

Supplementary Material 2: 87 ideas to improve RUM that were scored during stage 2

No	Research question
Domain 1- Antibiotic/anti infective	
	Discovery
	NIL
	Development
1	To develop diagnostic marker of antibiotic resistance
2	Steps to avoid antibiotic use in viral infections
3	Interventions to prescribe narrow spectrum first line antibiotic when it is sufficient instead of starting with broad spectrum antibiotics
4	Trial on pregnancy outcomes with and without use of antibiotics in uncomplicated normal vaginal delivery
5	Antimicrobial switch as a stewardship intervention in tertiary medical facilities
	Delivery
	NIL
	Description
6	Study on compliance of empirical treatment and implementation of antibiotic stewardship program
7	Study on Economic impact due to irrational use of antibiotics
8	Availability of Access group of antibiotics in all primary secondary and tertiary center
9	Irrational use of oral faropenam as a reason for AMR
10	A study of Fixed Dose combination of antibiotic skin ointments/ear drops/eye drops
Domain 2- Education, Information, Communication	
	Discovery
	NIL
	Development
11	Educational intervention to improve rational use of medicines by training to all prescribers and final year medical students
12	Developing Rational drug use by patient centered approach
13	Interventions to improve patient counselling
14	Randomised control trial of physicians' prescribing behaviour based on training
	Delivery
	NIL
	Description
	NIL
Domain 3- High risk population	
	Discovery
	NIL
	Development
15	Audit of prophylactic antenatal corticosteroids in low risk pregnant mothers
16	Intervention study to measure the impact of behavioral intervention in prescribing antibiotics in children in primary care setting
17	Developing prescribing criteria for elderly patients in India
	Delivery
	NIL
	Description
18	Rational use of medicines in pregnant women in ambulatory setting
19	Prescribing pattern of FDC of antimicrobial agents in ICU

Contd...

No	Research question
Domain 4- Pharma industry related	
	Discovery
	NIL
	Development
20	Methods of engaging pharmaceutical industry in improving rational use of drugs
	Delivery
	NIL
	Description
21	Study of price of top selling patented drugs in India
Domain 5- Policy/process/technology	
	Discovery
	NIL
	Development
22	Rational drug use in polycystic ovarian syndrome using standard treatment workflows
23	Methods to check whether physician is following the diagnostic criteria and treatment flow charts
24	Steps to develop Essential Drug List, Hospital formulary and Standard Treatment Guidelines in all the Health care institutes in India to promote rational drug use
25	Feasibility and fidelity testing of prescription audit using Artificial Intelligence & Machine Learning
26	Study on comparison of electronically entered and delivered prescriptions and traditional prescribing in promoting prescription safety and rationality.
27	Prescription review of patients receiving medications for asthma and interventions to align to SMART therapy and its impact on Patient outcome.
28	Estimating the effectiveness of hospital based “Drugs and Therapeutic Committee” in promoting rational drug use
29	Estimating the effect of Clinical Pharmacology based Antimicrobial Stewardship activity on the rational prescription of medicines including antibiotics
30	Steps to implement EMR based nudging of prescriptions to align with WHO indications of good prescriptions
31	A policy change of prescription rights restricting only to consultants and not postgraduate students
32	Preparation of list of combination drugs which are commonly prescribed along with guidelines
33	Steps to implement ICMR and NCDC recommendations for the proper use of medications in India.
34	An interventional study to check the quality and efficacy of Brand vs. generic medicines in India
35	Steps to implement restricted use of reserve antimicrobials.
36	Reward based incentives to improve rational prescribing of senior medical doctors
37	Steps for interdepartmental integration amongst the Clinicians to avoid duplication of drugs in the same patient
	Delivery
38	Evaluate the feasibility and efficacy of pre-visit pharmacist-led comprehensive patient medication reviews on physician prescribing behaviors.
	Description
39	Study on Pharma- doctor nexus in India.
40	Pharmacoeconomics of using rational medicines
41	A study on rational use of FDC
42	Evaluating the current status of medication reconciliations and patient adherence
Domain 6- Prescription review/TDM/Transition of care	
	Discovery
	NIL

Contd...

No	Research question
Development	
43	To perform drug utilization and drug audit studies for antimicrobials and drugs with chance for causing high adverse drug reactions and interactions
44	Steps to improve compliance of prescriptions to the Hospital Antibiotic Policy for Specific Infections.
45	Methods to Avoid over-prescribing and low-value prescribing
46	Impact of IV to oral switching on time to discharge
Delivery	
47	Impact of patient education about medications at transitions of care to improve reconciliation
Description	
48	Prescribing pattern of FDC in cardiac multi-morbidly
49	Use of parenteral preparation of drug when oral formulations will suffice-a retrospective chart review
50	Prescribing pattern of FDC in diabetic patient
51	Study on Rational prescribing in kidney disease patients
52	Factors affecting clinicians' prescription behaviour with a focus on knowledge and attitude
53	Beers criteria to deprescribe fall risk medicine in elderly
Domain 7- Self medication/OTC	
Discovery	
NIL	
Development	
NIL	
Delivery	
NIL	
Description	
54	Studying the extent of use of left over medicine at home by general public to determine its irrational use
55	Analysis of OTC, analgesics and antimicrobial use in general public
Domain 8- Specific disease/drug	
Discovery	
NIL	
Development	
56	Developing methods for Rationality of drugs like serratiopeptidase, thiocolchicoside, fatty acids , antioxidants
57	Methods to check effectiveness of multi-vitamins in non-specific pain and fatigue
58	Develop methods to identify excessive use of unsafe FDCs
Delivery	
NIL	
Description	
59	Interventions to improve rational use of PPI when co administered with other medicines such as NSAIDS and Domperidone.
60	Cough syrups containing both expectorant and suppressants. Frequency and responses of patients regarding its effects
Domain 9- Community Pharmacy	
Discovery	
NIL	
Development	
61	Interventions to avoid Drug substitution in community pharmacies

Contd...

No	Research question
	Delivery
	NIL
	Description
	NIL
Domain 1- Antibiotic/anti infective	
	Discovery
	NIL
	Development
62	Mobile app based anti microbial stewardship intervention to align prescriptions with local anti biotic policy/STG and to assess its effectiveness to improve rational use of anti microbials as well as user feedback using structured questionnaire.
63	Assessing the effectiveness of WHO AWare guidelines in reducing the irrational use of antimicrobials
64	Interventions to improve rational prescribing of antibiotics in reducing surgical site infections (choice of antibiotic/local vs. systemic/time of administration/duration)
	Delivery
	NIL
	Description
65	Study of antibiotic prescriptions by AYUSH practitioners
Domain 2- Education, Information, Communication	
	Discovery
	NIL
	Development
66	Creating a peer support group to educate and aid compliance with the prescribed drugs for chronic diseases in a community setting. 1. Baseline compliance will be assessed for patients with chronic diseases in a community setting- Preintervention phase 2. Formation of peer support groups, capacity building of the facilitators for the peer-led program- Intervention 3. Compliance after the intervention will be assessed
	Delivery
67	Educational interventions to strengthen Pharmacotherapeutic committees to improve their role in local medicines management policies, selecting medicines formularies, appropriate treatment protocols, essential medicines and awareness regarding adverse drug reaction reporting.
	Description
	NIL
Domain 3- High risk population	
	Discovery
	NIL
	Development
68	How artificial intelligence can guide polypharmacy in geriatric healthcare? Safety profile of polypharmacy for an individual may be difficult to predict. Using artificial intelligence, one can try to predict the possible adverse consequences of combination of medications in geriatric people in Indian context. For training dataset, we should try to gather reliable data in this perspective and then develop the model.
69	A multi centre hospital based study to optimize patient selection to improve rational use of tocolytics
	Delivery
	NIL
	Description
70	Pharmacotherapeutic interventions to optimize management of diarrhoea in immunocompromised patients.

Contd...

No	Research question
Domain 4- Pharma industry related	
	Discovery
	NIL
	Development
	NIL
	Delivery
	NIL
	Description
71	To evaluate the effect of claims in drug promotional literature by manufacturing companies on prescription pattern by medical practitioners
Domain 5- Policy/process/technology	
	Discovery
	NIL
	Development
72	Development and validation of the app for suggesting cheaper generic alternative of brand drugs: App can be developed which shows availability of multiple generics drugs for any brand name drug prescribed. The app can be made available to the clinicians. One group of clinician will use this app and another group will not. At the end of the study, patients in both the groups will be compared for efficacy, safety and cost. Qualitative study will be done to assess issues faced by clinicians while using app.
73	Common software for doctors and pharmacist: Patients will be randomized in 2 groups: in one group common software will be used for prescribing by doctors and dispensing by pharmacists and in group 2 conventional prescribing and dispensing method will be used. In interventional group patient will be identified by aadhar number of patient in the software and the doctor and pharmacist both can see the disease history and medicines prescribed to patient's whole life. At the end of study, both group will be compared for of polypharmacy, repeated prescriptions and for drugs having interactions.
74	Development of Standardized Indian Guidelines for evidence based storage and organization of drugs in pharmacies specifically to reduce medication errors. Guidelines may be developed on the basis of Good Distribution Practices and Good Storage Practices. Mandatory certification on Good Storage Practices and Good Distribution Practices to be made mandatory for pharmacists, pharmacologists and quality control personnel. Implementation of techniques such as Tall Man Lettering, Basket techniques, guidelines for temperature control using thermohygrometer.
75	There is a wide spectrum of the level of rationality of practitioner. Patients are not aware of the rationality of the prescription and there is no way to know rational standard of drug use of a practitioner. If the practitioners are under monitoring for the rationality of drug prescriptions, it is likely that they will make deliberate attempt to be as rational as possible in prescription as this might affect their acceptance by patients. It is worthwhile to set up a monitoring body that will review selected prescription. Score for each practitioner should be accessible to the public.
76	Shared decision model for selection of medications for patients: Currently clinicians decide about selection of brand of medicine. In this study, once the prescription is written, the pharmacist will inform clinician and patients about the availability of different alternatives for the brand written by doctors. The decision will be taken by the clinician in consultation with the pharmacist and patient. The experience of patient, pharmacist and doctors can be assessed. Efficacy and safety will be compared between shared decision model group and control group.
	Delivery
	NIL
	Description
77	To evaluate the availability, usage and affordability of selected 50 essential medicines from NLM-2022 & WHO essential medicines list in selected five PHCs& tertiary care hospital in and around Puducherry
78	A study in collaboration with Anganbadi to assess the primary healthcare delivery system to the inherent tribal population in view of reproductive and mental health.
Domain 6- Prescription review/TDM/Transition of care	
	Discovery
	NIL

Contd...

No	Research question
	Development
79	a multi-method tool will be developed to assess patient medication adherence for common diseases occurring in our region and measures to be taken to improve it which will help in promoting rational use of medicines
	Delivery
	NIL
	Description
80	Evaluation of the number of women receiving contraceptive pills without considering the eligibility criteria.
81	Pharmacoeconomic analyses for cost rationalization of new/repurposed medications
82	Adherence to the fixed drug regimens or blister pack regimens should be monitored effectively for proper cure.
Domain 7- Self medication/OTC	
	Discovery
	NIL
	Development
	NIL
	Delivery
	NIL
	Description
83	qualitative study to identify the reason for medication discontinuation at community level
Domain 8- Specific disease/drug	
	Discovery
	NIL
	Development
	NIL
	Delivery
	NIL
	Description
84	Review of use of Monoclonal antibodies alone or in combination with other biologics or non biologics.
85	evaluation of rationality of iron supplementation in gestational diabetes to prevent impairment of glycaemic control
86	Assessment of patterns of use of misoprostol in hard to reach populations
87	Research question: is the opioid use practice in orthopaedic OPD rational and safe? Aim of the study is to assess the rationality of opioid use in orthopaedics Out-patient Department of tertiary-care healthcare centre