



# INA-RESPOND



## INDONESIA RESEARCH PARTNERSHIP ON INFECTIOUS DISEASES

### A multi-center clinical research network in Indonesia

#### History of INA-RESPOND

On March 29, 2010 the Indonesian Minister of Research and Technology, Mr. Suharna Surapranata, and the US Ambassador for Indonesia, Mr. Cameron Hume, signed the Science and Technology agreement between the two countries which among others roll-out the idea to establish a clinical research network. INA-RESPOND was conceived during the tenure of the late Health Minister, Dr. Endang R. Sedyaningsih.

The collaboration was discussed between the delegation led by Minister Endang and NIAID Director Dr. Anthony Fauci in April 2010, which resulted in the establishment of implementing partnership between *Badan Litbangkes* of the Ministry of Health of Indonesia (National Institute of Health Research and Development) and the United States National Institute of Health / National Institute of Allergy and Infectious Diseases (NIH-NIAID).

#### Vision

To become the premier research network in the region providing evidence to inform policy making, minimize the impact of infectious diseases and improve human well-being.

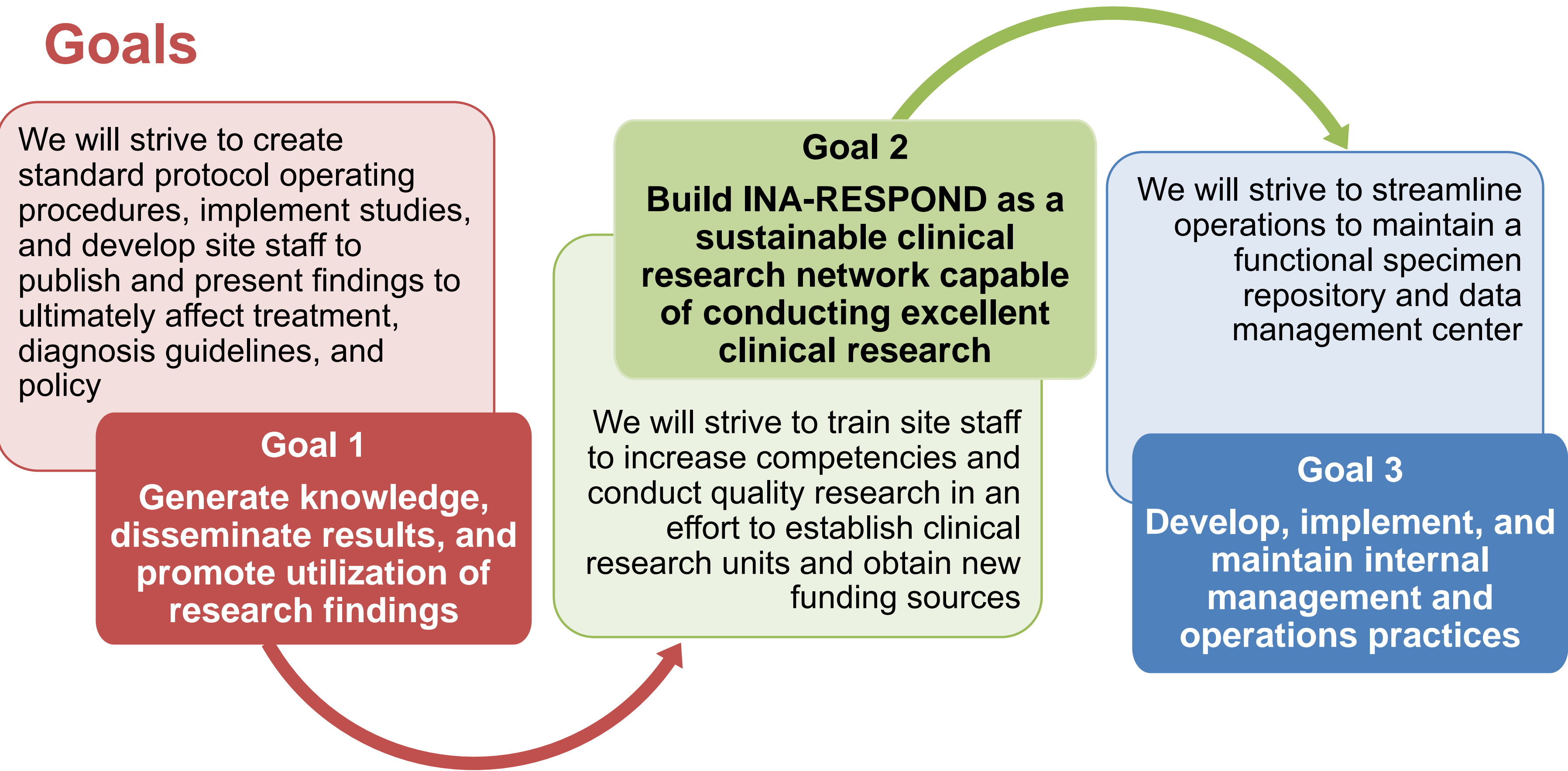
#### Mission

To improve the health of the people of Indonesia and benefit the international community by conducting high-quality infectious disease research through a collaborative, sustainable and well-recognized research network.

#### Values “BRIGHT”

- **Beneficial and Responsive** to the research needs of Indonesia and the international community
- **Innovative** in designing, implementing, and integrating research in a healthcare setting
- **Goal-Oriented** to achieve the mission of the network
- **High-Quality** in conducting scientifically sound and ethical research
- **Trust and Teamwork** with respect, transparency, communication, collaboration, and shared responsibility

#### Goals



#### INA-RESPOND Partners

1. National Institute of Health Research and Development (NIHRD) (Badan Litbangkes, Indonesia)
2. Universitas Airlangga / RSUD Dr. Soetomo, Surabaya
3. Universitas Diponegoro / RSUP Dr. Kariadi, Semarang
4. Universitas Gadjah Mada / RSUP Dr. Sardjito, Yogyakarta
5. Universitas Hasanuddin / RSUP Dr. Wahidin Sudirohusodo, Makassar
6. Universitas Indonesia / RSUPN Dr. Cipto Mangunkusumo, Jakarta
7. Universitas Padjadjaran / RSUP Dr. Hasan Sadikin, Bandung
8. Universitas Udayana / RSUP Sanglah, Denpasar
9. RSUP Persahabatan, Jakarta
10. RS Penyakit Infeksi Sulianti Saroso, Jakarta
11. Eijkman Institute for Molecular Biology, Jakarta
12. United States National Institutes of Health, National Institute of Allergy and Infectious Diseases (NIH-NIAID)
13. United States Centers for Disease Control and Prevention (CDC)

#### Network Policies

In all the activities of INA-RESPOND study, from data and specimen collection, data entry, specimen storage and shipment, laboratory testing, data analysis and presentation, and submission of the abstracts and manuscripts, INA-RESPOND researchers will adhere to the three important issues which are listed in Science and Technology agreement between the Indonesia and US governments as well as in the INA-RESPOND implementation arrangement between the two countries.

#### Intellectual Protection of Property (IPR)

These will be guided by the Intellectual Protection of Property (IPR) terms as provided under Article X in the S and T agreement between the two countries, Protection of Intellectual Property, as follow:

1. Provisions for the protection and distribution of intellectual property created or furnished in the course of cooperative activities under this Agreement are set forth in Annex I, which shall form an integral part of this Agreement.
2. Scientific and technological information of a non-proprietary nature resulting from cooperation under this Agreement (other than information which is not disclosed for commercial or industrial reasons) shall be made available, unless otherwise agreed, to the world scientific community through customary channels and in accordance with normal procedures of the participating agencies and entities.

And under Paragraphs III.A and III.B(1), (2)(a), (2)(b), (2)(c) of Annex I, Intellectual Protection Rights, of the Science and Technology agreement between the Government of the Republic of Indonesia and the Government of the United States of America.

#### Material Transfer Agreement (MTA)

All research activities using material and or data originating from Indonesia shall to the fullest extent possible be conducted in Indonesia. Any transfer of such materials and data, when really needed and on the agreement of the participants, shall be carried out in accordance with the laws, regulations and policies of the Parties, as provided in Article VIII of the Science and Technology Agreement and a Material Transfer Agreement concluded between Parties.

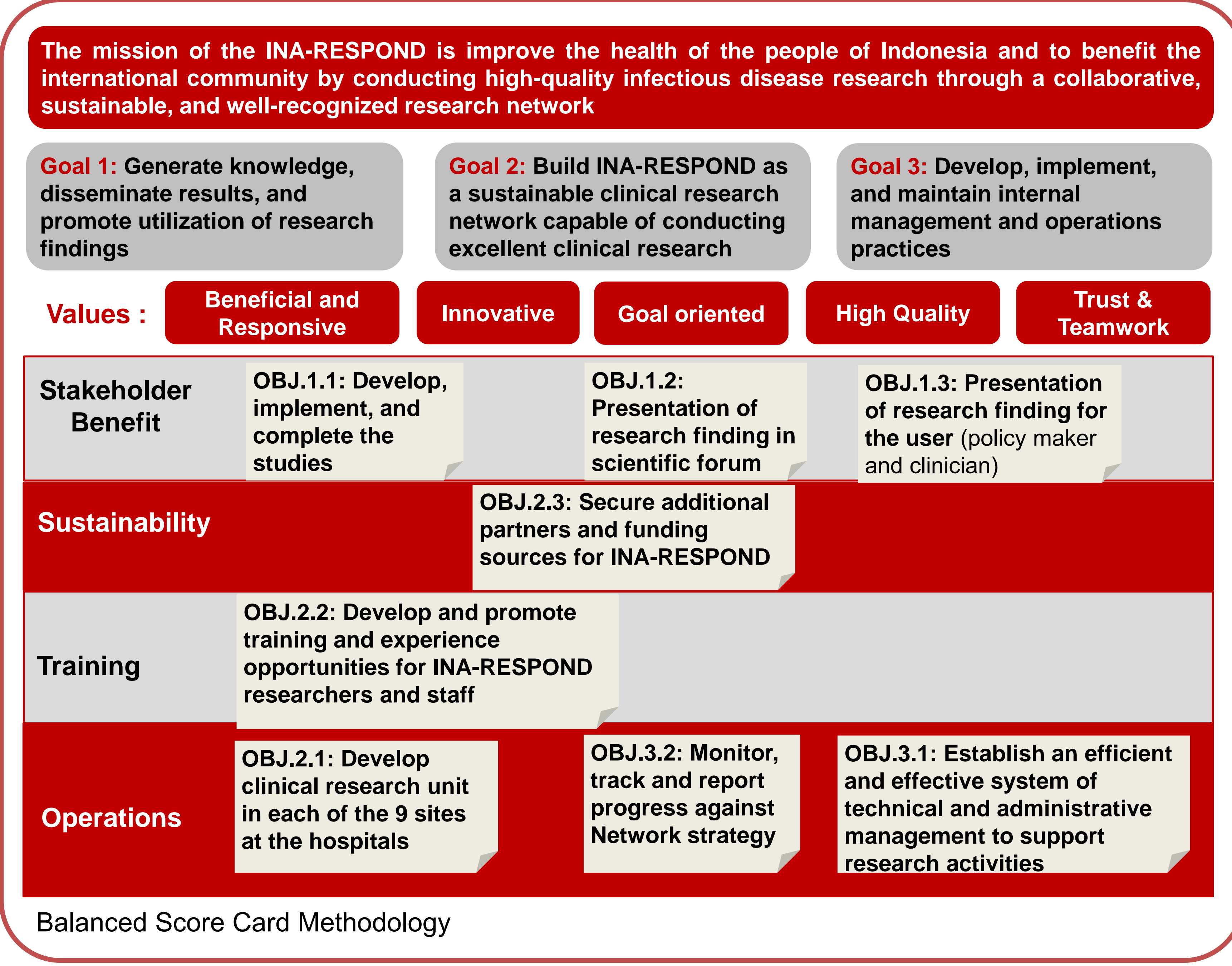
#### Genetic Resources and Traditional Knowledge (GRTK)

The collection, conservation and exchange of genetic resources and associated traditional knowledge under this protocol shall be subject to Article VI of the Science and Technology Agreement and shall be based on the following considerations:

1. Obtaining informed consent from the appropriate authority/institutional review board prior to accessing genetic resources collected during the conduct of this protocol under the control of such authority.
2. Equitably sharing the benefits arising from the use of traditional knowledge and genetic resources.

#### Strategic Map

The strategy map serves as a communication tool for all levels of INA-RESPOND staff. This tool effectively summarizes the strategic plan in a quick easy-to-read format.



#### Contact Us at INA-RESPOND Secretariat

Pusat Teknologi Terapan Kesehatan dan Epidemiologi Klinik,  
Badan Penelitian dan Pengembangan Kesehatan - Kementerian Kesehatan Republik Indonesia  
Gedung 4 (Laboratorium Terpadu), Lantai 5  
Jl. Percetakan Negara No. 29 Jakarta, 10560 Phone: +62 21 4287 9189 Website: [www.ina-respond.net](http://www.ina-respond.net)



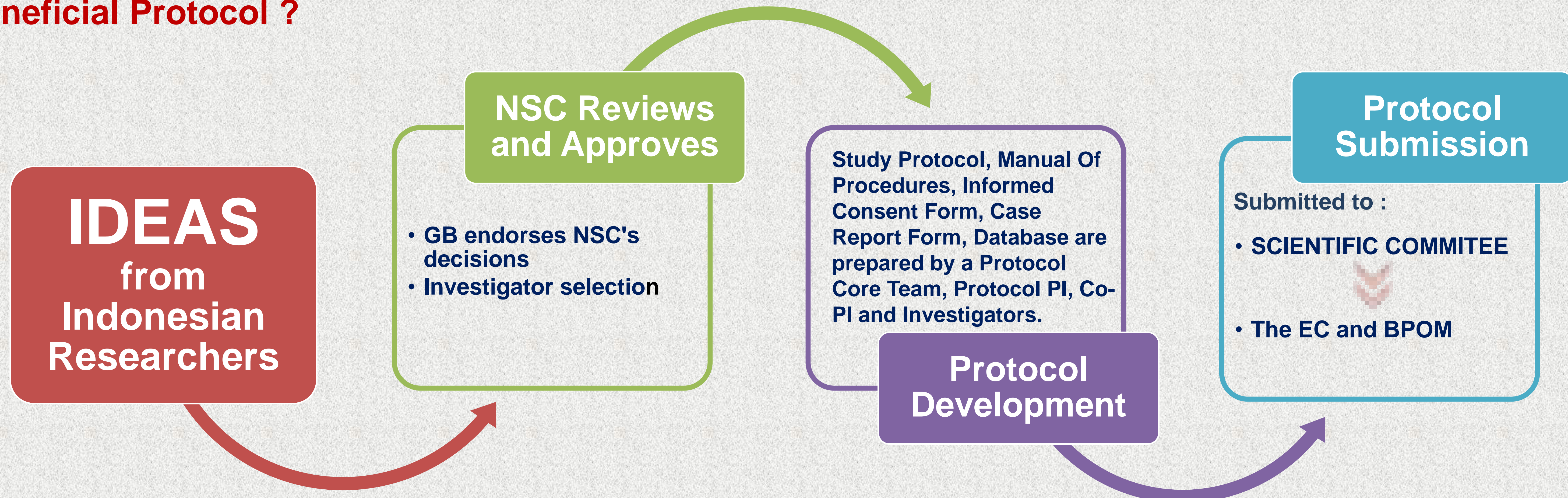


# FROM IDEAS TO POLICIES:

## The Process of **INA-RESPOND** Study

**INA-RESPOND**  
INDONESIA RESEARCH PARTNERSHIP ON INFECTIOUS DISEASE

What is the process to develop a high quality and beneficial Protocol ?

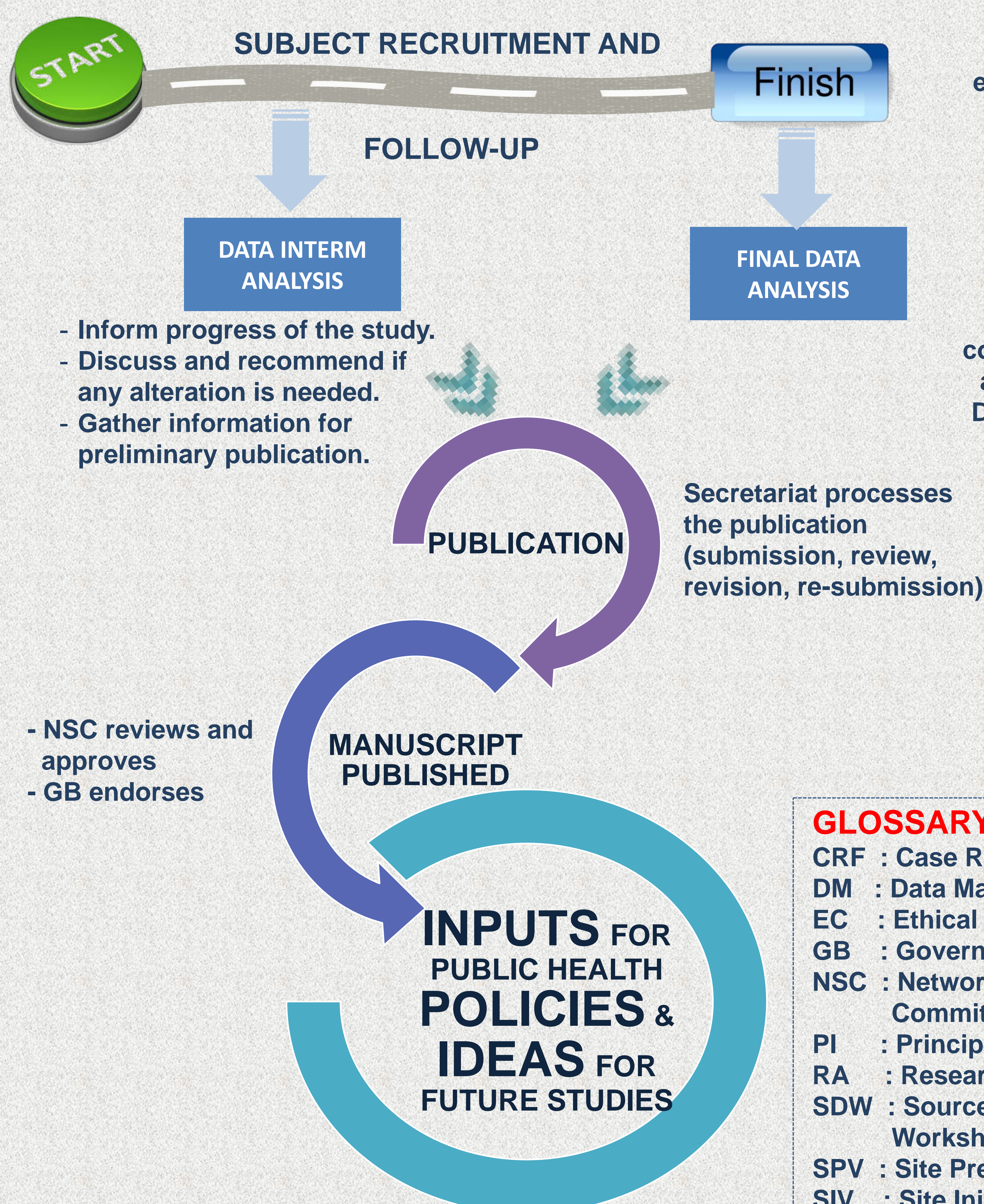


### ETHICAL CLEARANCE AND APPROVAL

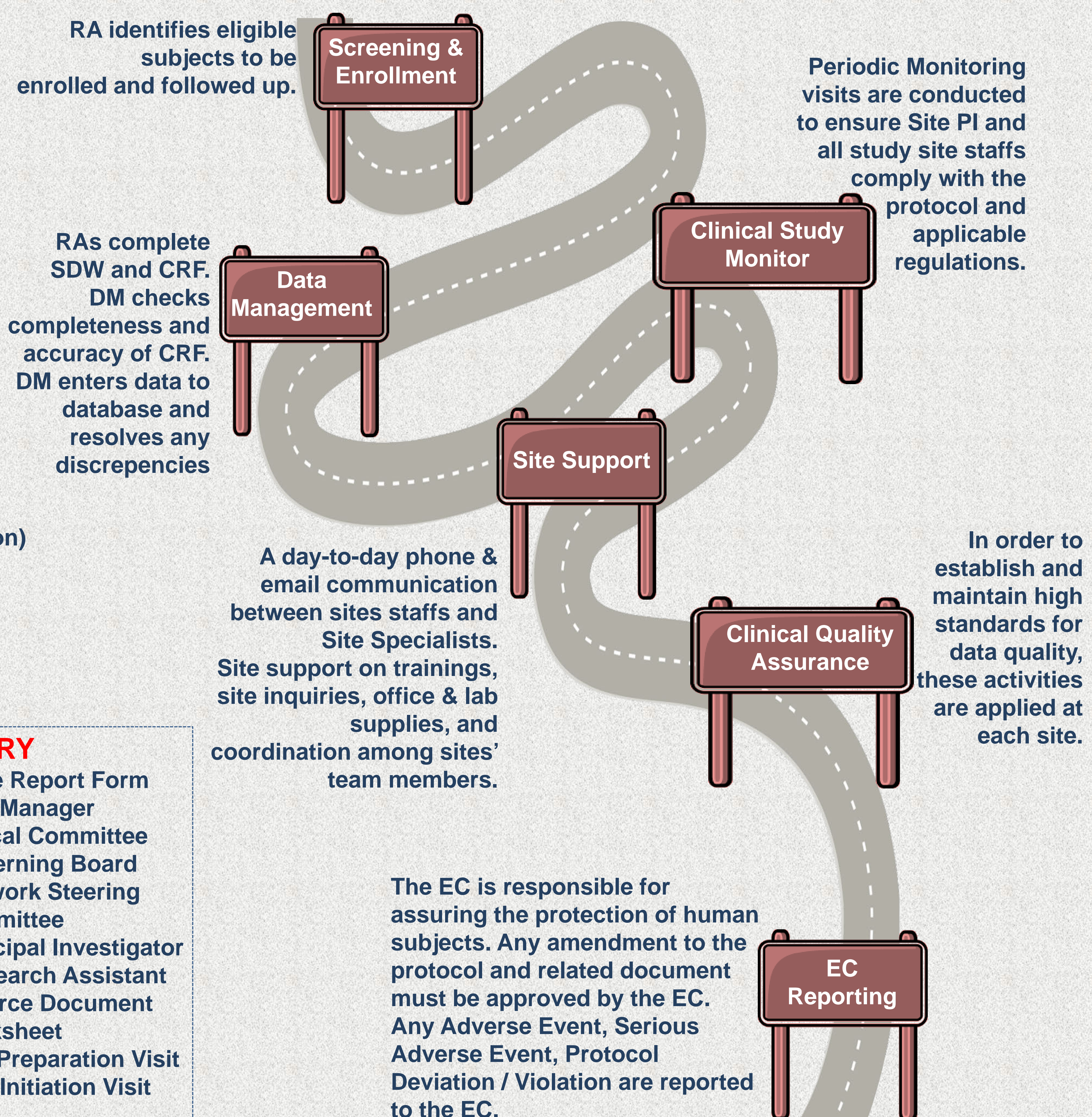
What preparation activities are conducted before the approved protocol is applied at site ?



The real journey begins. How does a research produce something?



What is going on behind the scene?



#### GLOSSARY

CRF : Case Report Form  
DM : Data Manager  
EC : Ethical Committee  
GB : Governing Board  
NSC : Network Steering Committee  
PI : Principal Investigator  
RA : Research Assistant  
SDW : Source Document Worksheet  
SPV : Site Preparation Visit  
SIV : Site Initiation Visit





# The Etiology of Acute Febrile Illness Requiring Hospitalization (INA101)

AFIRE Study Team

INA RESPOND  
INDONESIA RESEARCH PARTNERSHIP ON INFECTIOUS DISEASE

## Background

- Febrile illness is found approximately 20-25% of hospitalizations in Indonesia and presents a major cause of morbidity and mortality.
- In developing countries, a clinical presentation with fever is usually linked to an infectious etiology.
- Clinical diagnoses only → inappropriate clinical management
- Large-scale studies to identify causes of febrile illnesses in Indonesia have not been conducted.
- Most studies were designed to identify for specific agents and did not collect clinical data, outcomes and etiologies to measure disease burden systematically.

## Primary Objectives

- To identify the etiology of acute febrile illness cases and evaluate clinical manifestations and outcomes.

## Secondary Objectives

- To provide clinical data.
- To enhance research capacity and networking for infectious diseases in Indonesia.
- To establish a repository of biological specimens for future study

## Study Method

### Study location and Activation status

- Site 510: RSUP Dr Hasan Sadikin, Bandung
- Site 520: RSUP Sanglah, Denpasar
- Site 530: RSUPN Dr Cipto Mangunkusumo, Jakarta (will start in Nov 2014)
- Site 540: RSPI Prof Dr Sulianti Saroso, Jakarta (will start in Nov 2014)
- Site 550: RSUP Dr Wahidin Sudirohusodo, Makassar
- Site 560: RSUP Dr Kariadi, Semarang
- Site 570: RSUD Dr Soetomo, Surabaya
- Site 580: RSUP Dr Sardjito, Yogyakarta

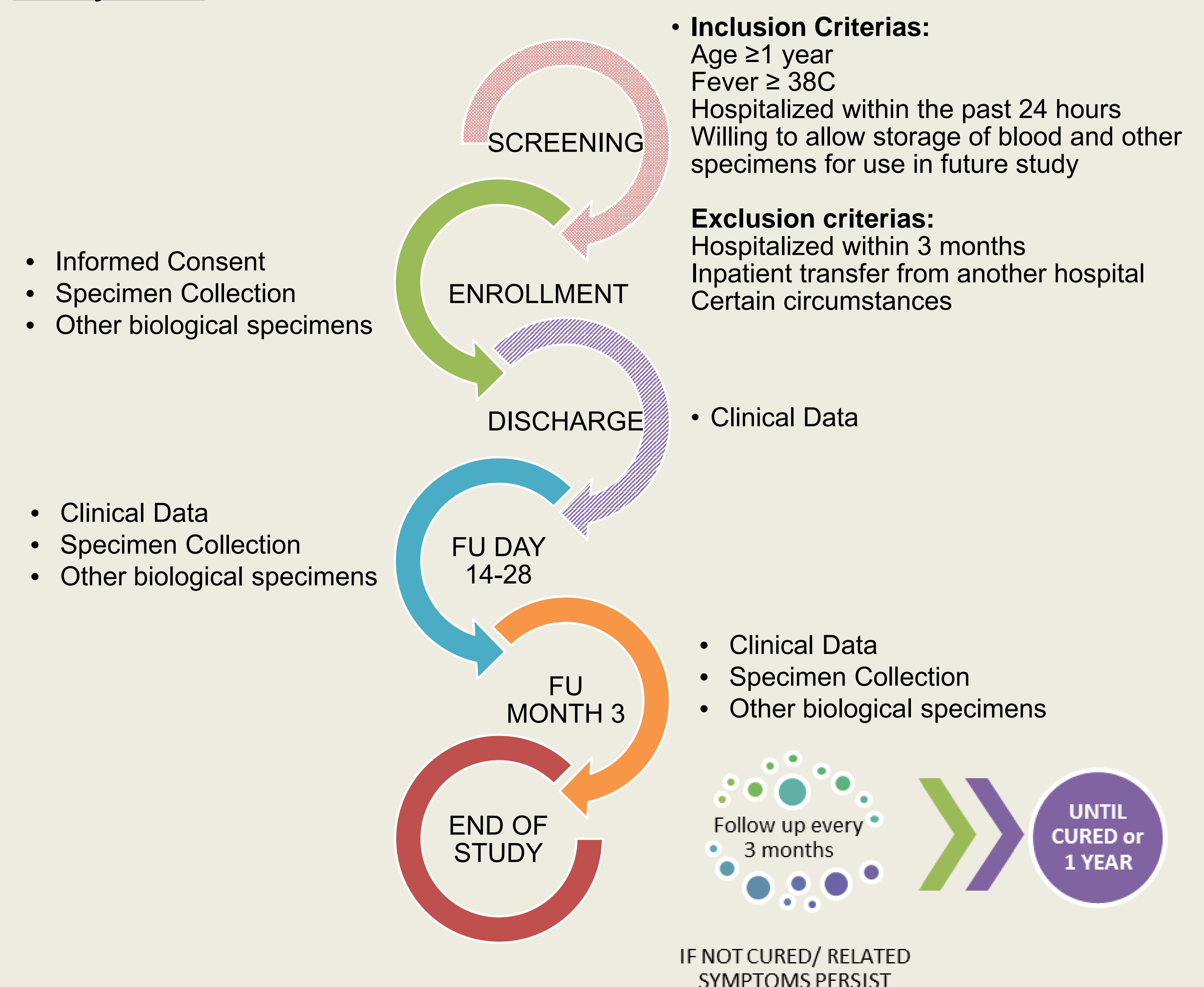


	Site 520 Denpasar	Site 560 Semarang	Site 580 Yogyakarta	Site 510 Bandung	Site 550 Makassar	Site 570 Surabaya
Activation status	Jul 15	Aug 12	Aug 14	Sept 04	Oct 04	Dec 27
Actual FPFV* date	Jul 18	Aug 19	Aug 26	Sept 04	Oct 16	Jan 3, 2014

### Study Population

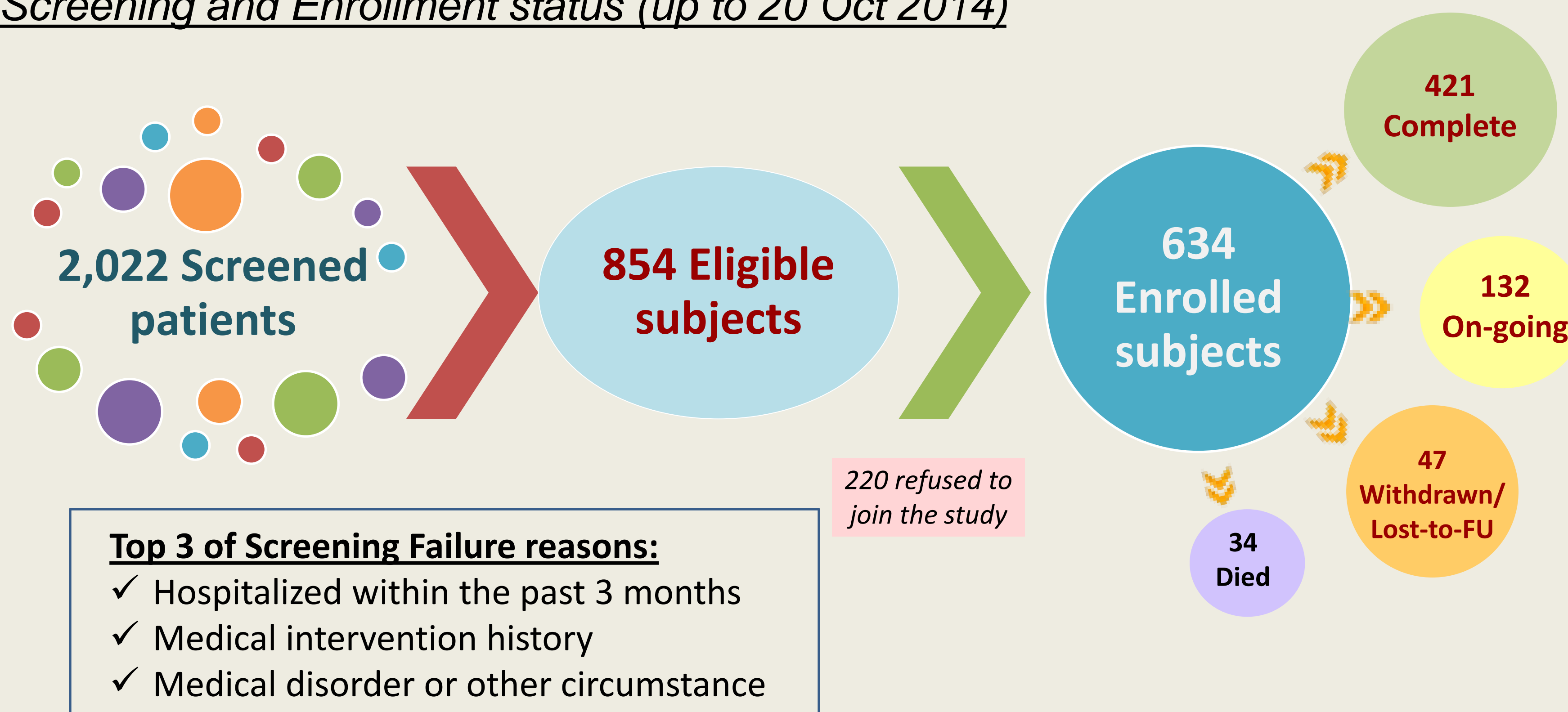
1,600 subjects; Approximately 100 adults and 100 children per site.

### Study Plan

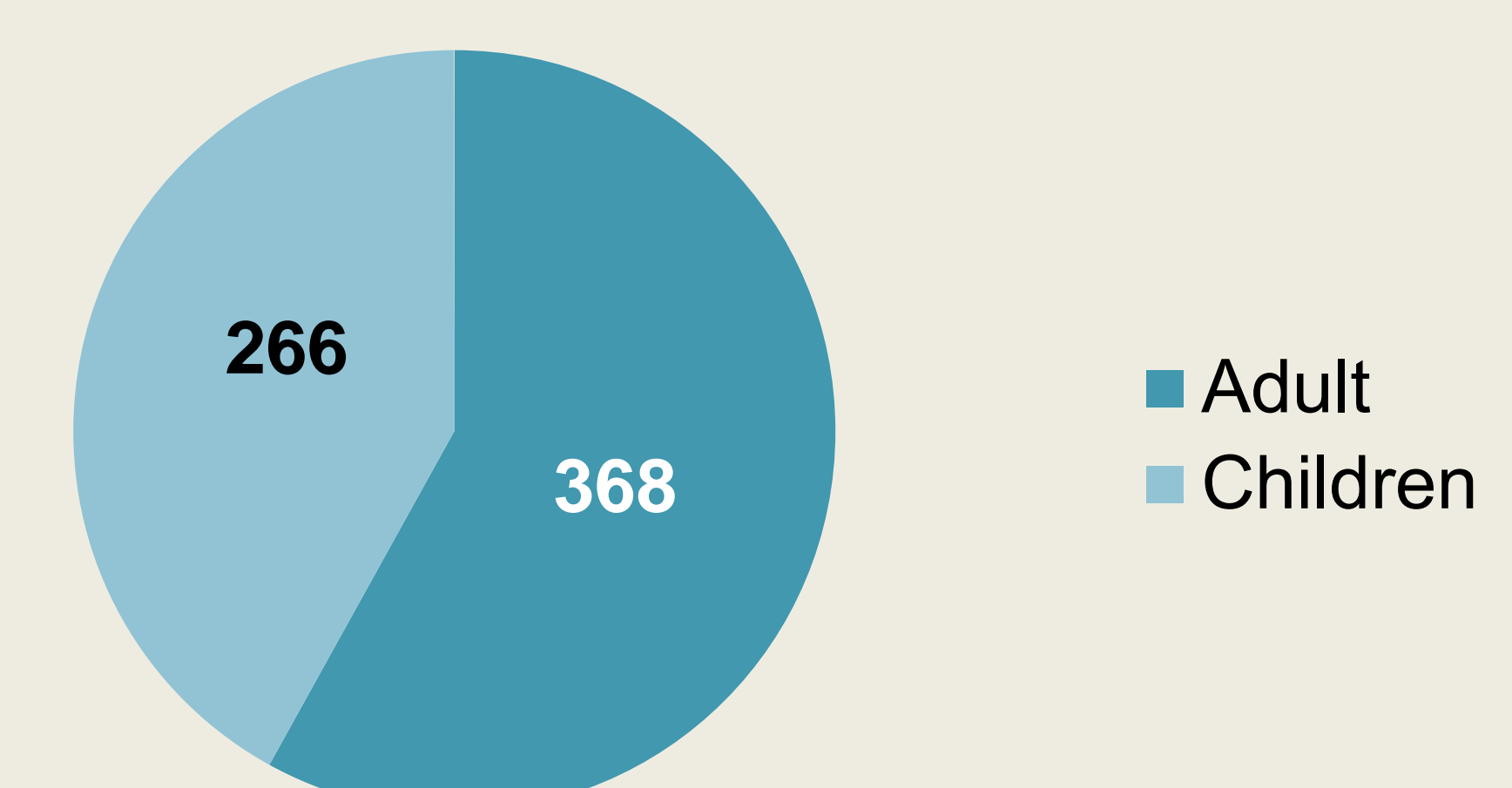


## Preliminary Results

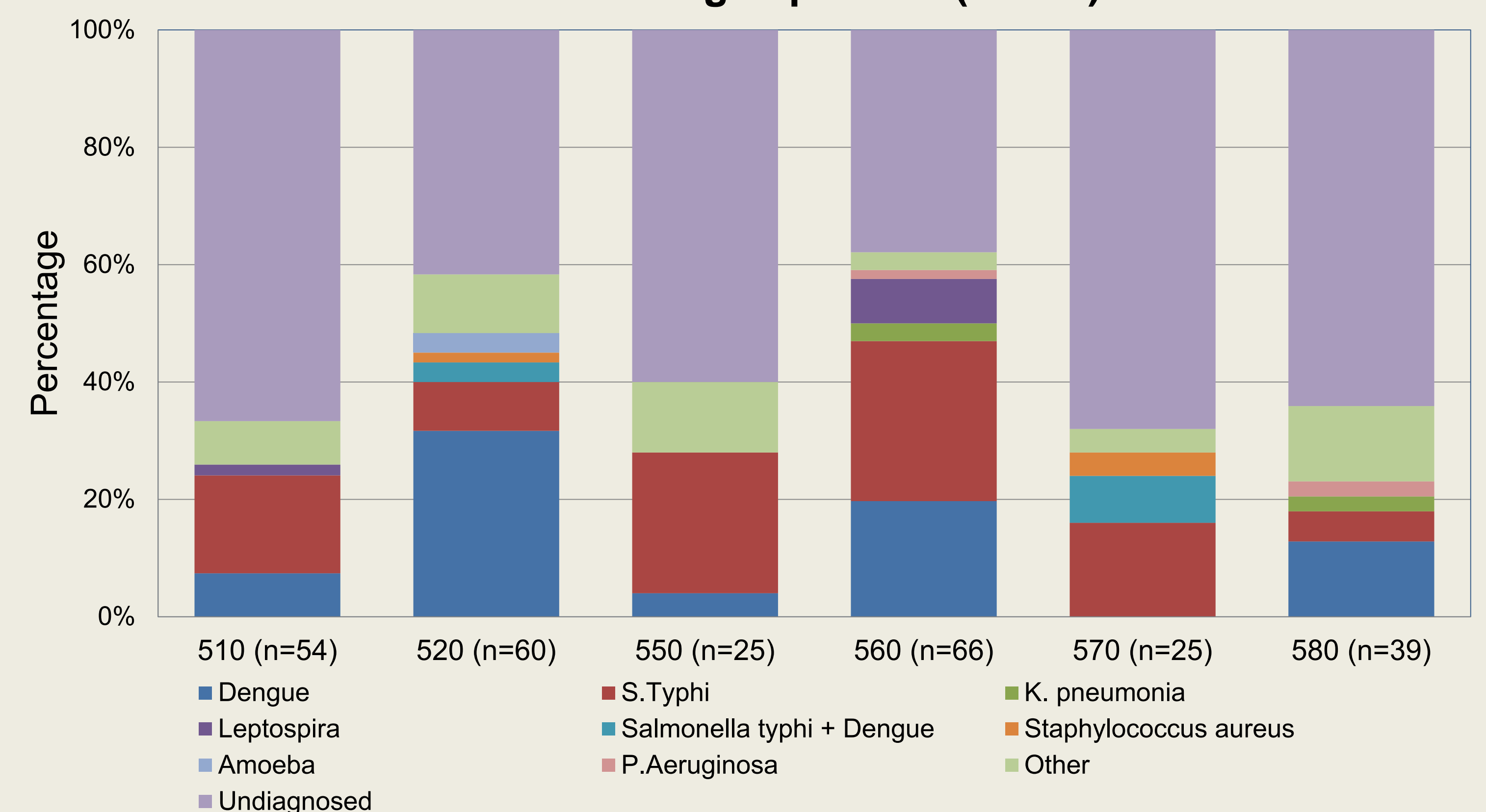
### Screening and Enrollment status (up to 20 Oct 2014)



### Enrolled subjects



### Identified Pathogen per Site (n=269)



### The preliminary analysis shows:

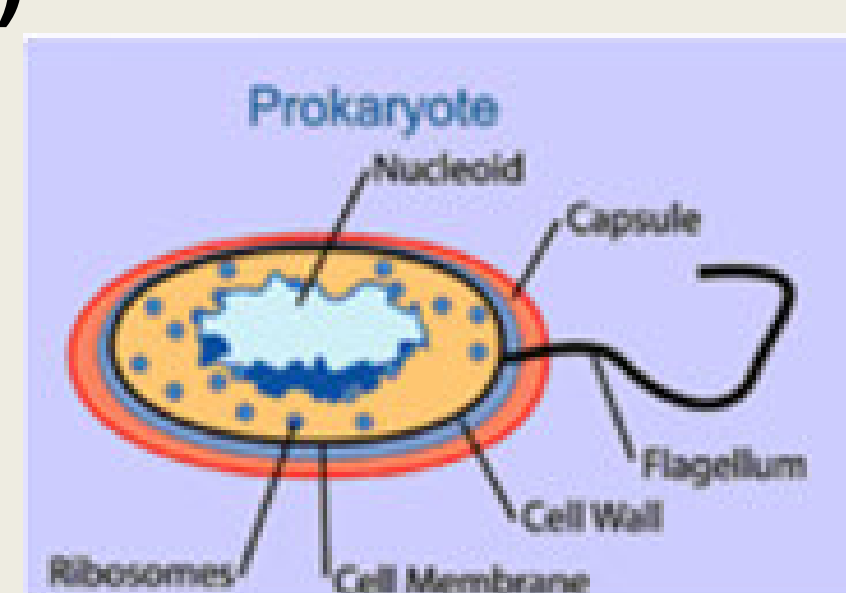
- 46.8% (n=269) etiologies of fever were confirmed, among which 30.2% (n=126) was confirmed by culture
- The most common identified pathogens are:
  - ✓ Dengue (site 520, 580)
  - ✓ S. typhi (site 510, 550, 560, 570)
- **53.2%** (n=269) etiologies of fever were not confirmed based on diagnostic testing (Standard of Care) at the hospital.

It shows that the diagnostic testing (SoC) for infectious disease at the hospital needs to be reviewed and improved, to increase the detection of etiological causes of fever.

## FUTURE PLAN:

### Identifying etiologies in unconfirmed cases

- PCR RNA 16s (acute specimens)

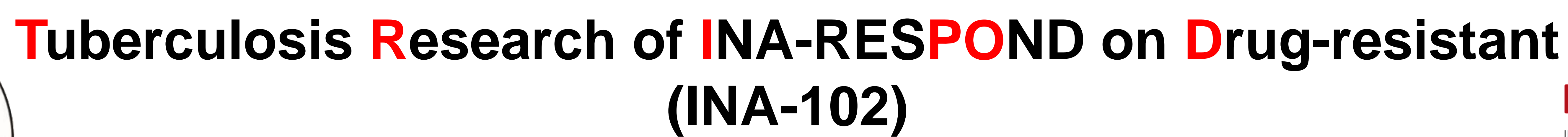


- Virus Panel (PCR, Serology)

RNA viruses:  
✓ Flaviviridae  
✓ Alphaviridae  
✓ Bunyaviridae

DNA viruses  
✓ Herpesviridae  
✓ Paramyxoviridae  
✓ Enteroviridae





## Eligibility Criteria

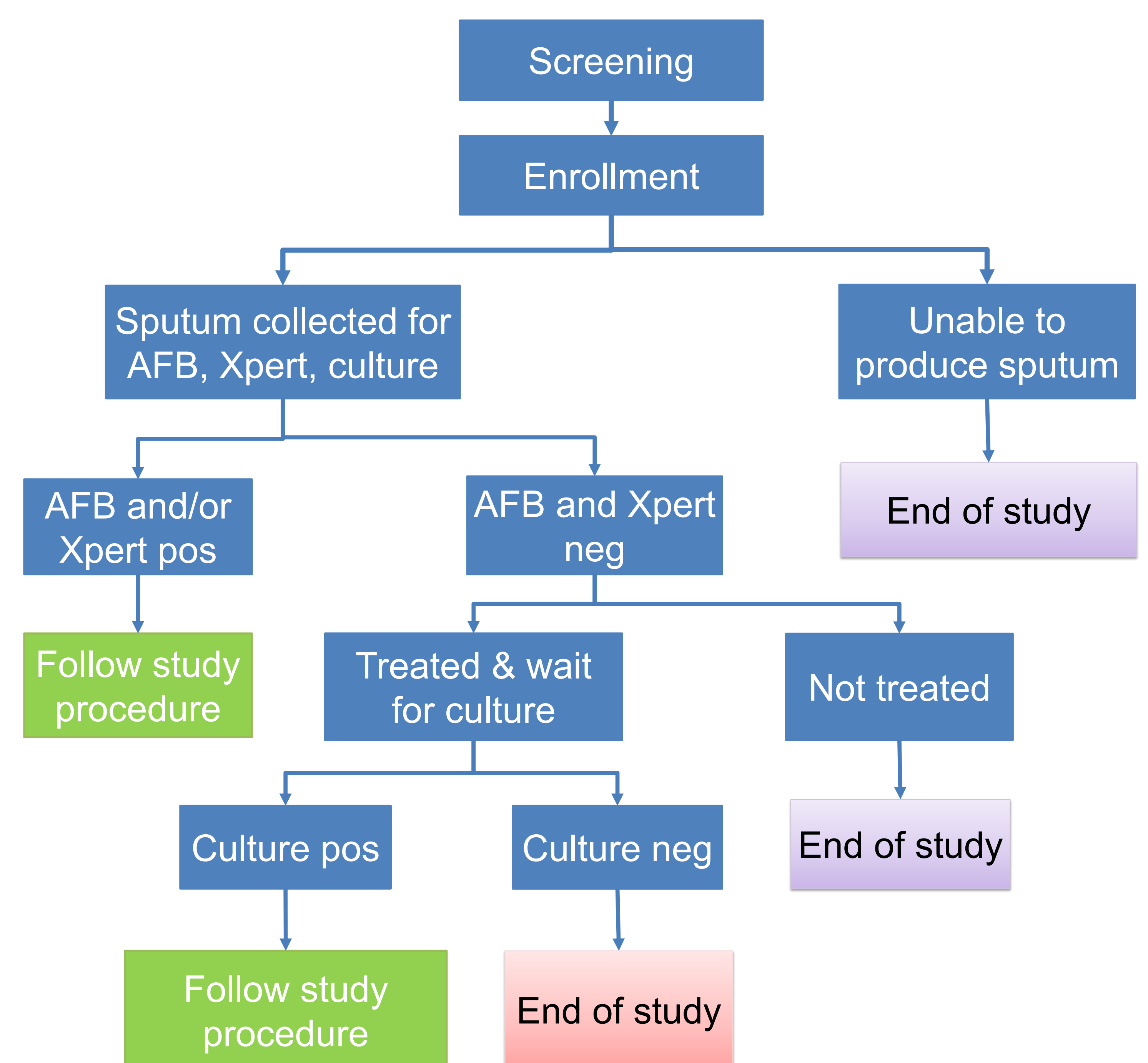
- Patients (with or without TB treatment history)  
who meet the following criteria:**

- Patients suspected of having pulmonary TB
- Cough  $\geq 2$  weeks
- At least 1 other TB clinical symptoms
- Suggestive pulmonary TB chest X-ray results
- Denies having TB treatment in the last 2 months
- Age  $\geq 18$  years old
- Willing to be treated/evaluated at study site
- Willing to have specimens stored
- No liver or chronic kidney disease or pregnancy or severe psychiatric illness that might interfere with study compliance

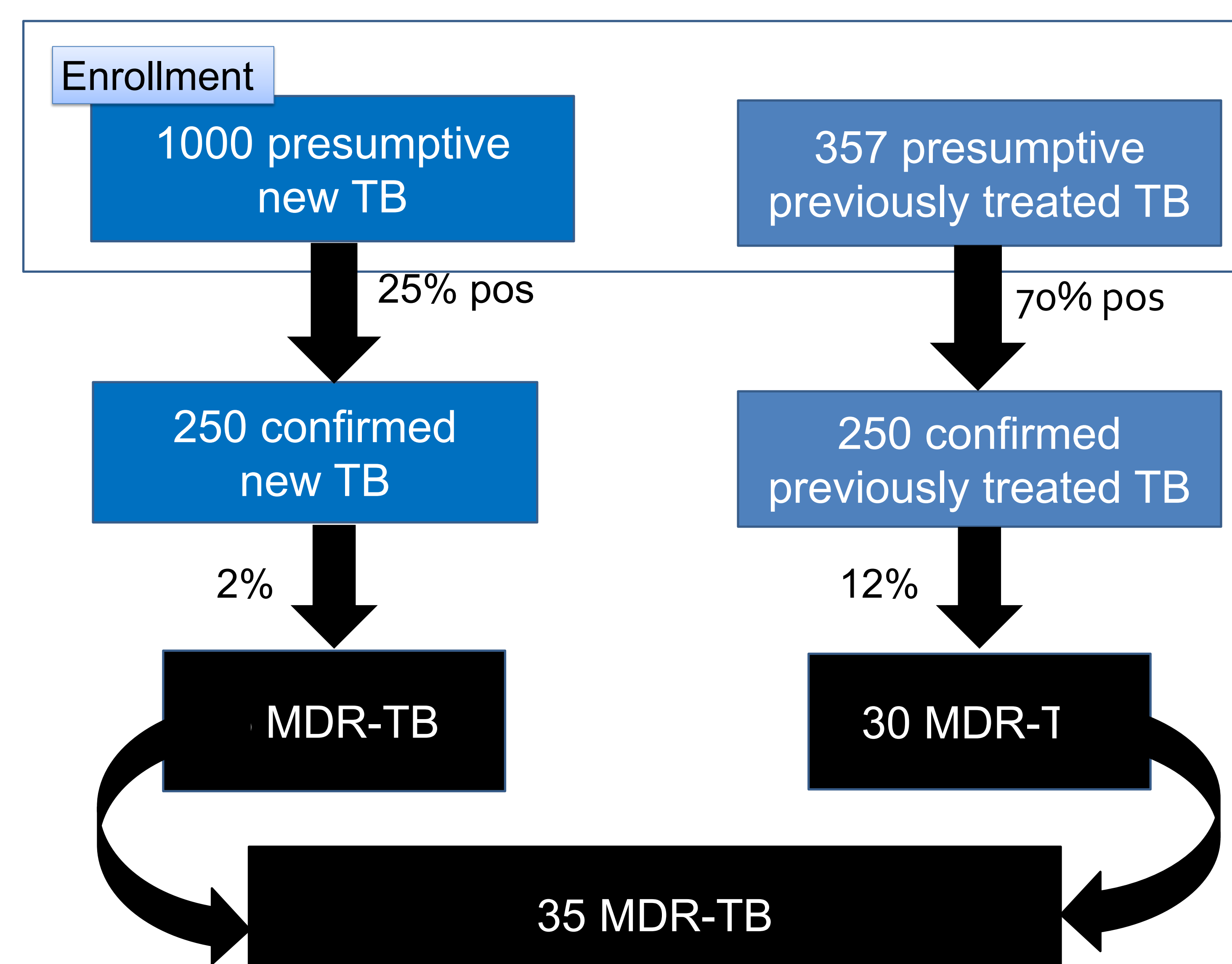
## Study Procedures

- To estimate the proportion of MDR TB of new and previously treated cases

- To estimate the proportion of cured, completed, failed, died, and lost to follow up as treatment outcomes in drug susceptible & drug resistant cases
- To evaluate the association of treatment success with the following: demographic, TB contact history, smoking habit, treatment seeking, comorbidities (HIV, DM), primary drug resistance, symptoms, lung cavity, nutrition status, treatment regimens, compliance, number of bacteria, TB strains (Beijing)
- Comparison of clinically defined TB vs laboratory confirmed TB for accuracy of diagnosis.
- Comparison between AFB and Xpert as TB diagnostic tests vs culture result.
- Estimation of Rif susceptibility result sens and spec in Xpert vs Rif susceptibility result in DST.



## Study Hospitals



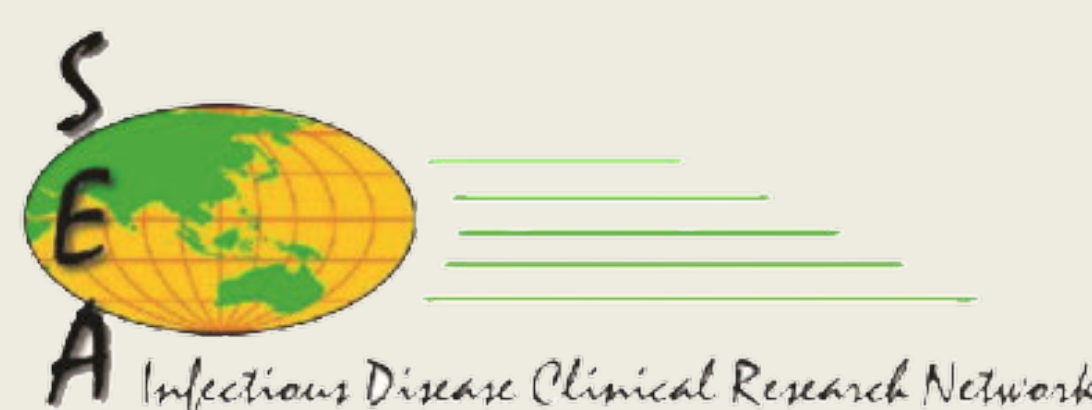
- 1.RSUP Persahabatan/FK UI (Jakarta)
- 2.RSUD Dr Soetomo/FK UA (Surabaya)
- 3.RSUP Dr Hasan Sadikin/FK Unpad (Bandung)
- 4.RSUP Dr Kariadi/FK Undip (Semarang)
- 5.RSUP Sanglah/FK Udayana (Bali)
- 6.RSUP Sulianti Saroso (Jakarta)
- 7.RSUP Dr Sardjito/FK UGM (Yogyakarta)





# An Observational Study of the Causes, Management, and Outcomes of Community-acquired Sepsis and Severe Sepsis in Southeast Asia

Sepsis Study Team



## Background

- Bacterial and viral infectious diseases are still the leading cause of death in Southeast Asia
- Sepsis is defined as the body's response to infectious diseases, including bacterial and viral causes.
- Patients with severe infectious diseases may not present with fever, and infectious causes may be overlooked by physicians.
- On the other hand, it is common for patients who are diagnosed with sepsis on admission to later have a confirmed non-infectious diagnosis.

## Objectives

### Primary objective

To determine the causes of community-acquired sepsis and severe sepsis in adult and pediatric subjects across Southeast Asia.

### Secondary objective

- To define the current acute management (within the first 48 hours after admission) of subjects presenting with community-acquired sepsis and severe sepsis. This will provide the basis for designing practical interventions to reduce the mortality of subjects with sepsis and severe sepsis in the future.
- To define the clinical outcomes of community-acquired sepsis and severe sepsis in Southeast Asia.

## Study Design

### Sample size

- 2,250 patients with sepsis or severe sepsis patients
- Each country (Thailand, Vietnam, and Indonesia) will enroll 750 subjects. 3 participating sites in Indonesia are RSUPN dr Cipto Mangunkusumo, RSUP dr Wahidin Sudirohusodo, and RSUP dr Sardjito.
- Indonesia will recruit 375 adults and 375 children



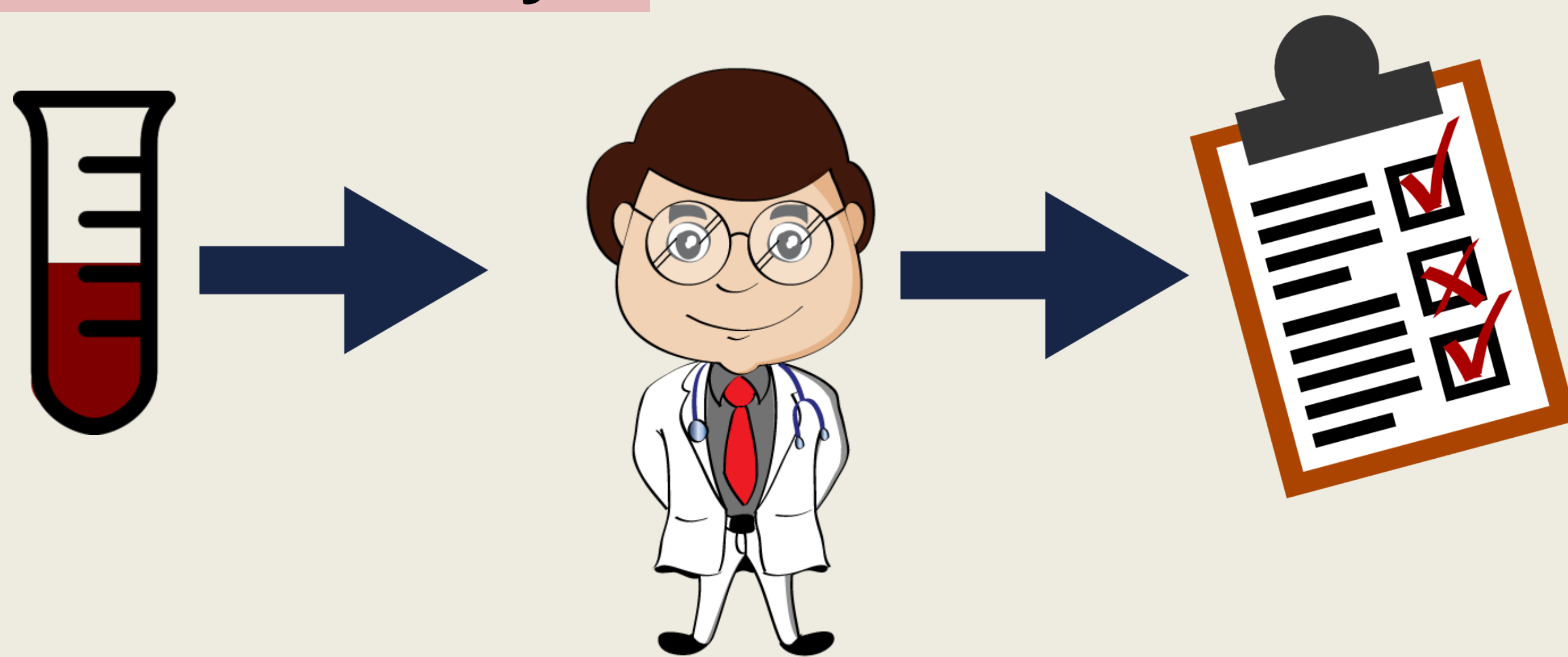
**Accrual Period**  
Up to 2 years

### Laboratory Testing

Disease	Test	Specimen
<b>Tests to be performed in Blood Culture Negative cases [estimated to be 90% of subjects]</b>		
Common bacterial infection	PCR 16s	Blood
<b>Tests to be performed on patients with CNS symptoms where CSF is available [estimated to be 10% of subjects]</b>		
Bacterial and fungal infection	Culture	CSF
M tuberculosis	AFB Slides	
Neisseria meningitis	PCR 4-plex	CSF
Streptococcus pneumonia		
Herpes simplex virus	PCR 2-plex	CSF
Varicella Zoster virus		
Dengue virus	PCR	CSF
Japanese Encephalitis virus	IgM ELISA	CSF
<b>Tests to be performed on subjects with respiratory symptoms [estimated to be 10% of subjects]</b>		
M tuberculosis	AFB Slides	Respiratory specimen
14 respiratory virus (including influenza)	PCR 14-plex	Nasal swab + Pharyngeal swab
Mycoplasma pneumoniae	PCR 5-plex	Nasal swab + Pharyngeal swab
<b>Tests to be performed on subjects with diarrheal symptoms [estimated to be 20% of subjects]</b>		
General bacterial infection	Stool culture	Stool
Rotavirus	ELISA or PCR	Stool
<b>Tests to be performed in cases where the cause of sepsis/severe sepsis is unknown [estimated to be 80% of subjects]</b>		
Leptospirosis	PCR & MAT	Blood
Scrub Thypus	PCR & IFA	Blood
Murine Thypus	PCR & IFA	Blood
Hanta virus	PCR	Blood
Spotted fever group	PCR	Blood

### Study Flow

#### Enrollment/Day 0



#### Blood Sample Collection for:

- Research tests
- Rapid Diagnostic tests
- EDTA for DNA (Optional for adults only)
- CSF, respiratory specimen, urine, stool (if available)

**Monitor if AE/SAE/UP**  
Occurred within 48 hours

#### Review Medical Records:

- Medical History
- Basic Physical Exam
- Vital Signs
- Any Investigations
- Treatments received from the primary hospital (if available) to the time of admission to the ER to the time of enrollment

#### 1<sup>st</sup> Follow-up (Day 14-20)



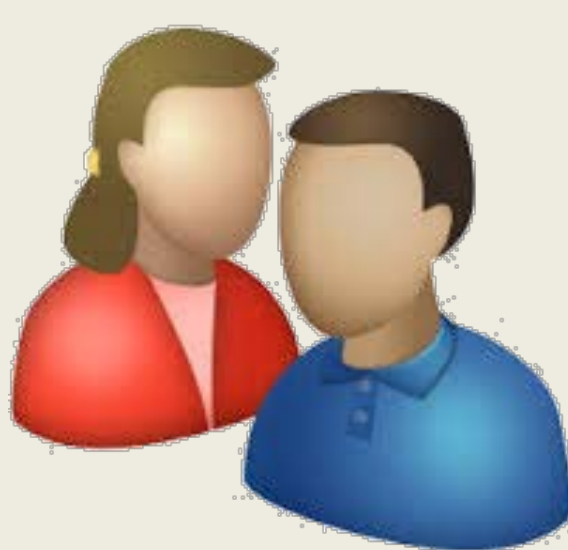
**Complete subject follow-up visit log and complete CRF**

#### Blood collection for research specific tests:

Adult and Children  $\geq 7$  years old: 10 mL (8-12 mL)  
Children  $\geq 3$  and  $< 7$  years old: 5 mL (4-6 mL)  
Children  $\geq 30$  days and  $< 3$  years old: 3 mL (2-4 mL)

Follow-up if AE/SAE/UP occurred within 48 hours

#### 2<sup>nd</sup> Follow-up/End of Study (Day 28-35)



**CRF Completion:**  
FINAL

#### Visit at ward, phone interview or home visit

- Survival Questionnaire
- Clinical Outcome







# Data Safety Monitoring Board (DSMB) for Clinical Trial



## What is a Data Safety Monitoring Board?

DSMB is a group of individuals with pertinent scientific expertise that:

- Reviews, on a regular basis, the accumulated research data from an ongoing clinical trial;
- Advises the sponsor and/or researcher regarding the continuing safety of trial subjects and those yet to be recruited into the research trial
- Advises as to the continuing validity and scientific merit of the trial

## Purposes of a DSMB



DSMBs are considered to have "stewardship" of a trial. The board has responsibilities to both subjects (in terms of safety) and the sponsor (in terms of trial credibility)

- ❖ Specific purpose of a DSMB includes:
  - Protecting participant safety
  - Ensuring the credibility and integrity of the trial for future subjects
  - Ensuring the timely conclusion of a trial so its results can be disseminated
  - Identify protocol violations that suggest clarification or changes to protocol are needed
  - Identify unexpectedly high dropout rates that threaten the trial's ability to produce credible results
  - Ensure the validity of study results

## DSMB Roles & Responsibilities

- Conducting an advisory review of the draft study protocol and study procedures
- Providing suggestions, where feasible for potential solutions to identified problems
- Performing ongoing interim reviews of safety and efficacy data
- May also be requested by the sponsor to conduct emergency reviews of data to assess safety-related issues
- Other : Making recommendation; Maintain meeting record

## DSMB Member's Qualifications

- Prior experience.
- Knowledge and understanding of clinical trial.
- Willingness and ability to commit to attending meetings and preparatory review of material.
- Demographic diversity or international representation.
- Should not be affiliated with sponsor, investigators, or study staff.
- Should also not have vested conflicts of interest.
- From multiple disciplines represented:
  - ✓ Trial-specific medical/clinical expertise (e.g., physicians)
  - ✓ Biostatisticians
  - ✓ Ad hoc experts (e.g., bioethicists, scientists, epidemiologists), as needed
  - ✓ Patient representatives, when appropriate

## What Kind of Studies Need DSMB?

- Randomized
- Are expected to provide answers concerning a medical intervention's efficacy and safety
- Address critical health outcomes (e.g., life-threatening events)
- May involve high levels of toxicity
- Evaluate an endpoint where the inferiority of one treatment arm has both safety and efficacy implications
- Might require early stoppage for ethical reasons if the primary question has been answered (even if secondary ones have not)

## DSMB Activities

- Protocol Review.
- Charter Review.
- Orientation Meeting.
- Regular Meetings : Open Session, Closed Session & Closed. Executive Session.
- Provide reports: interim review report, Verbal Report, Summary Report., Closed Session Report, Immediate Action Report.
- Making recommendation based on reports.

## ReDEFINE (Rifampicin Dose FINDing Study): The First Study Monitored by **INA-RESPOND DSMB**

### High-dose Rifampicin for the Treatment of Tuberculous Meningitis: a dose-finding study

Rovina Ruslami, Ahmad Rizal Ganiem, Faculty of Medicine UNPAD / RSUP Hasan Sadikin - Bandung  
A Peer Health Granted Study,

Sponsored by Padjadjaran University in Collaboration with the United States Agency for International Development (USAID) and Radboud University,  
ClinicalTrial.gov Identifier: NCT no:02169882

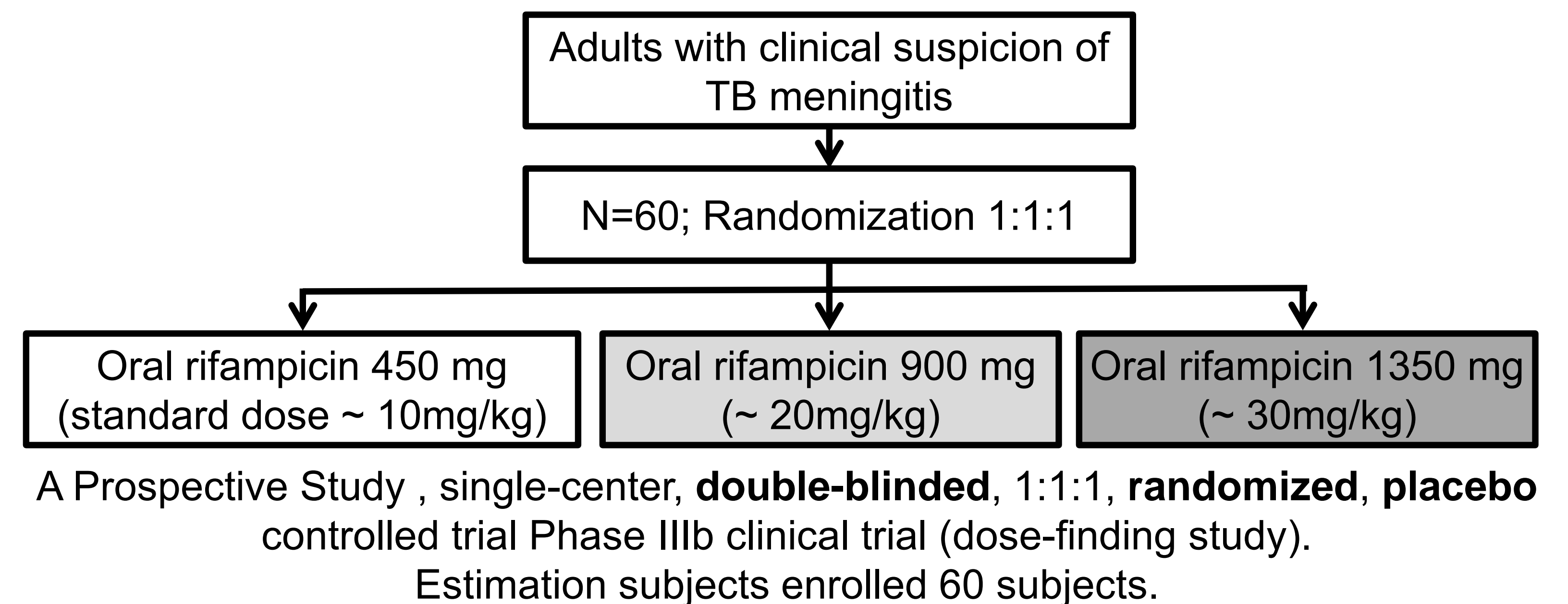
## Background & Rationale

- ❖ Meningitis is the most severe manifestation of TB
- ❖ Difficult to diagnose, high mortality.
- ❖ Current treatment regimens: not evidence-based, Follow Pulmonary TB treatment.
- ❖ Rifampicin (RIF) is keystone drug for TBM but its penetration to the Brain Blood Barrier (BBB) is limited
- ❖ Previous study using RIF 600 mg intravenous (iv) found that required RIF concentration in Cerebro Spinal Fluid (CSF) was safer and provided better outcome than the 450 mg p.o
- ❖ However, RIF iv. is invasive, impractical, expensive, and not widely available
- ❖ Alternatively, since the RIF is a friendly and well-tolerated drug, the ReDEFINE study will use higher oral doses

## Study Objectives

- ❖ **Primary Objective :**  
To generate PK data of higher dose of RIF in TBM patients.
- ❖ **Secondary Objective:**
  - Safety and tolerability
  - Efficacy, clinical & neurological response
  - Gene-expert for TBM
  - Bio repository of blood, CSF for future research

## Schematic Study Design



## INA-RESPOND Roles In ReDEFINE Study

- ❖ DSMB and Monitoring supported by INA-RESPOND.
- ❖ DSMB Activities scheduled for orientation meeting in November 2014.
- ❖ Purpose of Monitoring:
  - Protecting human subjects.
  - Maintaining the integrity of study data.
  - Compliance with regulations and Good Clinical Practice (GCP).
- ❖ Visit Types of Monitoring:
  - ✓ Study Initiation Visit (SIV).
  - ✓ Routine Site Monitoring Visit (MV).
  - ✓ Study Close Out Visit (COV).



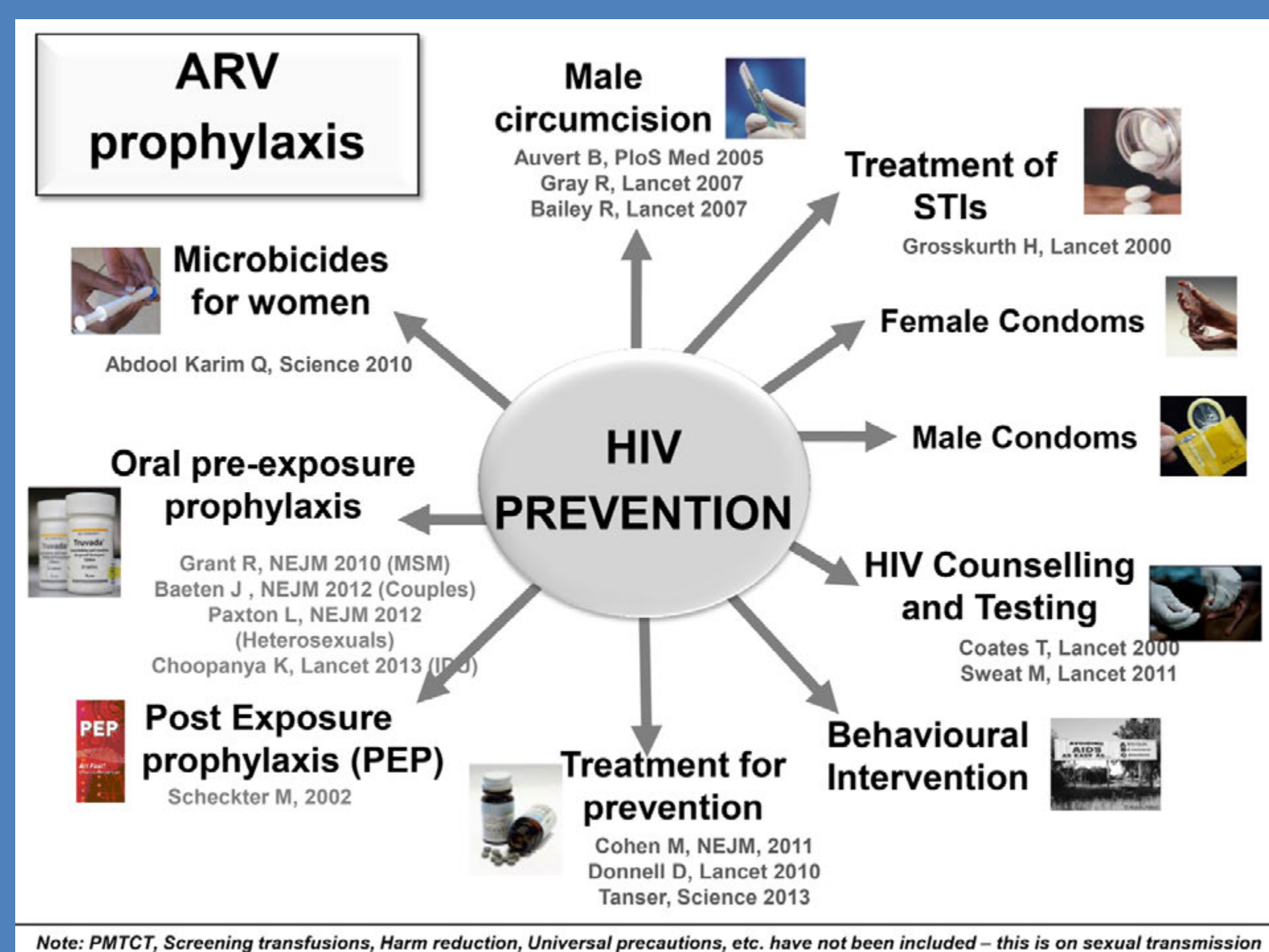


# NEXT STUDY: Test and Treat for HIV Prevention in Communities (TROPIC)

INA-RESPOND  
INDONESIA RESEARCH PARTNERSHIP ON INFECTIOUS DISEASE

## Background

- Globally 1.5m deaths, 35m living with HIV, 2.1m new infections in 2013
  - In Indonesia: 590,000 living with HIV, 58,000 new infections in 2012
- Impressive progress in HIV prevention, but
- To stop HIV/AIDS epidemics, a comprehensive HIV prevention that combines time-tested prevention modalities (behavioral intervention, condoms, circumcision, etc), ARV-based prophylaxis and VACCINE is a must, because of:
  - Programmatic barriers (inadequate fund and/or human resources)
  - Limited uptake, underused and non adherence
  - Stigma, discrimination and violence
  - Risk-taking behavior, complacency
- Among the HIV prevention methods, the most compelling is the effectiveness of Universal testing and early treatment
  - Cohen (2011) : immediate treatment reduced HIV transmission to sexual partner by 96%
  - Rodger (2014): Risk of HIV transmission through condom-less sex is exceedingly rare when the partner has an undetectable viral load at ART
- Why do we need this study then? UNKNOWN:
  - Universal Test and Treat (UTT) intervention can be delivered with high uptake and acceptability
  - Population level impact of intervention package
  - EVIDENCE to support whether UTT will prevent HIV transmission in various settings in Indonesia



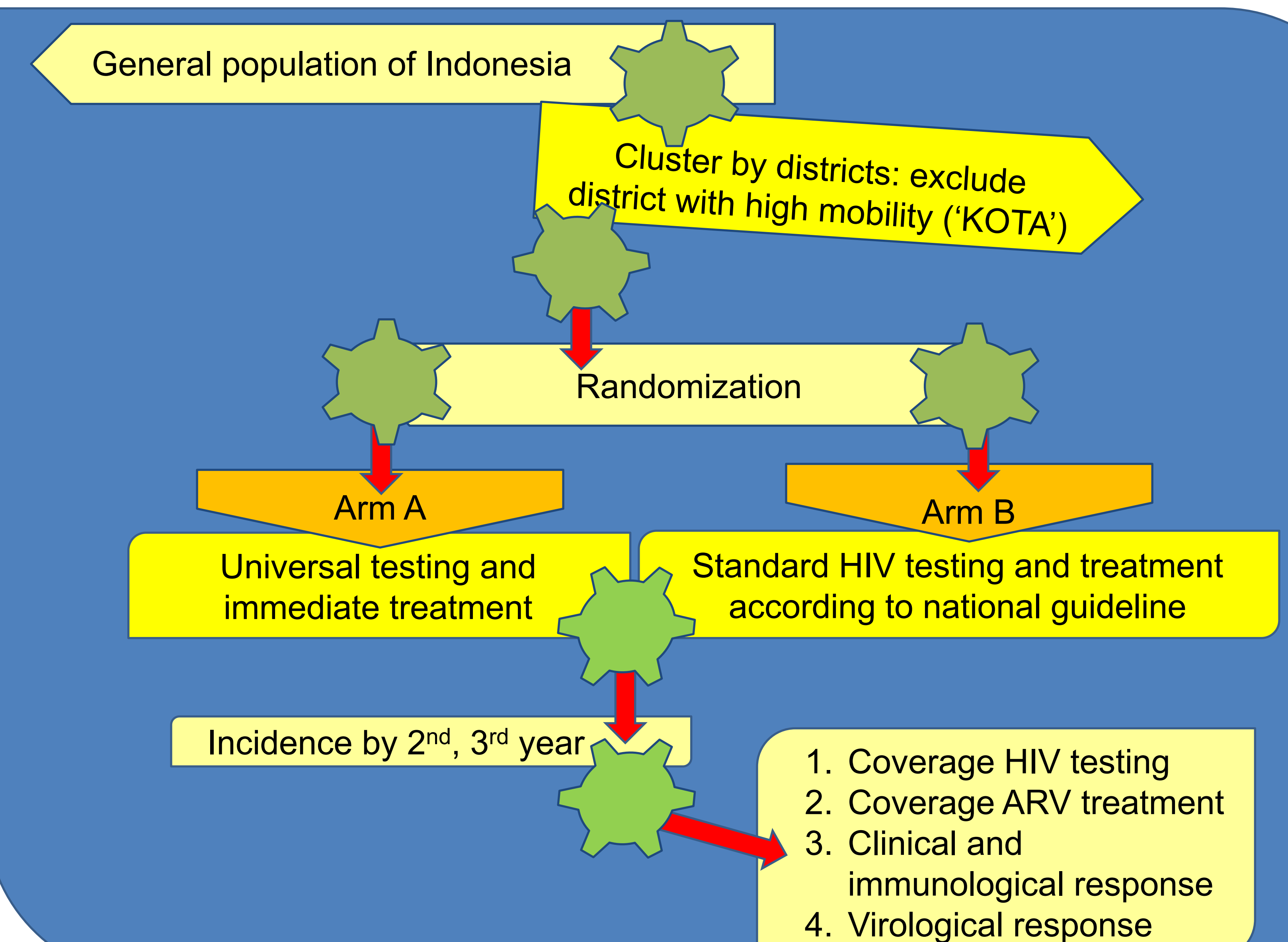
## Primary Objective

To measure the impact of universal testing and immediate treatment on preventing HIV transmission in Indonesia, indicated by reduction of HIV incidence in general population.

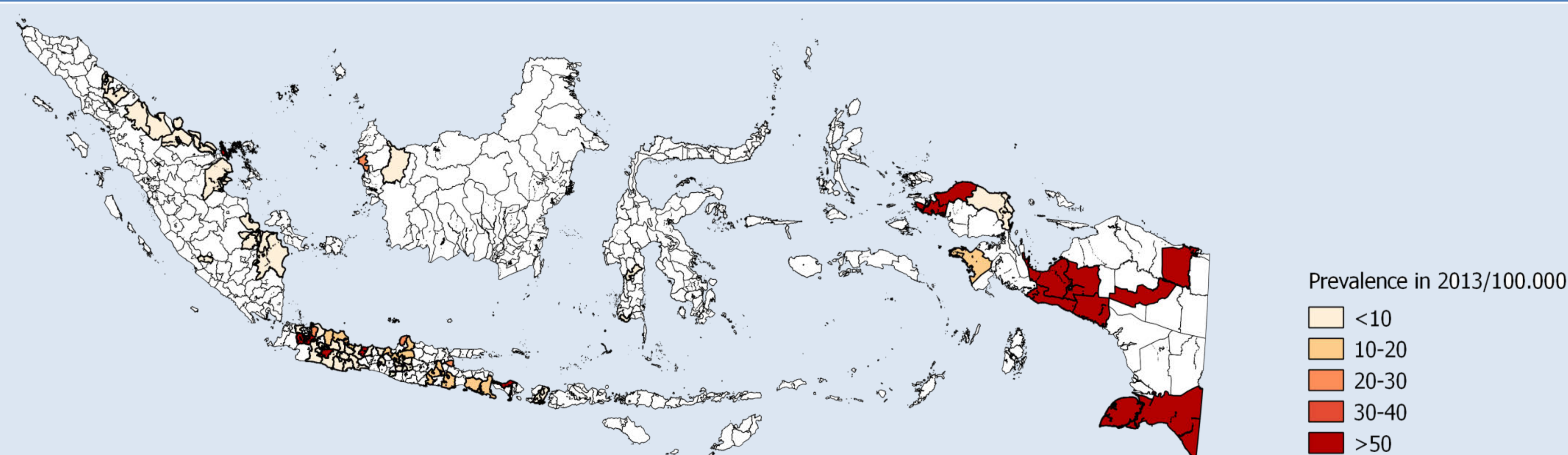
## Secondary Objectives

To measure: coverage of universal HIV testing, coverage of immediate HIV treatment, clinical response to HIV treatment, immunological response to HIV treatment, virological response, including resistance to HIV treatment

## Study Design



Sites will be randomly selected from 76 high-prevalence districts (colored) and low-prevalence districts (white)



## Other Prospective Studies on HIV/AIDS

According to the National Strategies and Plans to control HIV and AIDS, Indonesia needs to conduct several studies, including:

### 1 Epidemiology and behavior study



The objective of this study is to determine the epidemiology of HIV/AIDS in Indonesia, such as the prevalence, incidence and distribution of HIV/AIDS in Indonesia, the behavior of the population, and factors that influence them. The results will provide data and facts that are important to prepare policies to control the disease.

### Operational research

The objectives are to obtain reliable data and evidence that are useful to prepare a better HIV/AIDS control program, for example how to increase the adherence.

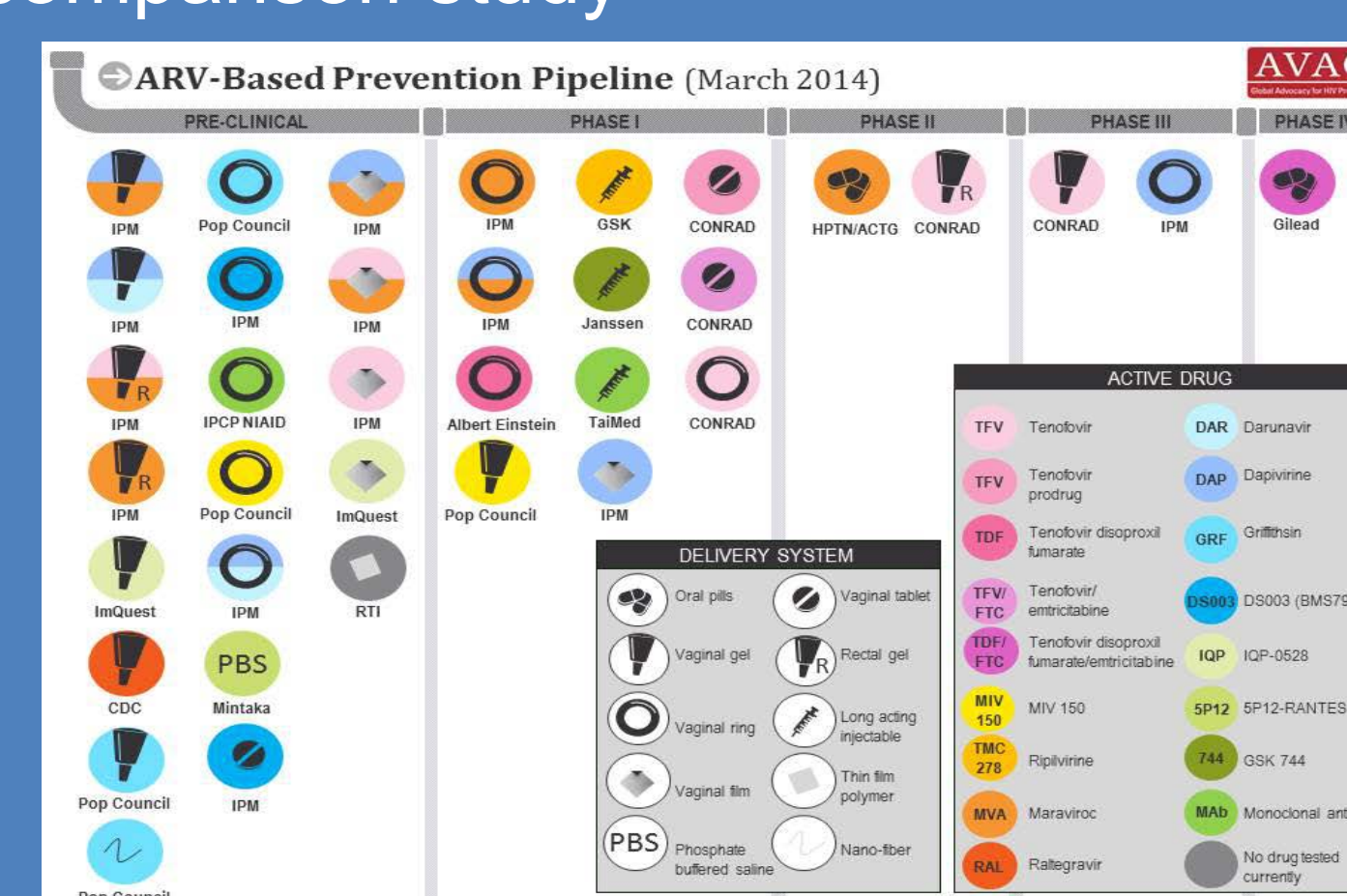
### 3 Capacity building for the researchers and institutions, strengthening research network

INA-RESPOND in collaboration with US-NIAID has built research capacities in 7 medical schools and their corresponding hospitals so that it will be ready to conduct any epidemiological, operational or clinical HIV Study. Collaborations with industries to support these studies are also welcome.

### 4 Drug management, e.g. the efficacy and safety of a new medication, treatment strategy, drug resistance, and other topics.

One of drug management studies that is needed by clinicians is dose reduction of Efavirenz which is associated with worse neuro-cognitive functions

- # Lower dose of Efavirenz a non-nucleoside reverse-transcriptase inhibitor (NNRTI)
  - A study (Puls, 2014) the efficacy is comparable, but less adverse events than 600mg
- # Can it be reduced further to 200mg?
  - Phase II, dose finding comparison of 200, 400, 600mg suggested comparable viral load suppression rate (Horn & Clayden)
- # dose finding comparison study for other ARV regimen comparison study



ARV drugs also play an important role in HIV prevention. The diagram on the left side shows the progress of ARV as prevention in the world. To determine the most suitable method for Indonesia, we need to also participate in these studies.