

Multimorbidity Literature Search Results: January to June 2023

1. Epidemiology of multimorbidity and its outcomes (inc. health economics).....	2
2. Epidemiology of multimorbidity prediction and associations with multimorbidity	9
3. Polypharmacy	21
4. Interventions for multimorbidity	23
5. Qualitative work – experience and perspectives	27
6. Multimorbidity policy and editorials	29

1. Epidemiology of multimorbidity and its outcomes (inc. health economics)

1. Dove A, Guo J, Marseglia A, Fastbom J, Vetrano DL, Fratiglioni L, et al. Cardiometabolic multimorbidity and incident dementia: the Swedish twin registry. *Eur Heart J*. 2023;44(7):573-82.
2. Chen H, Zhou Y, Huang L, Xu X, Yuan C. Multimorbidity burden and developmental trajectory in relation to later-life dementia: A prospective study. *Alzheimers Dement*. 2023;19(5):2024-33.
3. Dove A, Xu W. Cardiometabolic multimorbidity and cognitive decline. *Lancet Healthy Longev*. 2023;4(6):e241-e2.
4. Molina S, Martinez-Urrea A, Malik K, Libori G, Monzon H, Martínez-Cambor P, et al. Medium and long-term prognosis in hospitalised older adults with multimorbidity. A prospective cohort study. *PLoS One*. 2023;18(6):e0285923.
5. Lisco G, Bartolomeo N, Ramunni MI, De Tullio A, Carbone MD, Guastamcchia E, et al. Erectile Dysfunction in Patients with Multiple Chronic Conditions: A Cross- Sectional Study. *Endocr Metab Immune Disord Drug Targets*. 2023;23(3):396-404.
6. Triolo F, Sjöberg L, Calderón-Larrañaga A, Belvederi Murri M, Vetrano DL, Fratiglioni L, et al. Late-life depression and multimorbidity trajectories: the role of symptom complexity and severity. *Age Ageing*. 2023;52(2).
7. Otieno P, Asiki G, Wilunda C, Wami W, Agyemang C. Cardiometabolic multimorbidity and associated patterns of healthcare utilization and quality of life: Results from the Study on Global AGEing and Adult Health (SAGE) Wave 2 in Ghana. *PLOS Glob Public Health*. 2023;3(8):e0002215.
8. Lleal M, Corral-Vazquez C, Baré M, Comet R, Herranz S, Baigorri F, et al. Multimorbidity patterns in COVID-19 patients and their relationship with infection severity: MRisk-COVID study. *PLoS One*. 2023;18(8):e0290969.
9. Catalano A, Dansero L, Gilcrease W, Macciotta A, Saugo C, Manfredi L, et al. Multimorbidity and SARS-CoV-2-Related Outcomes: Analysis of a Cohort of Italian Patients. *JMIR Public Health Surveill*. 2023;9:e41404.
10. Quiñones AR, Hwang J, Heintzman J, Huguet N, Lucas JA, Schmidt TD, et al. Trajectories of Chronic Disease and Multimorbidity Among Middle-aged and Older Patients at Community Health Centers. *JAMA Netw Open*. 2023;6(4):e237497.
11. Zhao X, Zhang Q, Ma C, Liu H, Chen Y. Association between multimorbidity patterns and healthcare costs among middle-aged and older adults in China. *Arch Gerontol Geriatr*. 2023;109:104959.
12. Schübbe SF, König HH, Hajek A. Multimorbidity and loneliness. Longitudinal analysis based on the GSOEP. *Arch Gerontol Geriatr*. 2023;105:104843.
13. Dodds RM, Bunn JG, Hillman SJ, Granic A, Murray J, Witham MD, et al. Simple approaches to characterising multiple long-term conditions (multimorbidity) and rates of

- emergency hospital admission: Findings from 495,465 UK Biobank participants. *J Intern Med.* 2023;293(1):100-9.
14. Bell C, Prior A, Appel CW, Frølich A, Pedersen AR, Vedsted P. Multimorbidity and determinants for initiating outpatient trajectories: A population-based study. *BMC Public Health.* 2023;23(1):739.
 15. You L, Guo L, Li N, Zhong J, Er Y, Zhao M. Association between multimorbidity and falls and fear of falling among older adults in eastern China: a cross-sectional study. *Front Public Health.* 2023;11:1146899.
 16. Olanrewaju O, Trott M, Smith L, López Sánchez GF, Carmichael C, Oh H, et al. Chronic physical conditions, physical multimorbidity, and quality of life among adults aged ≥ 50 years from six low- and middle-income countries. *Qual Life Res.* 2023;32(4):1031-41.
 17. Mossadeghi B, Caixeta R, Ondarsuhu D, Luciani S, Hambleton IR, Hennis AJM. Multimorbidity and social determinants of health in the US prior to the COVID-19 pandemic and implications for health outcomes: a cross-sectional analysis based on NHANES 2017-2018. *BMC Public Health.* 2023;23(1):887.
 18. Liu H, Zhou Z, Fan X, Shen C, Ma Y, Sun H, et al. Association Between Multiple Chronic Conditions and Depressive Symptoms Among Older Adults in China: Evidence From the China Health and Retirement Longitudinal Study (CHARLS). *Int J Public Health.* 2023;68:1605572.
 19. Smith L, Shin JI, Lee S, Oh JW, López Sánchez GF, Kostev K, et al. The association of physical multimorbidity with suicidal ideation and suicide attempts in England: A mediation analysis of influential factors. *Int J Soc Psychiatry.* 2023;69(3):523-31.
 20. Wei MY. Multimorbidity, 30-Day Readmissions, and Postdischarge Mortality Among Medicare Beneficiaries Using a New ICD-Coded Multimorbidity-Weighted Index. *J Gerontol A Biol Sci Med Sci.* 2023;78(4):727-34.
 21. Saito Y, Igarashi A, Nakayama T, Fukuma S. Prevalence of multimorbidity and its associations with hospitalisation or death in Japan 2014-2019: a retrospective cohort study using nationwide medical claims data in the middle-aged generation. *BMJ Open.* 2023;13(5):e063216.
 22. Xiao X, Beach J, Senthilselvan A. Mortality among Canadian population with multimorbidity: A retrospective cohort study. *J Multimorb Comorb.* 2023;13:26335565231157626.
 23. Zhao Y, Zhang H, Liu X, Desloge A, Wang Q, Zhao S, et al. The prevalence of cardiometabolic multimorbidity and its associations with health outcomes among women in China. *Front Cardiovasc Med.* 2023;10:922932.
 24. Yang K, Yang S, Chen Y, Cao G, Xu R, Jia X, et al. Multimorbidity Patterns and Associations with Gait, Balance and Lower Extremity Muscle Function in the Elderly: A Cross-Sectional Study in Northwest China. *Int J Gen Med.* 2023;16:3179-92.

25. Kone AP, Martin L, Scharf D, Gabriel H, Dean T, Costa I, et al. The impact of multimorbidity on severe COVID-19 outcomes in community and congregate settings. *Dialogues Health*. 2023;2:100128.
26. Carrasco-Zavala J, Díaz-Rg JA, Bernabe-Ortiz A, Lazo-Porras M. Association between multimorbidity with cognitive dysfunction in a Peruvian population. *J Neurol Sci*. 2023;445:120543.
27. Eyowas FA, Schneider M, Alemu S, Getahun FA. Multimorbidity and adverse longitudinal outcomes among patients attending chronic outpatient medical care in Bahir Dar, Northwest Ethiopia. *Front Med (Lausanne)*. 2023;10:1085888.
28. Ayeni OA, Joffe M, Mapanga W, Chen WC, O'Neil DS, Phakathi B, et al. Multimorbidity and overall survival among women with breast cancer: results from the South African Breast Cancer and HIV Outcomes Study. *Breast Cancer Res*. 2023;25(1):7.
29. Lee SI, Hope H, O'Reilly D, Kent L, Santorelli G, Subramanian A, et al. Maternal and child outcomes for pregnant women with pre-existing multiple long-term conditions: protocol for an observational study in the UK. *BMJ Open*. 2023;13(2):e068718.
30. Stahl-Toyota S, Nikendei C, Nagy E, Bönsel S, Rollmann I, Unger I, et al. Interaction of mental comorbidity and physical multimorbidity predicts length-of-stay in medical inpatients. *PLoS One*. 2023;18(6):e0287234.
31. Palladino R, Pan T, Mercer SW, Atun R, McPake B, Rubba F, et al. Multimorbidity and out-of-pocket expenditure on medicine in Europe: Longitudinal analysis of 13 European countries between 2013 and 2015. *Front Public Health*. 2022;10:1053515.
32. Kazi K, Ali SM, Selby DA, McBeth J, van der Veer S, Dixon WG. Examining the variability of multiple daily symptoms over time among individuals with multiple long-term conditions (MLTC-M/multimorbidity): An exploratory analysis of a longitudinal smartwatch feasibility study. *J Multimorb Comorb*. 2023;13:26335565221150129.
33. Wang Z, Zeng Z. Effects of multimorbidity patterns and socioeconomic status on catastrophic health expenditure of widowed older adults in China. *Front Public Health*. 2023;11:1188248.
34. Tisminetzky M, Gurwitz JH, Tabada G, Reynolds K, Smith DH, Sung SH, et al. Approach to Multimorbidity Burden Classification and Outcomes in Older Adults With Heart Failure. *Med Care*. 2023;61(5):268-78.
35. Zhai X, Zhang Q, Li X, Zhao X. Association between multimorbidity patterns and catastrophic health expenditure among Chinese older adults living alone. *Arch Gerontol Geriatr*. 2023;106:104892.
36. Khondoker M, Macgregor A, Bachmann MO, Hornberger M, Fox C, Shepstone L. Multimorbidity pattern and risk of dementia in later life: an 11-year follow-up study using a large community cohort and linked electronic health records. *J Epidemiol Community Health*. 2023;77(5):285-92.
37. Su Z, Huang L, Zhu J, Cui S. Effects of multimorbidity coexistence on the risk of mortality in the older adult population in China. *Front Public Health*. 2023;11:1110876.

38. Botoseneanu A, Elman MR, Allore HG, Dorr DA, Newsom JT, Nagel CL, et al. Depressive Multimorbidity and Trajectories of Functional Status among Older Americans: Differences by Racial/Ethnic Group. *J Am Med Dir Assoc.* 2023;24(2):250-7.e3.
39. Wang Y, Du M, Qin C, Liu Q, Yan W, Liang W, et al. Associations among socioeconomic status, multimorbidity of non-communicable diseases, and the risk of household catastrophic health expenditure in China: a population-based cohort study. *BMC Health Serv Res.* 2023;23(1):403.
40. Sun M, Wang L, Wang X, Tong L, Jin L, Li B. Trends and all-cause mortality associated with multimorbidity of non-communicable diseases among adults in the United States, 1999-2018: a retrospective cohort study. *Epidemiol Health.* 2023;45:e2023023.
41. Thanakiattiwibun C, Siriussawakul A, Virotjarumart T, Maneeon S, Tantai N, Srinonprasert V, et al. Multimorbidity, healthcare utilization, and quality of life for older patients undergoing surgery: A prospective study. *Medicine (Baltimore).* 2023;102(13):e33389.
42. Patel P, Muhammad T, Sahoo H. The burden of disease-specific multimorbidity among older adults in India and its states: evidence from LASI. *BMC Geriatr.* 2023;23(1):53.
43. Schmidt MG, Franken DL, Olinto MTA, da Costa JSD, Paniz VMV. Impact of multimorbidity on the use of sleep medications among women: a population-based study in Southern Brazil. *Sleep Breath.* 2023;27(3):1135-42.
44. Ronaldson A, Arias de la Torre J, Bendayan R, Yadegarfar ME, Rhead R, Douiri A, et al. Physical multimorbidity, depressive symptoms, and social participation in adults over 50 years of age: findings from the English Longitudinal Study of Ageing. *Aging Ment Health.* 2023;27(1):43-53.
45. da Rosa PPS, Marques LP, Corrêa VP, De Oliveira C, Schneider IJC. Is the combination of depression symptoms and multimorbidity associated with the increase of the prevalence of functional disabilities in Brazilian older adults? A cross-sectional study. *Front Aging.* 2023;4:1188552.
46. Koster F, Bakx PLH, Kok MR, Barreto DL, Weel-Koenders A. Multimorbidity status and annual healthcare expenditures of rheumatoid arthritis patients: a Dutch hospital-centered versus population-based comparison. *Rheumatol Int.* 2023;43(6):1067-76.
47. Veronese N, Koyanagi A, Dominguez LJ, Maggi S, Soysal P, Bolzetta F, et al. Multimorbidity increases the risk of dementia: a 15 year follow-up of the SHARE study. *Age Ageing.* 2023;52(4).
48. Portela D, Pereira Rodrigues P, Freitas A, Costa E, Bousquet J, Fonseca JA, et al. Impact of multimorbidity patterns in hospital admissions: the case study of asthma. *J Asthma.* 2023;60(9):1723-33.
49. Liu X, Zhang J, Zhang S, Peng S, Pei M, Dai C, et al. Quality of life and associated factors among community-dwelling adults with multimorbidity in Shanghai, China: A cross-sectional study. *Nurs Open.* 2023;10(8):5328-37.

50. Li H, Chen J, Su D, Xu X, He R. Is Co-Occurrence of Frailty and Multimorbidity Associated with Increased Risk of Catastrophic Health Expenditure? A Prospective Cohort Analysis in China. *Risk Manag Healthc Policy*. 2023;16:357-68.
51. Barbagallo M, Smith L, Koyanagi A, Dominguez LJ, Fazzari A, Marrone E, et al. Multimorbidity increased the risk of urinary incontinence in community-dwelling adults: Results from the English Longitudinal Study On Ageing. *Maturitas*. 2023;169:40-5.
52. Tsai YC, Chen YM, Wen CJ, Wu MC, Chou YC, Chen JH, et al. Multimorbidity and prior falls correlate with risk of 30-day hospital readmission in aged 80+: A prospective cohort study. *J Formos Med Assoc*. 2023.
53. Griffin O, Li T, Beveridge A, D NC. Higher levels of multimorbidity are associated with increased risk of readmission for older people during post-acute transitional care. *Eur Geriatr Med*. 2023;14(3):575-82.
54. Salari P, Henrard S, O'Mahony C, Welsing P, Bhadhuri A, Jungo KT, et al. Healthcare Costs and Health-Related Quality of Life in Older Multimorbid Patients After Hospitalization. *Health Serv Insights*. 2023;16:11786329231153278.
55. Chang AY, Bryazka D, Dieleman JL. Estimating health spending associated with chronic multimorbidity in 2018: An observational study among adults in the United States. *PLoS Med*. 2023;20(4):e1004205.
56. England BR, Yun H, Chen L, Vanderbleek J, Michaud K, Mikuls TR, et al. Influence of Multimorbidity on New Treatment Initiation and Achieving Target Disease Activity Thresholds in Active Rheumatoid Arthritis: A Cohort Study Using the Rheumatology Informatics System for Effectiveness Registry. *Arthritis Care Res (Hoboken)*. 2023;75(2):231-9.
57. Glattacker M, Giesler JM, Bablok I, Kivelitz L, Schaefer J, Kanat M, et al. Availability and quality of assessment instruments on patient-centredness in older adults with multimorbidity: a systematic review. *Age Ageing*. 2023;52(3).
58. Alemi F, Avramovic S, Schwartz M. Predicting 6-month mortality of patients from their medical history: Comparison of multimorbidity index to Deyo-Charlson index. *Medicine (Baltimore)*. 2023;102(5):e32687.
59. Thompson ED, Miller AE, Reisman DS. Characterizing the impact of multiple chronic conditions on return to participation in chronic stroke survivors. *Top Stroke Rehabil*. 2023:1-7.
60. Newman MG, Porucznik CA, Date AP, Abdelrahman S, Schliep KC, VanDerslice JA, et al. Generating Older Adult Multimorbidity Trajectories Using Various Comorbidity Indices and Calculation Methods. *Innov Aging*. 2023;7(3):igad023.
61. Chalitsios CV, Santoso C, Nartey Y, Khan N, Simpson G, Islam N, et al. Trajectories of multiple long-term conditions and mortality in older adults: A retrospective cohort study using English Longitudinal Study of Ageing (ELSA). *medRxiv*. 2023.
62. Valletta M, Vetrano DL, Xia X, Rizzuto D, Roso-Llorach A, Calderón-Larrañaga A, et al. Multimorbidity patterns and 18-year transitions from normal cognition to dementia and death: A population-based study. *J Intern Med*. 2023;294(3):326-35.

63. Han Y, Hu Y, Yu C, Sun D, Pang Y, Pei P, et al. Duration-dependent impact of cardiometabolic diseases and multimorbidity on all-cause and cause-specific mortality: a prospective cohort study of 0.5 million participants. *Cardiovasc Diabetol*. 2023;22(1):135.
64. Sison SDM, Lin KJ, Najafzadeh M, Ko D, Patorno E, Bessette LG, et al. Common non-cardiovascular multimorbidity groupings and clinical outcomes in older adults with major cardiovascular disease. *J Am Geriatr Soc*. 2023.
65. Thomsen EL, Boisen KA, Andersen A, Jørgensen SE, Teilmann G, Michelsen SI. Low Level of Well-being in Young People With Physical-Mental Multimorbidity: A Population-Based Study. *J Adolesc Health*. 2023;73(4):707-14.
66. Ahrén J, Pirouzifard M, Holmquist B, Sundquist J, Halling A, Sundquist K, et al. A hypothesis - generating Swedish extended national cross-sectional family study of multimorbidity severity and venous thromboembolism. *BMJ Open*. 2023;13(6):e072934.
67. Tsang RS, Joy M, Whitaker H, Sheppard JP, Williams J, Sherlock J, et al. Development of a modified Cambridge Multimorbidity Score for use with SNOMED CT: an observational English primary care sentinel network study. *Br J Gen Pract*. 2023;73(731):e435-e42.
68. Henry AMS, Allodji RS, de Vathaire F, Boutron-Ruault MC, Journy NMY, Tran TV. Multi-Morbidity and Risk of Breast Cancer among Women in the UK Biobank Cohort. *Cancers (Basel)*. 2023;15(4).
69. Tsai MH, Grunert C, Vo JB, Moore JX, Guha A. Presence of Multi-Morbidities and Colorectal Cancer Screening Utilization among Breast Cancer Survivors. *Cancers (Basel)*. 2023;15(7).
70. O'Dwyer MC, Furgal A, Furst W, Ramakrishnan M, Capizzano N, Sen A, et al. The Prevalence of Periodontitis Among US Adults with Multimorbidity Using NHANES Data 2011-2014. *J Am Board Fam Med*. 2023;36(2):313-24.
71. Huberty S, Freystätter G, Wieczorek M, Dawson-Hughes B, Kanis JA, Rizzoli R, et al. Association Between Multimorbidity and Rate of Falls: A 3-Year 5-Country Prospective Study in Generally Healthy and Active Community-Dwelling Adults Aged ≥ 70 Years. *J Am Med Dir Assoc*. 2023;24(6):804-10.e4.
72. Zhang Z, Yuan M, Shi K, Xu C, Lin J, Shi Z, et al. Association between multimorbidity trajectories, healthcare utilization, and health expenditures among middle-aged and older adults: China Health and Retirement Longitudinal Study. *J Affect Disord*. 2023;330:24-32.
73. Shah S, Abbas G, Aslam A, Randhawa FA, Khan FU, Khurram H, et al. Assessment of health-related quality of life among patients with obesity, hypertension and type 2 diabetes mellitus and its relationship with multimorbidity. *PLoS One*. 2023;18(8):e0289502.

74. Ho HE, Yeh CJ, Cheng-Chung Wei J, Chu WM, Lee MC. Association between multimorbidity patterns and incident depression among older adults in Taiwan: the role of social participation. *BMC Geriatr.* 2023;23(1):177.
75. Ji Y, Feng Y, Wu S, Wu Y, Wang J, Zhao X, et al. Longitudinal trajectories of depressive symptoms: the role of multimorbidity, mobility and subjective memory. *BMC Geriatr.* 2023;23(1):22.
76. Craig LS, Cunningham-Myrie CA, Theall KP, Gustat J, Hernandez JH, Hotchkiss DR. Multimorbidity patterns and health-related quality of life in Jamaican adults: a cross sectional study exploring potential pathways. *Front Med (Lausanne).* 2023;10:1094280.
77. Craig LS, Cunningham-Myrie CA, Theall KP, Gustat J, Hernandez JH, Hotchkiss DR. Multimorbidity patterns and health-related quality of life in Jamaican adults: a cross sectional study exploring potential pathways. *Front Med (Lausanne).* 2023;10:1094280.
78. SadrAzar A, Sanaie S, Tutunchi H, Sheikh B, Faramarzi E, Jourabchi-Ghadim N. Is early age at menarche associated with multimorbidity? Findings from the Azar Cohort study. *Eur J Obstet Gynecol Reprod Biol.* 2023;287:46-51.
79. Lee JT, Ishida M, Haregu T, Pati S, Zhao Y, Palladino R, et al. Functional limitation as a mediator of the relationship between multimorbidity on health-related quality of life in Australia: evidence from a national panel mediation analysis. *Front Med (Lausanne).* 2023;10:1151310.
80. Kumar M, Kumari N, Chanda S, Dwivedi LK. Multimorbidity combinations and their association with functional disabilities among Indian older adults: evidence from Longitudinal Ageing Study in India (LASI). *BMJ Open.* 2023;13(2):e062554.
81. Arshadipour A, Thorand B, Linkohr B, Ladwig KH, Heier M, Peters A. Multimorbidity patterns and mortality in older adults: Results from the KORA-Age study. *Front Nutr.* 2023;10:1146442.
82. Ma T, He L, Luo Y, Fu D, Huang J, Zhang G, et al. Frailty, an Independent Risk Factor in Progression Trajectory of Cardiometabolic Multimorbidity: A Prospective Study of UK Biobank. *J Gerontol A Biol Sci Med Sci.* 2023.
83. Miyawaki CE, Garcia JM, Nguyen KN, Park VT, Markides KS. Multiple Chronic Conditions and Disability among Vietnamese Older Adults: Results from the Vietnamese Aging and Care Survey (VACS). *J Racial Ethn Health Disparities.* 2023.
84. Baneshi MR, Eynstone-Hinkins J, McElwee P, Mishra GD, Moran L, Waller M, et al. What can death records tell us about multimorbidity? *J Epidemiol Community Health.* 2023;77(8):507-14.
85. Downer MB, Li L, Carter S, Beebe S, Rothwell PM. Associations of Multimorbidity With Stroke Severity, Subtype, Premorbid Disability, and Early Mortality: Oxford Vascular Study. *Neurology.* 2023;101(6):e645-e52.
86. So WKW, Au DWH, Chan DNS, Ng MSN, Choi KC, Xing W, et al. Financial well-being as a mediator of the relationship between multimorbidity and health-related quality of life in people with cancer. *Cancer Med.* 2023;12(14):15579-87.

2. Epidemiology of multimorbidity prediction and associations with multimorbidity

1. Kuan V, Denaxas S, Patalay P, Nitsch D, Mathur R, Gonzalez-Izquierdo A, et al. Identifying and visualising multimorbidity and comorbidity patterns in patients in the English National Health Service: a population-based study. *Lancet Digit Health*. 2023;5(1):e16-e27.
2. Chen W, Wang X, Chen J, You C, Ma L, Zhang W, et al. Household air pollution, adherence to a healthy lifestyle, and risk of cardiometabolic multimorbidity: Results from the China health and retirement longitudinal study. *Sci Total Environ*. 2023;855:158896.
3. Russell CD, Lone NI, Baillie JK. Comorbidities, multimorbidity and COVID-19. *Nat Med*. 2023;29(2):334-43.
4. Franco Y, Jang Y, Saenz JL, Ho JY. The Relationship Between Multimorbidity and Types of Chronic Diseases and Self-Rated Memory. *Res Aging*. 2023;45(2):149-60.
5. Kantilafti M, Giannakou K, Chrysostomou S. Multimorbidity and food insecurity in adults: A systematic review and meta-analysis. *PLoS One*. 2023;18(7):e0288063.
6. MacKinnon MJ, Picchio CA, Nomah DK, Segura AR, van Selm L, Fernández E, et al. Chronic conditions and multimorbidity among West African migrants in greater Barcelona, Spain. *Front Public Health*. 2023;11:1142672.
7. Delpino FM, Dos Santos Rodrigues AP, Petarli GB, Machado KP, Flores TR, Batista SR, et al. Overweight, obesity and risk of multimorbidity: A systematic review and meta-analysis of longitudinal studies. *Obes Rev*. 2023;24(6):e13562.
8. Hag Mohamed S, Sabbah W. Is tooth loss associated with multiple chronic conditions? *Acta Odontol Scand*. 2023;81(6):443-8.
9. Obasohan PE, Walters SJ, Jacques R, Khatab K. Risk Factors Associated with Multimorbidity among Children Aged Under-Five Years in Sub-Saharan African Countries: A Scoping Review. *Int J Environ Res Public Health*. 2023;20(2).
10. Murali KP, Yu G, Merriman JD, Vorderstrasse A, Kelley AS, Brody AA. Multiple Chronic Conditions among Seriously Ill Adults Receiving Palliative Care. *West J Nurs Res*. 2023;45(1):14-24.
11. Álvarez-Gálvez J, Ortega-Martín E, Carretero-Bravo J, Pérez-Muñoz C, Suárez-Lledó V, Ramos-Fiol B. Social determinants of multimorbidity patterns: A systematic review. *Front Public Health*. 2023;11:1081518.
12. Grossardt BR, Chamberlain AM, Boyd CM, Bobo WV, St Sauver JL, Rocca WA. Convergence of four measures of multi-morbidity. *J Multimorb Comorb*. 2023;13:26335565221150124.
13. Zhou Y, Jin Y, Zhu Y, Fang W, Dai X, Lim C, et al. Sleep Problems Associate With Multimorbidity: A Systematic Review and Meta-analysis. *Public Health Rev*. 2023;44:1605469.

14. Mira R, Newton T, Sabbah W. Socioeconomic and Ethnic Inequalities in the Progress of Multimorbidity and the Role of Health Behaviors. *J Am Med Dir Assoc.* 2023;24(6):811-5.
15. Stannard S, Berrington A, Paranjothy S, Owen R, Fraser S, Hoyle R, et al. A conceptual framework for characterising lifecourse determinants of multiple long-term condition multimorbidity. *J Multimorb Comorb.* 2023;13:26335565231193951.
16. Zhang Y, Chen H, Lim CCW, Carrillo-Larco RM, Yan LL, Mishra GD, et al. Intake of sugary beverages with chronic conditions and multimorbidity: a prospective cohort study of UK Biobank. *Int J Epidemiol.* 2023.
17. Xu X, Mishra GD, Holt-Lunstad J, Jones M. Social relationship satisfaction and accumulation of chronic conditions and multimorbidity: a national cohort of Australian women. *Gen Psychiatr.* 2023;36(1):e100925.
18. Sieber S, Roquet A, Lampraki C, Jopp DS. Multimorbidity and Quality of Life: The Mediating Role of ADL, IADL, Loneliness, and Depressive Symptoms. *Innov Aging.* 2023;7(4):igad047.
19. Moreno-Juste A, Gimeno-Miguel A, Poblador-Plou B, Calderón-Larrañaga A, Cano Del Pozo M, Forjaz MJ, et al. Multimorbidity, social determinants and intersectionality in chronic patients. Results from the EpiChron Cohort. *J Glob Health.* 2023;13:04014.
20. Taloyan M, Alinaghizadeh H, Wettermark B, Jan Hasselström JH, Bertilsson BC. Physical-mental multimorbidity in a large primary health care population in Stockholm County, Sweden. *Asian J Psychiatr.* 2023;79:103354.
21. Khalid S, Innes K, Umer A, Lilly C, Gross D, Sambamoorthi U. --Assessment of Joint and Interactive Effects of Multimorbidity and Chronic Pain on ADRD Risk in the Elder Population. *Res Sq.* 2023.
22. Geng Y, Jie W, He Y, Zhou X, Zhang S, Dong W, et al. Prevalence and Patterns of Multimorbidity Among Adults Aged 18 Years and Older - China, 2018. *China CDC Wkly.* 2023;5(2):35-9.
23. Smith L, Shin JI, López Sánchez GF, Schuch F, Tully M, Barnett Y, et al. Physical Multimorbidity and Sarcopenia among Adults Aged ≥ 65 Years in Low- and Middle-Income Countries. *Gerontology.* 2023;69(4):406-15.
24. Wang S, Wu Y, Shi M, He Z, Hao L, Wu X. Association between Nutrition and Health Knowledge and Multiple Chronic Diseases: A Large Cross-Sectional Study in Wuhan, China. *Nutrients.* 2023;15(9).
25. Hayanga B, Stafford M, Bécares L. Ethnic inequalities in multiple long-term health conditions in the United Kingdom: a systematic review and narrative synthesis. *BMC Public Health.* 2023;23(1):178.
26. Shirazi D, Haudenschild C, Lynch DH, Fanous M, Kahkoska AR, Jimenez D, et al. Obesity, multiple chronic conditions, and the relationship with physical function: Data from the national health and aging trends survey. *Arch Gerontol Geriatr.* 2023;107:104913.

27. Wieczorek M, Meier C, Vilpert S, Reinecke R, Borrat-Besson C, Maurer J, et al. Association between multiple chronic conditions and insufficient health literacy: cross-sectional evidence from a population-based sample of older adults living in Switzerland. *BMC Public Health*. 2023;23(1):253.
28. Botoseneanu A, Markwardt S, Quiñones AR. Multimorbidity and Functional Disability among Older Adults: The Role of Inflammation and Glycemic Status - An Observational Longitudinal Study. *Gerontology*. 2023;69(7):826-38.
29. Luo Y, Chen Y, Wang K, De Fries CM, Huang Z, Xu H, et al. Associations between multimorbidity and frailty transitions among older Americans. *J Cachexia Sarcopenia Muscle*. 2023;14(2):1075-82.
30. Méndez-Flores JJ, Marroquín-Cosar RE, Bernabé-Ortiz A. Multimorbidity and Sleep Patterns among Adults in a Peruvian Semi-Urban Area. *Sleep Sci*. 2023;16(1):51-8.
31. Liu L, Wu X, Li HF, Zhao Y, Li GH, Cui WL, et al. Trends in the Prevalence of Chronic Non-Communicable Diseases and Multimorbidity across Socioeconomic Gradients in Rural Southwest China. *J Nutr Health Aging*. 2023;27(6):457-62.
32. Zhou Y, Ni Y, Jones M, Dai X, Lim CCW, Zhu A, et al. Sleep behaviors and progression of multimorbidity in middle-aged and older adults: A prospective cohort study from China. *J Gerontol A Biol Sci Med Sci*. 2023.
33. Pengpid S, Peltzer K, Anantanasuwong D. Bidirectional Association Between Probable Depression and Multimorbidity Among Middle-Aged and Older Adults in Thailand. *J Multidiscip Healthc*. 2023;16:11-9.
34. Pedersen SE, Aaby A, Friis K, Maindal HT. Multimorbidity and health literacy: A population-based survey among 28,627 Danish adults. *Scand J Public Health*. 2023;51(2):165-72.
35. Arias de la Torre J, Ronaldson A, Alonso J, Dregan A, Mudway I, Valderas JM, et al. The relationship between air pollution and multimorbidity: Can two birds be killed with the same stone? *Eur J Epidemiol*. 2023;38(4):349-53.
36. Ko S, Park S, Kim J, Subramanian SV, Kim R. Spousal multimorbidity and depressive symptoms among older Indian couples: Do one's own health status and sex matter? *Geroscience*. 2023.
37. Rong P, Chen Y, Dang Y, Duan X, Yan M, Zhao Y, et al. Geographical specific association between lifestyles and multimorbidity among adults in China. *PLoS One*. 2023;18(6):e0286401.
38. Muhammad T, Meher T, Siddiqui LA. Mediation of the association between multimorbidity and sleep problems by pain and depressive symptoms among older adults: Evidence from the Longitudinal Aging Study in India, wave- 1. *PLoS One*. 2023;18(2):e0281500.
39. Idalino SCC, Canever JB, Cândido LM, Wagner KJP, de Souza Moreira B, Danielewicz AL, et al. Association between sleep problems and multimorbidity patterns in older adults. *BMC Public Health*. 2023;23(1):978.

40. Peng P, Li J, Wang L, Ai Z, Tang C, Tang S. An analysis of socioeconomic factors on multiple chronic conditions and its economic burden: evidence from the National Health Service Survey in Yunnan Province, China. *Front Public Health*. 2023;11:1114969.
41. Ahmed A, Khan HTA, Lawal M. Systematic Literature Review of the Prevalence, Pattern, and Determinant of Multimorbidity Among Older Adults in Nigeria. *Health Serv Res Manag Epidemiol*. 2023;10:23333928231178774.
42. Smith L, Shin JI, Jacob L, López Sánchez GF, Schuch F, Tully MA, et al. Food insecurity and physical multimorbidity among adults aged ≥ 50 years from six low- and middle-income countries. *Eur J Nutr*. 2023;62(1):489-97.
43. Hu K, He Q. Rural-Urban Disparities in Multimorbidity Associated With Climate Change and Air Pollution: A Longitudinal Analysis Among Chinese Adults Aged 45. *Innov Aging*. 2023;7(6):igad060.
44. Gummidi B, Gautam V, John O, Ghosh A, Jha V. Patterns of multimorbidity among a community-based cohort in rural India. *J Multimorb Comorb*. 2023;13:26335565221149623.
45. Jin Y, Liang J, Hong C, Liang R, Luo Y. Cardiometabolic multimorbidity, lifestyle behaviours, and cognitive function: a multicohort study. *Lancet Healthy Longev*. 2023;4(6):e265-e73.
46. Zou X, Zou S, Guo Y, Peng D, Min H, Zhang R, et al. Association of smoking status and nicotine dependence with multi-morbidity in China: A nationally representative cross-sectional study. *Tob Induc Dis*. 2023;21:81.
47. Manning SE, Wang H, Dwibedi N, Shen C, Wiener RC, Findley PA, et al. Association of multimorbidity with the use of health information technology. *Digit Health*. 2023;9:20552076231163797.
48. Amirzada M, Buczak-Stec E, König HH, Hajek A. Multimorbidity patterns in the German general population aged 40 years and over. *Arch Gerontol Geriatr*. 2023;114:105067.
49. Vega-Cabello V, Struijk EA, Caballero FF, Lana A, Arias-Fernández L, Banegas JR, et al. Dietary Micronutrient Adequacy and Risk of Multimorbidity in Community-dwelling Older Adults. *Am J Clin Nutr*. 2023;118(1):34-40.
50. Chen C, Zhao Y, Su B, Wu Y, Zhong P, Zheng X. Association between multimorbidity and memory-related diseases among middle-aged and older adults: Evidence from the China Health and Retirement Longitudinal Study. *Front Public Health*. 2023;11:1115207.
51. Smith L, Shin JI, López Sánchez GF, Kostev K, Jacob L, Tully MA, et al. Physical multimorbidity, suicidal ideation, and suicide attempts among adults aged ≥ 50 years from low- and middle-income countries. *Int J Geriatr Psychiatry*. 2023;38(1):e5873.
52. Niebuur J, Vonk JM, Du Y, de Bock GH, Lunter G, Krabbe PFM, et al. Lifestyle factors related to prevalent chronic disease multimorbidity: A population-based cross-sectional study. *PLoS One*. 2023;18(7):e0287263.

53. St Sauver JL, Grossardt BR, Chamberlain AM, Kapoor E, Rocca WA. Synergistic interactions of obesity with sex, education, and smoking and accumulation of multimorbidity (MM) across the lifespan. *J Multimorb Comorb*. 2023;13:26335565231160139.
54. Chen M, Guo J, Lin Y, Xu J, Hu Y, Yang L, et al. Life-course fertility and multimorbidity among middle-aged and elderly women in China: Evidence from China health and retirement longitudinal study. *Front Public Health*. 2023;11:1090549.
55. Zhong Y, Qin G, Xi H, Cai D, Wang Y, Wang T, et al. Prevalence, patterns of multimorbidity and associations with health care utilization among middle-aged and older people in China. *BMC Public Health*. 2023;23(1):537.
56. Hu Y, He H, Ou Q, Nai J, Pan L, Chen X, et al. Prevalence of common chronic disease and multimorbidity patterns in Guangdong province with three typical cultures: analysis of data from the Diverse Life-Course Cohort study. *Front Public Health*. 2023;11:1163791.
57. O'Regan A, Glynn L, Niranjam V, O'Connor R, Hannigan A. How often do patients attend general practice, how often are they referred to hospital, and how do multimorbidity and polypharmacy affect general practice attendance and referral rates? *Rural Remote Health*. 2023;23(1):8106.
58. Otieno P, Asiki G, Wekesah F, Wilunda C, Sanya RE, Wami W, et al. Multimorbidity of cardiometabolic diseases: a cross-sectional study of patterns, clusters and associated risk factors in sub-Saharan Africa. *BMJ Open*. 2023;13(2):e064275.
59. Reyes-Ortiz CA, Lee T, Campo-Arias A, Ocampo-Chaparro JM, Luque JS. Racial Discrimination and Multimorbidity Among Older Adults in Colombia: A National Data Analysis. *Prev Chronic Dis*. 2023;20:E34.
60. Caballero FF, Lana A, Struijk EA, Arias-Fernández L, Yévenes-Briones H, Cárdenas-Valladolid J, et al. Prospective Association Between Plasma Concentrations of Fatty Acids and Other Lipids, and Multimorbidity in Older Adults. *J Gerontol A Biol Sci Med Sci*. 2023.
61. Awuviry-Newton K, Amponsah M, Amoah D, Dintrans PV, Afram AA, Byles J, et al. Physical activity and functional disability among older adults in Ghana: The moderating role of multi-morbidity. *PLOS Glob Public Health*. 2023;3(3):e0001014.
62. Mpinganjira MG, Chirwa T, Kabudula CW, Gómez-Olivé FX, Tollman S, Francis JM. Association of alcohol use and multimorbidity among adults aged 40 years and above in rural South Africa. *Sci Rep*. 2023;13(1):7807.
63. Lin SL, Fang L. Chronic Care for All? The Intersecting Roles of Race and Immigration in Shaping Multimorbidity, Primary Care Coordination, and Unmet Health Care Needs Among Older Canadians. *J Gerontol B Psychol Sci Soc Sci*. 2023;78(2):302-18.
64. Chen Y, Pan M, He Y, Dong X, Hu Z, Hou J, et al. Disease Burden and the Accumulation of Multimorbidity of Noncommunicable Diseases in a Rural Population in Henan, China: Cross-sectional Study. *JMIR Public Health Surveill*. 2023;9:e43381.

65. Hajek A, König HH. Frequency and Correlates of Multimorbidity Among the Oldest Old: Study Findings from the Representative "Survey on Quality of Life and Subjective Well-Being of the Very Old in North Rhine-Westphalia (NRW80+)". *Clin Interv Aging*. 2023;18:41-8.
66. Fehlberg BK, Barros MBA, Lima MG. Health behaviors and multimorbidity associated with bruxism: Population-based study. *Oral Dis*. 2023;29(1):245-53.
67. Somi M, Ostadrahimi A, Gilani N, Haji Kamanaj A, Hassannezhad S, Faramarzi E. Patterns and Predictors of Multimorbidity in the Azar Cohort. *Arch Iran Med*. 2023;26(1):8-15.
68. Caballero FF, Lana A, Struijk EA, Arias-Fernández L, Cárdenas-Valladolid J, Salinero-Fort M, et al. Multimorbidity Patterns in Older Adults: the Role of Social Variables and Lifestyle Behaviors. *Gerontology*. 2023;69(6):716-27.
69. Murali KP, Merriman JD, Yu G, Vorderstrasse A, Kelley AS, Brody AA. Complex Care Needs at the End of Life for Seriously Ill Adults With Multiple Chronic Conditions. *J Hosp Palliat Nurs*. 2023;25(3):146-55.
70. Roomaney RA, van Wyk B, Cois A, Pillay van-Wyk V. Multimorbidity patterns in South Africa: A latent class analysis. *Front Public Health*. 2022;10:1082587.
71. Alarilla A, Mondor L, Knight H, Hughes J, Koné AP, Wodchis WP, et al. Socioeconomic gradient in mortality of working age and older adults with multiple long-term conditions in England and Ontario, Canada. *BMC Public Health*. 2023;23(1):472.
72. Miller MJ, Eberhart LG, Jefferson CR, Horberg MA. Beyond Antiretroviral Treatment: Patterns and Factors Associated With Composite Medication Adherence Before and During the COVID-19 Pandemic in Patients With HIV With Multiple Chronic Conditions. *J Acquir Immune Defic Syndr*. 2023;92(5):405-13.
73. Caballero FF, Lana A, Struijk EA, Arias-Fernández L, Yévenes-Briones H, Cárdenas-Valladolid J, et al. Prospective Association Between Plasma Amino Acids and Multimorbidity in Older Adults. *J Gerontol A Biol Sci Med Sci*. 2023;78(4):637-44.
74. Micklesfield LK, Munthali R, Agongo G, Asiki G, Boua P, Choma SS, et al. Identifying the prevalence and correlates of multimorbidity in middle-aged men and women: a cross-sectional population-based study in four African countries. *BMJ Open*. 2023;13(3):e067788.
75. Li XL, Huang H, Lu Y, Stafford RS, Lima SM, Mota C, et al. Prediction of Multimorbidity in Brazil: Latest Fifth of a Century Population Study. *JMIR Public Health Surveill*. 2023;9:e44647.
76. Bliuc D, Tran T, Chen W, Alarkawi D, Alajlouni DA, Blyth F, et al. The association between multimorbidity and osteoporosis investigation and treatment in high-risk fracture patients in Australia: A prospective cohort study. *PLoS Med*. 2023;20(1):e1004142.
77. Jegede O, Stefanovics EA, Rhee TG, Rosenheck RA. Multimorbidity and Correlates of Comorbid Depression and Generalized Anxiety Disorder in a Nationally Representative US Sample. *J Nerv Ment Dis*. 2023;211(5):355-61.

78. Koné AP, Scharf D, Tan A. Multimorbidity and Complexity Among Patients with Cancer in Ontario: A Retrospective Cohort Study Exploring the Clustering of 17 Chronic Conditions with Cancer. *Cancer Control*. 2023;30:10732748221150393.
79. Cheong CY, Yap P, Yap KB, Ng TP. Associations of Inflammatory, Metabolic, Malnutrition, and Frailty Indexes with Multimorbidity Incidence and Progression, and Mortality Impact: Singapore Longitudinal Aging Study. *Gerontology*. 2023;69(4):416-27.
80. Otieno P, Asiki G, Aheto JMK, Wilunda C, Sanya RE, Wami W, et al. Cardiometabolic Multimorbidity Associated with Moderate and Severe Disabilities: Results from the Study on Global AGEing and Adult Health (SAGE) Wave 2 in Ghana and South Africa. *Glob Heart*. 2023;18(1):9.
81. Xi JY, Zhong SR, Zhou YX, Lin X, Hao YT. Effects of family multi-generational relationship on multimorbidity and healthy life expectancy for second generations: insight from the China Health and Retirement Longitudinal Study. *BMC Geriatr*. 2023;23(1):100.
82. Shang B, Chen R, Luo C, Lv F, Wu J, Shao X, et al. The relationship between alexithymia, depression, anxiety, and stress in elderly with multiple chronic conditions in China: a network analysis. *Front Psychiatry*. 2023;14:1209936.
83. Chowdhury SR, Chandra Das D, Sunna TC, Beyene J, Hossain A. Global and regional prevalence of multimorbidity in the adult population in community settings: a systematic review and meta-analysis. *EClinicalMedicine*. 2023;57:101860.
84. Ramadan OI, Rosenbaum PR, Reiter JG, Jain S, Hill AS, Hashemi S, et al. Redefining Multimorbidity in Older Surgical Patients. *J Am Coll Surg*. 2023;236(5):1011-22.
85. Chandrasekar R, Lacey RE, Chaturvedi N, Hughes AD, Patalay P, Khanolkar AR. Adverse childhood experiences and the development of multimorbidity across adulthood-a national 70-year cohort study. *Age Ageing*. 2023;52(4).
86. Felez-Nobrega M, Koyanagi A. Health status and quality of life in comorbid physical multimorbidity and depression among adults aged ≥ 50 years from low- and middle-income countries. *Int J Soc Psychiatry*. 2023;69(5):1250-9.
87. Marques LP, de Aguiar OB, Paula DP, Oliveira FEG, Chor D, Benseñor I, et al. Multimorbidity prevalence and patterns at the baseline of the Brazilian Longitudinal Study of Adult Health (ELSA-Brasil). *J Multimorb Comorb*. 2023;13:26335565231173845.
88. Ryu S, Morey BN, Lee GE, Kawachi I, Redline S, Lee S. The Cross-Sectional Association of Sleep Disturbance and Sleep Apnea With Complex Multimorbidity Among Chinese and Korean Americans. *Am J Epidemiol*. 2023;192(3):420-9.
89. Wu T, Zhang Y, Zhou Y, Zhang Z, Cheng Y, Liu X, et al. Solid Fuel Use and the Progression of Multimorbidity in Middle-Aged Chinese Participants: A Prospective Cohort Study. *Int J Public Health*. 2022;67:1605206.
90. Franken DL, Dias-da-Costa JS, Olinto MTA, Sturmer J, Bordin RB, Paniz VMV. Multimorbidity patterns: obesity as the main modifiable risk factor in adult women in Southern Brazil. *Arch Endocrinol Metab*. 2023;67(5):e000642.

91. Moftakhar L, Rezaeianzadeh R, Ghoddusi Johari M, Hosseini SV, Rezaianzadeh A. Epidemiology and predictors of multimorbidity in Kharameh cohort study: A population-based cross-sectional study in southern Iran. *Health Sci Rep.* 2023;6(1):e988.
92. Atkinson L, Joshi D, Raina P, Griffith LE, MacMillan H, Gonzalez A. Social engagement and allostatic load mediate between adverse childhood experiences and multimorbidity in mid to late adulthood: the Canadian Longitudinal Study on Aging. *Psychol Med.* 2023;53(4):1437-47.
93. Han BH, Bronson J, Washington L, Yu M, Kelton K, Tsai J, et al. Co-occurring Medical Multimorbidity, Mental Illness, and Substance Use Disorders Among Older Criminal Legal System-Involved Veterans. *Med Care.* 2023;61(7):477-83.
94. MacRae C, McMinn M, Mercer SW, Henderson D, McAllister DA, Ho I, et al. The impact of varying the number and selection of conditions on estimated multimorbidity prevalence: A cross-sectional study using a large, primary care population dataset. *PLoS Med.* 2023;20(4):e1004208.
95. Jin C, Dai X, Mishra GD, Wang Y, Xu X. Childhood socioeconomic disadvantage and risk of physical multimorbidity in later life: The mediating role of depression. *Maturitas.* 2023;167:17-23.
96. MacRae C, Mercer SW, Henderson D, McMinn M, Morales DR, Jefferson E, et al. Age, sex, and socioeconomic differences in multimorbidity measured in four ways: UK primary care cross-sectional analysis. *Br J Gen Pract.* 2023;73(729):e249-e56.
97. Li YT, Hou MH, Lu YX, Chen PR, Dai ZY, Yang LF, et al. Multimorbidity of Allergic Conditions in Urban Citizens of Southern China: A Real-World Cross-Sectional Study. *J Clin Med.* 2023;12(6).
98. Zheng Y, Zhou Z, Wu T, Zhong K, Hu H, Zhang H, et al. Association between composite lifestyle factors and cardiometabolic multimorbidity in Chongqing, China: A cross-sectional exploratory study in people over 45 years and older. *Front Public Health.* 2023;11:1118628.
99. Stumpf FMM, de Oliveira ASD, Faerstein E, Curioni CC. Cross-sectional associations between body mass index, waist circumference, and multimorbidity: Pró-Saúde study. *PeerJ.* 2023;11:e14744.
100. Zöller B, Pirouzifard M, Holmquist B, Sundquist J, Halling A, Sundquist K. Familial aggregation of multimorbidity in Sweden: national explorative family study. *BMJ Med.* 2023;2(1):e000070.
101. Alamnia TT, Sargent GM, Kelly M. Patterns of Non-Communicable Disease, Multimorbidity, and Population Awareness in Bahir Dar, Northwest Ethiopia: A Cross-Sectional Study. *Int J Gen Med.* 2023;16:3013-31.
102. Lee MR, Jung SM. Obstructive sleep apnea related to mental health, health-related quality of life and multimorbidity: A nationwide survey of a representative sample in Republic of Korea. *PLoS One.* 2023;18(6):e0287182.

103. Baré M, Lleal M, Sevilla-Sánchez D, Ortonobes S, Herranz S, Ferrandez O, et al. Sex Differences in Multimorbidity, Inappropriate Medication and Adverse Outcomes of Inpatient Care: MoPIM Cohort Study. *Int J Environ Res Public Health*. 2023;20(4).
104. Pereira CC, Pedroso CF, Batista SRR, Guimarães RA. Prevalence and factors associated with multimorbidity in adults in Brazil, according to sex: a population-based cross-sectional survey. *Front Public Health*. 2023;11:1193428.
105. Delpino FM, Caputo EL, Arcêncio RA, Cassuriaga J, Huckembeck CM, Nunes BP, et al. Association of Sleep Duration and Use of Sleeping Medication with Multimorbidity in Adults: Results from the PAMPA (Brazil) Cohort Study. *Sleep Sci*. 2023;16(1):68-74.
106. Zhou J, Song D, Ma J, Zhang G, Wu C, Chen Q, et al. Research trends in the mental health and multimorbidity of older people from 2002 to 2022: A bibliometric analysis via CiteSpace. *Front Psychiatry*. 2023;14:1117554.
107. Li H, Li S, Yang H, Zhang Y, Ma Y, Hou Y, et al. Association of Ultra-Processed Food Intake with Cardiovascular and Respiratory Disease Multimorbidity: A Prospective Cohort Study. *Mol Nutr Food Res*. 2023;67(11):e2200628.
108. Neba RA, Warner M, Manning SE, Wiener RC, Sambamoorthi U. The Association of Multimorbidity With Whole Health Activities Among Adults in the United States: Evidence From the NHIS and BRFSS. *Glob Adv Integr Med Health*. 2023;12:27536130231156857.
109. Rizzo A, Jing B, Boscardin WJ, Shah SJ, Steinman MA. Can markers of disease severity improve the predictive power of claims-based multimorbidity indices? *J Am Geriatr Soc*. 2023;71(3):845-57.
110. Geiger I, Flemming R, Schüttig W, Sundmacher L. Regional variations in multimorbidity burden among office-based physicians in Germany. *Eur J Public Health*. 2023;33(3):389-95.
111. Hsieh PI, Chen YC, Chen TF, Chiou JM, Chen JH. Multimorbid Patterns and Cognitive Performance in the Presence of Informative Dropout Among Community-Dwelling Taiwanese Older Adults. *Innov Aging*. 2023;7(2):igad012.
112. Sharma SK, Nambiar D, Ghosh A. Sex differences in non-communicable disease multimorbidity among adults aged 45 years or older in India. *BMJ Open*. 2023;13(3):e067994.
113. St Sauver JL, LeBrasseur NK, Rocca WA, Olson JE, Bielinski SJ, Sohn S, et al. Cohort study examining associations between ceramide levels and risk of multimorbidity among persons participating in the Mayo Clinic Biobank. *BMJ Open*. 2023;13(4):e069375.
114. Guo J, Li A, Chen M, Wei D, Wu J, Wang T, et al. Association of longitudinal patterns of nighttime sleep duration and daytime napping duration with risk of multimorbidity. *Sleep Health*. 2023;9(3):363-72.
115. Liu J, Yu Y, Yan S, Zeng Y, Su S, He T, et al. Risk factors for self-reported medication adherence in community-dwelling older patients with multimorbidity and polypharmacy: a multicenter cross-sectional study. *BMC Geriatr*. 2023;23(1):75.

116. Keetile M, Letamo G, Navaneetham K. The influence of childhood socioeconomic status on non-communicable disease risk factor clustering and multimorbidity among adults in Botswana: a life course perspective. *Int Health*. 2023;15(1):1-9.
117. Aubert CE, Blum MR, Gastens V, Dalleur O, Vaillant F, Jennings E, et al. Prescribing, deprescribing and potential adverse effects of proton pump inhibitors in older patients with multimorbidity: an observational study. *CMAJ Open*. 2023;11(1):E170-e8.
118. Blum M, Gelfman LP. Visualizing Multimorbidity in Chronically Ill Populations Using UpSet Plots. *J Pain Symptom Manage*. 2023;65(4):e397-e8.
119. Owora AH. Modeling the Natural Course of Atopic Multimorbidity: Correlates of Early-Life States and Exposures. *Am J Respir Crit Care Med*. 2023;207(5):633-4.
120. Zou S, Wang Z, Tang K. Social inequalities in all-cause mortality among adults with multimorbidity: a 10-year prospective study of 0.5 million Chinese adults. *Int Health*. 2023;15(2):123-33.
121. Stemmer R, Büchler B, Büttner M, Dera-Ströhm C, Klein J, Gianicolo E. Effects of care of multimorbid patients in general practices by advanced practice nurses (FAMOUS): study protocol for a nonrandomized controlled trial. *BMC Health Serv Res*. 2023;23(1):501.
122. Kannukene A, Orrego C, Lember M, Uusküla A, Põlluste K. Estonian adverse events study for multimorbid patients using Estonian Trigger Tool (MUPETT-MUltimorbid Patients-Estonian Trigger Tool). Development of Estonian trigger tool for multimorbid patients. A study protocol for mixed-methods study. *PLoS One*. 2023;18(3):e0280200.
123. Morton ZP, Christina Mehta C, Wang T, Palella FJ, Naggie S, Golub ET, et al. Cumulative Human Immunodeficiency Virus (HIV)-1 Viremia Is Associated With Increased Risk of Multimorbidity Among US Women With HIV, 1997-2019. *Open Forum Infect Dis*. 2023;10(2):ofac702.
124. Rosen CB, Roberts SE, Wirtalla CJ, Keele LJ, Kaufman EJ, Halpern SD, et al. The Conditional Effects of Multimorbidity on Operative Versus Nonoperative Management of Emergency General Surgery Conditions: A Retrospective Observational Study Using an Instrumental Variable Analysis. *Ann Surg*. 2023;278(4):e855-e62.
125. Hill CM, Tseng AS, Holzhauer K, Littman AJ, Jones-Smith JC. Association between health care access and food insecurity among lower-income older adults with multiple chronic conditions in Washington State, USA. *Public Health Nutr*. 2023;26(1):199-207.
126. Ren Z, Zhao Y, Niu G, Lian X, Zheng X, Wu S, et al. Healthy Lifestyles and Chronic Pain with New-Onset Metabolic-Related Multimorbidity among Older Adults - China, 2011-2018. *China CDC Wkly*. 2023;5(16):358-64.
127. Bedard C, Timmons BW, Ferro MA. Exploratory examination of the association between physical-mental multimorbidity and physical activity in children. *Front Pediatr*. 2023;11:920629.
128. McCloskey JK, Ellis JL, Uratsu CS, Drace ML, Ralston JD, Bayliss EA, et al. Telehealth During COVID-19 for Adults with Multiple Chronic Conditions: Associations with Self-Reported Food Insecurity and with Physical Limitations. *Telemed J E Health*. 2023.

129. Leontsinis I, Farmakis D, Avramidis D, Andrikou E, Valatsou A, Gartzonikas E, et al. Cardiorenal multimorbidity in hospitalized cardiology patients: The Hellenic Cardiorenal Morbidity Snapshot (HECMOS) study. *Hellenic J Cardiol.* 2023.
130. O'Neill AS, Newsom JT, Trubits EF, Elman MR, Botosaneanu A, Allore HG, et al. Racial, ethnic, and socioeconomic disparities in trajectories of morbidity accumulation among older Americans. *SSM Popul Health.* 2023;22:101375.
131. Wang W, Luan W, Zhang Z, Mei Y. Association between medication literacy and medication adherence and the mediating effect of self-efficacy in older people with multimorbidity. *BMC Geriatr.* 2023;23(1):378.
132. Bennett MD, Jr., McDaniel JT, Albright DL. Chronic disease multimorbidity and substance use among African American men: veteran-non-veteran differences. *Ethn Health.* 2023;28(8):1145-60.
133. Fritz H, Chase S, Morgan L, Cutchin MP. Managing Complexity: Black Older Adults with Multimorbidity. *Gerontologist.* 2023.
134. Epstein MM, Zhou Y, Castaneda-Avila MA, Cohen HJ. Multimorbidity in patients with monoclonal gammopathy of undetermined significance. *Int J Cancer.* 2023;152(12):2485-92.
135. Huang Y, Su Y, Byun Y, Lee Y, Kim S. Analysis of multiple chronic disease characteristics in middle-aged and elderly South Koreans by exercise habits based on association rules mining algorithm. *BMC Public Health.* 2023;23(1):1232.
136. Stahl-Toyota S, Nikendei C, Nagy E, Bönsel S, Rollmann I, Unger I, et al. Interaction of mental comorbidity and physical multimorbidity predicts length-of-stay in medical inpatients. *PLoS One.* 2023;18(6):e0287234.
137. Baltramonaityte V, Pingault JB, Cecil CAM, Choudhary P, Järvelin MR, Penninx B, et al. A multivariate genome-wide association study of psycho-cardiometabolic multimorbidity. *PLoS Genet.* 2023;19(6):e1010508.
138. Ferro MA, Toulany A. Longitudinal Association Between Youth Multimorbidity and Psychological Distress: Impact of the COVID-19 Pandemic. *Child Psychiatry Hum Dev.* 2023.
139. Faramarzi E, Somi MH, Tutunchi H, Almaspour H, Sanaie S, Asemani S. The association of parity number with multimorbidity and polypharmacy among Iranian women in the Azarcohort: a cross-sectional study. *BMC Womens Health.* 2023;23(1):295.
140. Fessler L, Maltagliati S, Sieber S, Cullati S, Tessitore E, Craviari C, et al. Physical activity matters for everyone's health, but individuals with multimorbidity benefit more. *Prev Med Rep.* 2023;34:102265.
141. Ansari S, Anand A, Singh S, Hossain B. Exploring food insecurity and multimorbidity in Indian socially disadvantaged people: cross-sectional findings from LASI, 2017-18. *BMC Public Health.* 2023;23(1):1234.

142. Carrasco-Ribelles LA, Cabrera-Bean M, Danés-Castells M, Zabaleta-Del-Olmo E, Roso-Llorach A, Violán C. Contribution of Frailty to Multimorbidity Patterns and Trajectories: Longitudinal Dynamic Cohort Study of Aging People. *JMIR Public Health Surveill.* 2023;9:e45848.
143. Yang Q, Zhang Q, Ngai FW, Wang S, Zhang D, Gao Y, et al. The Multimorbidity and Lifestyle Correlates in Chinese Population Residing in Macau: Findings from a Community-Based Needs Assessment Study. *Healthcare (Basel).* 2023;11(13).
144. Maturana FM, Rolf R, Schweda S, Reimer M, Widmann M, Burgstahler C, et al. Adipokines as Predictive Biomarkers for Training Adaptation in Subjects with Multimorbidity-A Hypothesis-Generating Study. *J Clin Med.* 2023;12(13).
145. Wang Q, Schmidt AF, Lennon LT, Papacosta O, Whincup PH, Wannamethee SG. Prospective associations between diet quality, dietary components, and risk of cardiometabolic multimorbidity in older British men. *Eur J Nutr.* 2023;62(7):2793-804.
146. Tagliafico L, Maizza G, Marani C, Della Rovere F, Schiavetti I, Signori A, et al. Prevalence of Palliative Care Needs in Older Adults With Multimorbidity: A Multicentric Point Prevalence Study. *J Am Med Dir Assoc.* 2023;24(9):1278-81.

3. Polypharmacy

1. Chuang YN, Chen CC, Wang CJ, Chang YS, Liu YH. Frailty and polypharmacy in the community-dwelling elderly with multiple chronic diseases. *Psychogeriatrics*. 2023;23(2):337-44.
2. Zuo SW, Tellechea L, Kohn JR, Chen CCG, Abraham N, Leegant A, et al. Polypharmacy and Multimorbidity in the Urogynecology Population and Their Effect on Pelvic Floor Symptoms. *Urogynecology (Phila)*. 2023;29(1):80-7.
3. Mendoza-Quispe D, Perez-Leon S, Alarcon-Ruiz CA, Gaspar A, Cuba-Fuentes MS, Zunt JR, et al. Scoping review of measures of treatment burden in patients with multimorbidity: advancements and current gaps. *J Clin Epidemiol*. 2023;159:92-105.
4. Anliker N, Molinero-Mourelle P, Weijers M, Bukvic H, Bornstein MM, Schimmel M. Dental status and its correlation with polypharmacy and multimorbidity in a Swiss nursing home population: a cross-sectional study. *Clin Oral Investig*. 2023;27(6):3021-8.
5. Lucenteforte E, Finocchietti M, Addis A, Tettamanti M, Varano M, Parravano M, et al. Polytherapy and Multimorbidity Pattern of Users of Anti-VEGF Drugs and Dexamethasone for the Treatment of Age-Related Macular Degeneration and other Vascular Retinopathies in Clinical Practice. *Pharmaceuticals (Basel)*. 2023;16(5).
6. Li Y, Schmiede SJ, Anderson H, Richmond NE, Young KA, Hokanson JE, et al. Longitudinal Assessment of Multimorbidity Medication Patterns among Smokers in the COPDGene Cohort. *Medicina (Kaunas)*. 2023;59(5).
7. Sibille FX, de Saint-Hubert M, Henrard S, Aubert CE, Goto NA, Jennings E, et al. Benzodiazepine Receptor Agonists Use and Cessation Among Multimorbid Older Adults with Polypharmacy: Secondary Analysis from the OPERAM Trial. *Drugs Aging*. 2023;40(6):551-61.
8. Jungo KT, Ansorg AK, Florian C, Rozsnyai Z, Schwab N, Meier R, et al. Optimising prescribing in older adults with multimorbidity and polypharmacy in primary care (OPTICA): cluster randomised clinical trial. *Bmj*. 2023;381:e074054.
9. Jimenez HR, Bover Manderski MT, Natali KM, Boachie N, Suh JS. Prevalence of Comorbidities and Polypharmacy in a Historically Minoritized Community and Their Impact on Virologic Suppression in Persons with HIV. *AIDS Patient Care STDS*. 2023;37(6):297-305.
10. Mejías-Trueba M, Rodríguez-Pérez A, Sotillo-Sánchez I, Sánchez-Fidalgo S, Nieto-Martin MD, García-Cabrera E. Prevalence of Potentially Inappropriate Medications in Patients With Multimorbidity According to LESS-CHRON and STOPPFrail Criteria. *J Am Med Dir Assoc*. 2023;24(4):511-6.e3.
11. Yang C, Lee DTF, Chair SY. Validation and adaption of an Information-Motivation-Behavioral Skills model of medication adherence in older patients with multimorbidity. *Patient Educ Couns*. 2023;113:107756.
12. Bužančić I, Ortner Hadžabić M. Deprescribing in a multimorbid older adult: A case vignette study among community pharmacists and primary care physicians. *Basic Clin Pharmacol Toxicol*. 2023.
13. van Pinxteren M, Mbokazi N, Murphy K, Mair FS, May C, Levitt N. The impact of persistent precarity on patients' capacity to manage their treatment burden: A

comparative qualitative study between urban and rural patients with multimorbidity in South Africa. *Front Med (Lausanne)*. 2023;10:1061190.

14. Zazzara MB, Villani ER, Palmer K, Fialova D, Corsonello A, Soraci L, et al. Frailty modifies the effect of polypharmacy and multimorbidity on the risk of death among nursing home residents: Results from the SHELTER study. *Front Med (Lausanne)*. 2023;10:1091246.
15. Foley L, Doherty AS, Wallace E, Boland F, Hynes L, Murphy AW, et al. Exploring the Multidimensional Relationship Between Medication Beliefs and Adherence to Medications Among Older Adults Living With Multimorbidity Using Polynomial Regression: An Observational Cohort Study. *Ann Behav Med*. 2023;57(7):561-70.
16. Teng PHJ, Lun P, Tang JY, Tan KT, Ang W, Ding YY. Using multiple approaches to develop a physician-pharmacist collaborative care intervention to facilitate appropriate prescribing for older adults with multimorbidity. *Arch Gerontol Geriatr*. 2023;115:105110.

4. Interventions for multimorbidity

1. Zhou Y, Dai X, Ni Y, Zeng Q, Cheng Y, Carrillo-Larco RM, et al. Interventions and management on multimorbidity: An overview of systematic reviews. *Ageing Res Rev.* 2023;87:101901.
2. Alamoodi AH, Albahri OS, Zaidan AA, Alsattar HA, Zaidan BB, Albahri AS, et al. Intelligent Emotion and Sensory Remote Prioritisation for Patients with Multiple Chronic Diseases. *Sensors (Basel).* 2023;23(4).
3. Woodward A, Davies N, Walters K, Nimmons D, Stevenson F, Protheroe J, et al. Self-management of multiple long-term conditions: A systematic review of the barriers and facilitators amongst people experiencing socioeconomic deprivation. *PLoS One.* 2023;18(2):e0282036.
4. Nicholson K, Makovski TT, Nagyova I, van den Akker M, Stranges S. Strategies to improve health status among adults with multimorbidity: A scoping review. *Maturitas.* 2023;167:24-31.
5. Sagan A, Kowalska-Bobko I, Bryndová L, Smatana M, Chaklosh I, Gaál P. What is being done to respond to the rise of chronic diseases and multi-morbidity in Czechia, Hungary, Poland, and Slovakia? *Front Public Health.* 2022;10:1082164.
6. Ozemek C, Arena R, Rouleau CR, Campbell TS, Hauer T, Wilton SB, et al. Long-Term Maintenance of Cardiorespiratory Fitness Gains After Cardiac Rehabilitation Reduces Mortality Risk in Patients With Multimorbidity. *J Cardiopulm Rehabil Prev.* 2023;43(2):109-14.
7. Michielsen L, Bischoff E, Schermer T, Laurant M. Primary healthcare competencies needed in the management of person-centred integrated care for chronic illness and multimorbidity: Results of a scoping review. *BMC Prim Care.* 2023;24(1):98.
8. Onaisi R, Dumont R, Hasselgard-Rowe J, Safar D, Haller DM, Maisonneuve H. Multimorbidity and statin prescription for primary prevention of cardiovascular diseases: A cross-sectional study in general practice in France. *Front Med (Lausanne).* 2022;9:1089050.
9. Arakelyan S, Lone N, Anand A, Mikula-Noble N, M JL, De Ferrari L, et al. Effectiveness of holistic assessment-based interventions in improving outcomes in adults with multiple long-term conditions and/or frailty: an umbrella review protocol. *JBIM Evid Synth.* 2023;21(9):1863-78.
10. Bricca A, Jäger M, Johnston M, Zangger G, Harris LK, Midtgaard J, et al. Effect of In-Person Delivered Behavioural Interventions in People with Multimorbidity: Systematic Review and Meta-analysis. *Int J Behav Med.* 2023;30(2):167-89.
11. Jin Y, Brown R, Bhattarai M, Kuo WC, Chen Y. Psychometric properties of the self-care of chronic illness inventory in Chinese older adults with multiple chronic conditions. *Int J Older People Nurs.* 2023;18(3):e12536.

12. Khraim F, Munir S, Johnson J, Alqudah M, Kan'an H. Arabic translation, cultural adaptation, and pilot-testing of multimorbidity self-management self-efficacy scales. *Chronic Illn.* 2023;19(1):221-32.
13. Muliya KP, Sujai R, Thirthalli J. Enhancing Care for Multimorbidity in Adults with Neurodevelopmental Disorders. *J Psychosoc Rehabil Ment Health.* 2023;10(1):5-9.
14. Nambisan P, Stange KC, Lyytinen K, Kahana E, Duthie E, Potnek M. A Comprehensive Digital Self-care Support System for Older Adults With Multiple Chronic Conditions: Development, Feasibility, and Usability Testing of myHESTIA. *J Appl Gerontol.* 2023;42(2):170-84.
15. Pel-Littel RE, Buurman BM, van de Pol MH, Twisk JWR, Tulner LR, Minkman MM, et al. Effects of a shared decision making intervention for older adults with multiple chronic conditions: the DICO study. *BMC Med Inform Decis Mak.* 2023;23(1):42.
16. De Maria M, Lee CS, Matarese M, Vellone E, Lorini S, Ausili D. Dyadic Archetypes of Patient Self-Care and Caregiver Contribution to Self-Care in Dyads With Multiple Chronic Conditions: An Observational Study. *J Appl Gerontol.* 2023;42(8):1809-19.
17. Skou ST, Brødsgaard RH, Nyberg M, Dideriksen M, Bodtger U, Bricca A, et al. Personalised exercise therapy and self-management support for people with multimorbidity: feasibility of the MOBILIZE intervention. *Pilot Feasibility Stud.* 2023;9(1):12.
18. Barker K, Holland AE, Skinner EH, Lee AL. Clinical Outcomes Following Exercise Rehabilitation in People with Multimorbidity: A Systematic Review. *J Rehabil Med.* 2023;55:jrm00377.
19. Shiozaki K, Asaeda M, Hashimoto T, Umemoto Y, Ito H, Takahashi T, et al. Effects of Physiatrist and Physiotherapist-supervised Therapeutic Exercise on Physical Function in Frail Older Patients with Multimorbidity. *Prog Rehabil Med.* 2023;8:20230012.
20. Li M, Tang H, Liu X. Primary care team and its association with quality of care for people with multimorbidity: a systematic review. *BMC Prim Care.* 2023;24(1):20.
21. Ryan BL, Mondor L, Wodchis WP, Glazier RH, Meredith L, Fortin M, et al. Effect of a multimorbidity intervention on health care utilization and costs in Ontario: randomized controlled trial and propensity-matched analyses. *CMAJ Open.* 2023;11(1):E45-e53.
22. Banstola A, Pokhrel S, Hayhoe B, Nicholls D, Harris M, Anokye N. Economic evaluations of interventional opportunities for the management of mental-physical multimorbidity: a systematic review. *BMJ Open.* 2023;13(2):e069270.
23. González-Colom R, Herranz C, Vela E, Monterde D, Contel JC, Sisó-Almirall A, et al. Prevention of Unplanned Hospital Admissions in Multimorbid Patients Using Computational Modeling: Observational Retrospective Cohort Study. *J Med Internet Res.* 2023;25:e40846.
24. Wang Y, Fu P, Li J, Gao T, Jing Z, Wang Q, et al. Community-Level Social Support to Mitigate the Impact of Combined Frailty and Multimorbidity on Psychological Distress Among Rural Chinese Older Adults During the COVID-19 Pandemic: Multilevel Modeling Study. *JMIR Public Health Surveill.* 2023;9:e43762.

25. Gallo LC, Fortmann AL, Clark TL, Roesch SC, Bravin JI, Spierling Bagsic SR, et al. Mi Puente (My Bridge) Care Transitions Program for Hispanic/Latino Adults with Multimorbidity: Results of a Randomized Controlled Trial. *J Gen Intern Med.* 2023;38(9):2098-106.
26. Yang C, Lee DTF, Wang X, Chair SY. Developing a Medication Self-Management Program to Enhance Medication Adherence Among Older Adults With Multimorbidity Using Intervention Mapping. *Gerontologist.* 2023;63(4):637-47.
27. Bell C, Vedsted P, Kraus DGA, Fredberg U, Jeffery L, Dahlgaard MB, et al. Clinic for Multimorbidity: An Innovative Approach to Integrate General Practice and Specialized Health Care Services. *Int J Integr Care.* 2023;23(2):25.
28. Varela T, Zamorano P, Muñoz P, Rain C, Irazoqui E, Sapag JC, et al. Evaluation of the implementation progress through key performance indicators in a new multimorbidity patient-centered care model in Chile. *BMC Health Serv Res.* 2023;23(1):439.
29. Van Woensel W, Tu SW, Michalowski W, Sibte Raza Abidi S, Abidi S, Alonso JR, et al. A community-of-practice-based evaluation methodology for knowledge intensive computational methods and its application to multimorbidity decision support. *J Biomed Inform.* 2023;142:104395.
30. Jäger M, Zangger G, Bricca A, Dideriksen M, Smith SM, Midtgaard J, et al. Mapping interventional components and behavior change techniques used to promote self-management in people with multimorbidity: a scoping review. *Health Psychol Rev.* 2023:1-24.
31. Jones JRA, Karahalios A, Puthuchearu ZA, Berry MJ, Files DC, Griffith DM, et al. Responsiveness of Critically Ill Adults With Multimorbidity to Rehabilitation Interventions: A Patient-Level Meta-Analysis Using Individual Pooled Data From Four Randomized Trials. *Crit Care Med.* 2023;51(10):1373-85.
32. Carlson DM, Yarns BC. Managing medical and psychiatric multimorbidity in older patients. *Ther Adv Psychopharmacol.* 2023;13:20451253231195274.
33. Skou ST, Nyberg M, Dideriksen M, Overgaard JA, Bodilsen C, Soja AM, et al. Study protocol for a multicenter randomized controlled trial of personalized exercise therapy and self-management support for people with multimorbidity: The MOBILIZE study. *J Multimorb Comorb.* 2023;13:26335565231154447.
34. Bricca A, Smith SM, Skou ST. Management of multimorbidity. *J Multimorb Comorb.* 2023;13:26335565231156693.
35. Faessler L, Kofler S, Wenke-Zobler J, Brunner C, Schäfer-Keller P, De Geest S, et al. The use of nurse-led care intervention to improve self-care abilities subsequently decreasing readmission in multimorbid hospitalized patients: A quasi-experimental study in a real-world setting. *Nurs Open.* 2023;10(6):3787-98.
36. Bousquet J, Anto JM, Sousa-Pinto B, Czarlewski W, Bedbrook A, Hahtela T, et al. Digitally-enabled, patient-centred care in rhinitis and asthma multimorbidity: The ARIA-MASK-air(®) approach. *Clin Transl Allergy.* 2023;13(1):e12215.

37. Albanesi B, Piredda M, Dimonte V, De Marinis MG, Matarese M. Use of Motivational Interviewing in Older Patients with Multiple Chronic Conditions and Their Informal Caregivers: A Scoping Review. *Healthcare (Basel)*. 2023;11(12).
38. Bas-Sarmiento P, Fernández-Gutiérrez M, Poza-Méndez M, Carrasco-Bernal M, Cuenca-García M, Díaz-Rodríguez M, et al. Needs of patients with multi-morbidity and heart failure for the development of a mHealth to improve their self-management: A qualitative analysis. *Digit Health*. 2023;9:20552076231180466.
39. Wiwatkunupakarn N, Aramrat C, Pliannuom S, Buawangpong N, Pinyopornpanish K, Nantsupawat N, et al. The Integration of Clinical Decision Support Systems Into Telemedicine for Patients With Multimorbidity in Primary Care Settings: Scoping Review. *J Med Internet Res*. 2023;25:e45944.
40. Otieno P, Agyemang C, Wao H, Wambiya E, Ng'oda M, Mwanga D, et al. Effectiveness of integrated chronic care models for cardiometabolic multimorbidity in sub-Saharan Africa: a systematic review and meta-analysis. *BMJ Open*. 2023;13(6):e073652.
41. Xu Z, Zhang D, Zheng X, Lee RCM, Wong SYS, Wong CKM. Use, satisfaction, and preference of online health services among older adults with multimorbidity in Hong Kong primary care during COVID-19. *BMC Geriatr*. 2023;23(1):368.
42. Schäfer I, Schulze J, Glassen K, Breckner A, Hansen H, Rakebrandt A, et al. Validation of patient- and GP-reported core sets of quality indicators for older adults with multimorbidity in primary care: results of the cross-sectional observational MULTIqual validation study. *BMC Med*. 2023;21(1):148.

5. Qualitative work – experience and perspectives

1. Spiers G, Boulton E, Corner L, Craig D, Parker S, Todd C, et al. What matters to people with multiple long-term conditions and their carers? *Postgrad Med J*. 2023;99(1169):159-65.
2. Tent S, Verhoeff M, Festen S, van Munster BC. Goals of older hospitalized patients with multimorbidity. *Eur Geriatr Med*. 2023;14(2):229-37.
3. Davis-Ajami ML, Lu ZK, Wu J. US Older Adults with Multiple Chronic Conditions Perceptions of Provider-Patient Communication: Trends and Racial Disparities from MEPS 2013-2019. *J Gen Intern Med*. 2023;38(6):1459-67.
4. Guénette L, Turcotte V, Bélanger L, Blais L, Sirois C, Lunghi C, et al. Multimorbidity Treatment Burden Questionnaire (MTBQ): Translation, Cultural Adaptation, and Validation in French-Canadian. *Can J Aging*. 2023;42(1):126-34.
5. Vu T, Mroz EL, Hernandez-Bigos K, Chow D, Samper Ternent R, Bonds Johnson K, et al. Persons living with dementia and multiple chronic conditions identifying health priorities with care partners. *J Am Geriatr Soc*. 2023;71(6):2005-8.
6. Eyowas FA, Schneider M, Alemu S, Getahun FA. Experience of living with multimorbidity and health workers perspectives on the organization of health services for people living with multiple chronic conditions in Bahir Dar, northwest Ethiopia: a qualitative study. *BMC Health Serv Res*. 2023;23(1):232.
7. Whitehead L, Palamara P, Babatunde-Sowole OO, Boak J, Franklin N, Quinn R, et al. Nurses' experience of managing adults living with multimorbidity: A qualitative study. *J Adv Nurs*. 2023;79(7):2514-24.
8. Damarell RA, Morgan DD, Tieman JJ, Senior T. Managing multimorbidity: a qualitative study of the Australian general practitioner experience. *Fam Pract*. 2023;40(2):360-8.
9. Dinh TS, Brünn R, Schwarz C, Brueckle MS, Dieckelmann M, González González AI, et al. How do middle-aged patients and their healthcare providers manage multimorbidity? Results of a qualitative study. *PLoS One*. 2023;18(8):e0291065.
10. de Monteynard S, Bihan H, Campagné L, Crozet C, Cailhol J. Perceptions of multiple chronic conditions and coping strategies among migrants from Sub-Saharan Africa living in France with diabetes mellitus and HIV: An interview-based qualitative study. *PLoS One*. 2023;18(6):e0284688.
11. Urbonas G, Raila G, Serapinas D, Valius L, Veličkienė D, Plisienė J, et al. Evaluation of Satisfaction with Healthcare Services in Multimorbid Patients Using PACIC+ Questionnaire: A Cross-Sectional Study. *Medicina (Kaunas)*. 2023;59(2).
12. Robertson ML, Phung A, Bhatnagar S, Li L, Schuchman M, Wolff J, et al. Assessing the wellbeing of family caregivers of multimorbid and homebound older adults-A scoping literature review. *J Am Geriatr Soc*. 2023;71(1):268-75.

13. Fritz H, Jones R, Cutchin MP. Health Management Occupations During COVID-19: Experiences of Older African Americans With Multimorbidity. *OTJR (Thorofare N J)*. 2023;43(1):90-7.
14. Lorino A, Talero Cabrejo P, Coppola S. Occupational Experiences of Medication Management Among Adults Living With Multiple Chronic Conditions. *OTJR (Thorofare N J)*. 2023:15394492231172931.
15. Kappelin C, Sandlund C, Westman J, Wachtler C. Dancing with the patient: a qualitative study of general practitioners' experiences of managing patients with multimorbidity and common mental health problems. *BMC Prim Care*. 2023;24(1):104.
16. Nicholson CJ, Combes S, Mold F, King H, Green R. Addressing inequity in palliative care provision for older people living with multimorbidity. Perspectives of community-dwelling older people on their palliative care needs: A scoping review. *Palliat Med*. 2023;37(4):475-97.
17. Sader J, Diana A, Coen M, Nendaz M, Audétat MC. A GP's clinical reasoning in the context of multimorbidity: beyond the perception of an intuitive approach. *Fam Pract*. 2023;40(1):113-8.
18. Younas A, Inayat S, Masih S. Nurses' perceived barriers to the delivery of person-centred care to complex patients: A qualitative study using theoretical domains framework. *J Clin Nurs*. 2023;32(3-4):368-81.
19. Horn AB, Zimmerli L, Maercker A, Holzer BM. The worse we feel, the more intensively we need to stick together: a qualitative study of couples' emotional co-regulation of the challenge of multimorbidity. *Front Psychol*. 2023;14:1213927.
20. Tsunawaki S, Abe M, DeJonckheere M, Cigolle CT, Philips KK, Rubinstein EB, et al. Primary care physicians' perspectives and challenges on managing multimorbidity for patients with dementia: a Japan-Michigan qualitative comparative study. *BMC Prim Care*. 2023;24(1):132.
21. Dobarrio-Sanz I, Chica-Pérez A, Fernández-Sola C, Ruiz-Fernández MD, Del Mar Jiménez-Lasserotte M, Hernández-Padilla JM. Nursing students' experiences of a home visiting programme for older adults with multimorbidity (VISITAME project): A phenomenological study. *Nurse Educ Today*. 2023;128:105881.

6. Multimorbidity policy and editorials

1. Sattar N, McMurray JJV, McInnes IB, Aroda VR, Lean MEJ. Treating chronic diseases without tackling excess adiposity promotes multimorbidity. *Lancet Diabetes Endocrinol.* 2023;11(1):58-62.
2. van der Feltz-Cornelis C, Heightman M, Allsopp G. Learning from long COVID: integrated care for multiple long-term conditions. *Br J Gen Pract.* 2023;73(730):196-7.
3. Dixon J, Mendenhall E, Bosire EN, Limbani F, Ferrand RA, Chandler CIR. Making morbidity multiple: History, legacies, and possibilities for global health. *J Multimorb Comorb.* 2023;13:26335565231164973.
4. Koirala B, Peeler A, Dennison Himmelfarb C, Davidson PM. Living with multiple chronic conditions: How we achieve holistic care and optimize health outcomes. *J Adv Nurs.* 2023;79(2):e7-e9.
5. Richards T. Multimorbidity deserves its makeover. *Bmj.* 2023;381:898.
6. Giannakou K, Kyprianidou M, Chrysostomou S, Christophi CA. Editorial: The associations of lifestyle factors and behaviors with multimorbidity. *Front Public Health.* 2023;11:1227381.
7. Multimorbidity: Addressing the next global pandemic. *PLoS Med.* 2023;20(4):e1004229.
8. Jain S, Rosenbaum PR, Reiter JG, Ramadan OI, Hill AS, Hashemi S, et al. Defining Multimorbidity in Older Patients Hospitalized with Medical Conditions. *J Gen Intern Med.* 2023;38(6):1449-58.
9. Steinman MA, Jing B, Shah SJ, Rizzo A, Lee SJ, Covinsky KE, et al. Development and validation of novel multimorbidity indices for older adults. *J Am Geriatr Soc.* 2023;71(1):121-35.
10. Simpson G, Stokes J, Farmer A, Dambha-Miller H. Social care need in multimorbidity. *J R Soc Med.* 2023;116(4):124-7.
11. Larsson H. How to advance the understanding of multimorbidity in neurodevelopmental disorders using longitudinal research? *JCPP Adv.* 2023;3(1):e12147.
12. Dixon J, Mendenhall E. Syndemic thinking to address multimorbidity and its structural determinants. *Nat Rev Dis Primers.* 2023;9(1):23.
13. Roomaney RA, van Wyk B, Pillay-van Wyk V. Multimorbidity in South Africa: Is the health system ready? *J Multimorb Comorb.* 2023;13:26335565231182483.
14. Consorti F, Torre D, Luzi D, Pecoraro F, Ricci F, Tamburis O. The challenge of clinical reasoning in chronic multimorbidity: time and interactions in the Health Issues Network model. *Diagnosis (Berl).* 2023.
15. Bernabeu-Wittel M, Para O, Voicehovska J, Gómez-Huelgas R, Václavík J, Battegay E, et al. Competences of internal medicine specialists for the management of patients with multimorbidity. EFIM multimorbidity working group position paper. *Eur J Intern Med.* 2023;109:97-106.

16. van der Kooi ALF. Multimorbidity warrants a proactive management of pregnancy in cancer survivors. *Bjog*. 2023;130(7):790.
17. Puzio TJ, Adams SD, Kao LS. Invited Commentary: Targeting Many or a Few? A Commentary on Redefining Multimorbidity in Older Surgical Patients. *J Am Coll Surg*. 2023;236(5):1022-3.
18. Johansson T. Limited knowledge about what matters to older people with multimorbidity hinders appropriate palliative care provision. *Evid Based Nurs*. 2023;26(2):83.
19. Zahid U, Hosang GM, de Freitas DF, Mooney R, Bhui K. Ethnic inequality, multimorbidity and psychosis: can a syndemic framework resolve disputed evidence? *Schizophrenia (Heidelb)*. 2023;9(1):37.
20. Fairall L. Multimorbidity: time to stop defending our silos. *Bmj*. 2023;381:1342.
21. Adebajo AO. Multimorbidity: small steps in the right direction. *Bmj*. 2023;381:1348.