

Additional file 1. Identification, assessment, classification, and documentation of MRPs and recommendations by the panel of experts

Medical Conditions & Medication Therapy Involved					
Medication-related needs	Categories of MRPs		Subcategory or cause(s) of MRPs	Recommendation/intervention	Status of the recommendation
INDICATION	1.	Needs additional drug therapy	• Untreated medical condition • Preventive/ prophylactic • Synergistic/ potentiating • Others	• Initiate new drug therapy • Other	☐ Accepted, ☐ Partially accepted ☐ Rejected
	2.	Unnecessary drug therapy	• No medical indication • Duplicate therapy • Non-drug therapy indicated • Treating avoidable ADR • Addictive/ recreational • Others	• Discontinue drug therapy • Initiate non drug therapy • Patient counseling • Other	☐ Accepted, ☐ Partially accepted ☐ Rejected
EFFECTIVENESS	3.	Dose too low	• Wrong dose • Frequency inappropriate • Duration too short • Drug interaction • Others	• Increase dose • Increase frequency • Avoid interacting drugs • Prolong duration • Other	☐ Accepted, ☐ Partially accepted ☐ Rejected
	4.	Ineffective drug	• More effective drug available • Condition refractory to drug • Dosage form inappropriate • Not effective for condition • Others	• Switch to more effective agent • Institute a monitoring plan or recommend lab/other test • Switch to preferred dosage form or route • Other	☐ Accepted, ☐ Partially accepted ☐ Rejected
SAFETY	5.	Dose too high	• Wrong dose • Frequency inappropriate • Duration too long • Incorrect administration • Drug interaction • Others	• Decrease dose • Change duration • Change frequency • Other	☐ Accepted, ☐ Partially accepted ☐ Rejected
	6.	Adverse drug reaction	• Undesirable effect • Unsafe drug for patient • Drug interaction • Dosage administered or changed too fast • Allergic reaction • Contraindications present • Others	• Institute a monitoring plan or recommend lab/other test • Switch to safer alternative • Dose titration • Other	☐ Accepted, ☐ Partially accepted ☐ Rejected
ADHERENCE	7.	Compliance	• Directions not understood • Patient prefers not to take • Patient forgets to take • Drug product too expensive • Patient cannot swallow/ administer • Drug product not available • Patient felt better or worse • Regimen complexity • Fear of adverse events • Patient not aware of medication changes • Disbelief in drug effectiveness • Others	• Provide patient-specific instructions • Change administration time, route or dosage form • Switch to generic alternative • Switch to cheaper alternative • Switch to safer alternative • Provide adherence aid or educate • Others	☐ Accepted, ☐ Partially accepted ☐ Rejected
OTHER CATEGORIES	8.	Other Categories	Need for additional laboratory test	• laboratory parameters are required to determine if the patient needs treatment	☐ Accepted, ☐ Partially accepted ☐ Rejected
			Incomplete drug order	• Patient is on a medication where a particular detail of the order has been omitted	☐ Accepted, ☐ Partially accepted ☐ Rejected