

# Developing and Validating Innovative Methods to improve measurement of Out-Of-Pocket payments for health services in Low and Middle-Income countries

## iHOPE Research Project

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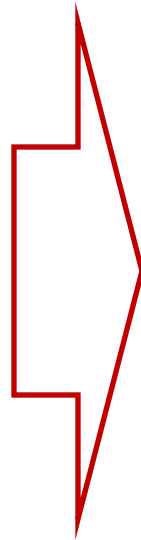
# Introduction

- ▶ There is an increasing demand for disease-specific health expenditures from countries and development partners
- ▶ There is the need to collect better data on OOP expenditures and particularly linked to diseases.
- ▶ Current approaches to estimate OOP payments rely on data from national surveys, like LSS and Household Budget Surveys (HBS).

# Existing data for Financial Protection Tracking and respective limitations

## Existing Surveys

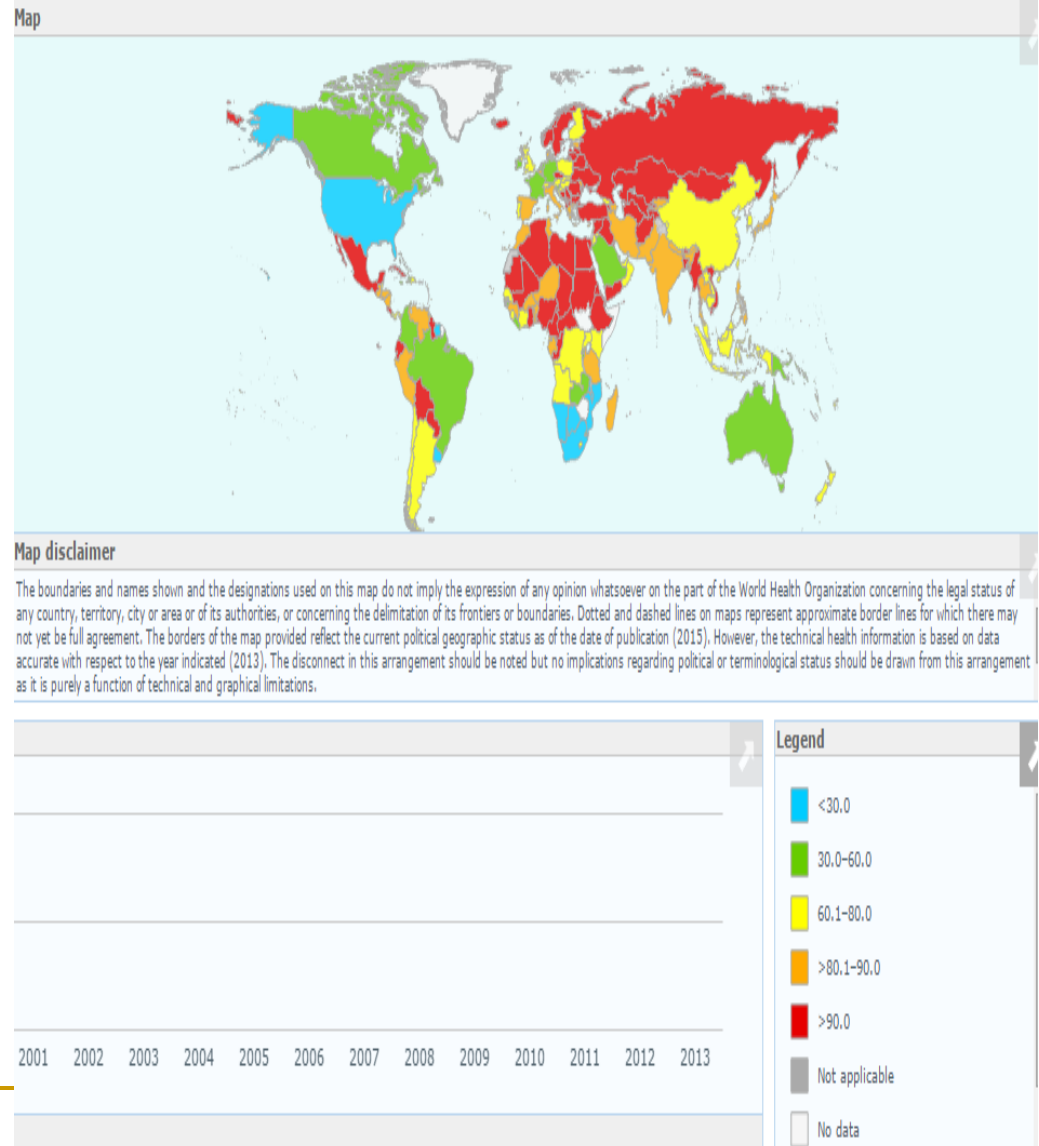
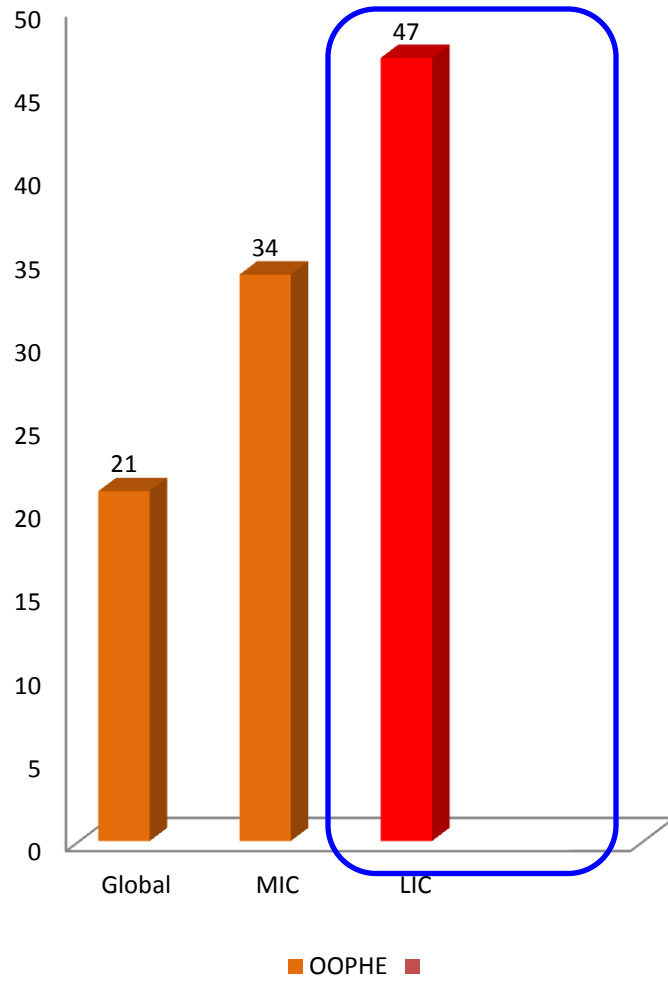
- General Household Survey
- Health Surveys



## Challenges

- Many different surveys measure household health expenditures, and the question modules are not standardized
- The number of specific health items, whether they are services, medicines, or supplies or equipment, varies drastically

# OOPHE Share of Total Health Expenditure



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# Objectives of the IHOPE Project

1. Improve estimation of OOPs in a household survey
  2. Develop a set of questions to facilitate OOP specific disease measurement
  3. To test and develop interim/alternative approaches in HH surveys
  4. To develop reliable substantiated tool to measure household expenditures at different details of items
  5. To provide a socio-economic context to interpret OOPs
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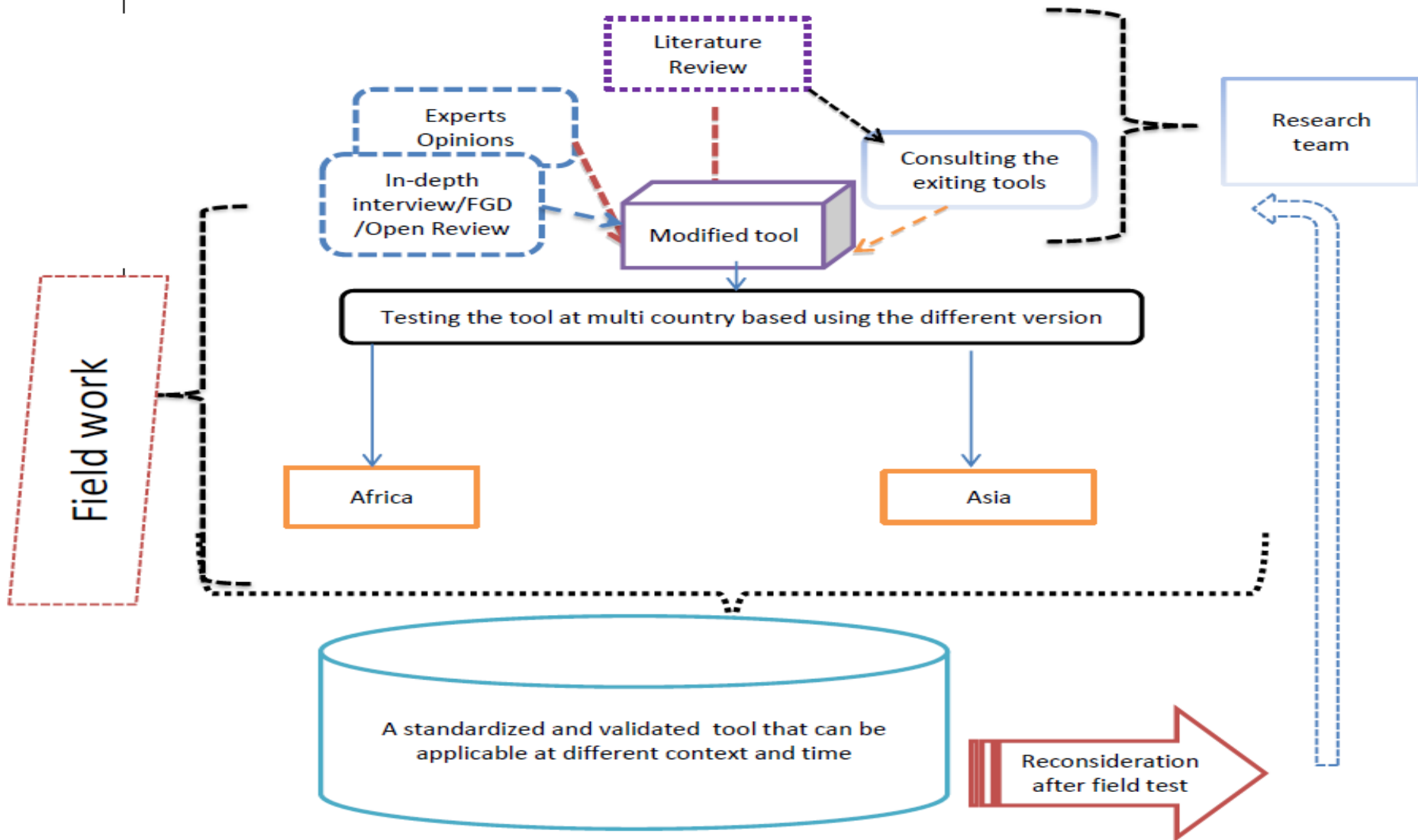


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# Some Research Questions

- 1) What is the optimum number of questions on health expenditures that can be included in household expenditure, income or budget surveys (HECS) to obtain accurate estimates?
- 2) What is the optimum number of questions on non-health expenditures that can be included in household health surveys (HS) to obtain accurate estimates?
- 3) What is the optimum number of questions that are needed to identify OOPs?
- 4) Which recall period is more accurate for OOPs? (2 weeks, 6 months versus 4 weeks, 1 year)

# Overall Designed Approach



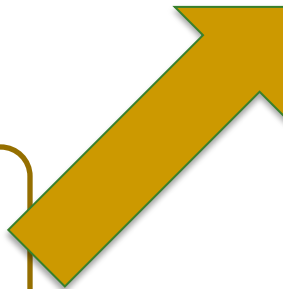
The Study Conceptual Framework



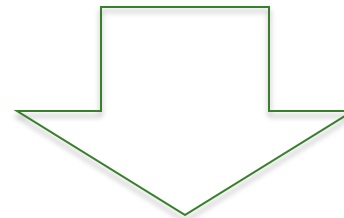
# Premises of this OOPHE validation

## Main source of errors

1. Sampling error;
2. **Bias from non-sampling error**
3. Insufficient frequency of repetition



- Defects in the design and implementation, or limitations in human ability to adequately convey or elicit the true response-mainly:-



**A) Fail to recall**

**B) Fail to report**



# Fail to Recall?

## ■ Evidence and remedies

- **Recall period.....** Shorter reference period is more recalled (Eg. 2-weeks is more recall than 4-weeks)
  - ❖ ?Small recall period--- Fewer events are being captured
  
- **Questions detail---** More detail expenditure elicitation (single item<4-items<8-items)
  - ❖ ? too many questions-----are difficult to implement(it is a load to respondents)



# It is to answer this.....Expanding recall period Vs Number of items

“100% accuracy  
(Provider level data)”

Level of accuracy

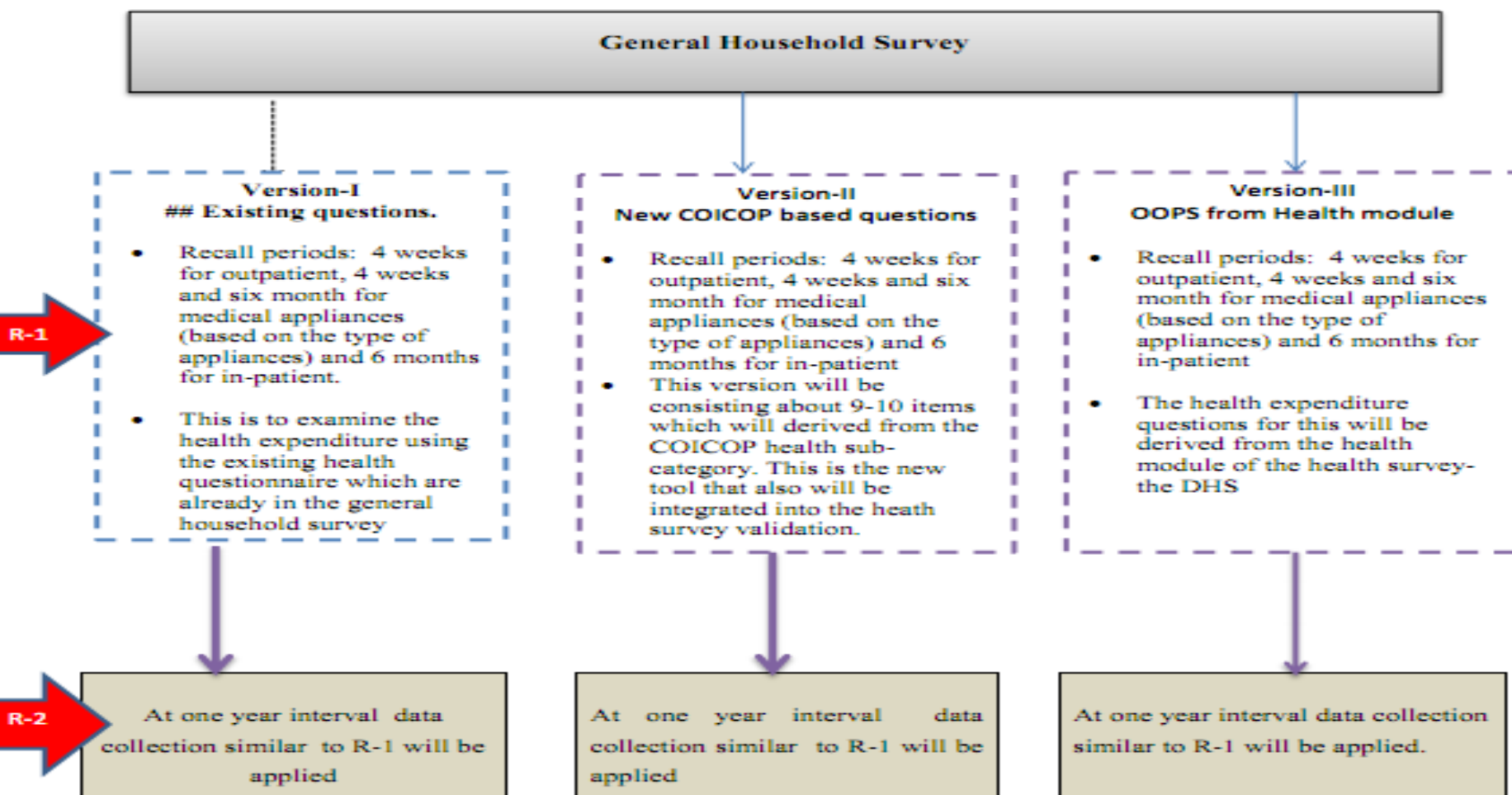
2-  
weeks

Level of accuracy

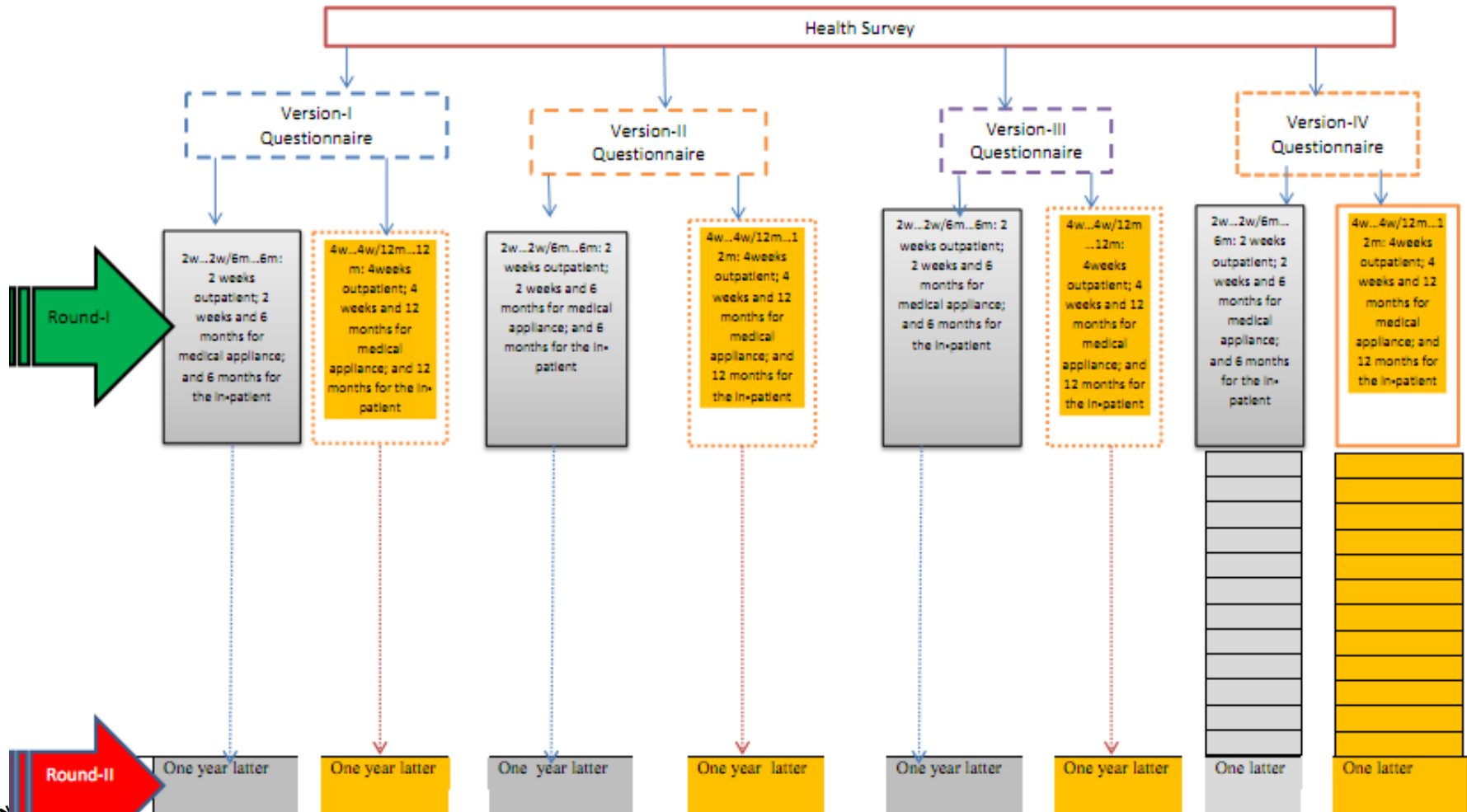
4-weeks

1. Increasing number of items to optimum level
2. Innovative approach for elicitation of recalling
3. Both approaches

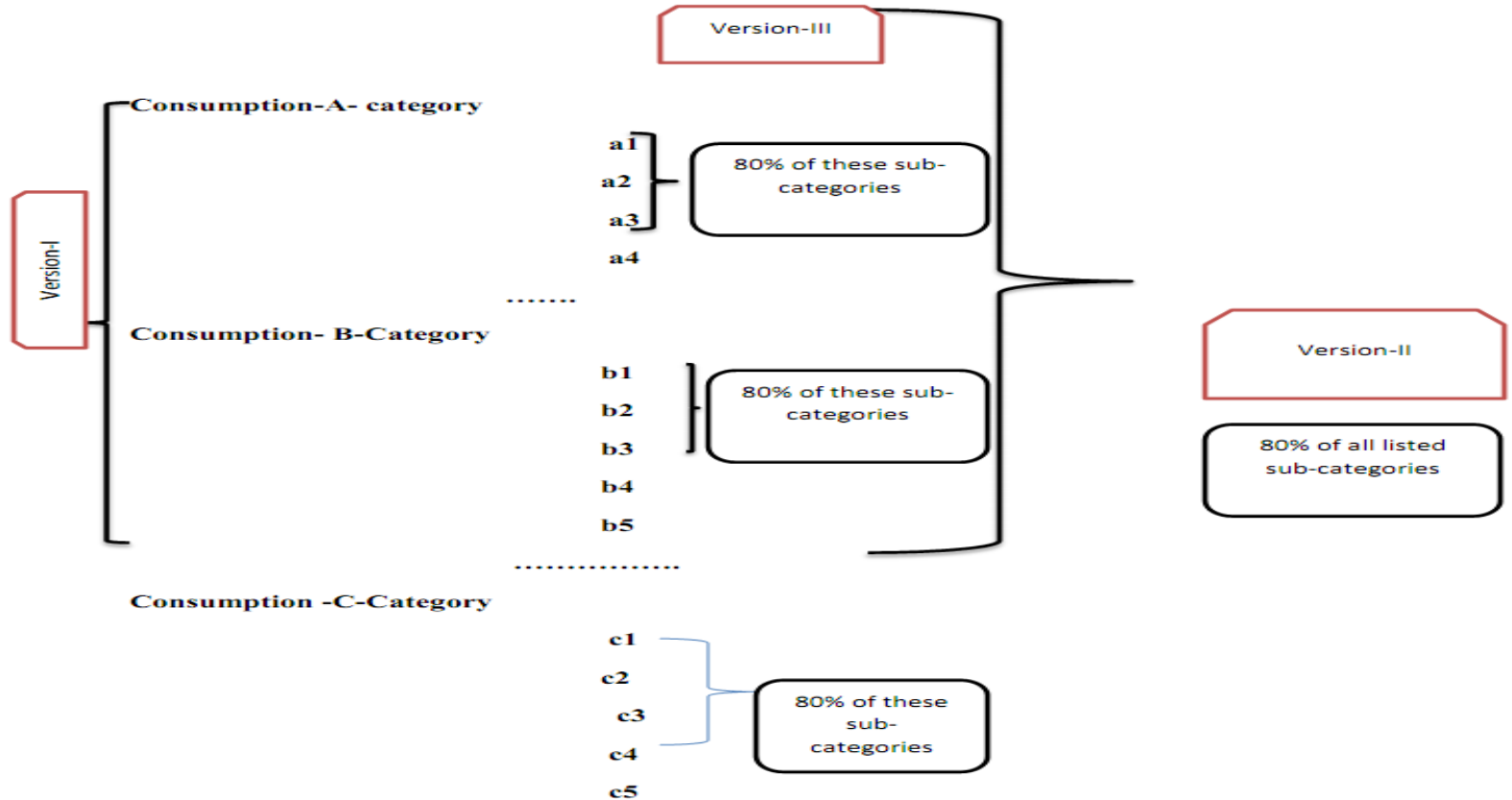
# Randomization for the Validation of general household survey



# Health Survey Validation Randomization

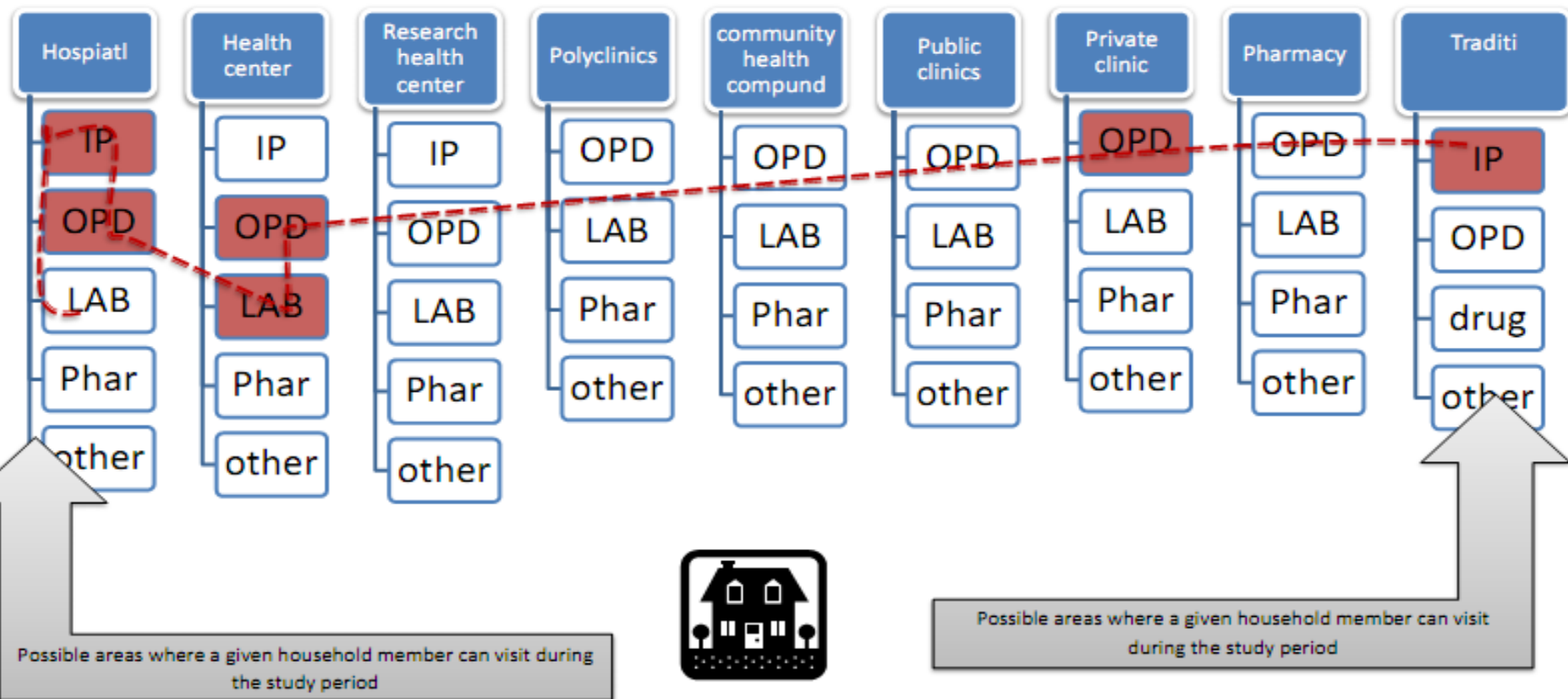


# Versions of HH expenditure



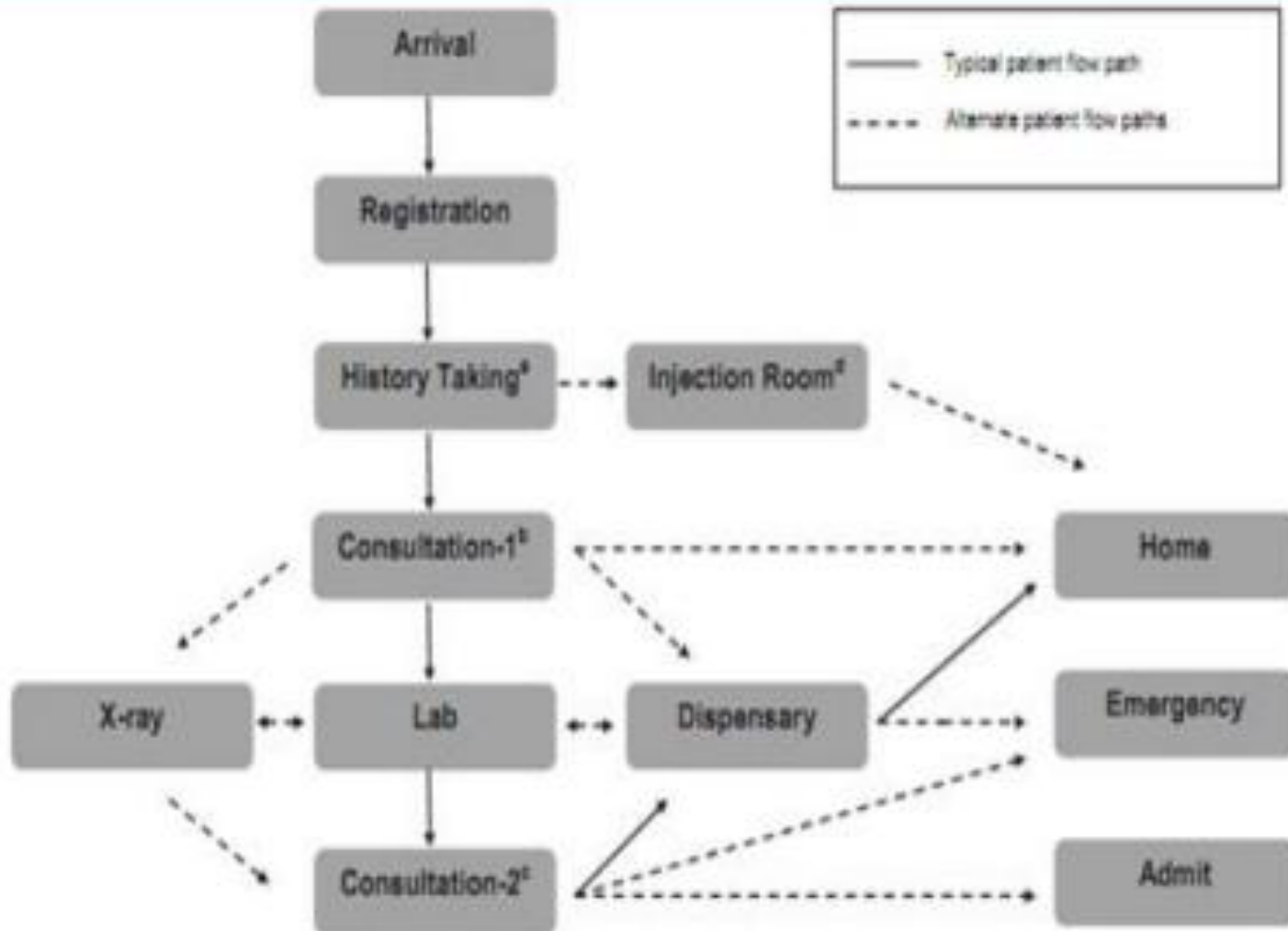
# How to get accurate data at provider level- Realities and approaches?

Possible existing health facilities in each countries HDSS

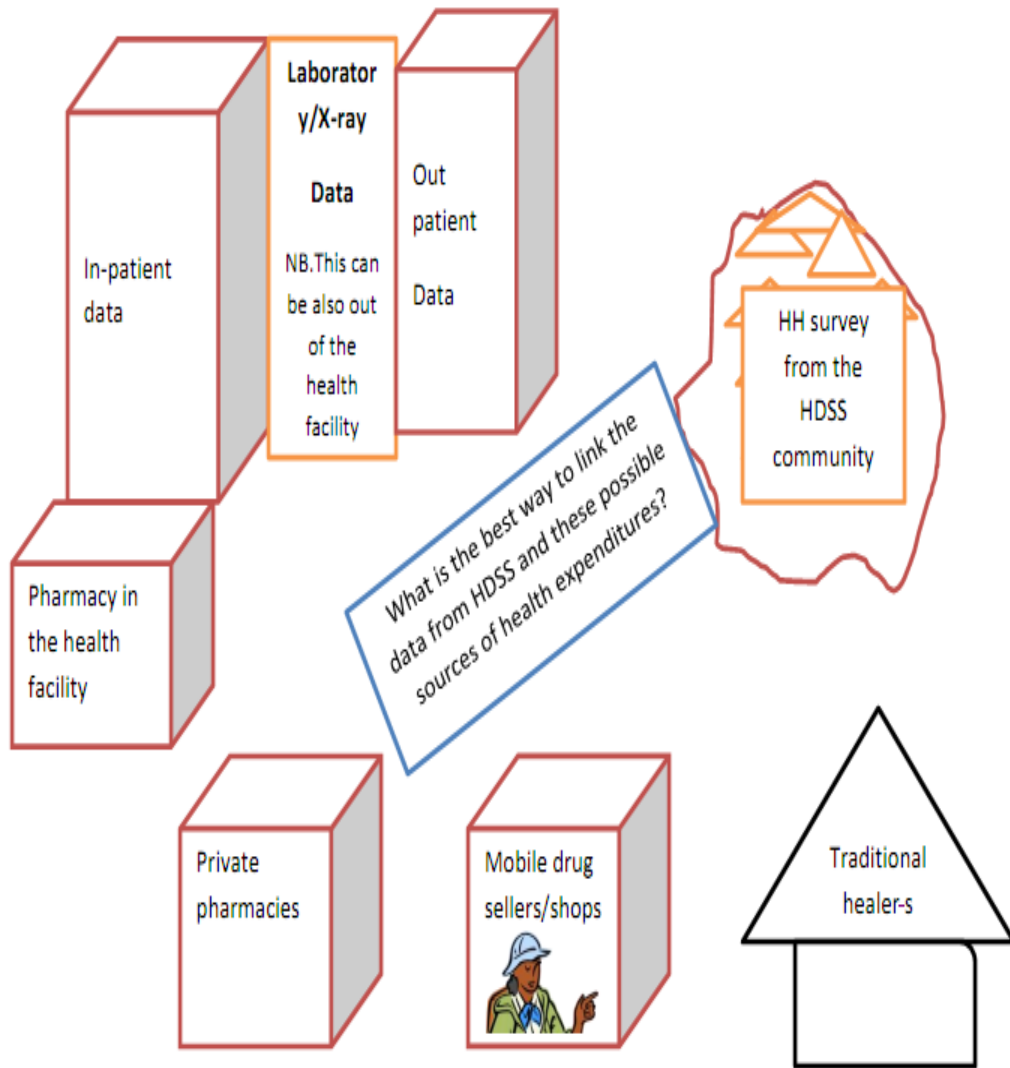


The first step in this validation study start from how we have reliable documentations at each site where the provider level data that we assume as Gold standard will be obtained. In this, paper based or electronic based or both paper based and electronic based documentation will be designed and installed within each health facility.

# Even after getting into the health facility-They pass through the following procedures



# Suggested approaches to get the provider level data



## Documentation

### improvement:-

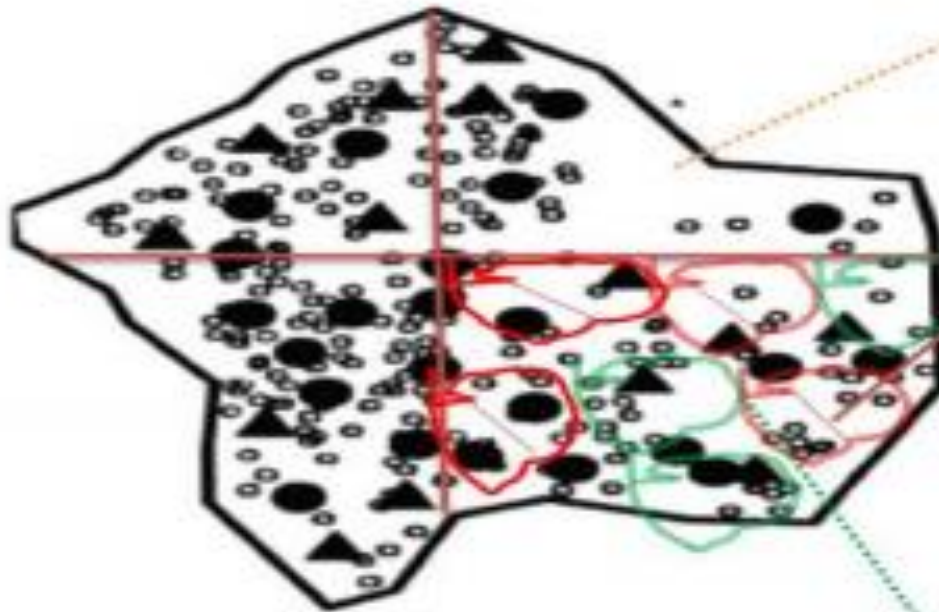
1. Patient identification
  2. Financial expenditure
  3. Diagnosis of the disease
- **Use of technologies- Especially for financial expenditure documentation –Electronic cash register?**



- **The concept of patient information exchange**



# Sampling Techniques



This indicates different stratum of the HDSS site( like North, South, West and East)

The red (four in number) indicate the random allocation of the clusters for the health survey version which will be further divided to accommodate the different recalls

Those green once (three in numbers) will be for the general household oops validation. Households in the cluster will be randomly selected proportional to the required sample size to each randomization blocks .

1. Navrongo, Ghana
2. Ouagadougou, Burkina Faso
3. Filabavi, Vietnam

# Designs to test for the in-patient and low prevalence health problems recall periods

W1	W2	W3	W4	<p>This is to test the health care utilization in the last 4 weeks(( for the inpatient and low prevalence out-patient)</p> <p>Has the respondent ever used health care service in the last 4 weeks 1) yes 2)No</p> <p>2) When did the health utilization happen i) 1<sup>st</sup> week ii) 2<sup>nd</sup> week iii) 3<sup>rd</sup> week iv) 4<sup>th</sup> weeks</p> <p>How much did you spend _____</p>										
M1			M2	M2	<p>This is to investigate health care utilization in the last three months</p> <p>1) Have you used health care service in the last three months a) yes b-no</p> <p>2) When was the time did the health utilization happen</p> <p>i) 1<sup>st</sup> month ii) 2<sup>nd</sup> month iii) 3<sup>rd</sup> month iv) combinations of _____</p> <p>ii) How much did you spend _____</p>									
M1			M2	M3	M4	M5	M6	<p>This is to investigate the health care utilization in the last six months.</p> <p>1) Have the respondent ever used health care service in the last six months 1) yes 2)no 2) When was the time did the health utilization happen 1) 1<sup>st</sup> month 2<sup>nd</sup> month 3) 3<sup>rd</sup> month 4) 4<sup>th</sup> month 5) any combinations</p>						
M1			M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M2	<p>The same questioning approach will be made by considering the respective months in the last one year</p>

# Common symptoms collected from past questionnaires VS Diagnosis from NHA

## Symptoms

Malaria/Fever  
 Diarrhea  
 HIV/AIDS  
 Headache  
 Dizziness  
 Nausea/vomiting  
 Restlessness  
 Body pains  
 Cough  
 Joint pains, bone pains  
 High blood pressure  
 Blood urine, piss with sharpen pain  
 Loss of appetite  
 Respiratory infections  
 Maternal condition  
 Hypertension  
 Nutritional deficiency  
 Neoplasms  
 Diabetes  
 Cardiovascular disease  
 Mental condition  
 Oral disease  
 Skin disease  
 Other, specify

## Diagnosis

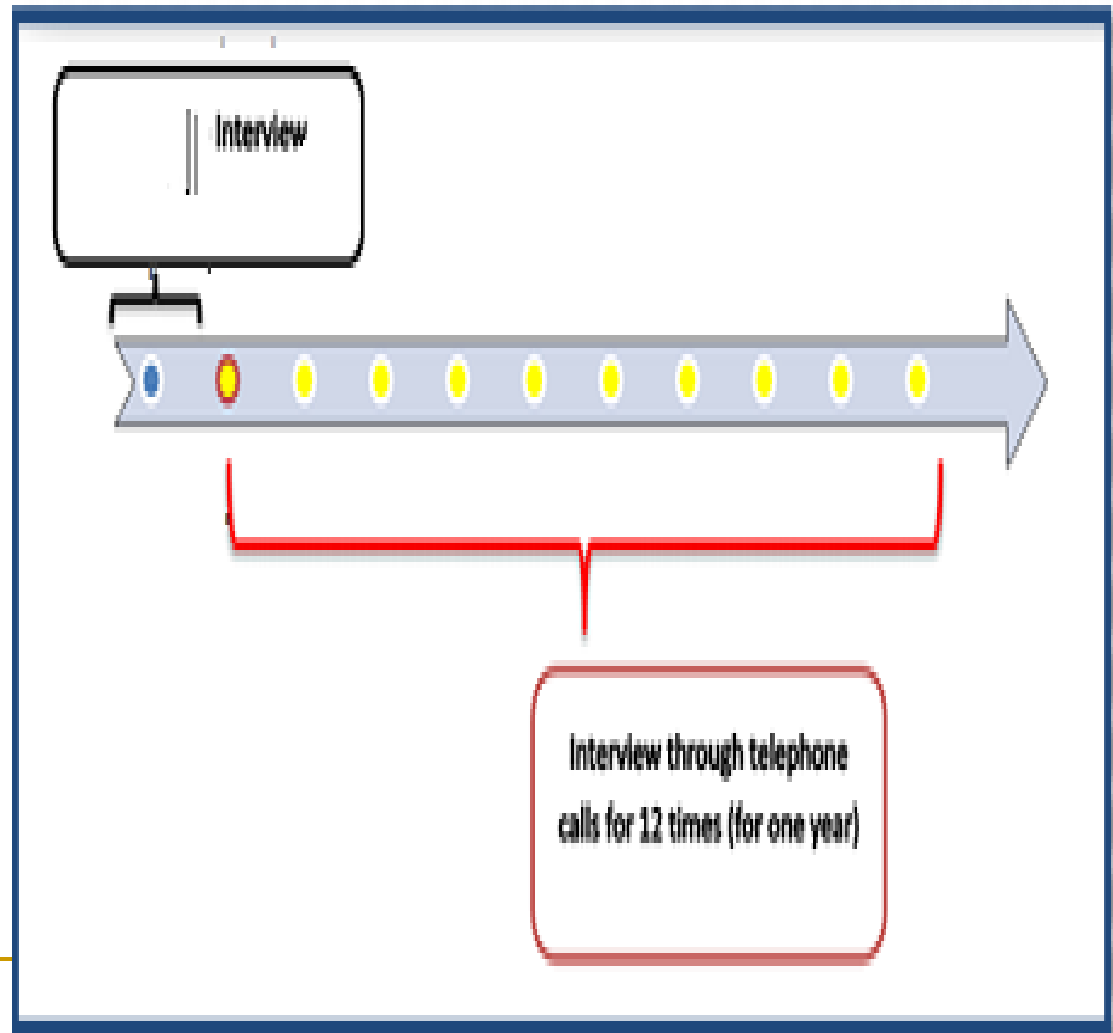
		Response
<b>I</b>	Infectious and parasitic disease	
1.1	HIV/AIDS and Other Sexually Transmitted Diseases (STDs)	
1.1.1	HIV/AIDS and Opportunistic Infections (OIs)	
	HIV/AIDS	
	TB/HIV	
	Other OI and HIV	
	Unspecified HIV/AIDS and OIs (n.e.c.)	
1.1.2	STDs Other than HIV/AIDS	
1.1.3	Unspecified HIV/AIDS and Other STDs	
1.2	Tuberculosis (TB)	
	Pulmonary TB	
	Drug-Sensitive Tuberculosis (DS-TB)	
	Multidrug-resistant Tuberculosis (MDR-TB)	
	Extensively drug-resistant Tuberculosis (XDR-TB)	
	Unspecified Pulmonary Tuberculosis (n.e.c.)	
	Extra pulmonary TB	
	Unspecified tuberculosis (n.e.c.)	
1.3	Malaria	
1.4	Respiratory infections	
1.5	Diarrheal diseases	
1.6	Neglected tropical diseases	
1.7	Vaccine preventable diseases	
1.8	Other and unspecified infectious and parasitic diseases (n.e.c.)	
<b>II</b>	Reproductive health	
2.1	Maternal conditions	
2.2	Perinatal conditions	
2.3	Contraceptive management (family planning)	
2.4	Unspecified reproductive health conditions (n.e.c.)	
<b>III</b>	Nutritional deficiencies	
<b>IV</b>	Non communicable disease	
4.1	Neoplasms	
4.2	Endocrine and metabolic disorders	
4.2.1	Diabetes	
4.2.2	Other and unspecified endocrine and metabolic disorders (	
4.3	Cardiovascular diseases	
4.3.1	Hypertensive diseases	
4.3.2	Other and unspecified cardiovascular diseases (n.e.c.)	
4.4	Mental and behavioural disorders, and Neurological conditions	
4.4.1	Mental (psychiatric) disorders	
4.4.2	Behavioural disorders	
4.4.3	Neurological conditions	
4.4.4	Unspecified mental and behavioural disorders and neurological conditions (n.e.c.)	
4.5	Respiratory diseases	
4.6	Diseases of the digestive	
4.7	Diseases of the genito-urinary system	
4.8	Sense organ disorders	
4.9	Oral diseases	
4.10	Other and unspecified non-communicable diseases (n.e.c.)	
<b>V</b>	Injuries	
<b>VI</b>	Non-disease specific	
<b>VII</b>	Other and unspecified diseases/conditions (n.e.c.)	



# *Developing scalar to annualize the out-of-pocket health expenditure*

Once we have captured the data with the different modules that can be considered as baseline further interview will be made through telephone in line with their respective recall period!

**We will set up a center to facilitate the implementation of these approaches!**



# Work-Plan

Activities	Nov- Jan/2015	Feb- April/2016	May 2016 – Jan 2017	Feb-April 2017	May-December 2017
Ethical approval	XXXXXXXX				
Round-I data collection		XXXXXXXXXX X			
Data on scalar derivation			XXXXXXXXXX X		
Data collection on in- patient and low prevalence			XXXXXXXXXX XX		
Round-II data collection				XXXXXXXXXX	
Report writing & Papers	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXXXXXX

**Thank You!**

