

Supplementary Material 1: 122 ideas to improve SUM that were scored during stage 2

No.	Research question
Domain 1- Antibiotic/anti infective	
	Discovery
	NIL
	Development
1	Developing Interventional methods for managing risks from TB antimicrobials
2	Developing SOP or protocol for stop using high end antibiotics initially for a treatment.
	Delivery
	NIL
	Description
3	To establish the expression of drug resistance molecular mechanisms
Domain 2- Community Pharmacy	
	Discovery
	NIL
	Development
4	New methods for proper Storage of medicines
	Delivery
	NIL
	Description
5	To find out availability of banned drugs in pharmacies and chemist shops
Domain 3- Education, Information, Communication	
	Discovery
	NIL
	Development
6	Effectiveness of a “How to take your Medicines desk” in improving patients’ knowledge regarding drug administration, FDC, OTC, and antibiotic resistance for improving drug safety
7	To evaluate the impact of clinical pharmacology led drug information unit to provide critically appraised information to health-care professionals for better clinical care
	Delivery
8	Estimating public knowledge on OTC drugs and impact of pharmacist-based education in dispensing OTC drugs for diarrhoea
9	Estimating the effectiveness of a structured brief training program in improving medication prescribing practices by unqualified practitioners
10	Impact of hands-on training to various disease for health care workers
	Description
11	Whether previous experience of the physician influences treatment of disease?
12	Awareness through mass media.
Domain 4- High risk population	
	Discovery
	NIL
	Development

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No.	Research question
13	Preventability of ADRs and drug drug interactions in ICU patients on multiple antimicrobial agents
14	Estimating the effectiveness of albumin transfusion in preeclamptic patients, Knowledge about teratogenic drugs in pregnancy
15	Safety of levetiracetam in pregnancy or pediatric population; effectiveness of the drug in neuropathic pain, dosing errors in emergency paediatric set up
16	Estimating the extent and pattern of polypharmacy in geriatric population In India methods to promote safe use of drugs
17	Burden of medication errors at patients' homes and interventions to improve them
18	Determining the effectiveness of interventions for safe dispensing of OTC medicines during pregnancy
19	Estimating the effectiveness of Aspirin 150 mg versus 75 mg in patients with past history of pre-eclampsia or eclampsia
20	Estimating effectiveness of Safe FDCs for elderly
21	Developing methods for converting adult formations like tablets in a suitable form for paediatric use.
22	Methods to promote rational use of antibiotic utilization in ICU in a tertiary care teaching hospital
23	Effectiveness of pharmacist intervention to improve the outcomes within older patients with polypharmacy
Delivery	
24	Fixed drug combinations as an intervention in improving medication adherence and clinical outcome in cardiac multi-morbidity
25	Developing interventions to reduce redundant medications
26	Practices to improve predictability of allergic reactions using various methods of test dose
27	Emergency management practices in case of accidental consumption of wrong dose or route for patients
28	Providing education about safe use of drugs and vaccines in pregnancy to reduce the risk of unsafe of drugs in pregnancy
Description	
29	A multicenter retrospective survey on the prescribing pattern of medicines in pregnant and lactating mothers
Domain 5- Pharma industry related	
Discovery	
NIL	
Development	
30	An interventional study to check the role of pharma industry in shaping the prescription practises of doctors
Delivery	
NIL	
Description	
31	Marketing strategies of branded (originator) products over generics and biosimilars
32	Study of drug promotion by top ten drug companies
Domain 6- Pharmacovigilance	
Discovery	
NIL	
Development	
33	Developing or strengthening the Pharmacovigilance services and patient reporting of ADR
34	Methods to check safety of repurposed medicine used in COVID
35	Methods for finding Adverse events by the irrational use of drugs and QALY lost
Delivery	
36	Improving Adverse drug reaction monitoring in patients taking Anti-leprosy regimen and Anti tuberculosis drugs
Description	
37	Estimating the extent of Pharmacovigilance in pediatric patients and elderly

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No.	Research question
Domain 7- Policy/process/technology	
Discovery	
NIL	
Development	
38	Interventions to prevent medication administration errors at the level of nurses and patient attendants and improving electronic -patient medical record system in hospitals
39	Evaluating the effectiveness of Clinical Pharmacist led interventions to prevent wrong dosing among in-patients and their role in providing information related to discharge medicines
40	Estimating methods to calculate burden of medicine wastage and accidental administration resulting from improper storage and developing safe packing methods for drugs
41	Estimating the effectiveness of an app based education to restrict self medication in order to improve safe use of medicines and effectiveness of drug-drug interaction checking software
42	Interventional study to check effectiveness of Applications vs. manual pill organizers to effectively manage medication adherence and ensure safety in geriatric patients on multiple medications
43	Regulatory requirement for assessment of long term safety of new medicines by an independent body
44	Steps to promote use of generic names of drugs, atleast within bracket by prescribers
45	Warning signs on medical products in local languages and pictures as effective ways of improving drug safety
46	Role of barcodes and qr codes with patient details to support health literacy and safe use of medicines
47	Steps to ensure clear, distinctive labelling of medications by pharmacist
48	Drug-drug interaction software and its effectiveness in improving safe use of medicines
49	Safety interventions to prevent drug induced phlebitis
50	Steps to ensure LASA and high risk medicine policy compliance at hospital pharmacy
51	Implementation of a Medication Error and Patient Safety Incident Reporting System in a Tertiary Healthcare Institute and developing legal provisions for penalising prescribers violating drug safety
52	Narcotic policy and standards of implementation at hospitals
53	What the different steps required for ensuring safe use of medicines
54	Steps to implement laws to prevent OTC sale of antibiotics
55	Medical teaching curriculum revisions (Gen med and Pharmac exams at same year) as an intervention to improve rational use of medicine
56	Have all generic medicines available in the market gone through BA-BE testing
57	Evaluate provider incentives for using wise-use, essential medicine lists, for generic prescribing, and for avoiding fixed dose combinations.
58	Policies and national guidelines based on rather ambiguous evidence (e.g. fixed-dose combinations of antihypertensives) + review of literature on the real quality of evidence
Delivery	
NIL	
Description	
59	Ecological impact of medicine waste from unused or expired medicine
60	Examine off label use of medicines and survey on irrational FDC
61	Identify the use of AYUSH and modern medicine together
62	Impact of banned medicines on drug companies and consumers in the context of FDCs banned by drug controller
63	Cost effectiveness of antibiotic stewardship interventions
Domain 8- Prescription review/TDM/Transition of care	
Discovery	
NIL	

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No.	Research question
Development	
64	Elucidation of causes of medication errors or preventable adverse events during the medication-use process.
65	Safe use of cough medicines in children
66	Safe medication practices in pediatric ICU and ward
67	Effect of therapeutic drug monitoring based vancomycin dosing on clinical outcome in critically ill patients
68	Voriconazole and interpatient variability: Role of Therapeutic drug Monitoring
Delivery	
69	Importance of risk communication on the prevention of medication errors during transitions of care in tertiary hospitals
70	Training, education and CME in assessing difference in WHO/INRUD prescribing indicators
71	Safe use of medicines in cardiac, renal and hepatic disease patients- a chart review.
Description	
72	Prescription analysis of drugs prescribed for extremes of ages at primary secondary and tertiary level
73	Role of frequent interruption in causing medication error.
74	Knowledge about patient problems and drug prescription: How can indication-based prescribing improve patient safety?
Domain 9- Self medication/OTC	
Discovery	
NIL	
Development	
75	Developing guidelines for OTC medications and self administration to ensure safe use of medicines and educating patients and pharmacists on OTC
Delivery	
NIL	
Description	
76	Comparison of usage of physician-prescribed vs. over-the-counter available sedatives and mood stabilizers among persons with chronic depression and mood disorders
77	Over the counter usage of steroids and antibiotics
Domain 10- Specific disease/drug	
Discovery	
NIL	
Development	
78	Developing guidelines for safe use of Anticoagulants
79	Accuracy and precision of IV medication preparation
80	Methods to study Unsafe use of NSAIDs in different patient populations
81	Study to access long term use of Tamoxifen for breast cancer and its safety for the endometrium
82	Evaluating IV smart pump data for impact on reducing medication errors
83	Better services for epilepsy
84	Safety of use of statins by type 2 diabetic patients
85	Use of contraceptive methods, you can evaluate the cost for the governments and correlate with the public health policies
86	Comparison of two similar but different molecules, like Vildagliptin and sitagliptin or telmisartan and olmesartan
87	Methods for Rational treatments in psychiatry and mental illness
Delivery	
88	Audit of safe use of antimalarials during pregnancy and pregnancy outcome
Description	
89	Cohort study for safety of OC pills in PCOS including thromboembolic episodes in Indian population
90	A study on Diabetic patients and use of insulin

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Domain 1- Antibiotic/anti infective	
	Discovery
	NIL
	Development
	NIL
	Delivery
	NIL
	Description
	NIL
Domain 2- Community Pharmacy	
	Discovery
	NIL
	Development
91	Containers with safety cap for medicines: Dispensing of medicines in containers having safety caps to prevent the accidental use of medicines by children. Patients with children below 14 years of age in family will be divided in two groups. One group will receive medicines in child lock containers and other in regular packaging. At the end of study both groups will be compared in terms of accidental consumption of medicines by children
	Delivery
	NIL
	Description
	NIL
Domain 3- Education, Information, Communication	
	Discovery
	NIL
	Development
	NIL
	Delivery
	NIL
	Description
	NIL
Domain 4- High risk population	
	Discovery
	NIL
	Development
92	Effectiveness of Personal health cards/Pill cards with list of medications (in generic name) in improving medication safety when given to geriatric population in the PHCs (NCD clinics and OP) and digitalization of the same with periodic updates
93	Application of Integrated medicines management (IMM) model to optimise prescribing in elderly patients in hospital settings in India: a randomised controlled trial
94	Development and implementation of evidence based programs to reduce risk of falls as a result of irrational prescription of FRIDS (Fall Risk Increasing Drugs) in Geriatric population. The use of FRIDS can be identified using the list prepared by the Swedish National Board of Health and Welfare as well as Beers criteria. Attempts will be made to deprescribe the patient using algorithms suggested by the EuGMS Task and Finish group on Fall Risk Increasing Drugs (FRIDs).
	Delivery
	NIL
	Description
	NIL

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No.	Research question
Domain 5- Pharma industry related	
	Discovery
	NIL
	Development
	NIL
	Delivery
	NIL
	Description
Domain 6- Pharmacovigilance	
	Discovery
	NIL
	Development
95	WhatsApp based alerts to mothers to prevent adverse drug reaction in children: Children may get adverse effects of drugs due to incorrect dosing or incorrect frequency of the drugs. In this study, mother's mobile number will be added into a WhatsApp group and general instructions about safer use of medicine will be sent in the group. The frequency of adverse events in children whose mother received alerts in WhatsApp group will be compared with children of mothers who were not the part of WhatsApp app group.
96	The ADR Alert Card is a novel way and gaining traction to prevent ADR recurrence . It reduces avoidable morbidity, helping to bring down costs and improve hospital workflow. Unnecessary admissions and resource wastage are prevented. Being a frugal innovation, it is very easy to implement in LMICs. We developed this card that has details of suspected ADR, suspected medication, date of onset of reaction, contact details, emergency contact number, blood group, major illnesses of the patient and Helpline number.
	Delivery
	NIL
	Description
97	Estimating the magnitude of adverse events in married infertile women on ovulation inducing drugs in a tertiary care hospital
98	A review on adverse events associated with cardiac medical devices to formulate guidelines on safe use of cardiac devices.
99	"Impact Analysis of Vigilance Programs on Indian Healthcare system"
100	Adverse events due to covid 19 vaccination at the population level among those acceptors
Domain 7- Policy/process/technology	
	Discovery
	NIL
	Development
101	Considering Swiss cheese model for prevention of medication error it is a responsibility of each personnel involved in the cascade to be alert in pointing out the errors. The cascade ranges from the prescribing doctor, dispensing pharmacist, administering nurse, patient and their attendees. Monday, Thursday the doctor is the leader, Tuesday and Friday pharmacist and Wednesday and Saturday Nurse. Outcome will be to evaluate its impact on errors made.
102	Impact of hospital based drug safety alerts on the prescribing of drugs: Drug safety alerts are regularly given by the regulatory authorities like FDA or CDSCO. In this study, the baseline prescription audit will be done and the audit assessment will be done periodically. The impact of drug safety alerts which are disseminated regularly amongst the clinicians will be assessed based on change in prescription writing. Reasons for following or not following the alerts will also be analyzed.
103	Co-production of best practice fit for purpose models for e-pharmacy regulation
104	Drug Takeback program in India: Policy making, regulations and implementation. Improper disposal of drugs result in polluting the environment and ultimately results in many problems, especially antimicrobial resistance.

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No.	Research question
105	Development of a tailored healthcare dashboard based on a unique patient identifier for outpatients in a tertiary care hospital. Formatting and customizing a dashboard panel by creating 1. Unique patient identifier (Aadhar-Linked) 2. Details of prescription and investigations 3. Flagging of the patient (to avoid duplication of prescription by visiting multiple OPD) 4. Using the centralized prescription (by Pharmacist) for dispensing the prescribed drugs. 5. To identify and flag adverse drug reactions, drug interactions, and nutraceuticals/herbal product usage for the patient
106	Evaluating the utility of Pharmacogenetic testing for safe use of medicines
107	Research Question: Are the blood and blood-products being used safely and rationally in different clinical settings? Aim of the study is to evaluate safety and rationality of use of blood and blood-products with respect to prevailing standard of care and guidelines in hospital In-patient Departments and day-care centers
108	An interactive digital (audio/video) interface between healthcare providers to vulnerable patients and their care-givers about the medical history of drug allergy and efficacy of the patient to enable appropriate decision making in emergency situations.
109	System like DOTS for patients taking resistance prone antimicrobials
110	Development of Evidence based Guidelines for management of Vertigo to prevent irrational prescription of vestibular depressants that are known to cause drug induced Parkinsons disease.
111	Effectiveness of giving drug information card while dispensing comprising ADR, DOs and donts during drug usage for each drug in patients language
112	Develop guidelines to manage drug shortages and assess their impact on patient outcome prospectively.
	Delivery
	NIL
	Description
113	DOES THE ADDITION OF A POST OF PHARMACIST ASSISTANT TO CLINICIANS ASSIST IN PRACTICE (EG IN THE NHS)
	Domain 8- Prescription review/TDM/Transition of care
	Discovery
	NIL
	Development
114	'Brown bag' medication reviews (a method to review all the medicines consumed by the patient) as a means of optimizing patients' use of medication to reduce medication errors
	Delivery
	NIL
	Description
115	Drug induced liver injury and/or failure specifically focusing on DILI or liver failure due to alternative system of medicine.
116	Role of gastroprotective agents in reducing short-term gastrointestinal complications when prescribed concurrently with NSAIDS in the emergency department.
117	Active surveillance of use of neuromuscular blockers (NMBs) and sedatives in critical care unit to reduce weakness and prolonged immobility
118	To estimate the medication errors in management of Stroke and venous thromboembolism medical conditions in view of anti-coagulation therapy.
	Domain 9- Self medication/OTC
	Discovery
	NIL
	Development
	NIL
	Delivery
	NIL

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No.	Research question
	Description
119	1. Area-Self medication; 2. Intervention- Cost-effective analysis of self medication of antibiotics for upper respiratory tract infection in two groups- self medicated and taking medicines as prescribed by physician 3. Study design- Prospective, non-randomized, cost effective analysis; 4. Indicators- ICER in two groups with direct, indirect and intangible cost as cost parameters while time to partial/complete recovery, duration to resume routine daily activities, loss of wage days as effectiveness parameters
	Domain 10- Specific disease/drug
	Discovery
	NIL
	Development
120	RCTs to determine how and when can we taper off the drugs during remission of chronic ailments such as metabolic and autoimmune diseases for Minimal side effects, maximal drug-free and disease-free duration for patients?
	Delivery
	NIL
	Description
121	Estimating the drug combinations given as a treatment in primary health care centres for treatment of urinary tract infections among females in reproductive age groups?
122	Assessment of diabetes risk in patients on long term proton pump inhibitors – A prospective cohort study