

Authors, Origin, and Review Type	Aim	Study Period	No. of Primary Studies	No. of Participants	Countries of Primary Studies	Study Designs	Interventions
Allred et al ¹ United Kingdom Systematic Review	To determine the effects of interventions to optimise prescribing for older people in care homes.	1994 to 2015	12	10,953 residents	Australia, UK, Canada, Finland, Israel, New Zealand, Spain, Sweden, the Netherlands, and USA.	12 RCTs	MR, MD case-conferencing, educational element for care home staff, CCDSS, and transfer of medicines information.
Chen et al ² Australia Systematic Review	To review literature about processes, impact, and outcomes of MR and reconciliation in Australian RACF.	1999 to 2018	13	3,937 residents	Australia	8 CSSs 4 cohort 1 RCTs	Collaborative MR.
Forsetlund et al ³ Norway Systematic Review	To identify and summarise the effect of interventions aimed to reduce potentially inappropriate use of drugs in NHs.	1992 to 2010	20	6,835 residents	Australia, Canada, UK, Germany, Sweden, and USA.	20 RCTs	Educational outreach initiatives, MR, EMs, geriatric assessment care teams, early psychiatric intervention, and activity program interventions for residents.
Fuller et al ⁴ Canada Scoping Review	To map the extent, range, and nature of research on the effectiveness, level of use, and perceptions of eMARs and BCMA in LTCF.	2006 to 2016	34	Not reported	Australia, Canada, Sweden, UK, and USA.	28 descriptive 6 analytic	eMARs and BCMA.
Ali et al ⁵ Australia Systematic Review	To investigate the efficacy of pharmacist-led interventions to reduce adverse drug events in older people living in RACFs.	1992 to 2020	23	20,553 Residents (22 studies)	Australia, Israel, Canada, UK, Germany, New Zealand, Norway, USA, Slovenia, Netherlands, and Japan.	15 RCTs 8 non-RCTs	MR and Educational programs.

Table 4: Continued

Authors, Origin, and Review Type	Aim	Study Period	No. of Primary Studies	No. of Participants	Countries of Primary Studies	Study Designs	Interventions
Kröger et al ⁶ Canada Scoping Review	To determine how to identify inappropriate medications for NH residents with severe dementia and identify interventions to improve medication use among them.	1992 to 2013	43	15,270 residents (34 studies)	Australia, the USA, Belgium, Canada, Israel, Northern Ireland, Norway, Sweden, Taiwan, the UK, Switzerland, the Netherlands.	14 BA 7 CRTs 6 RCTs 5 CCTs 2 OSs 1 case-control	MR, MD team meetings, educational and training sessions.
Lee et al ⁷ Malaysia Systematic Review and Meta-Analysis	To provide an overview of the evidence of pharmacist-led interventions to improve quality use of medication in NHs and determine their impact on NHs safety.	1978 to 2017	52	30,376 residents	Australia, Europe, and North America.	28 BA 13 RCTs 6 retros 5 case-control	Clinical MR, staff education, and MD team meetings.
Loganathan et al ⁸ United Kingdom Systematic Review	To interpret the results of studies that have evaluated any strategy to improve prescribing in care homes.	1992 to 2010	16	11,534 residents	Australia, Canada, Norway, Sweden, the UK, and the USA.	11 CRTs 3 BA 2 RCTs	Pharmacist MR, staff education, MD team meetings, and CCDSS.
Marasinghe ⁹ Canada Systematic Review	To ensure medication safety for elderly living in LTCF; improve systems' efficiency; reduce the burden on health systems from medication-related issues; enhance the quality of care in LTCF.	2006 to 2012	7	10,307 residents	Not reported	5 RCTs	CCDSS
Almutairi et al ¹⁰ Australia Systematic Review and Meta-Analysis	To review interventions that increase medication appropriateness in RACFs and the outcomes of these interventions.	1992 to 2016	25	22,989 residents	Australia, UK, USA, Norway, Canada, Israel, Spain, Sweden, Finland, Ireland, Switzerland, and New Zealand.	14 cRCTs 11 RCTs	MR, MD case conferencing, staff education and CCDSS.

Authors, Origin, and Review Type	Aim	Study Period	No. of Primary Studies	No. of Participants	Countries of Primary Studies	Study Designs	Interventions
Sadowski et al ¹¹ Canada Systematic Review and Meta-Analysis	To evaluate the effects of pharmacist-based interventions on medications, health systems, and clinical outcomes in seniors living in LTCF.	1975 to 2017	26	20,228 residents	Asia, Australia, Europe, and the USA.	14 RCTs 10 non-RCTs 2 Oss	MR, documentation, case conferencing, and education.
Thiruchelvam et al ¹² Malaysia Systematic Review	To assess the impact of MR in LTCF, with focus on the types of MR (prescription and/or clinical MR) in the same settings.	1998 to 2015	22	11,430 residents (20 studies)	Australia, the UK, Belgium, the USA, Northern Ireland, Singapore, Spain, Sweden, Switzerland, and the Netherlands.	12 CTs 10 OSs	MD team MR and pharmacists-led MR.
Thompson Coon et al ¹³ United Kingdom Systematic Review	To evaluate the effectiveness of interventions to reduce inappropriate prescribing of antipsychotics to people with dementia in care homes.	1987 to 2013	22	19,300 residents	Australia, Canada, Norway, Sweden, the UK, and the USA.	6 RCT 5 CTs 11 BA	Educational programs, in-reach services, MR, and multicomponent interventions.
Verrue et al ¹⁴ Belgium Systematic Review	To interpret the results of clinical trials of interventions involving pharmacists to improve the quality of prescribing in NHs, and to identify the key factors for successful intervention in this setting.	1998 to 2006	8	7,299 residents	Australia, Sweden, and the UK.	7 RCTs 1 non-RCT	Pharmacists MR.

BA = before-after, BCMA = bar-code medication administration, CCDSS = computerised clinical decision support system, CCT = cluster-controlled trial, CRT = cluster randomised trial, CSS = cross-sectional study, CT = controlled trial, EM = educational meeting, eMAR = electronic medication administration record, LTCF = long-term care facility, MD = multidisciplinary, MR = medication review, NH = nursing home, OS = observational study, RACF = residential aged care facility, RCT = randomised controlled trial, and Retro = retrospective study.

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