Additional file 2. Data collection instrument

Inappropriate medication prescribing, polypharmacy, potential drug-drug interactions and medication regimen complexity in older adults attending three referral hospitals in Asmara, Eritrea: a cross-sectional study

Area Identification

Hospital	☐☐
Medical card number	☐☐☐
Participant's ID	☐☐☐

Date of data collection_____/_____/_____
Result of the data collection ☐ 1 = Completed 2= Incomplète 3= Refused

Data collector Name and code	Supervisor Name and code	Data Entry Personnel code
_____ ☐☐	_____ ☐☐	☐☐

Section A: Socio-demographic information and background characteristics

S.No.	Questions	Response	Skip
101.	Age (in completed years)	☐☐☐	
102.	Sex	Male ..... 1 Female 2	
103.	Educational level	No formal education ..... 1 Primary (1-5) ..... 2 Middle (6-8) ..... 3 Secondary (9-12) ..... 4 Higher 5	
104.	Occupation	Governmental 1	

		Private service ..... 2 Self-employed ..... 3 Unemployed ..... 4 House wife..... 5	
105.	Presence of chronic illness	Yes..... 1 No 2	→107
106.	Chronic illness ***(Multiple answers are possible)***	Hypertension .....A Diabetes .....B Asthma.....C Renal failure .....D Cardiac problem .....E Others (*specify*).....X	
107.	Religion	Christian ..... 1 Muslim..... 2 Others (*specify*)..... 3	
108.	Ethnic group	Tigrigna ..... 1 Tigre ..... 2 Bilen ..... 3 Saho ..... 4 Afar..... 5 Kunama ..... 6 Nara ..... 7 Hidareb ..... 8 Rashaida 9	

Section B: Medication utilization pattern
(Extract the following information from prescription)

Name of a prescribed medicine	**Dose and Frequency**	**Duration (days)**	**Route of administration**	**Dosage form**

Total number of drugs per prescription	
Prescriber qualification	General Practitioner ..... Specialist ..... Nurse practitioner..... GP interns..... Others (*specify*) .....

Section C: Analysis of potential drug-drug interactions

Drug interactions			**Risk category**	**Severity**	**Clinical implication**
	Drug 1	**Drug 2**			
301			A .....1 B.....2 C.....3 D .....4 X .....5 No interaction of any risk 6	Major.....1 Moderate .....2 Minor.....3 No interaction.....4	
302			A .....1 B.....2 C.....3 D .....4 X .....5 No interaction of any risk 6	Major.....1 Moderate .....2 Minor.....3 No interaction.....4	
303			A .....1 B.....2 C.....3 D .....4 X .....5 No interaction of any risk 6	Major.....1 Moderate .....2 Minor.....3 No interaction.....4	
304			A .....1 B.....2 C.....3 D .....4 X .....5 No interaction of any risk 6	Major.....1 Moderate .....2 Minor.....3 No interaction.....4	
			A 1	Major.....1	

305			B.....2 C.....3 D .....4 X .....5 No interaction of any risk 6	Moderate .....2 Minor.....3 No interaction.....4	
306.			A .....1 B.....2 C.....3 D .....4 X .....5 No interaction of any risk 6	Major.....1 Moderate .....2 Minor.....3 No interaction.....4	
307.			A .....1 B.....2 C.....3 D .....4 X .....5 No interaction of any risk 6	Major.....1 Moderate .....2 Minor.....3 No interaction.....4	
308	Availability of clinically significant potential DDIs in a prescription				Yes… .....1 No…..... 2
309	If yes, provide the number of clinically significant potential drug-drug interactions				☐☐

Section D: Medical card review
(Extract the following information from medical cards)

401	Diagnosis ***(Multiple answers possible)***	Diagnosis (1) _____ Diagnosis (2) _____ Diagnosis (3) _____
402	Co-morbidity ***(Multiple answers possible)***	Hypertension.....A Diabetes .....B Asthma.....C Renal failure .....D Cardiac problem .....E Others (*specify*).....X
403	Prescriber qualification	General Practitioner..... 1 Specialist..... 2 Nurse practitioner 3

		GP interns ..... 4 Others (*specify*)..... 5

Section E: Analysis of potentially inappropriate medication and potential prescribing omission using STOPP/START version 3

S.No.	Questions	Response	Skip
501.	Availability of potentially inappropriate medication (PIM) in a prescription	Yes… ..... 1 No… .....2 →	504
502.	Mention the PIM (*Provide the section alphabet and statement number*) E.g. Beta-blocker in combination with verapamil or diltiazem (risk of heart block)= B03	PIM (1) _____ PIM (2) _____ PIM (3) _____ PIM (4) _____	
503.	Number of PIM in a prescription	☐☐	
504.	Availability of potential prescribing omission (PPO) in a prescription	Yes… ..... 1 No… .....2 →	Section F
505.	Mention the PPO (*Provide the section alphabet and statement number*) E.g. Angiotensin Converting Enzyme (ACE) inhibitor with coronary artery disease= B03	PPO (1) _____ PPO (2) _____ PPO (3) _____ PPO (4) _____	
506.	Number of PPO in a prescription	☐☐	

Section F: Analysis of medication regimen complexity (MRC) using MRC index

S.No.	Questions	Response	Skip
Dosage Forms			
601.	Oral **(*Multiple answers are possible*)**	Capsule/Tab .....A Gargle/Mouthwash .....B Gum/Lozenge .....C Liquid/Solution/Suspension.....D Powder .....E Sublingual ..... F	
602.	Topical **(*Multiple answers are possible*)**	Cream/Gel/Ointment/Lotion.....A Paste.....B Patch/Type .....C Spray.....D Shampoo/Topical Solution .....E	

603.	Ear/Eye/Nose **(*Multiple answers are possible*)**	Ear drop/Cream/Ointment .....A Eye drop.....B Eye gel/Ointment.....C Nasal drop/Cream/Ointment.....D Nasal spray .....E	
604.	Inhalation **(*Multiple answers are possible*)**	Aerolizer .....A Metered dose.....B Nebulizer .....C Other DPI.....D Oxygen.....E	
605.	Other	Enema .....A Injection pre-filled .....B Injection Ampoule/Vial .....C Suppository.....D Vaginal.....E	
606.	Dosage form score	☐	
Dosing Frequency			
607.	Dosing frequency **(*Multiple answers are possible*)**	Once daily.....A Twice daily .....B Three times daily .....C Four times daily.....D PRN .....E Others (*specify*).....F	
608.	Dosing frequency score	☐	
Additional Directions			
609.	Medicine additional directions **(*Multiple answers are possible*)**	Break/crush tablet.....A Dissolve tablet/powder .....B Multiple units at once .....C Take at specific time.....D Relation to food/liquid.....E Variable dose .....F Take/use as directed.....G Tapering/increasing .....H Alternating dose.....I Liquid/Solution/Suspension.....J Powder.....K Sublingual.....L	
610.	Additional directions score	☐	

611.	Total score		

Comment section (if any):