

## SUPPLEMENTARY MATERIAL

### Box S1 Search strategy.

Database	Search strategy (search date: September 14, 2020)	Papers
PubMed	("Potentially Inappropriate Medication"[All Fields] OR "inappropriate prescribing"[All Fields] OR "PIM List"[All Fields] OR "PIM Lists"[All Fields] OR "Potentially Inappropriate Medications"[All Fields] OR "Potentially Inappropriate Medication"[All Fields] OR "Beers Criteria"[All Fields] OR "Beers Potentially Inappropriate Medications"[All Fields] OR "de Beers Criteria"[All Fields] OR "Screening Tool of Older Person's Potentially Inappropriate Prescriptions"[All Fields] OR "STOPP"[All Fields] OR "STOPP START Criteria"[All Fields] OR "Medication Appropriateness Index"[All Fields] OR ("potentially inappropriate medication list"[MeSH Terms] OR ("potentially"[All Fields] AND "inappropriate"[All Fields] AND "medication"[All Fields] AND "list"[All Fields]) OR "potentially inappropriate medication list"[All Fields] OR ("medication"[All Fields] AND "appropriateness"[All Fields] AND "indices"[All Fields])) OR "Potential inappropriate medication"[All Fields] OR "potentially inappropriate prescribing"[All Fields] OR ("improve"[All Fields] OR "improved"[All Fields] OR "improvement"[All Fields] OR "improvements"[All Fields] OR "improves"[All Fields] OR "improving"[All Fields] OR "improvement"[All Fields]) AND ("prescribability"[All Fields] OR "prescribable"[All Fields] OR "prescribe"[All Fields] OR "prescribed"[All Fields] OR "prescriber"[All Fields] OR "prescriber s"[All Fields] OR "prescribers"[All Fields] OR "prescribes"[All Fields] OR "prescribing"[All Fields]) AND ("aged"[MeSH Terms] OR "aged"[All Fields] OR "elderly"[All Fields] OR "elderlies"[All Fields] OR "elderly s"[All Fields] OR "elderlys"[All Fields]) AND "tool"[All Fields] OR "PRISCUS"[All Fields] OR "inappropriate drug use"[All Fields] AND ("elderly"[All Fields] OR "aged"[All Fields] OR "older populations"[All Fields]) AND ("family practice"[All Fields] OR "primary health care"[All Fields] OR "general practice"[All Fields] OR "Primary Care"[All Fields] OR "Primary Healthcare"[All Fields] OR "Primary Care"[All Fields])	745
Embase	((('inappropriate prescribing'/exp OR 'inappropriate prescribing' OR 'pim list' OR 'pim lists' OR 'potentially inappropriate medications'/exp OR 'potentially inappropriate medications' OR 'potentially inappropriate medication'/exp OR 'potentially inappropriate medication' OR 'beers criteria'/exp OR 'beers criteria' OR 'beers potentially inappropriate medications' OR 'de beers criteria' OR 'screening tool of older persons potentially inappropriate prescriptions' OR 'stopp' OR 'stopp start criteria'/exp OR 'stopp start criteria' OR 'medication appropriateness index'/exp OR 'medication appropriateness index' OR 'medication appropriateness indices' OR 'potential inappropriate medication' OR 'potentially inappropriate prescribing'/exp OR 'potentially inappropriate prescribing' OR 'improved prescribing in the elderly tool' OR 'priscus' OR 'inappropriate drug use'/exp OR 'inappropriate drug use') AND ('elderly'/exp OR 'elderly' OR 'aged'/exp OR 'aged' OR 'older populations') AND ('family practice'/exp OR 'family practice' OR 'primary health care'/exp OR 'primary health care' OR 'general practice'/exp OR 'general practice' OR 'primary healthcare'/exp OR 'primary healthcare' OR 'primary care'/exp OR 'primary care')) AND [embase]/lim NOT ([embase]/lim AND [medline]/lim)	272 (without MEDLINE)
Cochrane Central (Trials)	("potentially inappropriate medication" OR "inappropriate prescribing" OR "PIM List" OR "PIM Lists" OR "Potentially Inappropriate Medications" OR "Potentially Inappropriate Medication" OR "Beers Criteria" OR "Beers Potentially Inappropriate Medications" OR "de Beers Criteria" OR "Screening Tool of Older Person's Potentially Inappropriate Prescriptions" OR "STOPP" OR "STOPP START Criteria" OR "Medication Appropriateness Index" OR "Medication Appropriateness Indices" OR "Potential inappropriate medication" OR "potentially inappropriate prescribing" OR "improved prescribing in the elderly tool" OR "PRISCUS" OR "inappropriate drug use") AND ("elderly" OR "aged" OR "older populations") AND ("family practice" OR "primary health care" OR "general practice" OR "primary care" OR "Primary Healthcare" OR "Primary Care")	136
LIVIVO	("potentially inappropriate medication" OR "inappropriate prescribing" OR "PIM List" OR "PIM Lists" OR "Potentially Inappropriate Medications" OR "Potentially Inappropriate Medication" OR "Beers Criteria" OR "Beers Potentially Inappropriate Medications" OR "de Beers Criteria" OR "Screening Tool of Older Person's Potentially Inappropriate Prescriptions" OR "STOPP" OR "STOPP START Criteria" OR "Medication Appropriateness Index" OR "Medication Appropriateness Indices" OR "Potential inappropriate medication" OR "potentially inappropriate prescribing" OR "improved prescribing in the elderly tool" OR "PRISCUS" OR "inappropriate drug use") AND ("elderly" OR "aged" OR "older populations") AND ("family practice" OR "primary health care" OR "general practice" OR "primary care" OR "Primary Healthcare" OR "Primary Care")	61 (without MEDLINE)
Web of Science	TÓPICO: (("potentially inappropriate medication" OR "inappropriate prescribing" OR "PIM List" OR "PIM Lists" OR "Potentially Inappropriate Medications" OR "Potentially Inappropriate Medication" OR "Beers Criteria" OR "Beers Potentially Inappropriate Medications" OR "de Beers Criteria" OR "Screening Tool of Older Person's Potentially Inappropriate Prescriptions" OR "STOPP" OR "STOPP START Criteria" OR "Medication Appropriateness Index" OR "Medication Appropriateness Indices" OR "Potential inappropriate medication" OR "potentially inappropriate prescribing" OR "improved prescribing in the elderly tool" OR "PRISCUS" OR "inappropriate drug use") AND ("elderly" OR "aged" OR "older populations") AND ("family practice" OR "primary health care" OR "general practice" OR "primary care" OR "Primary Healthcare" OR "Primary Care")) Tempo estipulado: Todos os anos. Índices: SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH,	377

	ESCI.	
Scopus	( TITLE-ABS-KEY ( ("potentially inappropriate medication" OR "inappropriate prescribing" OR "PIM List" OR "PIM Lists" OR "Potentially Inappropriate Medications" OR "Potentially Inappropriate Medication" OR "Beers Criteria" OR "Beers Potentially Inappropriate Medications" OR "de Beers Criteria" OR "Screening Tool of Older Person's Potentially Inappropriate Prescriptions" OR "STOPP" OR "STOPP START Criteria" OR "Medication Appropriateness Index" OR "Medication Appropriateness Indices" OR "Potential inappropriate medication" OR "potentially inappropriate prescribing" OR "improved prescribing in the elderly tool" OR "PRISCUS" OR "inappropriate drug use") AND ("elderly" OR "aged" OR "older populations") AND ("family practice" OR "primary health care" OR "general practice" OR "primary care" OR "Primary Healthcare" OR "Primary Care")) ) )	676
LILACS	(tw:(("potentially inappropriate medication" OR "inappropriate prescribing" OR "PIM List" OR "PIM Lists" OR "Potentially Inappropriate Medications" OR "Potentially Inappropriate Medication" OR "Beers Criteria" OR "Beers Potentially Inappropriate Medications" OR "de Beers Criteria" OR "Screening Tool of Older Person's Potentially Inappropriate Prescriptions" OR "STOPP" OR "STOPP START Criteria" OR "Medication Appropriateness Index" OR "Medication Appropriateness Indices" OR "Potential inappropriate medication" OR "potentially inappropriate prescribing" OR "improved prescribing in the elderly tool" OR "PRISCUS" OR "inappropriate drug use" OR "Lista de Medicamentos Potencialmente Impróprios" OR "Lista de Medicamentos Potencialmente Perigosos" OR "Medicamentos Potencialmente Inapropriados" OR "Medicamentos Potencialmente Perigosos" OR "Lista de Medicamentos Potencialmente Inapropriados") AND ("elderly" OR "aged" OR "older populations" OR Idoso OR Idosos OR "Pessoa de Idade" OR "Pessoa Idosa" OR "Pessoas de Idade" OR "Pessoas Idosas" OR "População Idosa" OR Anciano OR "Adulto Mayor" OR Ancianos OR "Persona de Edad" OR "Persona Mayor" OR "Personas de Edad" OR "Personas Mayores") AND ("family practice" OR "primary health care" OR "general practice" OR "primary care" OR "Primary Healthcare" OR "Atenção Primária à Saúde" OR "Atenção Básica" OR "Atenção Básica à Saúde" OR "Atenção Básica de Saúde" OR "Atenção Primária" OR "Atenção Primária de Saúde" OR "Atenção Primária em Saúde" OR "Estratégia Saúde da Família" OR "Estrategia de Salud Familiar" OR "Atención Primaria de Salud" OR "Atención Básica" OR "Atención Primaria")))	16
Proquest	noft(("potentially inappropriate medication" OR "inappropriate prescribing" OR "PIM List" OR "PIM Lists" OR "Potentially Inappropriate Medications" OR "Potentially Inappropriate Medication" OR "Beers Criteria" OR "Beers Potentially Inappropriate Medications" OR "de Beers Criteria" OR "Screening Tool of Older Person's Potentially Inappropriate Prescriptions" OR "STOPP" OR "STOPP START Criteria" OR "Medication Appropriateness Index" OR "Medication Appropriateness Indices" OR "Potential inappropriate medication" OR "potentially inappropriate prescribing" OR "improved prescribing in the elderly tool" OR "PRISCUS" OR "inappropriate drug use") AND ("elderly" OR "aged" OR "older populations") AND ("family practice" OR "primary health care" OR "general practice" OR "primary care" OR "Primary Healthcare" OR "Primary Care"))	15
OpenGrey	("potentially inappropriate medication" OR "inappropriate prescribing" OR "PIM List" OR "PIM Lists" OR "Potentially Inappropriate Medications" OR "Potentially Inappropriate Medication" OR "Beers Criteria" OR "Beers Potentially Inappropriate Medications" OR "de Beers Criteria" OR "Screening Tool of Older Person's Potentially Inappropriate Prescriptions" OR "STOPP" OR "STOPP START Criteria" OR "Medication Appropriateness Index" OR "Medication Appropriateness Indices" OR "Potential inappropriate medication" OR "potentially inappropriate prescribing" OR "improved prescribing in the elderly tool" OR "PRISCUS" OR "inappropriate drug use") AND ("elderly" OR "aged" OR "older populations") AND ("family practice" OR "primary health care" OR "general practice" OR "primary care" OR "Primary Healthcare" OR "Primary Care")	2
Google Scholar	("potentially inappropriate medication" OR "PIM List" OR "STOPP" OR "STOPP START Criteria" OR "PRISCUS") AND ("elderly" OR "aged") AND ("primary health care" OR "general practice" OR "primary care")	100 first

## Box S2 Excluded articles and reasons.

Author, year	Reason for exclusion
Clyne et al., 2016	1
Price et al., 2017	1
Lenander et al., 2017	1
Martin et al., 2013	2
Kiel et al., 2017	3
Fried et al., 2017	4
Bryant et al., 2011	1
Thiem et al., 2020	4
Montero-Balosa et al., 2014	2
Montero-Balosa et al., 2017	2
López et al., 2014	2

Reasons:

- 1 – The article does not use any explicit list of potentially inappropriate medication for the elderly as a reference;
- 2 – Three were published in conference proceedings;
- 3 – It was not found in the full version;
- 4 – Did not evaluate health outcome.

## References

1. Clyne B, Smith SM, Hughes CM, Boland F, Cooper JA, Fahey T, et al. Sustained effectiveness of a multifaceted intervention to reduce potentially inappropriate prescribing in older patients in primary care (OPTI-SCRIPT study). *Implement Sci* 2016; 11:79.
2. Price M, Davies I, Rusk R, Lesperance M, Weber J. Applying STOPP guidelines in primary care through electronic medical record decision support: randomized control trial highlighting the importance of data quality. *JMIR Med Inform* 2017; 5:e15.
3. Lenander C, Bondesson Å, Viberg N, Jakobsson U, Beckman A, Midlöv PC, et al. Effects of an intervention (SÄKLÄK) on prescription of potentially inappropriate medication in elderly patients. *Fam Pract* 2017; 34:213-8.
4. Martin P, Tamblyn R, Ahmed S, Tannenbaum C. An educational intervention to reduce the use of potentially inappropriate medications among older adults (EMPOWER study): protocol for a cluster randomized trial. *Trials* 2013; 14:80.
5. Kiel WJ, Phillips SW. Impact of pharmacist-conducted comprehensive medication reviews for older adult patients to reduce medication related problems. *Pharmacy (Basel)* 2017; 6:2.
6. Fried TR, Niehoff KM, Street RL, Charpentier PA, Rajeevan N, Miller PL, et al. Effect of the Tool to Reduce Inappropriate Medications (TRIM) on medication communication and deprescribing. *J Am Geriatr Soc* 2017; 65:2265-71.
7. Bryant LJM, Coster G, Gamble GD, McCormick RN. The General Practitioner-Pharmacist Collaboration (GPPC) study: a randomised controlled trial of clinical medication reviews in community pharmacy. *Int J Pharm Pract* 2011; 19:94-105.
8. Thiem U, Wilm S, Greiner W, Rudolf H, Trampisch HJ, Müller C, et al. Reduction of potentially inappropriate medication in the elderly: design of a cluster-randomised controlled trial in German primary care practices (RIME). *Ther Adv Drug Saf* 2020; 12:2042098620918459.
9. 43rd ESCP international symposium on clinical pharmacy patient safety: bridging the gaps Copenhagen, Denmark, 22-24 October 2014. *Int J Clin Pharm* 2015; 37:179-287.
10. 45th ESCP-NSF international symposium on clinical pharmacy: clinical pharmacy tackling inequalities and access to health care. Oslo, Norway, 5–7 October 2016. *Int J Clin Pharm* 2017; 39: 208-341.
11. López MC, Muñoz VM, Zafra OL, Sepúlveda LP, Moreno JG, Mora EV. Efficiency of the control of polypharmacy in primary care in elderly. *Basic Clin Pharmacol Toxicol* 2014; 115 Suppl 3:38.