth Intervention to Improve the Quality of Life of Older Adults With Multiple Chronic Conditions: Protocol for a Randomized Controlled Trial. JMIR research protocols 2021;10(2):e25175. doi: 10.2196/25175


Goehner A, Kricheldorf C, Bitzer EM. Trained volunteers to support chronically ill, multimorbid elderly between hospital and domesticity - a systematic review of one-on-


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


Lefevre T, d'Ivernois JF, De Andrade V, Crozet C, Lombrail P, Gagnayre R: What do we mean by multimorbidity? An analysis of the literature on multimorbidity measures,


Coventry PA, Small N, Panagiotti M, Adeyemi I, Bee P: Living with complexity; marshalling resources: a systematic review and qualitative meta-synthesis of lived experience of mental and physical multimorbidity. BMC Fam Pract. 2015;16(1):171.


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


Corallo B, Proser M, Nocon R. Comparing Rates of Multiple Chronic Conditions at Primary Care and Mental Health Visits to Community Health Centers Versus Private Practice Providers. J Ambul Care Manage 2020;43(2):136-47. doi: 10.1097/JAC.0000000000000324


3.2 Aetiology


### 3.3 Correlation with biological markers


3.4 Interactions and patterns

Ronaldson A, Arias de la Torre J, Prina M, et al. Associations between physical multimorbidity patterns and common mental health disorders in middle-aged adults: A


3.5 Socio-demographic, socio-economic, and psychosocial variables. Lifestyle factors


McCallum M, MacDonald S. "Multimorbidity Plus": a secondary analysis exploring GP work in areas of high socioeconomic deprivation. BJGP Open 2021 doi: 10.3399/BJGPO.2021.0117

Flores TR, Rodrigues A, Neves RG, et al. The Risk of Multimorbidity Associated with Overweight and Obesity: Data from the Brazilian National


### 3.6 Variables related to hospitalization


Allen A, Frederick L, Hovey SL. Using Palliative Care Nurses in a Supportive Care Program to Reduce Hospital Utilization for Patients With Multiple Chronic Conditions. J Nurs Care Qual 2021;36(1):79-83. doi: 10.1097/NCQ.0000000000000482


Tran VT, Diard E, Ravaud P. Priorities to improve the care for chronic conditions and multimorbidity: a survey of patients and stakeholders nested within the ComPaRe e-cohort. BMJ Qual Saf 2020 doi: 10.1136/bmjqs-2020-011219


Patterns of morbidity and multimorbidity associated with early and late readmissions in an Australian regional health service. Chronic Illn 2020;1742395319899459. doi: 10.1177/1742395319899459


Multiple Chronic Conditions and Disparities in 30-Day Hospital Readmissions Among Nonelderly Adults. J Ambul Care Manage 2018;41(4):262-73. doi: 10.1097/JAC.0000000000000246


Multimorbidity in middle age predicts more subsequent hospital admissions than in older age: A nine-year retrospective cohort study


Fernández Miera, M. F. "[Patients with multimorbidity in the hospital setting.][Spanish]." Gac Sanit 2008. **22**: 137-41.


3.7 Resource utilisation


Perez-Ardanaz B, Morales-Asencio JM, Garcia-Pinero JM, et al. Socioeconomic Status and Health Services Utilization for Children With Complex Chronic Conditions Liable to Receive


3.8 Quality of life and functional level


Gontijo Guerra S, Berbiche D, Vasiliadis HM. Changes in instrumental activities of daily living functioning associated with concurrent common mental disorders and physical


Klinedinst TC, Terhorst L, Rodakowski J. Multimorbidity groups based on numbers of chronic conditions are associated with daily activity. Chronic Illn 2021:17423953211023964. doi: 10.1177/17423953211023964


Peng X, Bao X, Xie Y, et al. The mediating effect of pain on the association between multimorbidity and disability and impaired physical performance among community-


Gonzalez-Chica DA, Hoon E, Stocks N. Multimorbidity, health-related quality of life and health service use among individuals with mental health problems: Urban-rural


Amaral TLM, Amaral CA, Lima NS, et al. Multimorbidity, depression and quality of life among elderly people assisted in the Family Health Strategy in Senador Guiomard, Acre,


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


3.9 Psychological distress, depression, and cognition


Tong L, Pu L, Guo X, et al. Multimorbidity study with different levels of depression status. J Affect Disord 2021;292:30-35. doi: 10.1016/j.jad.2021.05.039


Tong L, Pu L, Guo X, et al. Multimorbidity study with different levels of depression status. J Affect Disord 2021;292:30-35. doi: 10.1016/j.jad.2021.05.039


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


Zidan A, Awaisu A, El-Hajj MS, et al. Medication-Related Burden among Patients with Chronic Disease Conditions: Perspectives of Patients Attending Non-Communicable


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


De Maria M, Tagliabue S, Ausili D, et al. Perceived social support and health-related quality of life in older adults who have multiple chronic conditions and their caregivers:


3.12 Other clinical variables


Kivimaki M, Kuosma E, Ferrie JE, et al. Overweight, obesity, and risk of cardiometabolic multimorbidity: pooled analysis of individual-level data for 120 813 adults from 16 cohort


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.


3.13 Generalisation of clinical trials / Guidelines


3.14 Other subjects


Griffith LE, Gruneir A, Fisher KA, et al. The impact of multimorbidity level and functional limitations on the accuracy of using self-reported survey data compared to administrative


Moin JS, Glazier RH, Kuluski K, et al. Examine the association between key determinants identified by the chronic disease indicator framework and multimorbidity by rural and


Tran VT, Diard E, Ravaud P. Priorities to improve the care for chronic conditions and multimorbidity: a survey of patients and stakeholders nested within the ComPaRe e-cohort. BMJ Qual Saf 2021;30(7):577-87. doi: 10.1136/bmjqs-2020-011219


Carvalho JN, de Camargo Cancela M, de Souza DLB. Lifestyle factors and high body mass index are associated with different multimorbidity clusters in the Brazilian population. PLoS One 2018;13(11):e0207649. doi: 10.1371/journal.pone.0207649


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


Le Reste JY, Nabbe P, Billot Grasset A, et al. Multimorbid outpatients: A high frequency of FP appointments and/or family difficulties, should alert FPs to the possibility of death


Galvan-Banqueri M, de la Higuera-Vila L, Vega-Coca MD, Nieto Martin MD, Perez-Guerrero C, Santos-Ramos B. Reliability of a questionnaire for pharmacological


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


Otero MJ, Toscano Guzman MD, Galvan-Banqueri M, et al. Utility of a trigger tool (TRIGGER-CHRON) to detect adverse events associated with high-alert medications in


Holzhausen M, Fuchs J, Busch M, et al. Operationalizing multimorbidity and autonomy for health services research in aging populations--the OMAHA study. BMC Health Serv Res 2011;11:47.


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


Inouye SK, Bogardus STJ, Vitagliano G, Desai MM, Williams CS, Grady JN et al. Burden of illness score for elderly persons. Risk adjustment incorporating the cumulative impact


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


Davenport C, Ouellet J, Tinetti ME. Use of the Patient-Identified Top Health Priority in Care Decision-making for Older Adults With Multiple Chronic Conditions. JAMA Netw Open 2021;4(10):e2131496. doi: 10.1001/jamanetworkopen.2021.31496


Zhao D. Key roles of five lifestyle risk factors in the harmful transition from a healthy condition to multimorbidity in the Chinese population. Eur Heart J 2021;42(34):3385-87. doi: 10.1093/eurheartj/ehab516


Ecks S. Depression, Deprivation, and Dysbiosis: Polyaigenesis in Multiple Chronic Illnesses. Cult Med Psychiatry 2021 doi: 10.1007/s11013-020-09699-x


Tsai J, King B, Elder J. Multimorbidity and Social Drivers of Homelessness and Health: Introduction to This Special Issue. Med Care 2021;59(Suppl 2):S101-S02. doi: 10.1097/MLR.0000000000001518


Selby K, Chabloz YM, Schwarz J, et al. The multimorbidity dead end: how we got here and possible ways out. Br J Gen Pract 2020;70(701):607-08. doi: 10.3399/bjgp20X713825


Mathew R. Rammya Mathew: Learning to manage multimorbidity. BMJ 2020;368:m871. doi: 10.1136/bmj.m871


Duncan H. Managing multimorbidity: all doctors started as generalists. BMJ 2020;368:m733. doi: 10.1136/bmj.m733

Coughlan C, Watson M. Managing multimorbidity: listening to patients and integrated care. BMJ 2020;368:m713. doi: 10.1136/bmj.m713

Sharpe M. Time to transcend "physical" and "mental" health. BMJ 2020;368:m609. doi: 10.1136/bmj.m609


Whitty CJM, Watt FM. Map clusters of diseases to tackle multimorbidity. Nature 2020;579(7800):494-96. doi: 10.1038/d41586-020-00837-4

Sutherland I, Samadian S. Managing multimorbidity needs time and thought. BMJ 2020;368:m711. doi: 10.1136/bmj.m711


Stewart D, McCambridge J. Alcohol complicates multimorbidity in older adults. BMJ 2019;365:i4304. doi: 10.1136/bmj.i4304


Fortin M. "It-that-must-not-be-named": Addressing patient discomfort with the term multimorbidity. Can Fam Physician 2018;64(12):881-82.


Oliver D. David Oliver: A manifesto for multimorbidity. *BMJ* 2018;360:k1044. doi: 10.1136/bmj.k1044


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.


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.


7. QUALITATIVE RESEARCH


Boye LK, Mogensen CB, Andersen PT, et al. 'One feels somewhere that one is insignificant in that system' - older multimorbid patients' between lifeworld and system in healthcare. BMC Geriatr 2021;21(1):397. doi: 10.1186/s12877-021-02348-x


Prazeres F, Simoes JA. Key Factors to Consider in Team Meetings when Dealing with Multimorbidity in Primary Care: Results from a Delphi Panel. Cureus 2019;11(6):e4990. doi: 10.7759/cureus.4990


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.


8. INTERVENTION IDEAS


Williams K, Markwardt S, Kearney SM, et al. Addressing Implementation Challenges to Digital Care Delivery for Adults With Multiple Chronic Conditions: Stakeholder Feedback in a Randomized Controlled Trial. JMIR Mhealth Uhealth 2021;9(2):e23498. doi: 10.2196/23498


Prados-Torres A, Cura-Gonzalez ID, Prados-Torres JD, et al. MULTIPAP Study: Improving healthcare for patients with multimorbidity. Br J Gen Pract 2020;70(suppl 1) doi: 10.3399/bjgp20X711257


Sinnott C, Mercer SW, Payne RA, Duerden M, Bradley CP, Byrne M: Improving medication management in multimorbidity: development of the Multimorbidity...


9. OTHERS
9.1 Physical activity


Loprinzi PD. Multimorbidity, cognitive function, and physical activity. *Age (Dordr).* 2016;38:8.


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


