I-TECH

INTERNATIONAL TRAINING & EDUCATION CENTER ON HIV

Experiences in Strengthening Health Laboratories in Resource Limited Countries

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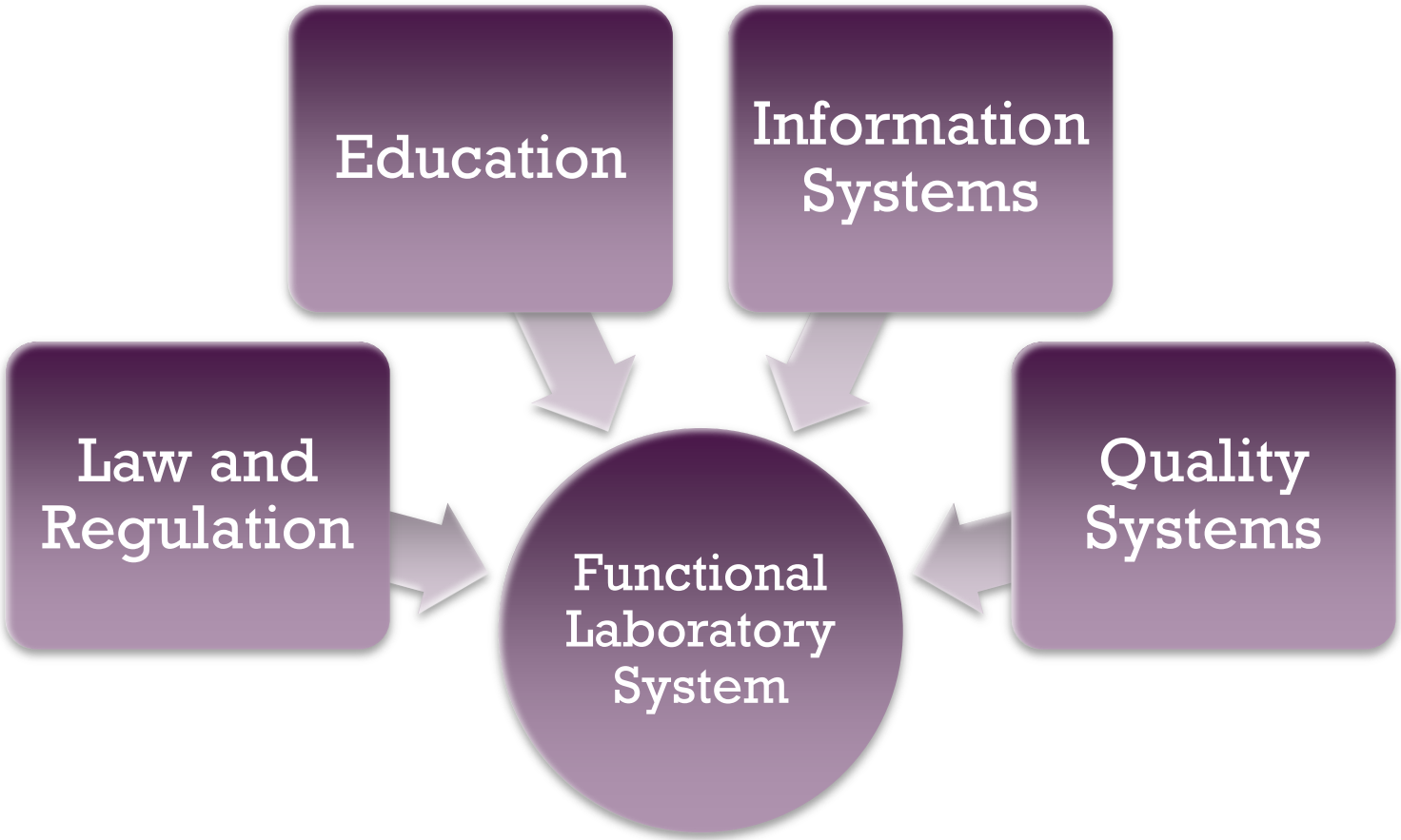
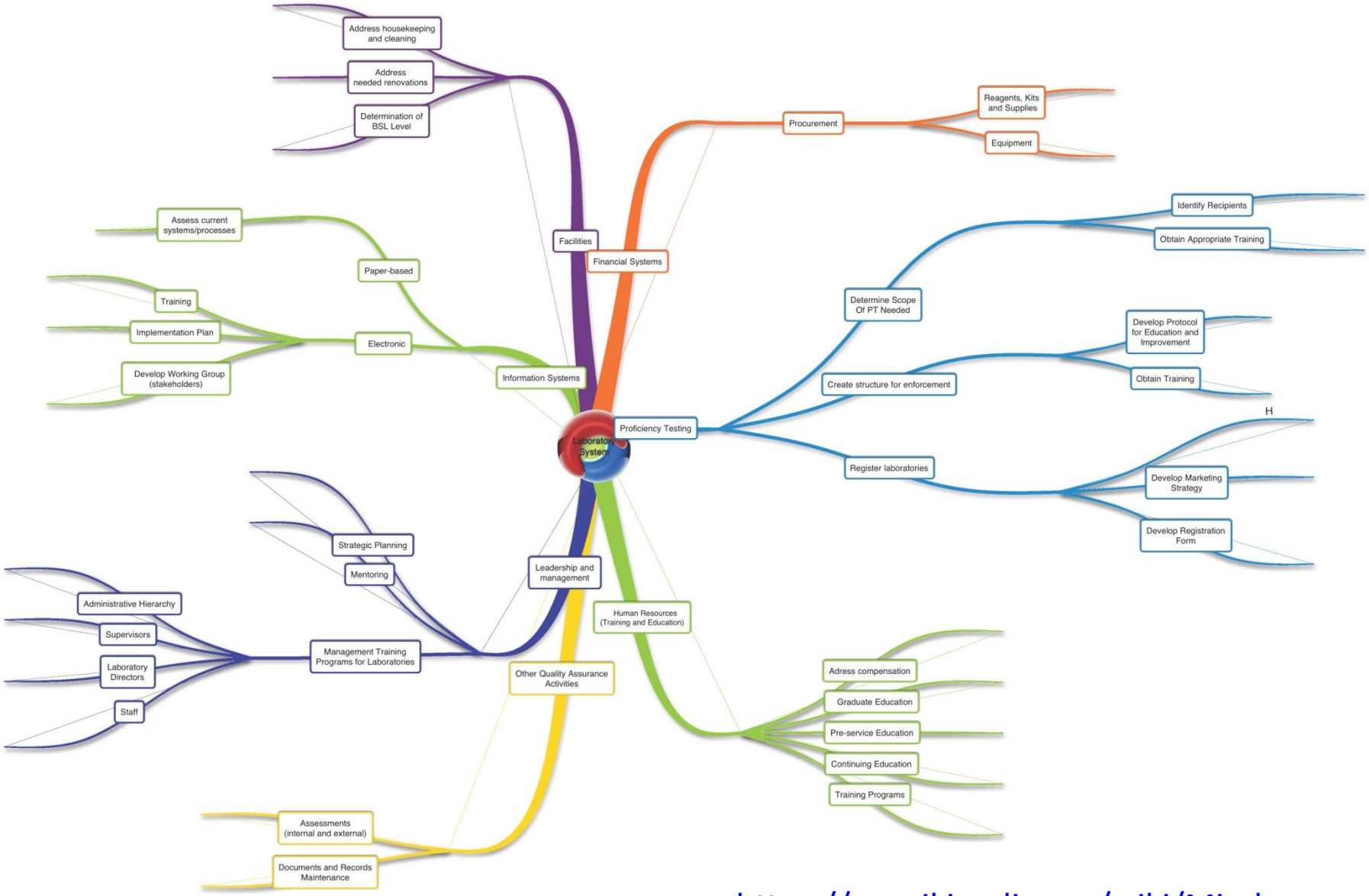
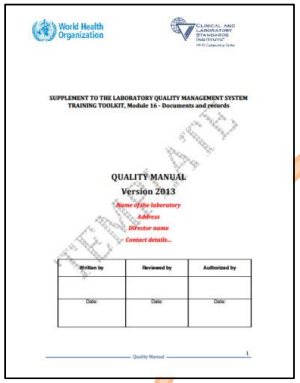

Education
Information Systems
Law and Regulation
Functional Laboratory System
Quality Systems

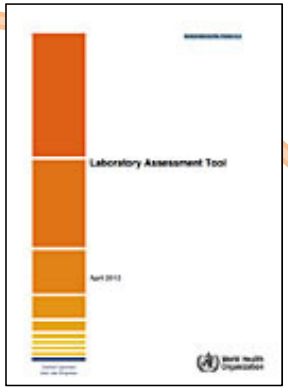


https://en.wikipedia.org/wiki/Mind_map

The WHO suite of tools to help you implement a quality management system in your laboratory



The **quality manual template** provides guidance for public health and clinical laboratories on writing policies and procedures to support a quality management system. It comprises a main document providing information and examples to assist with writing a laboratory quality manual together with 24 appendices. *Available in English (French and Russian in progress).*



The **Laboratory Assessment Tool** describes the general process for assessing laboratories and provides two questionnaires to help assess national laboratory systems and individual laboratories. Assessors can use it as is, or customize the available materials to meet local requirements. *Available in English, French, Russian and Spanish.*

Laboratory Quality Stepwise Implementation tool

If you are ready to start implementing a QMS in your laboratory, then the **Laboratory Quality Stepwise Implementation tool** is for you. The LQSI translates ISO 15189 requirements into step-by-step activities, structured by an interactive roadmap. It provides additional support material such as document templates. *Available in English (French and Russian in progress).*

The **LQMS training toolkit** provides all the materials needed for a trainer to develop and provide training in laboratory quality management. *Available in English, French and Russian.*

The **Laboratory Quality Management System handbook** provides a comprehensive reference on LQMS. This handbook covers topics essential for quality management of a public health or clinical laboratory and based on ISO 15189 and CLSI GP26-A3 documents. *Available in English, French and Russian.*

All tools available at: http://www.who.int/ihr/lyon/hls/en/

Appoint Quality Officer

Laboratory Organization chart

IQC

Job descriptions

Appoint Biosafety Officer

SOP writing

Rejection/Acceptation criteria

Standardize request form

Inventory

Access control system

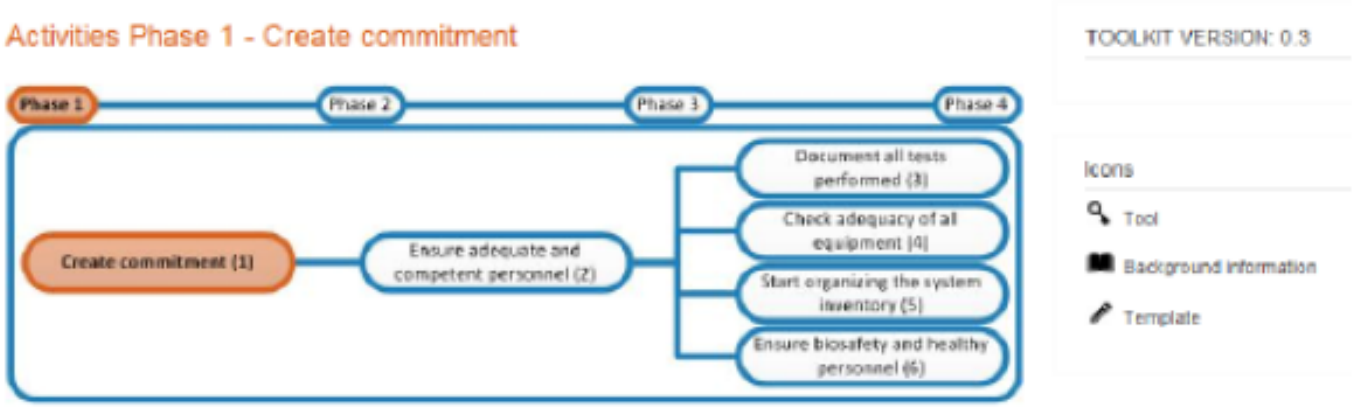
Waste segregation

EQA participation

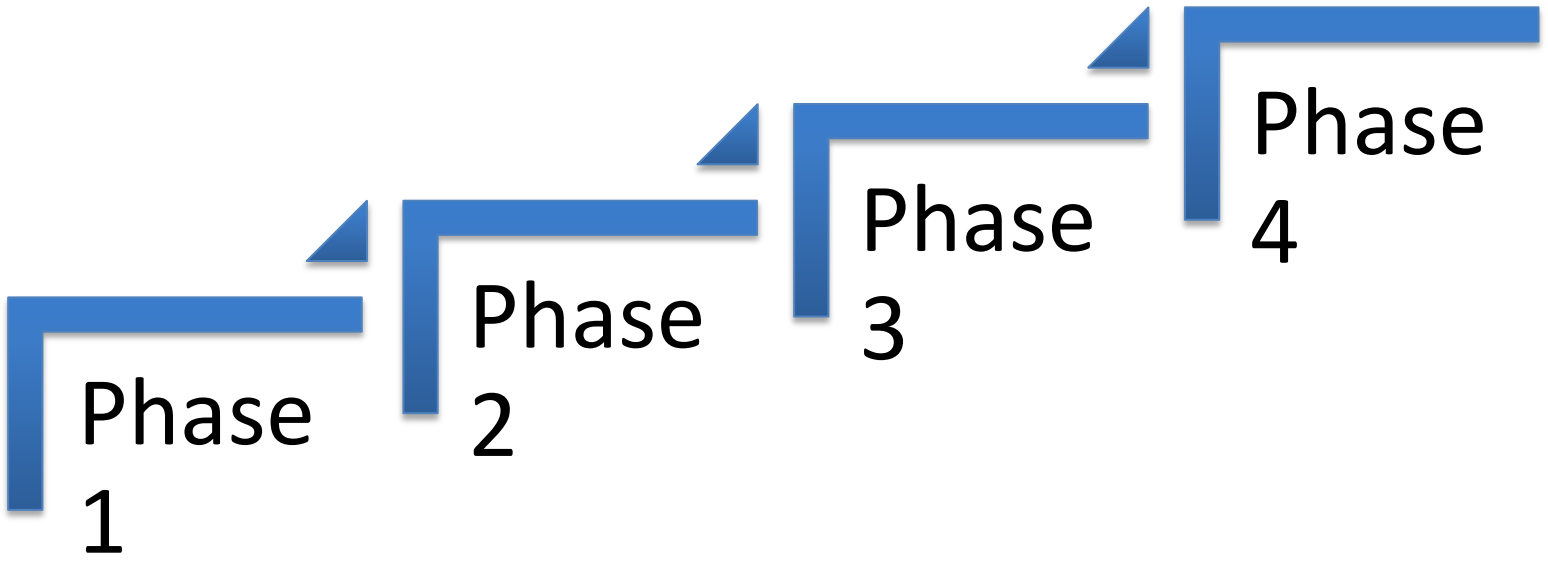
The LQSI Process

Laboratory **Q**uality **S**tepwise **I**mplementation

- A tool to assist laboratories in the implementation of a quality management system that meets international standards.
- LQSI translates the requirements of ISO 15189 into step-by-step activities divided in 4 phases, structures them in an interactive roadmap, and provides many user-modifiable support materials such as document templates and SOPs available online.



Laboratory Quality Stepwise Implementation (LQSI) Process



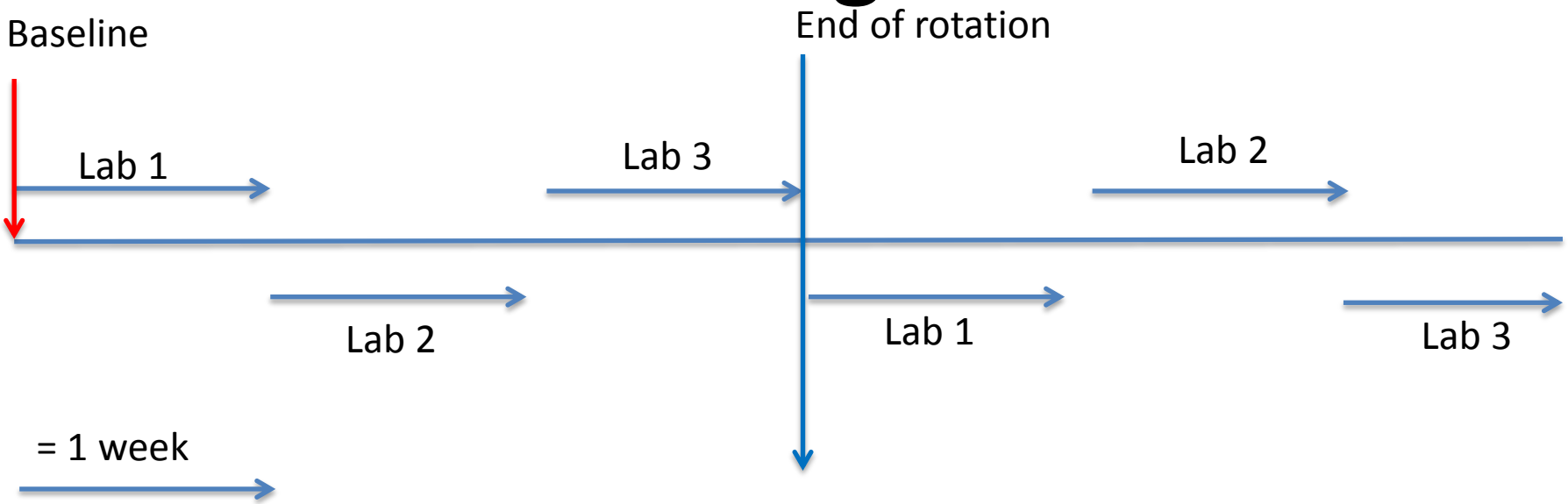
Phase 1: Assure technical competency of testing

Phase 2: Implement QC measures, create traceability

Phase 3: Establish the policy cycle with proper management, leadership and planning

Phase 4: create CQI, document progress

The Mentoring Process:



- Multiple mentor calls to labs every week
- Mentor meets with Lab Manager daily and Hospital Director weekly
- Weekly team call
- Weekly progress reports
- Monthly progress reports
- Bi-monthly team meetings in PP

Mentors follow an action plan, use a daily checklist (in Khmer) and measure progress weekly

Checklist Phase 1		បញ្ជីត្រួតពិនិត្យដំណាក់កាលទី១	QSE		How	វិធានការ (How)	Indicator	សូចនាករ Indicator
1	Have the staff adequately been instructed on the symptoms of infection with pathogens worked with in the laboratory?	តើបុគ្គលិកត្រូវបានណែនាំគ្រប់គ្រាន់ទៅលើរោគសញ្ញានៃការឆ្លងជាមួយនឹងមេរោគបង្កជំងឺនៅក្នុងមន្ទីរពិសោធន៍ដែរឬទេ?	Facilities and Safety	Activity	**1.** Identify the pathogens most frequently worked with in the laboratory. **2.** Identify the symptoms of diseases caused by these pathogens. **3.** Present and discuss the symptoms of the diseases caused by these pathogens with all staff. And explain to the staff members what they should do when they have these symptoms. **4.** Develop policy to allow staff to be vaccinated; and regular check of TB. **5.** Vaccinate to staff against Hepatitis B and organize regular checks for TB.	១. កំនត់អត្តសញ្ញាណ នៃមេរោគបង្កជំងឺដែលមន្ទីរពិសោធន៍ធ្វើការជាមួយជាញឹកញាប់។ ២. កំនត់អត្តសញ្ញាណ នៃរោគសញ្ញាជំងឺដែលបង្កឡើដោយមេរោគទាំងនោះ។ 3. បង្ហាញនិងពិភាក្សាជាមួយបុគ្គលិកទាំងអស់នូវរោគសញ្ញាដែលបង្ករឡើងដោយមេរោគទាំងនោះ និងការឆ្លស់ត្រូវធ្វើខ្លួនៅពេលដែលមានរាគសញ្ញាទាំងនោះ ។ 4. បង្កើតគោលនយោបាយដើម្បីឱ្យ	**1.** Presence of the list for pathogens and its symptoms for the most pathogens frequently worked with in the laboratory. **2.** Presence of the minute of meeting/record on the discussion and explaination of the symptoms of the diseases caused by these pathogens with all staff; and explain to the staff members what they should do when they have these symptoms. **3.** Presence of policy that staff need to be vaccinated and regular check for TB. **4.** Presence of the certificate of vaccination of staff against Hepatitis B.	១.មានបញ្ជីមេរោគបង្កជំងឺ និងរោគសញ្ញារបស់វា។ 2. មានកំនត់ហេតុប្រជុំ 3. មានគោលនយោបាយដើម្បីឱ្យបុគ្គលិកបានទទួលការចាក់វ៉ាក់សាំង និងពិនិត្យសុខភាពជាប្រចាំដើម្បីរកមេរោគរបេង ។ 4. មានបិទភ្ជាប់ការចាក់វ៉ាក់សាំងការពារជំងឺរលាកថ្លើមប្រភេទបេ។
2	Is there a written procedure on how to act in case of a suspected laboratory associated infection/laboratory accident whereby a	តើមានឯកសារជាលាយលក្ខអក្សរសម្រាប់អនុវត្តន៍ក្នុងករណីសង្ស័យថាមន្ទីរពិសោធន៍មួយមានជាប់ទាក់ទងទៅ	Facilities and Safety	Activity	**1.** Write/develop/collect the procedure on what to do when staff members (potentially) have become infected in the laboratory, including the administration of PEP and visiting of medical services (pre-exposure prophylaxis and post-exposure prophylaxis)	1. បង្កើតស្រាវជ្រាវរក pre-exposure prophylaxis និង post-exposure prophylaxis.	**1.** Presence of pre-exposure prophylaxis and post-exposure prophylaxis. And put the its flow charts at the place that all staff could see it easily.	1. មានឯកសារអំពី pre-exposure prophylaxis និង post-exposure prophylaxis ព្រមទាំងមានរូបភាពបិទនៅលើជញ្ជាំង។

Done but no evidence = Not Done

Strengths of approach

- **Detailed action plans** for each phase
- **Regular mentor schedule and embedding of mentors**
- **Establishing a culture of CQI**
- **MoH (BLMS) support**
- **Maintaining weekly contact with mentors**
- **Teambuilding!!**

Clinical utilization of laboratory

Improve Laboratory Utilization by Clinicians

- Survey doctors and nurses on lab utilization- discuss results with the TWG for clinical education
- Design intervention strategies:
  - Lab Medicine rounds/case studies
  - Lab Medicine CME
  - Medical education –Lab Med elective at Medical School