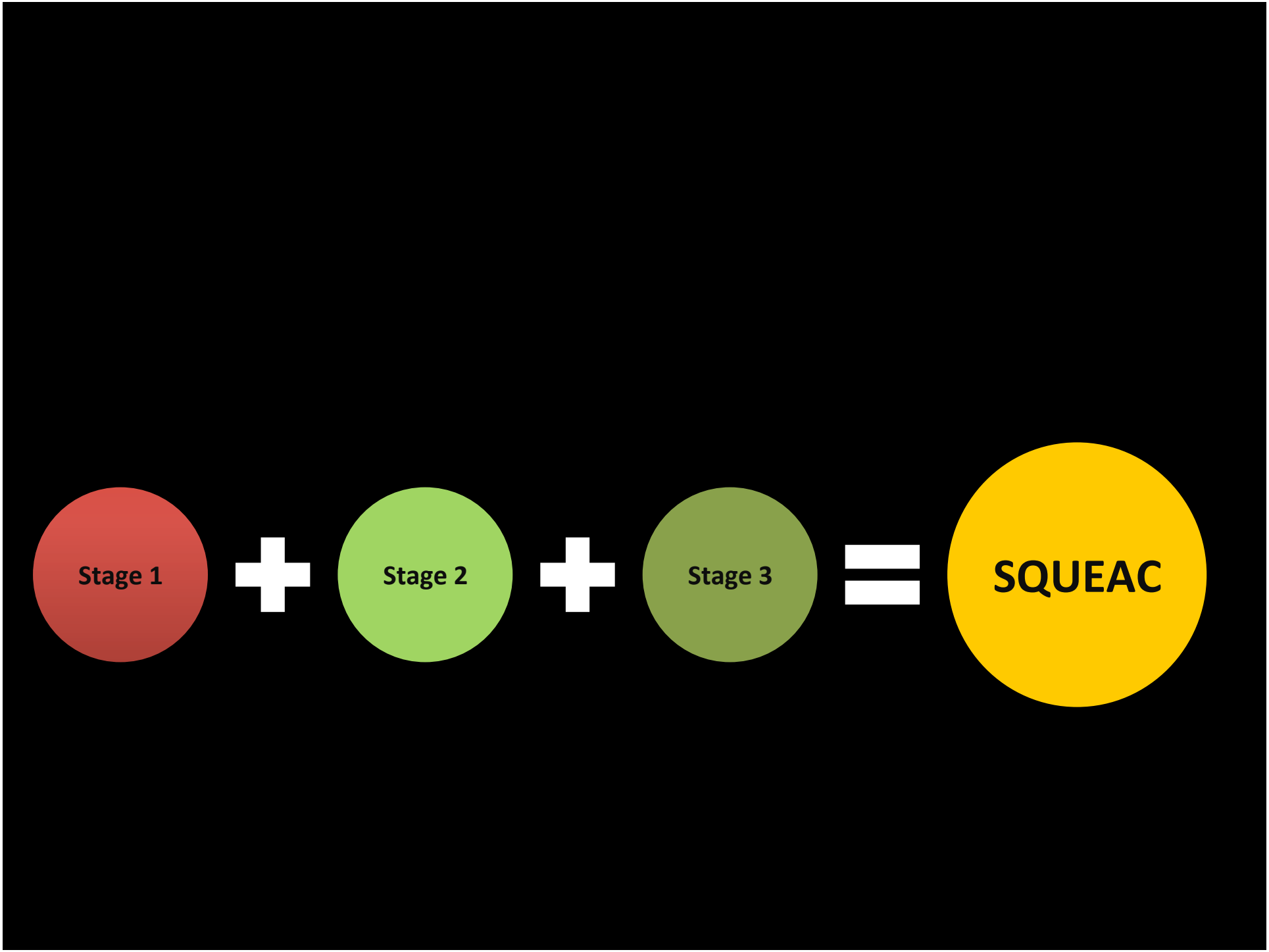
SQUEAC was developed to bring together quantitative and qualitative data to ensure a full understanding of programme coverage.

SQUEAC is not a survey technique – it is an in-depth investigation.

Although we already have an idea of the main issues affecting coverage the value of SQUEAC is seeing exactly how these play out in a particular context.

Elements of SQUEAC


Stage 1
Stage 2
Stage 3
SQUEAC

STAGE 1

Stage 1:

Investigate coverage and factors influencing coverage

Identify potential areas of high and low coverage

Gain an idea of what coverage is likely to be

How can we do this?

The SQUEAC Toolkit

SQUEAC consists of a set of tools which…

Collect Data

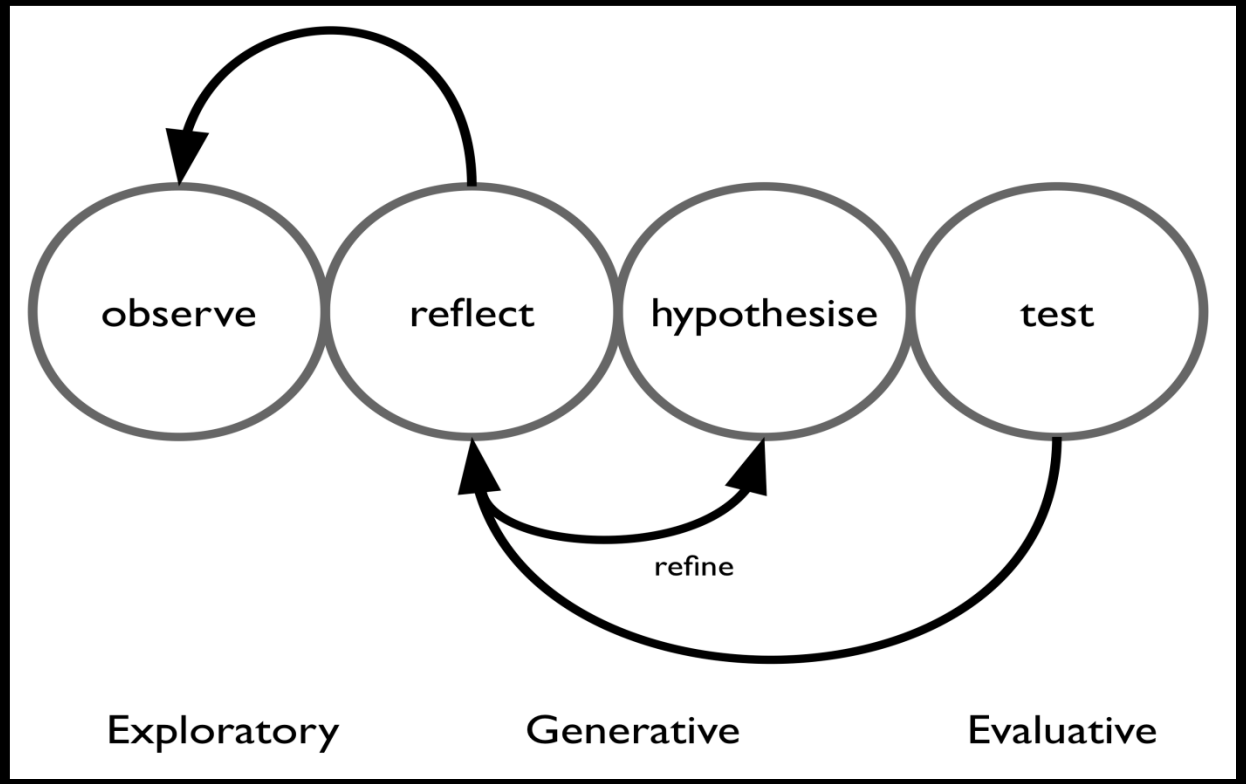
Analyse Results

Organise Findings

The tools:

- Allow us to gradually build up an idea of the 'truth' about coverage
- Provide information which can direct specific practical action to improve impact
- Are designed to be integrated into routine programme monitoring activities

SQUEAC is an iterative, innovative process



Learn & validate as you go

Two key principles…

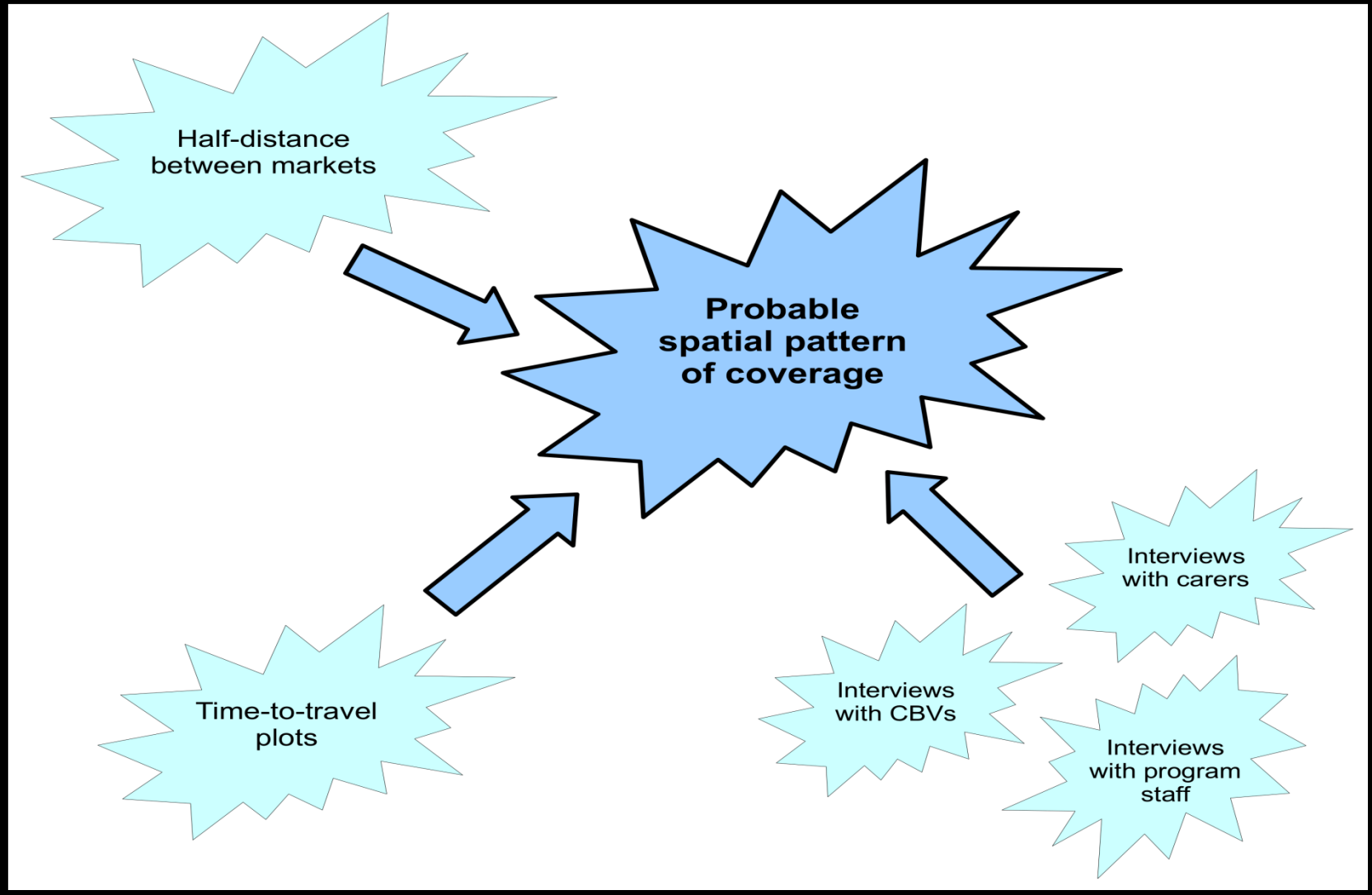
Triangulation: Data is collected from *different sources* and using *different methods* and is compared.

Discrepancies inform what further data needs to be collected and how

Sampling to redundancy: Data collection continues until no new information comes to light.

It is important that data is *exhaustive*

Example of Triangulation



We investigate…

Routine Programme Data

Standard programme monitoring data
Additional quantitative data from beneficiary record cards

Qualitative Data

Opinions, perceptions and experiences of both those directly connected with the programme and those who have an indirect interest in its activities

For each finding we need to ask ourselves:

What is its effect on coverage?

Is this a barrier or a booster?

Admissions

The number of admissions over time is the most important item of routine programme data.

In a non-emergency setting the pattern of admissions should vary with the incidence of under-nutrition.

Admissions should be graphed (time on x-axis, number of admissions on y-axis).

We need to determine:

Is the programme responding to need?

By comparing:

Observed vs. expected admissions

Figure SQ.6 : An example data collection form for collecting seasonal calendar data

Calendar Collection & Summary

Source: MALE (LEADER) Location: SHAL AOSP (A) Method: FGD Date 9/11

Childhood Disease

Disease	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
DIARRHOEA	+++	+++	+++	+		+	++	+++	+++	++		++
MALARIA					++	+++	+++	++				
A-R-I		+	++	++	++				+	++	+	

Crops & Produce

Crop / Produce	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
SORGHUM			+	++	+++	+++	+++	++	++	+		
SESAME				++	++	+++	++	+				
BEANS					++	++						
MAIZE					++	+++	+++					

Staple Food Price

Staple Food	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
SORGHUM	+	+	++	++	+++	+++	+++	++	+	+	+	+

Food Availability

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Food Availability	++	++	++	+	+	+	+	+++	+++	+++	+++	++

Female Labour Demand

Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
PREPARE	+	++	++									
SOWING				+++								
WEEDING				+	+	++	+					
HARVEST					+	++	+++	+	++	++	+	

Male Labour Demand

Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
PREPARE	++	+++	+++	+++								
SOWING				+++								
HARVEST					++	++	+++	++	++	++	+	

Climate

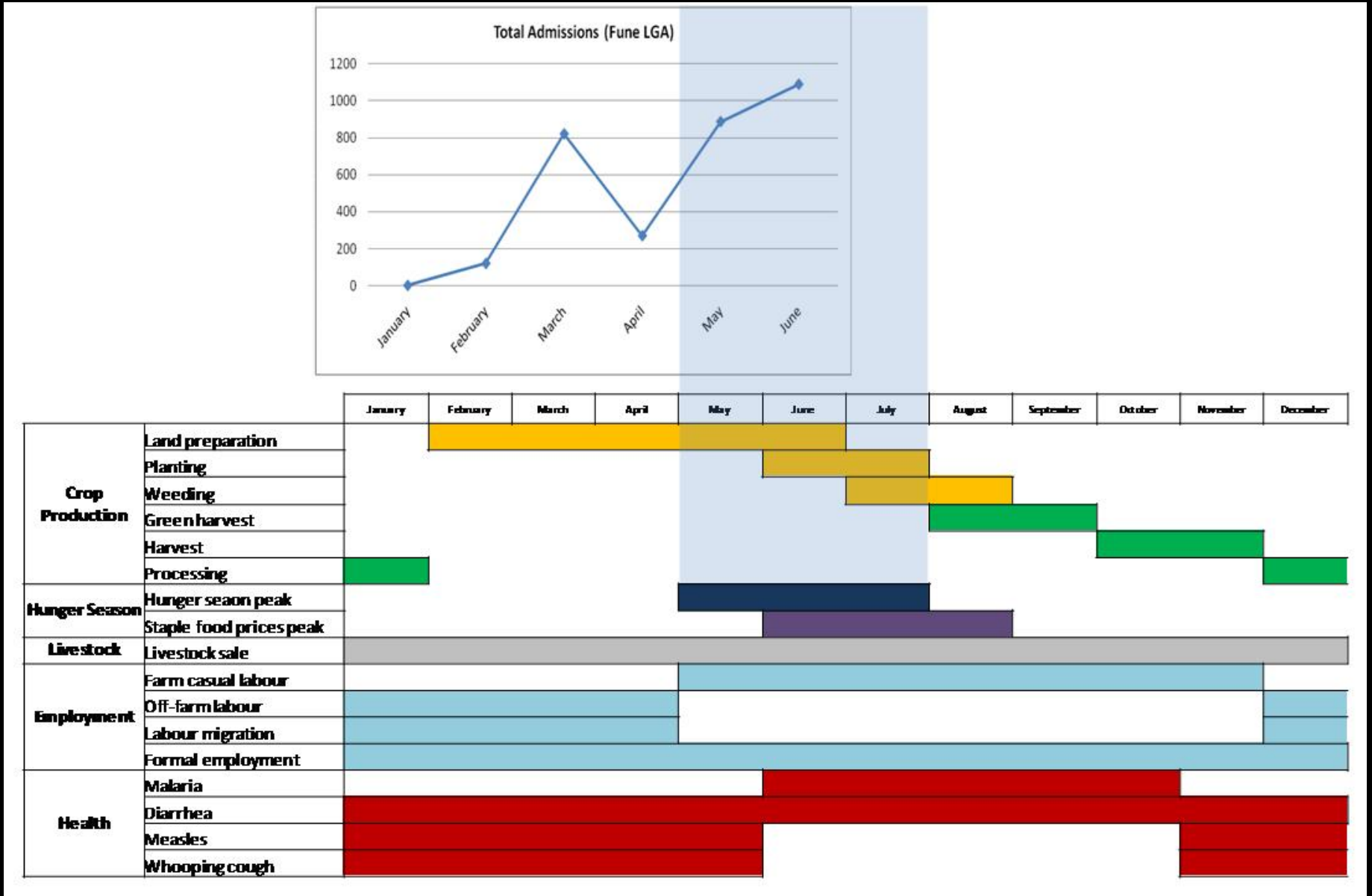
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rainfall		+	+	+	?	++	+++	++				
Temperature					+	++	+++	+++	+++	+		

Data courtesy of UNICEF (Sudan)

Seasonal Calendar Collection Tool

In order to contextualise admissions we collect information on associated Illnesses and food availability

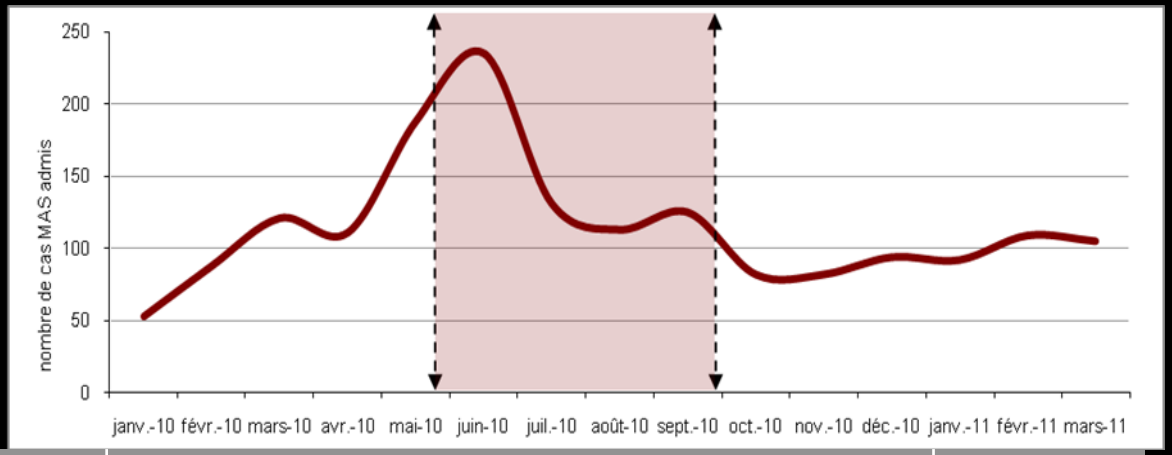
Admissions over Time with Seasonal Calendar Nigeria



If more children were treated at a time when the incidence of undernutrition was likely to be high then the pattern of admissions conforms to expectations.

Deviation from the expected pattern indicates a potential problem with recruitment procedures.

Admissions over time with seasonal calendar: Burkina Faso



Calendrier saisonnier	2010 janv	févr	mars	avr	mai	juin	juil	août	sept	oct	nov	déc	2011 janv	févr	mars
Pluies	Saison sèche					Saison des pluies Bas-fonds			Saison sèche						
Calendrier agricole	Agriculture de contre saison (Maraîchage)			Préparation des champs		Travaux agricoles			Récolte de céréales				Agriculture de contre saison (Maraîchage)		
Disponibilité alimentaire	Bonne			Moyenne		Période de soudure Approvisionnement marché faible Hausse des prix			Forte disponibilité, stocks familiaux importants Baisse des prix				Bonne		
Besoin énergétique du ménage	Faibles					Elevés					Moyens		Faibles		
Relation mère enfant Disponibilité mères	Amélioration			Début dégradation		Dégradation			Début d'amélioration				Amélioration		
Morbidité	Infections respiratoires			Méningite, rougeole		Diarrhée et paludisme + ++			Paludisme			Infections respiratoires			

Prévalence de la malnutrition aigue élevée

Evènements clés	janv	févr	mars	avr	mai	juin	juil	août	sept	oct	nov	déc	janv	févr	mars
Rupture prolongée d'ATPE															
Ruptures rations sèches PAM															
Cérémonies et funérailles															
Distribution préventive PAM (6-23 mois)															
Ouverture de 2 nouveaux CSPS															
Extension du partenariat APDC															
Formation de 110 nouveaux volontaires															
Délocalisation des animateurs ACF															

Median MUAC on Admission

Timeliness of admissions is important.

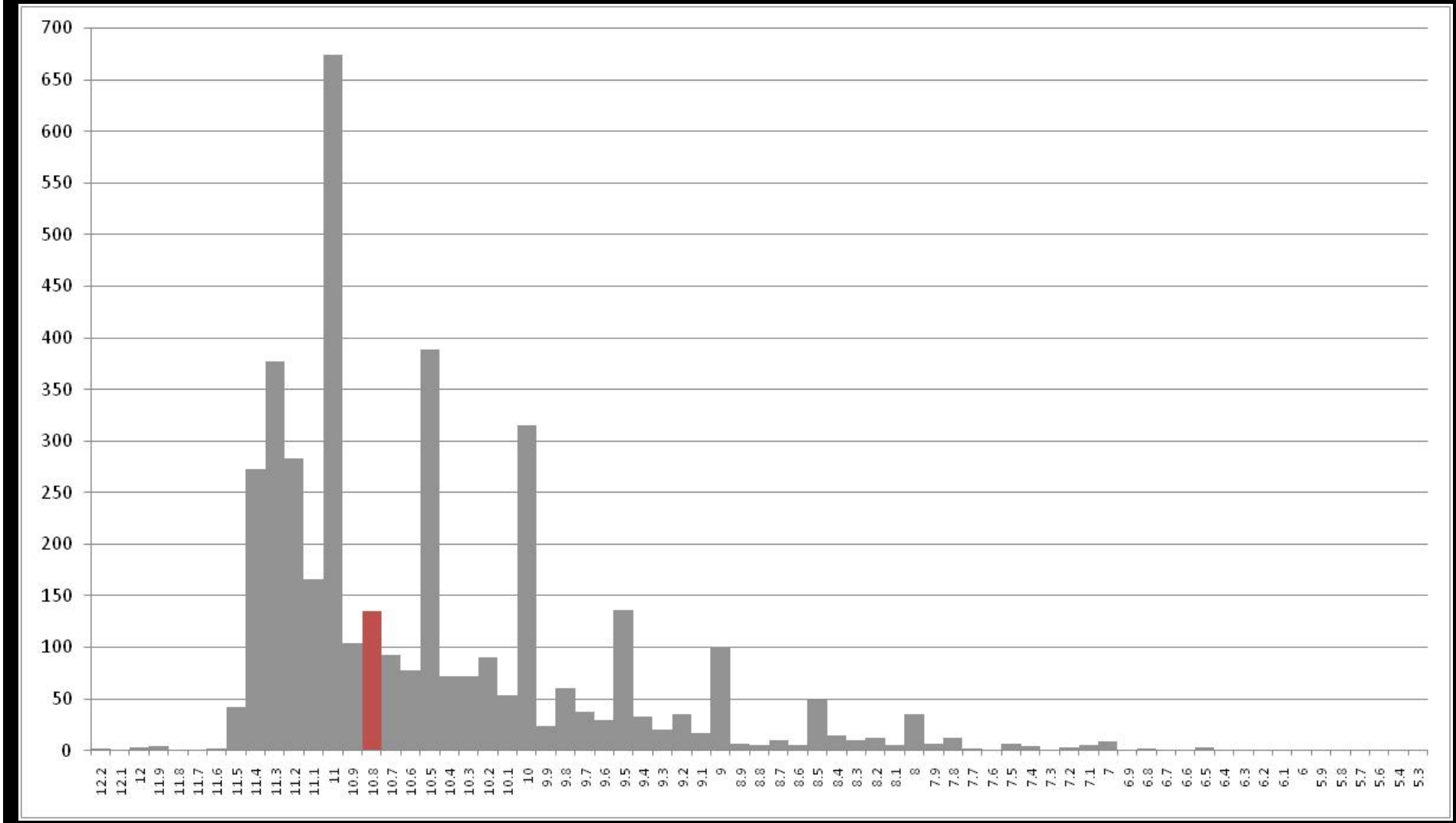
Late admissions (e.g. children with a low MUAC on admission) will have met admission criteria and been uncovered cases for some considerable time.

Late admissions can be investigated by plotting MUAC on admission.

Are we seeing:

- Timely case finding?
- Early treatment seeking behaviour?

Median MUAC on Admission Nigeria



A programme with high coverage is likely to have a plot with a large number of admission MUAC close to the programme admission criteria.

A programme with low coverage is likely to have a markedly different plot and is indicative of case finding problems.

NB: A wider range of MUAC likely in the early stages of a programme (due to prevalent and incident cases).

Standard Programme Indicators

Thorough case finding and early treatment seeking are key but so equally is good retention from admission to cure.

Defaulters, children who have left the programme without being formally discharged, should be in the programme but are not.

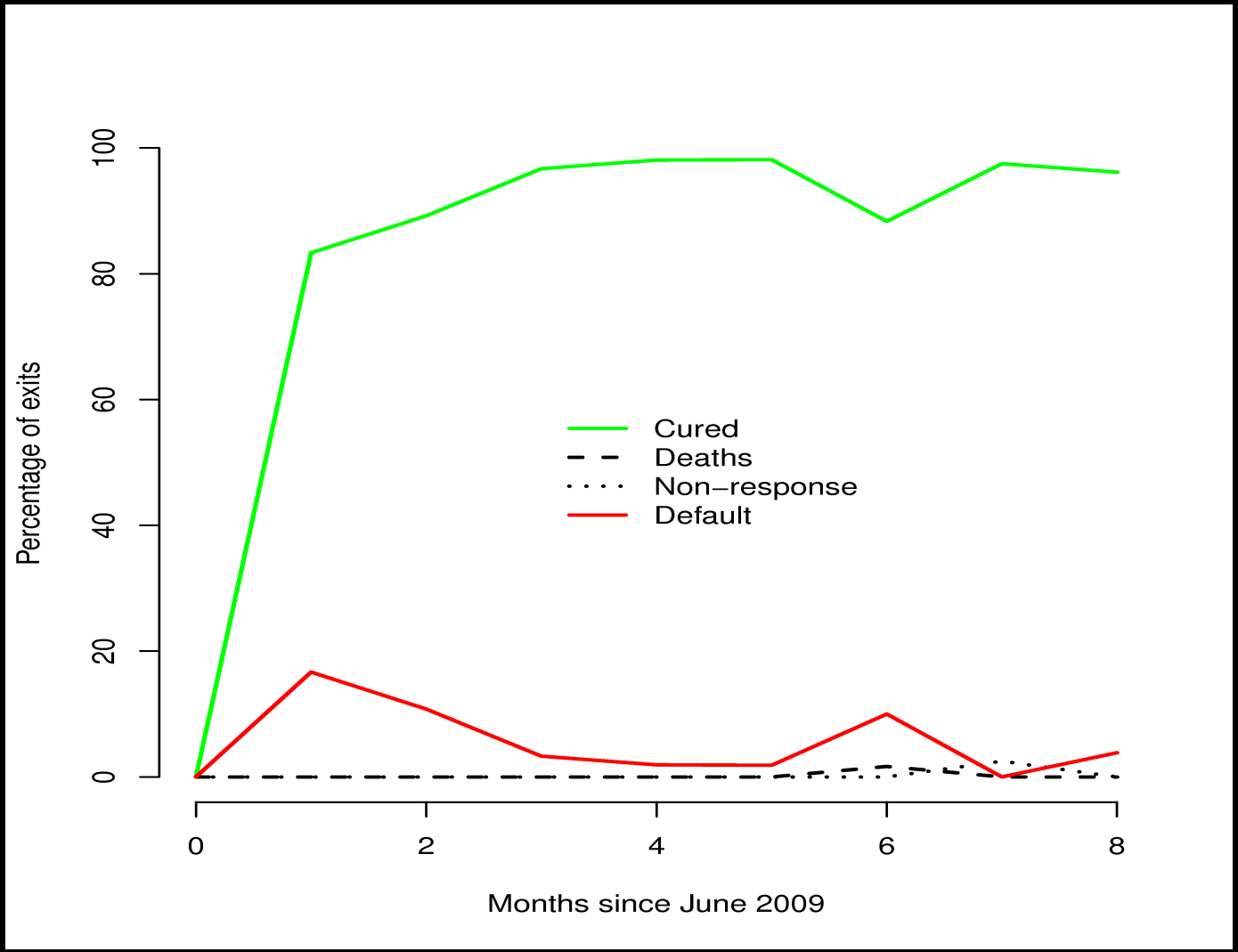
Indicators (cured, defaulters, death, non response) should be graphed over time as a % of all exits.

Establish:

What is the overall defaulter rate?

Is there a seasonal variation in the rate?

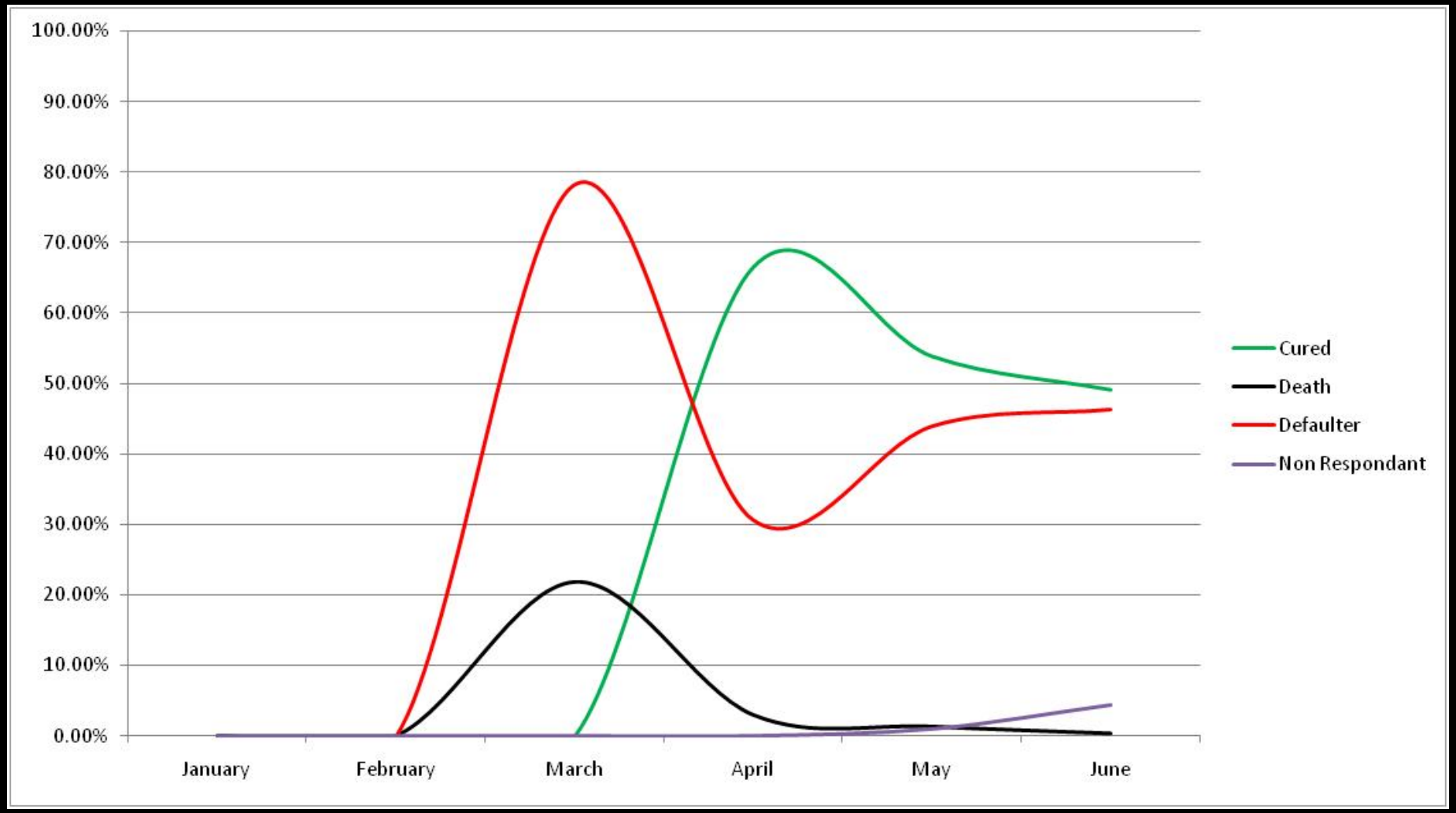
Standard Programme Indicators Bangladesh



A programme with high coverage should show a consistently low rate of defaulting.

High rates of defaulting are associated with low programme coverage.

Standard Programme Indicators Nigeria



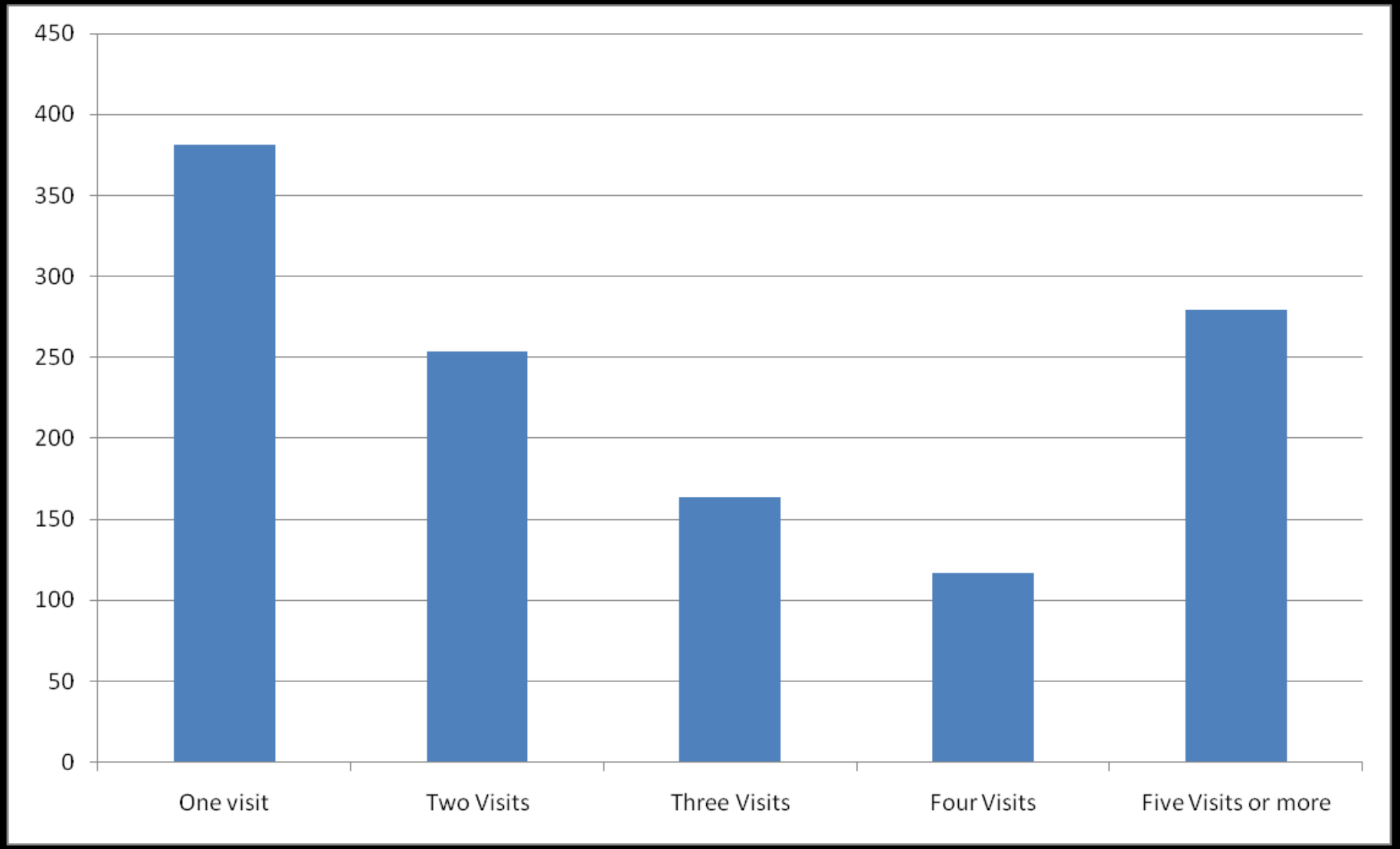
Further investigation advisable if defaulter rate high…

Beneficiaries that default early are likely to still be current (SAM) cases. A high rate could mask 'hidden deaths'. Those that default later are more probably recovering cases.

Determine:

- **Time in Programme**
- **Distance (home location – health centre)**
- **Reason**

Defaulter – Number of Weeks in the Programme Nigeria



Time to Travel

Distance may have an effect on programme attendance (higher closer to the clinic) and on defaulting (higher further from the clinic).

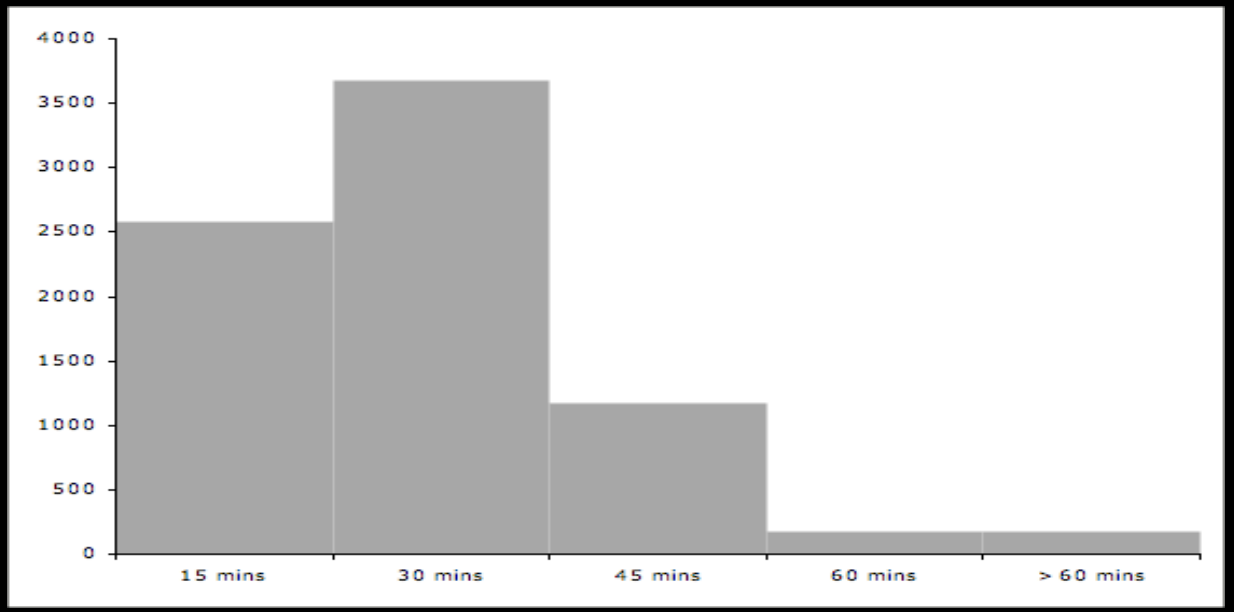
Maps, lists, tables and graphs can all be used to analyse spatial data.

Identify:

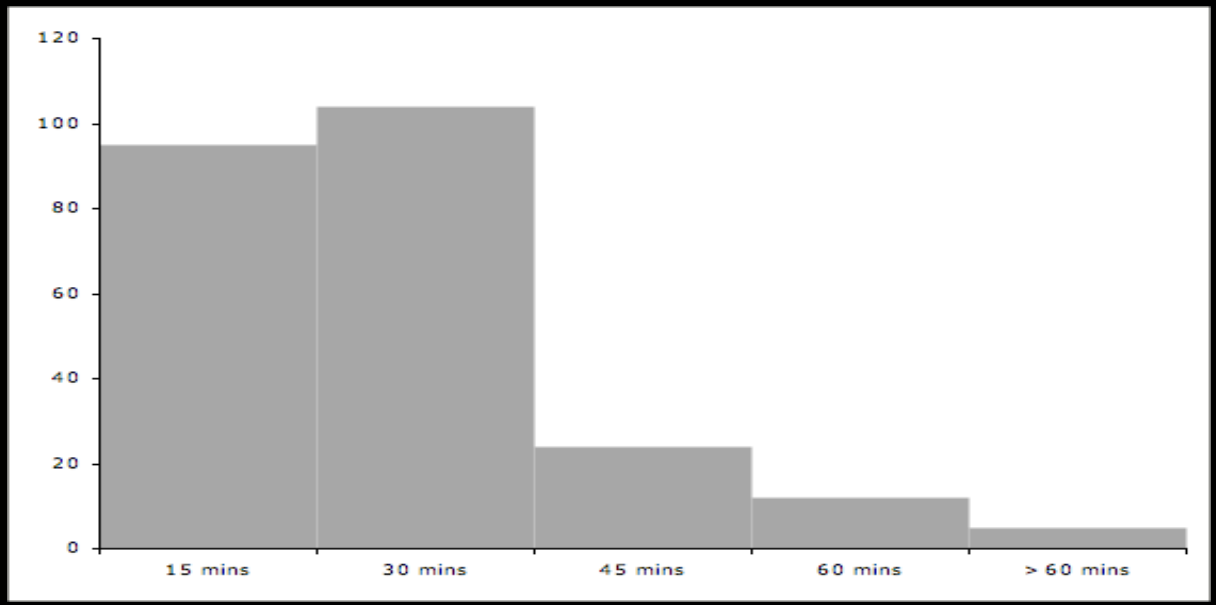
- Is distance a possible cause of defaulting?
- What is the intended vs. actual catchment area?

Time to Travel Histograms Somalia

All Beneficiaries



Defaulters

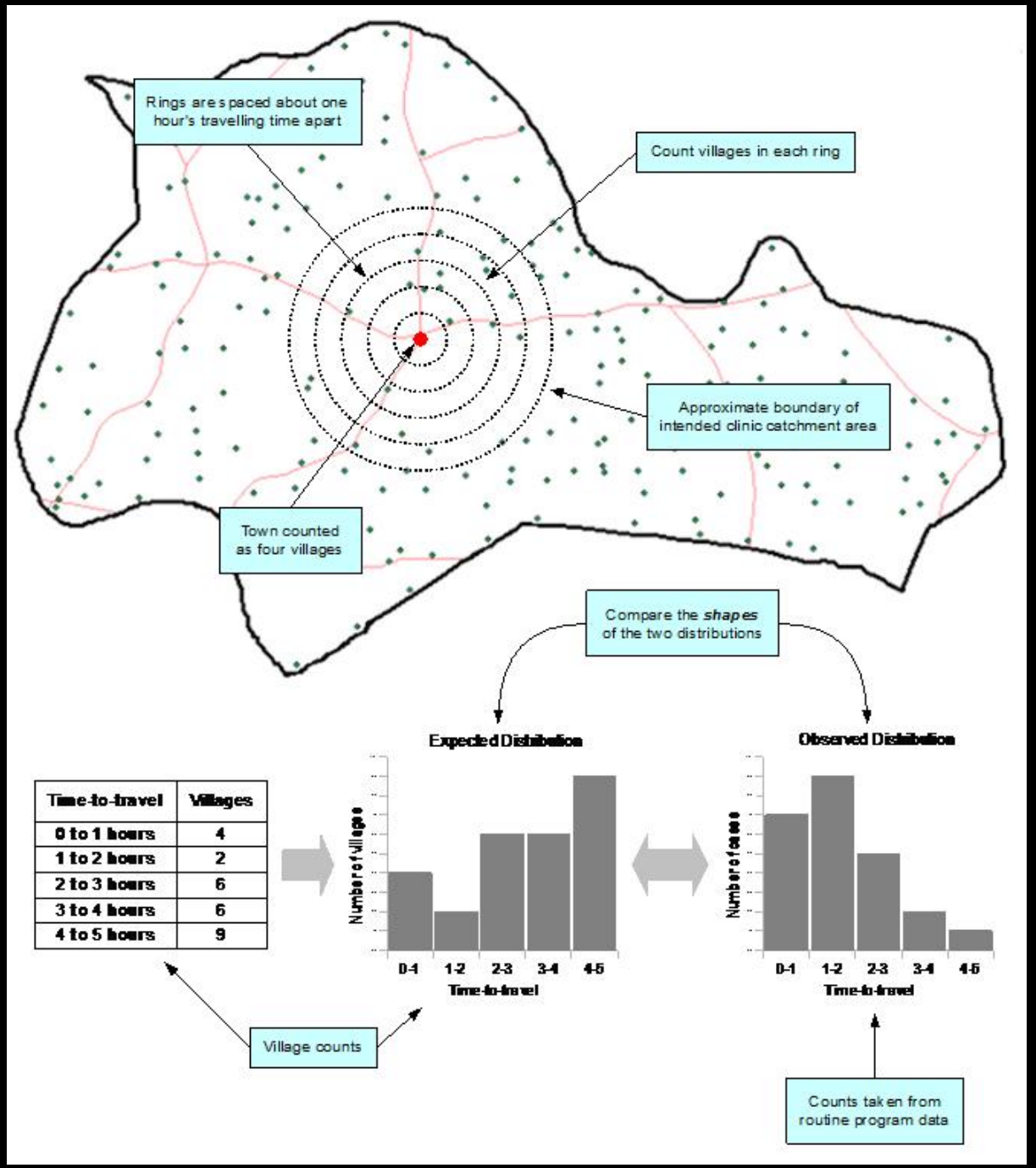


High coverage is more likely to be achieved if OTP services are decentralised to within an acceptable travelling time.

Distance is usually a major contributory factor to low coverage in programmes with a patchy spatial distribution of OTP sites.

BUT if most defaulters live near the health centre factors other than distance need to be explored.

Expected and observed pattern for time to travel



Spatial Distribution

Mapping is a useful way to determine the spatial reach of a programme, define the real catchment area, and assess outreach activities.
A large, accurate geographical map is needed.

Formulate hypotheses:

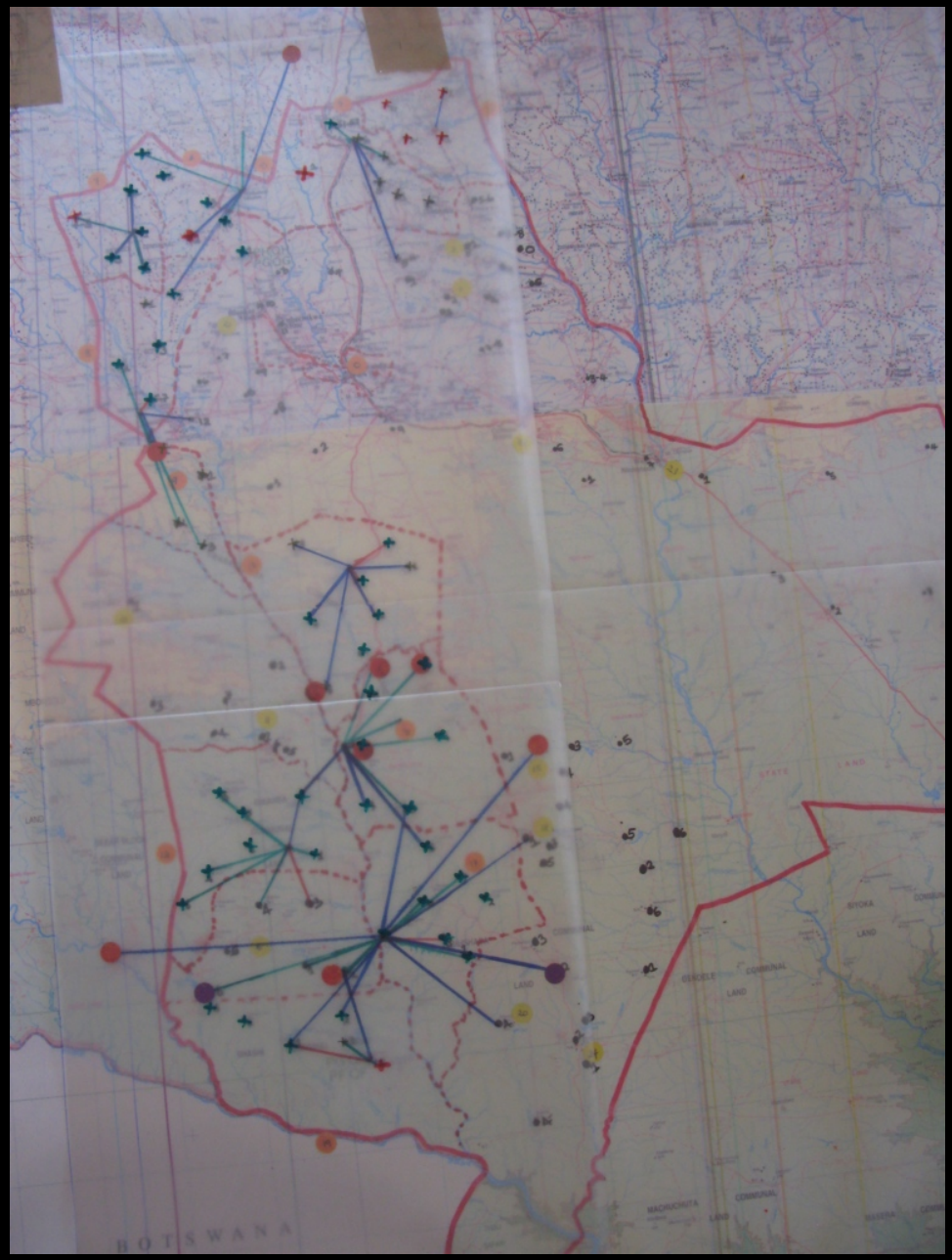
- Is coverage patchy or homogenous?

By mapping home locations of:

- Beneficiaries
- Defaulters
- Case Finding Volunteers

Plot of admissions, defaulters and volunteers

Zimbabwe



Many admissions and volunteers in one group of villages (e.g. close to the clinic or along major roads) but few or none in another (e.g. where accessible only by motorbike, fall between clinics).

Suggests…

Coverage may be ‘patchy’ – high in some areas, low in others

An even distribution of admissions, defaulters and volunteers across all villages, (high or low).

g

Suggests…

Coverage is potentially homogenous

BUT routine and quantitative data provide limited information

Qualitative Data is needed

To inform and explain quantitative data (e.g. use of traditional medicine and poor case-finding volunteer motivation lead to late admissions)

To identify additional barriers not apparent from statistics (e.g. rude behaviour of clinic staff towards mothers)

Qualitative Data Collection

How:

Informal group discussions
Semi-structured interviews
Simple structured interviews
Case histories

With:

Community and programme actors

To better understand:

Barriers to Access
Reasons for Defaulting

Data	Source	Method	Person	Notes
Disease calendar	Medical assistant	SSI	Farah	
	Nursing staff	SSI	Farah	
	Carers	IDI	Sara	Add to histories
	Carers	IGD	Iptihalat	
	Clinic returns	Data Extraction	Farah	Clinic and state MoH
	TBA	SSI	Iptihalat	
	THP	SSI	Farah	
Labour calendar	Tea-shop customers	IGD	Taj El Dein	
	Carers	IGD	Iptihalat	
	Clinic guard	SSI	Farah	
	Agriculture extension worker	SSI	Farah	
Food Availability calendar	Tea-shop customers	IGD	Taj El Dein	
	Agriculture extension worker	SSI	Taj El Dein	
	Carers	IGD	Iptihalat	
	Market data	Data Extraction	Farah	WFP monitoring data

SSI = Semi-structured interview; IDI = In-depth (focussed) interview; IGD = Informal group discussion

Data courtesy UNICEF (Sudan)

Qualitative Data Collection Plan

Triangulation by source and by method

Key themes:

- Aetiologies for SAM
- Pathways to treatment
- Awareness of programme
- Perceptions and opinions of programme
- Case-finding volunteer activity
- Knowledge of and reasons for uncovered cases

Stage 2 & 3 surveys:

Determine 'case finding question'

- Terminologies for SAM

Identify

- Key Informants

Example of Interview Guide

Box 1 : Example interview guide for first interviews with carers of children in the program

How did this child get to be in this program?

The intention of this question is to :

Elicit a history.

Explore local SAM aetiologies.

Explore treatment seeking behaviour / pathways to care (i.e. for contrast with the program's case-finding and referral methods).

The carer may start by (e.g.) describing events around case-finding and referral. Keep this as a 'reference point' during the interview and probe:

"What happened after that?"

"What happened before that?"

Do you know of any children in your village that are like your child but are <u>not</u> attending this program?

When asking and following-up on this question refer to / ask about :

The index child's specific history (from above).

Common SAM aetiologies (e.g. not recovered well after an illness").

Specific signs (e.g. thin arms, swollen feet, kwashiorkor signs).

Treatment seeking behaviour / pathways to care.

Encourage narratives / histories.

If <u>YES</u> : Why do you think the child is not attending this program?

Reflect back responses to elicit further information.

Probe "How do you know this?", "Any other reasons?", "Any other children".

Encourage narratives / histories.

Record the name and home location of the informant for follow-up.

IF <u>NO</u> : If there were children like your child but <u>not</u> attending this program, why do you think they would not attend the program?

Note the question is hypothetical. This may need explaining.

Reflect back responses to elicit further information.

Probe : "Any other reasons?"

If I wanted to find children like your child and the children we have spoken about how would I best describe them to other people?

The intention of this questions is to discover local terms and aetiologies for wasting. Probe for definitions of local terms. Some terms will be descriptive whereas others will reflect local / folk aetiologies (e.g. kwashiorkor is a Ga language term for "the sickness the baby gets when the new baby comes"). You will find this useful for case-finding in surveys and to contrast with program messages.

Give examples of specific signs and ask for local terms.

Probe "Any other names for this?", "Will most people understand what I am asking if I ask about [TERM]?".

Ask about how this differs from the program messages (e.g. "Are these [TERMS] the same thing as 'malnutrition'?").

If I wanted to find children like your child and the children we have spoken about who would best be able to help me to find them?

Probe : "Anyone else?". Make sure you ask directly about midwifes / TBAs, traditional healers, the people mentioned in histories when exploring treatment seeking behaviour / pathways to care (above), and the people used by the program for case-finding and referral. Probe : "Why?" and "Why not?".

Confirm : "You are saying that I should ask [PERSON] to take me to see children with [TERMS]. Is that right?"

This information will be used for case-finding in surveys.

SQUEAC investigations collect a broad set of data (quantitative & qualitative) using a variety of methods from diverse sources.

How can we best store and organise findings?

Create a Mind Map

A mind map is used to summarise the findings and is drawn and modified as the investigation proceeds.

Mind Map

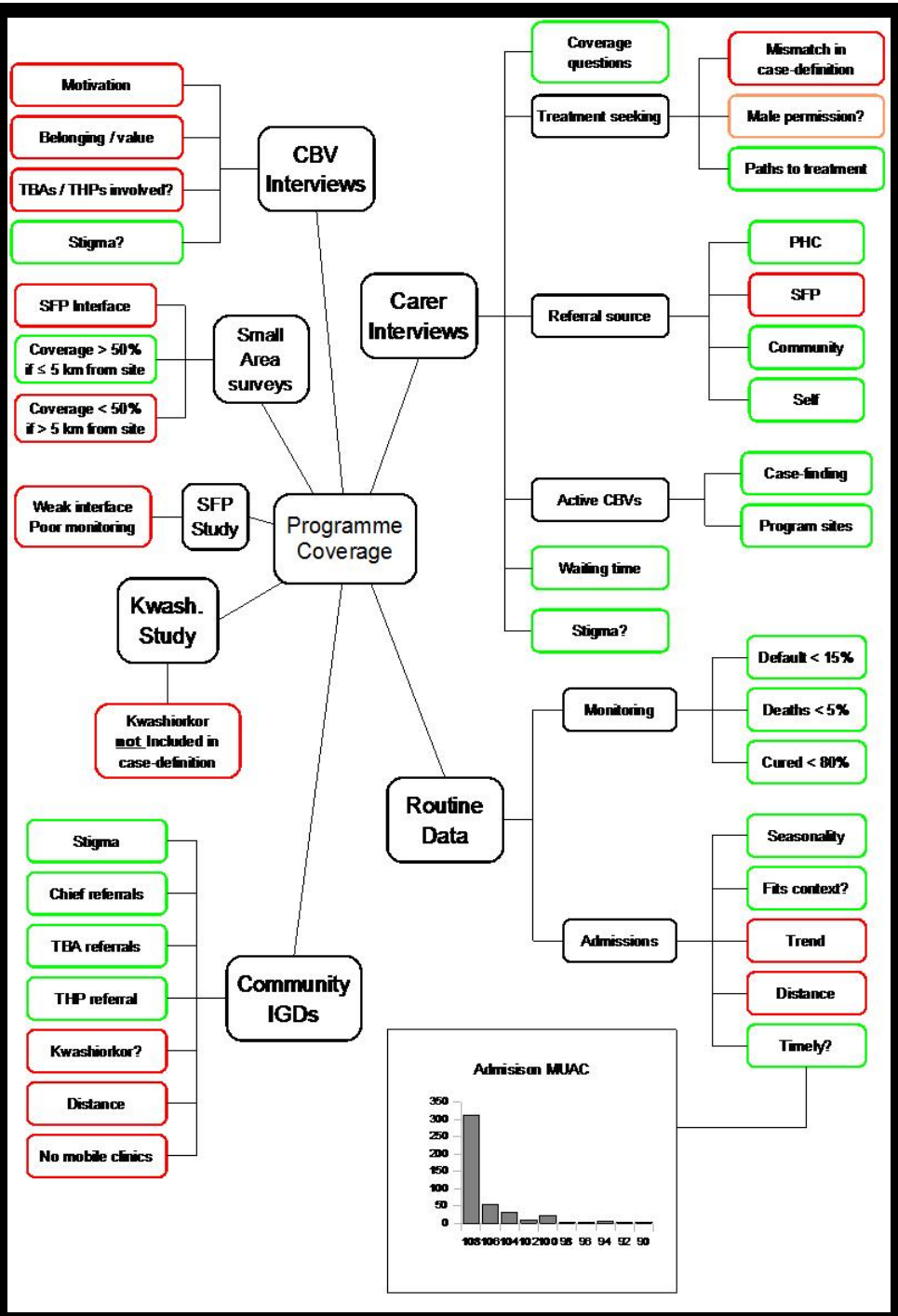
A mind map organises findings using tree structures based around a central theme.

How?:

Start with a central theme: coverage
Use a branching hierarchy:
central theme → data source/method → findings
Present each finding alone
Use images, symbols, codes and colours to differentiate findings

Mind mapping software can also be used as a database and to produce a report.

Sample Mind Map from a SQUEAC investigation



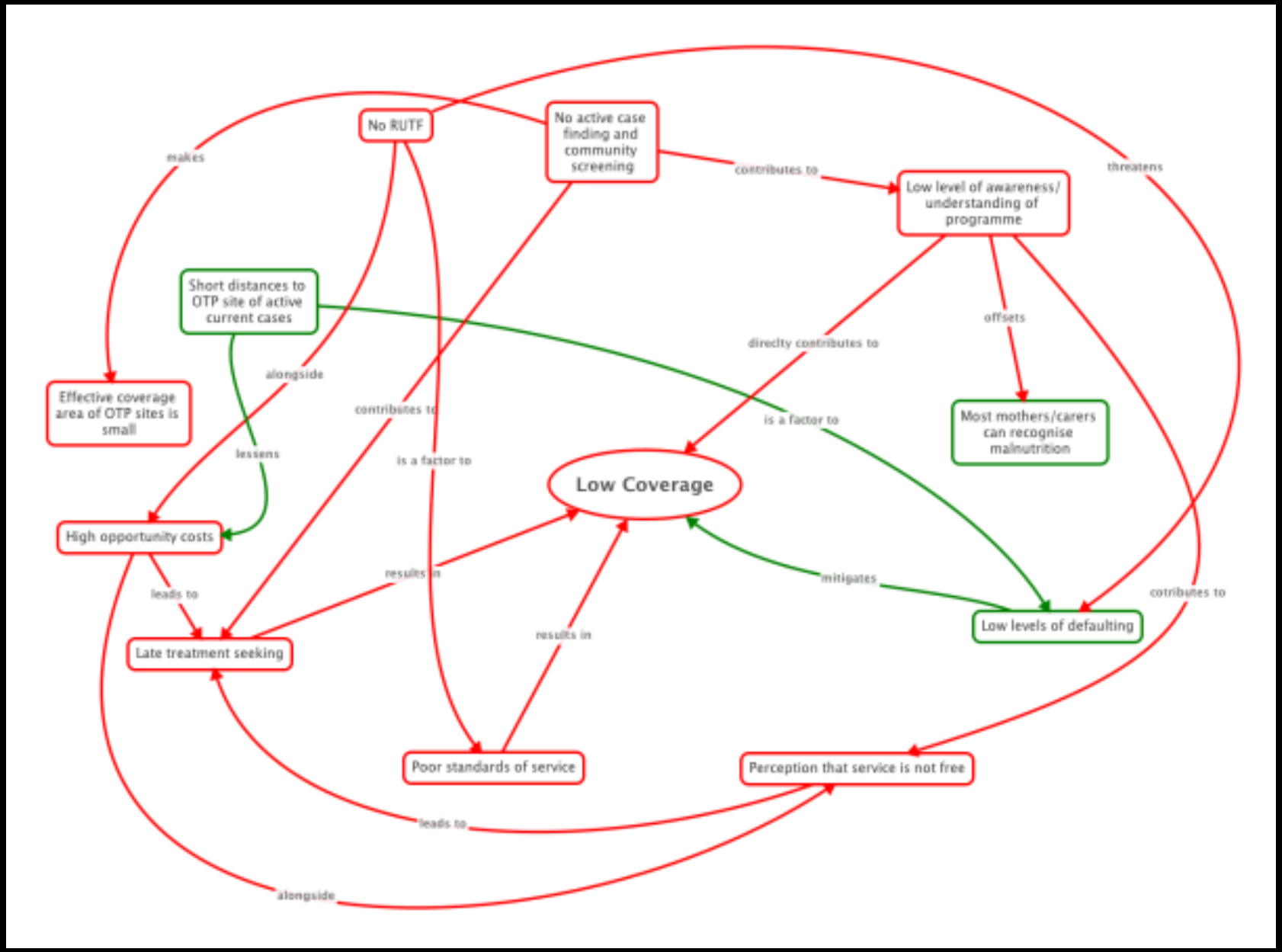
We also need to understand how the different factors are linked and how barriers influence each other.

How can we best visualise the interaction between factors which leads to high or low coverage?

Create a Concept Map

This will also help to prioritise action to be taken to improve coverage.

Concept Map: how factors interact to create low coverage



What do we need practically for Stage 1?

SQUEAC Practical Needs

Stage	Pre-Existing Information	Staff Profile	Staff Number	Additional Resources	Estimated Number of Working Days
1	Programme data (e.g. admissions and exits by month, seasonal calendar, full list of community volunteers and villages covered, programme reports, etc) Up to date list of all villages/ settlements by catchment area Accurate geographical map of size A1/A0 with scale close to 1:50,000	Local language speakers • Lead (e.g. Programme Coordinator, Programme Manager, M&E/Surveillance Officer) • Programme staff (e.g. OTP support staff, Community Mobilisation Officers, etc.) • Partners (e.g. Nutrition Focal Point from district MoH)	2-6	Vehicle (ad hoc to collect information) Drivers with local knowledge	7-10 (will be shorter for subsequent SQUEACs)

Question & Answer

(5 minutes)