Table S3 Summary of included qualitative studies

First author（year）	JBI score	Period studied	Setting	Participant information	N	Approach	General results
Qualitative Studies							
Rieckert (2018)[61]	9	2015-2016	GP practices, Germany	General practitioners	21	Semi-structured interviews	Barriers to deprescribing medications included the GP and/or the patient prioritised differently, the GP regarded the medication as necessary, the GP feared that changing medication could get complex, recommendation not applicable to the patient, and GP's unwillingness of interfering with medication prescribed by a colleague.
Clyne (2016)[62]	8	2013	GP practices, Ireland	General practitioners	17	Semi-structured interviews	Several inter-related factors that contribute to the occurrence of PIP including a complex prescribing environment, paternalistic doctor-patient relationships and limited relevance of the PIP concept for GPs.
Heser (2018)[63]	8	2014-2015	Germany	Elderly patients, General practitioners, and significant others of the patients	52+ 52+ 48	Semi-structured interviews	Barriers to deprescribing include that PIM is not rated as problematic medication; patient does not care about side effects of PIM; alternative treatments are not utilized; resistance against cessation of PIM; Dependency or failed discontinuation of the medicine; ageism by the patient.
Straßner (2017)[64]	8	2012-2014	Germany	General practitioners, specialists, pharmacists, nurses, medical assistants, and other professionals	24+ 4+1 +3+ 6+1 7	Thirty-eight semi-structured interviews and 2 focus groups	A much wider range of domains need to be addressed, such as communication skills, patient involvement and practice organization.
Pohontsch (2017)[65]	8	2014-2015	Germany	General practitioners	47	Semi-structured interviews	Prescription-, medication-, general practitioner-, patient- and system-related aspects related to the long-term use of PIM.
Heyworth (2013)[66]	8	2012	Veterans Affairs clinic facilities, USA	Primary care physicians, nurse practitioners or physician assistants	13+ 2	Semi-structured interviews	Providers highlighted a number of patient-level obstacles hindering high-quality medication reconciliation, emphasizing the difficulty in achieving accurate medication reconciliation among complex or elderly patients. Providers identified limited time and support for medication reconciliation as key barriers.
Anderson (2017)[67]	7	2014	Australia	General practitioners and consultant pharmacists	32+ 15	Five GP focus group interviews and two CP focus group interviews	Poorly developed interprofessional relationships and a lack of dedicated time and tacit knowledge/familiarity with patients for GPs and CPs, respectively, are important barriers to deprescribing for community-based older adults with polypharmacy. Well developed interprofessional relationships and less-siloed care will be critical to minimizing problematic polypharmacy and ultimately improving

							patient outcomes
Schuling (2012)[68]	7	2010-2011	The Netherlands	General practitioners	27	Three focus group interviews	A range of factors affecting the GPs' deprescribing for elderly patients with multimorbidity, including a lack of information on the benefit/risk ratio for preventive medication, poor communication to the patients, and difficulties in identifying ADEs, cooperation with prescribing medical specialists, etc.
Hansen (2018)[69]	7	2017	Community pharmacies, Ireland	Community pharmacists	18	Semi-structured interviews	Community pharmacists described challenges of overcoming social and environmental barriers, compounded by a lack of relevant guidelines for reducing PIP and education on the subject of PIP.
Wallis (2017)[70]	7	NM	New Zealand	Primary care physicians	24	Semi-structured interviews	Physicians described deprescribing as "swimming against the tide" of patient expectation, the medical culture of prescribing, and organizational constraints.
Weir (2019)[71]	7	NM	Australia	Pharmacists, older adults, and companions	11+ 17+ 4	Semi-structured interviews	Barriers to effective home medication reviews include gaps in inter-professional communication and factors related to patient involvement.
Magin (2015)[72]	7	2009-2010	Australia	General practitioners	22	Semi-structured interviews	The concept of 'appropriate' versus 'inappropriate' medications implicit in classification systems is at odds with complex considerations informing decision-making prescribing PIMs in older persons.
AlRasheed (2018)[73]	7	2016	Saudi Arabia	Family medicine specialists, residents, and general practitioners	15	Three focus group interviews	Barriers included lack of knowing the deprescribing term and process, patient comorbidities, risk/fear of conflict between physicians and clinical pharmacists, lack of documentation and communication, lack of time or crowded clinics, and patient resistance/acceptance.
Frich (2010)[74]	7	NM	Norway	General practitioners and tutors	39+ 20	Nine focus group interviews	Explanations for inappropriate prescriptions were with lack of knowledge, factors associated with patients, the GP's background, the practice, and other health professionals or health care facilities.

Abbreviation

CIR-G: number of cumulative illness rating scale for geriatric patients; CCI, Charlson comorbidity index;

NM: Not mentioned