HOW CAN MALARIA COMMUNITY WORKERS BE A CENTERPIECE OF A SUSTAINABLE AND INTEGRATED APPROACH?

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L'INITIATIVE
sida, tuberculose, paludisme

IMPLEMENDED BY EXPERTISE FRANCE GROUPE AFD

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SHOULD COMMUNITY WORKERS BE THE CENTERPIECE OF COMMUNITY-BASED INTEGRATED HEALTHCARE?

HOW?

WHY INTEGRATION AT COMMUNITY LEVEL?

What is the main problem to get quality health care in remote communities?

No health services in remote communities

Health services in remote communities (in Myanmar)

Small communities (~ 500 people)

No official health care system

Doctors/nurses/midwives don't go there

Referral can take hours / days and the patient is sick

Often no phone / internet

Inequality in access to health care is worst in remote communities….!

What do people do - in most remote communities - when they are ill?

<u>Informal Health Care providers *(Quacks)*</u>

Address most complaints, provide treatment

No formal training / guidelines

High antibiotic use, injections

Quacks; poor quality, … but probably save many lives !

Because there is nothing else

What do people do in most remote communities *when they are ill?*

Quack & Malaria

Patients present with fever

Malaria has no specific symptoms

Usually no RDT, diagnosis difficult

Fever → try an AB or a "cocktail"?

…….. Transmission continues

What do we need?

Early diagnosis and treatment <u>in</u> the community

Introduction of <u>community-based health workers</u>

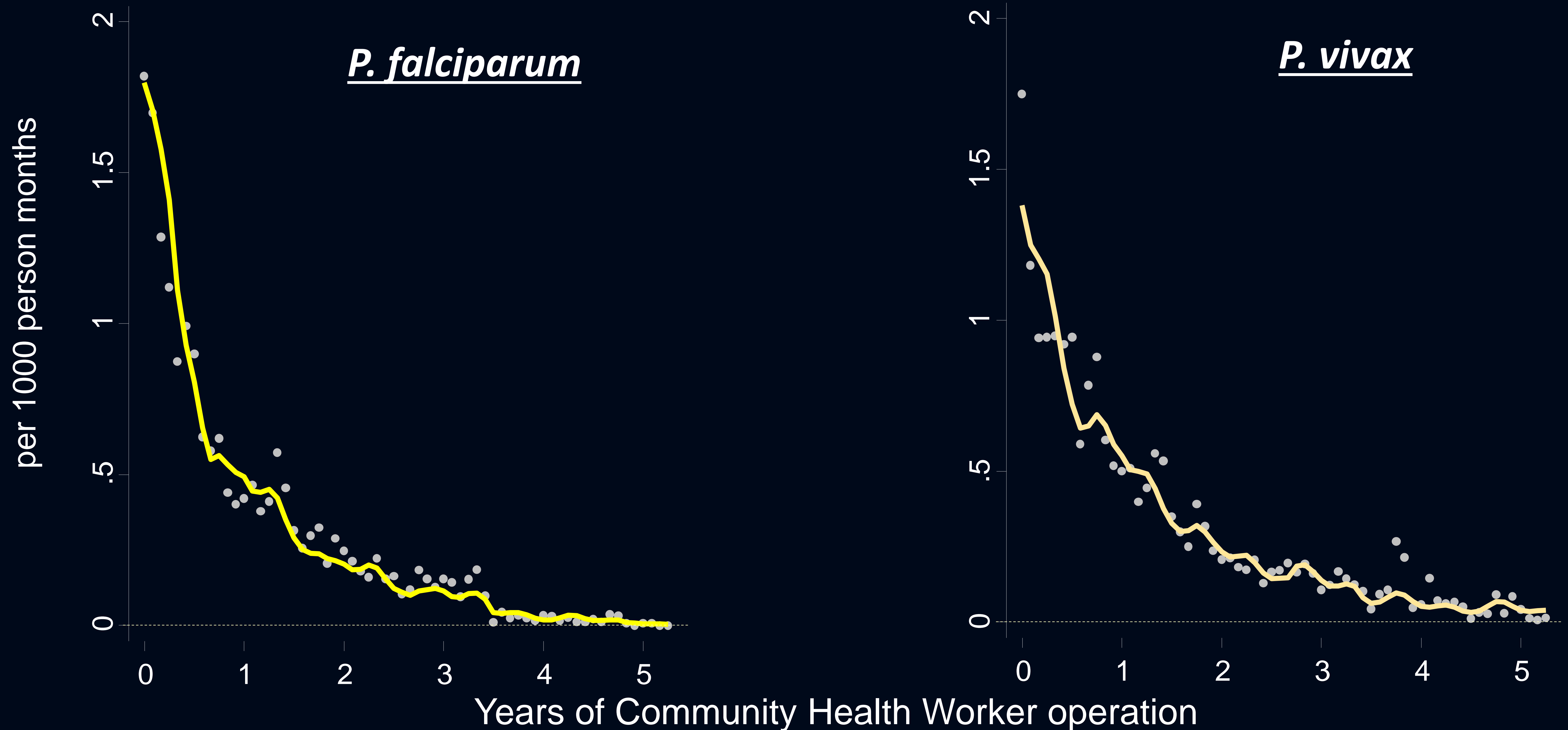
- Train
- Equip
- Monitor and support (mobile medical team)
- Provide an incentive

Early diagnosis and treatment → stop transmission

What was the result?

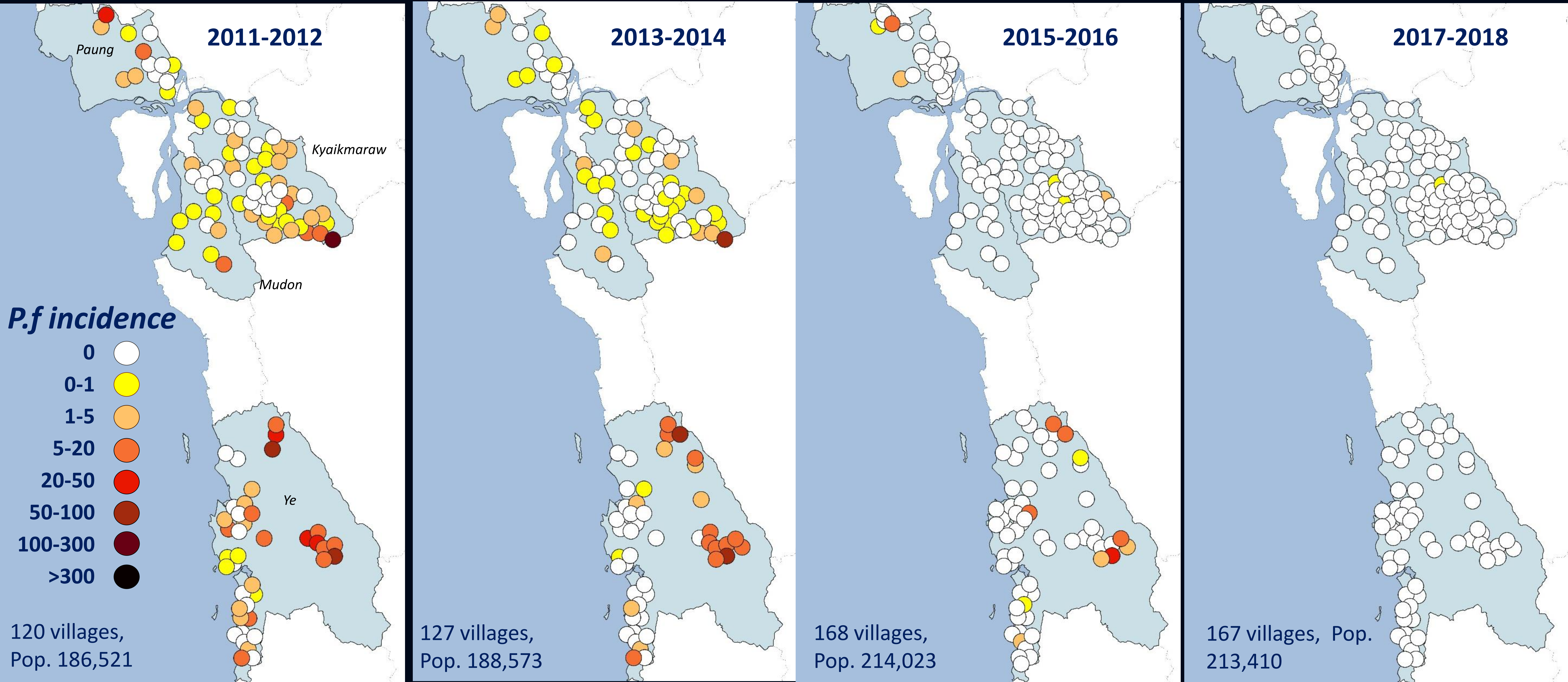
Malaria incidence reduced; *P.f.* 70% and *P.v.* 64% per year

1,335 CHWs; 571,286 RDTs (2012-2016)



P.f RDT incidence rate after introduction of CHW

167 villages in Mon state, based on >250,000 RDTs



52,591 RDT, 1,282 *Pf*+ (2.4%) | 64,371 RDT, 420 *Pf*+ (0.7%) | 88,278 RDT, 86 *Pf*+ (0.1%) | 54,961 RDT, 1 *Pf*+ (<0.01%)

Can malaria-CHW uptake be sustained when malaria is low? RDT (+) rate <0.1%

Feedback from the community

My child had fever, I visited the CHW who did a test

“Malaria (-)” and she sent us home ….!

We went to the quack

The patient’s problem is not addressed…..

Patients return to quack? Transmission might return!

What do people need?

What do people need?

The people need care for <u>Patients</u> instead of care for <u>Malaria</u>

There is no official health care in remote communities

They need an integrated health care package

Which diseases?

Malaria + Diseases that are <u>*common*</u> / <u>*relevant*</u> for the villagers

This will help to Eliminate malaria !

Test everybody with fever for malaria

+

Address the problems of the patients with an integrated health care package (diagnosis and treatment for both children and adults)

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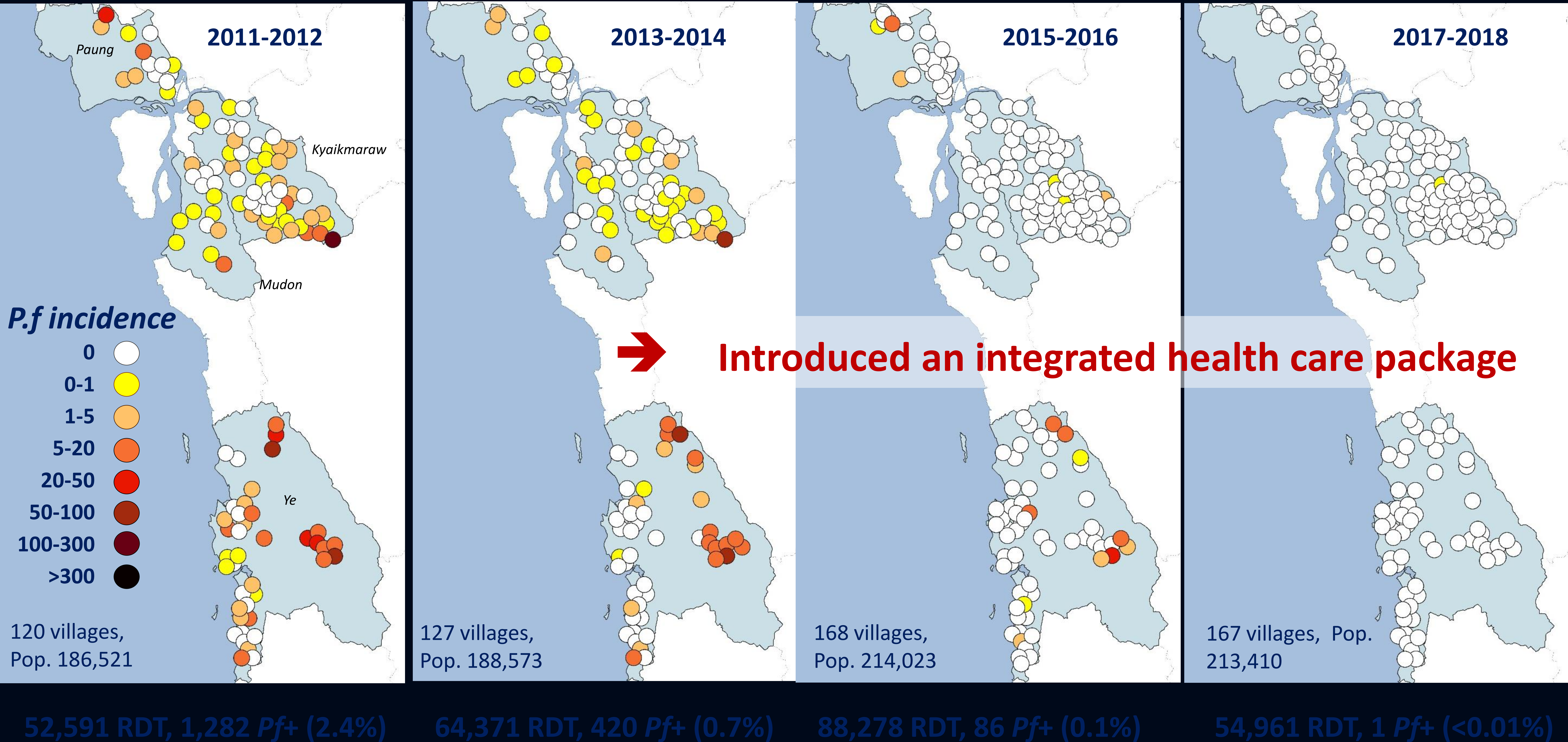

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Which diseases should be addressed?

…and which diseases don't need to / cannot be addressed?

Common and most relevant diseases

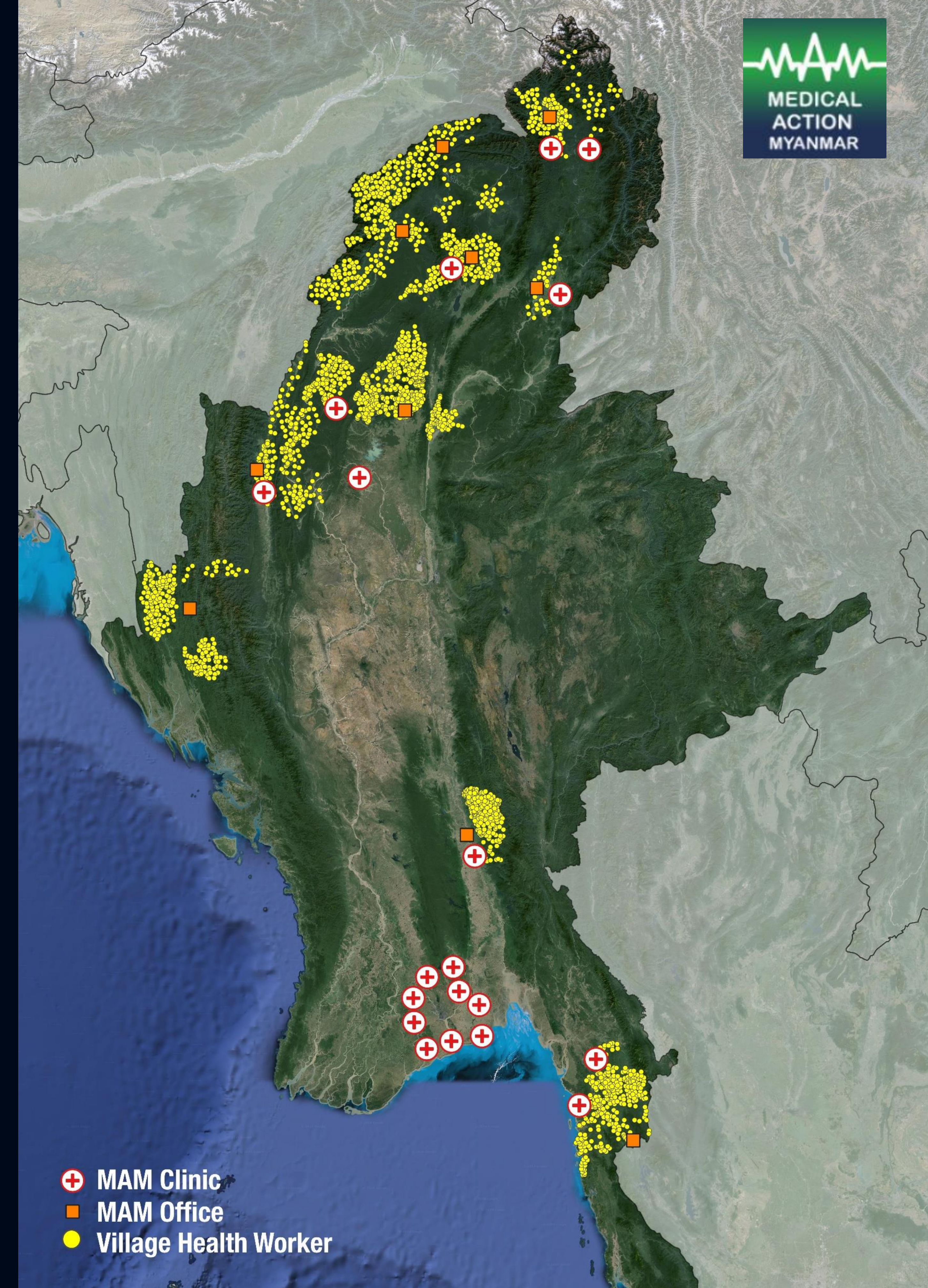
Address the needs of the people…

Depends on several factors; epidemiology, diagnostics, treatment, finance, politics,

Which diseases?

1. Malaria
2. Fever & Acute common infections
   – Respiratory Tract Inf and Diarrhoea
3. TB
4. HIV, HCV
5. Reproductive Health (Post-partum haemorrhage)
6. Malnutrition
   – Rickets
7. Hospital referrals
8. NCD
9. …….

…. Malaria was easy to diagnose and treat



Integration of malaria and additional healthcare services

What do we need?

1. Tools for the CHW to make a diagnosis
2. Clear and simple protocols
3. Regular teaching and quality monitoring
   - Classroom
   - On-the-job
4. Support to refer severe patients to hospitals

Training and monitoring of CHW by mobile medical team

labour intensive !

Including a mobile clinic in the evening

MD and CHW seeing patients together

MD will initiate chronic diseases to be followed up by CHW

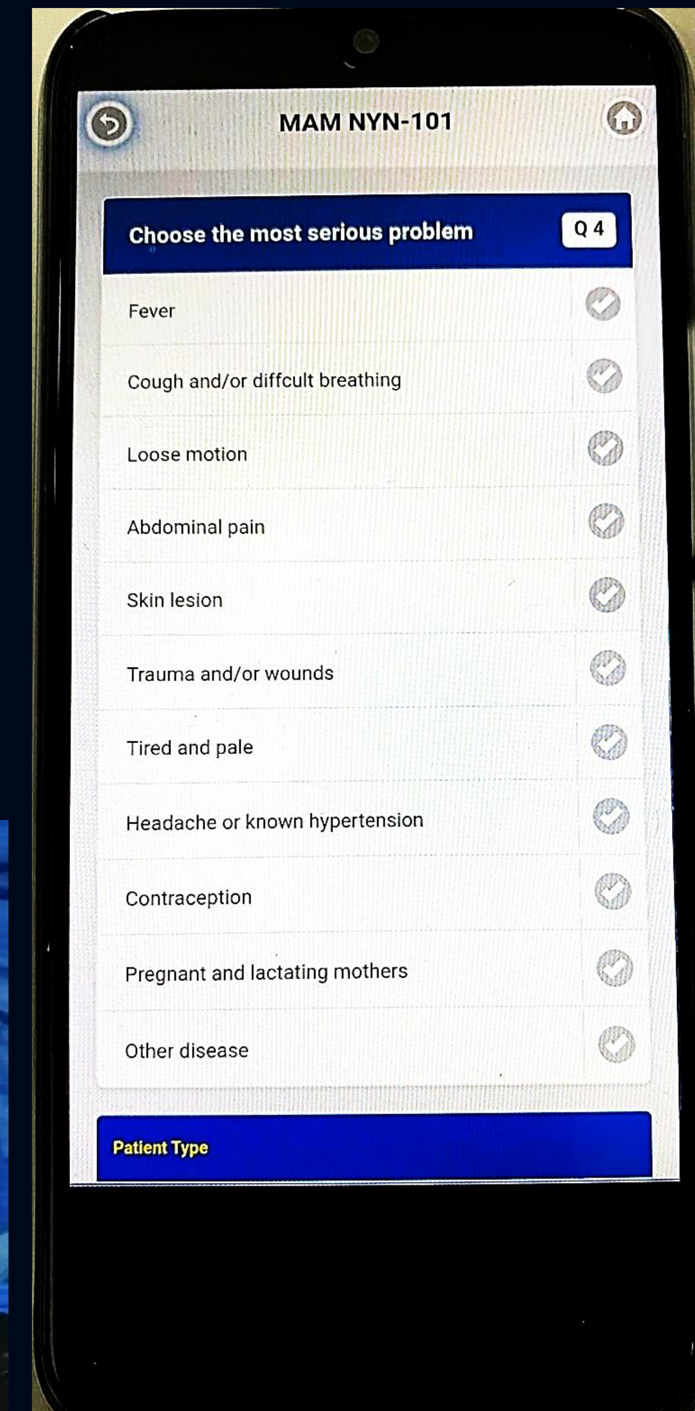
- Train to identify diseases
- Train to identify severe patients for referral
- Follow up chronic patients; TB, HIV, NCD, Maln, …

MAM mobile medical team

Community-Based Health App

An offline application to help making a diagnosis and treatment

- Step by step choosing signs and symptoms
- Videos and pictures included as visual aids
  1. Improve diagnosis and treatment of common diseases
  2. Timely emergency referral
  3. Data collection for analysis



1 question per page

Choose the age category

Medical Action Myanmar

Regular Visit Age Group Q 2

0 - under 1 month

1 - under 12 months

1 - 4 years

5 - 9 years

10 - 14 years

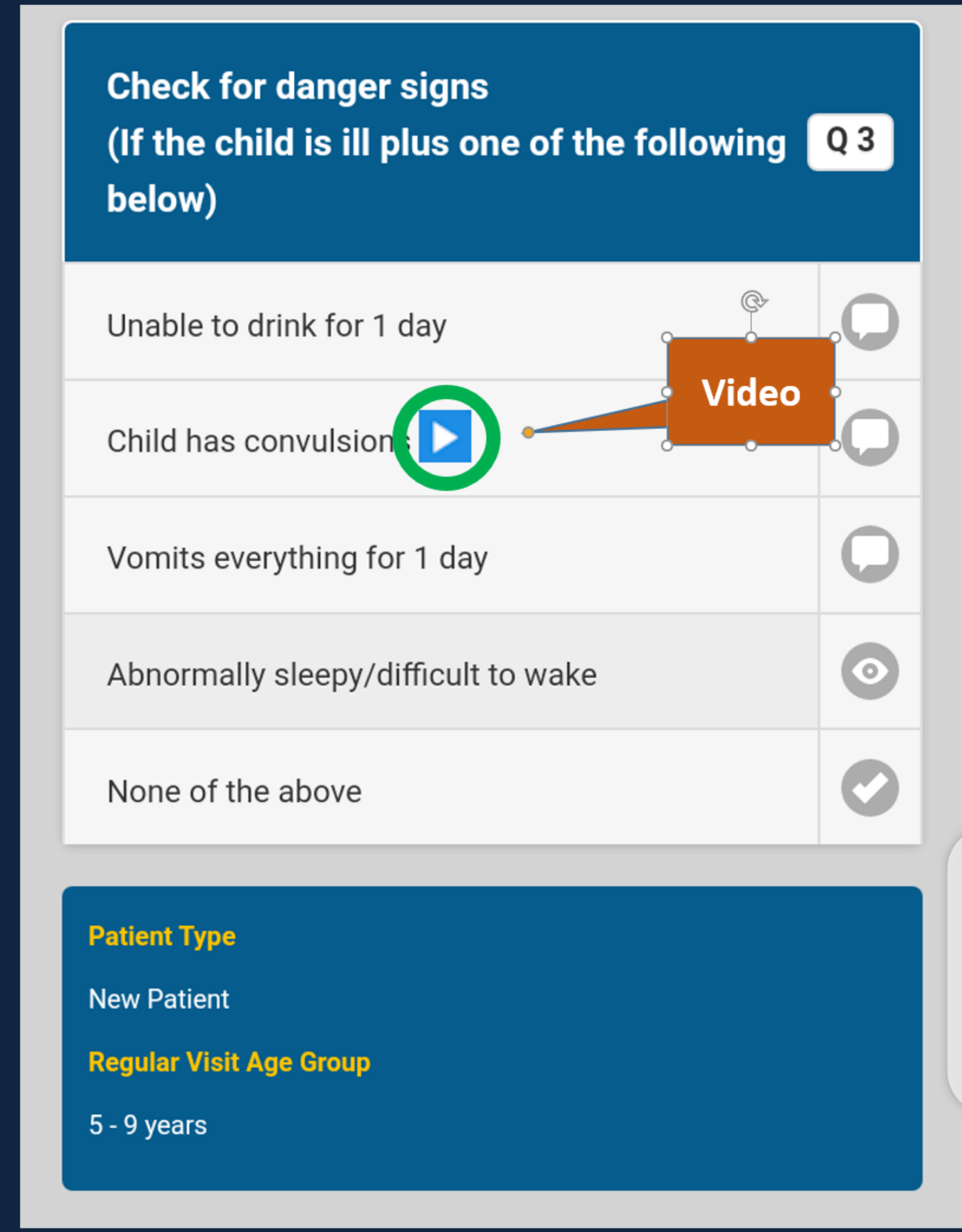
15 years and above

Patient Type

New Patient

Check the danger signs

If present, follow the instruction



Step by step questions will lead to a diagnosis

Does the patient have fever? Q 6

Yes - Fever

No fever

How long has the fever been present? Q 6

≥ 1 month

< 1 month

How long has the cough been present? Q 8

≥ 2 weeks

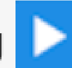
< 2 weeks

Does the child have fast breathing? Q 9

Breathing rates > 30/min

Normal breathing

Does the child have chest indrawing? Q 10

Chest indrawing  Watch video

No chest indrawing

… and finally you will come to a diagnosis and suggestions for management

The child has pneumonia

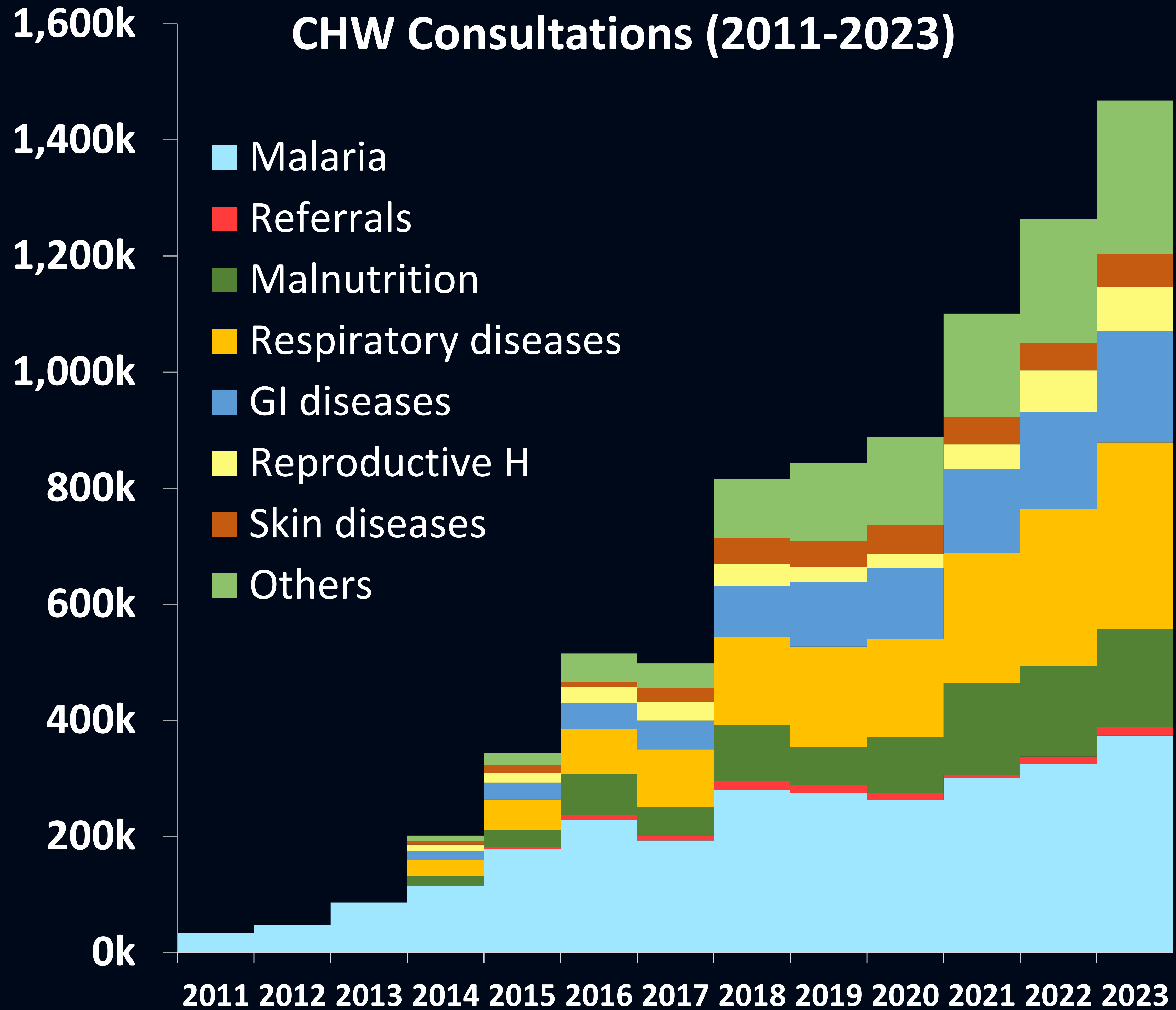
Stimulate fluid intake
Give paracetamol as follows:

Body weight (kg)	Paracetamol	Times/day
15 – 34	1	3 times
≥ 35	2	3 times

Contact MAM medical doctor to get antibiotic (amoxicillin) or advise patient to visit nearest MOHS or private health staff to get amoxicillin.

Body weight (kg)	Paracetamol	Times/day
15 – 34	1	3 times
≥ 35	2	3 times

Monitor respiratory rate



CHW Consultations (2011-2023)
1,600k
1,400k
1,200k
1,000k
800k
600k
400k
200k
0k
Malaria
Referrals
Malnutrition
Respiratory diseases
GI diseases
Reproductive H
Skin diseases
Others
2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023

Malnutrition test with a MUAC

Treat in the community or refer if severe / no improvement

15 years old boy, completely immobile at the time of diagnosis

After 6 months

and after 2 years treatment

Nutritional rickets

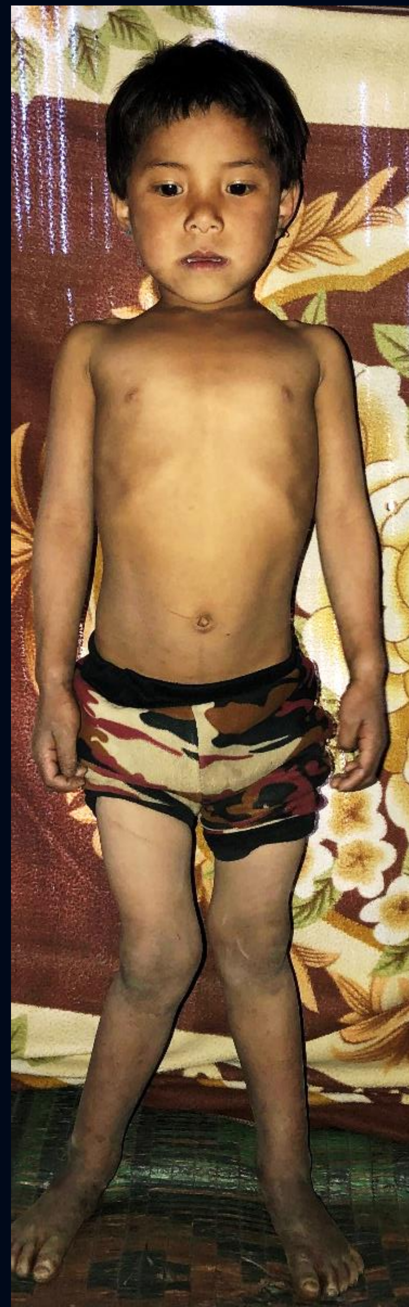
MD makes the diagnosis and starts treatment in the community

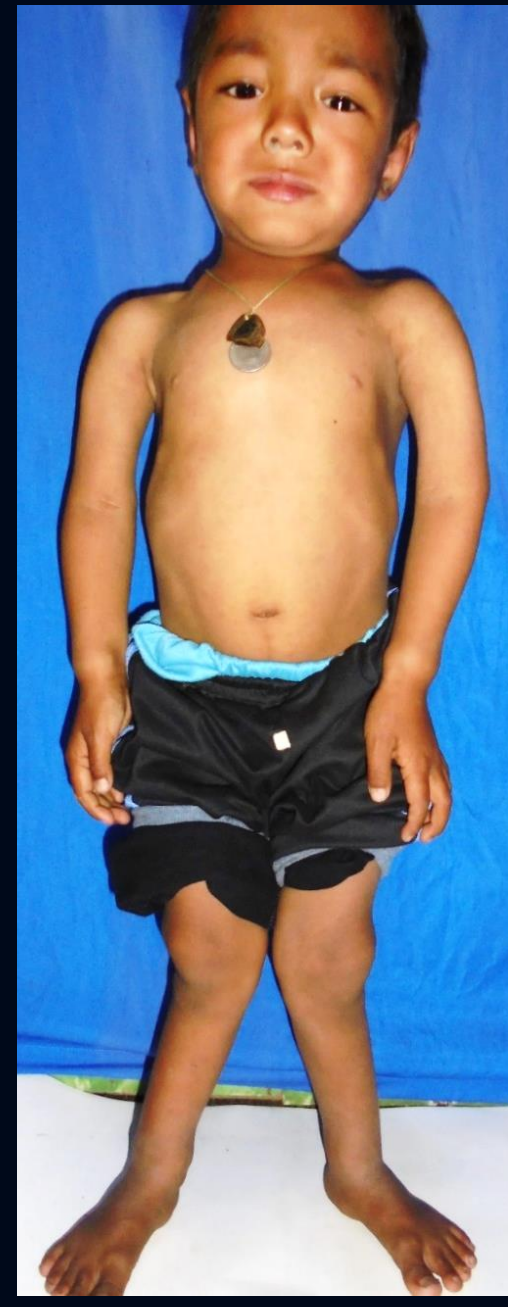
Follow up by CHW

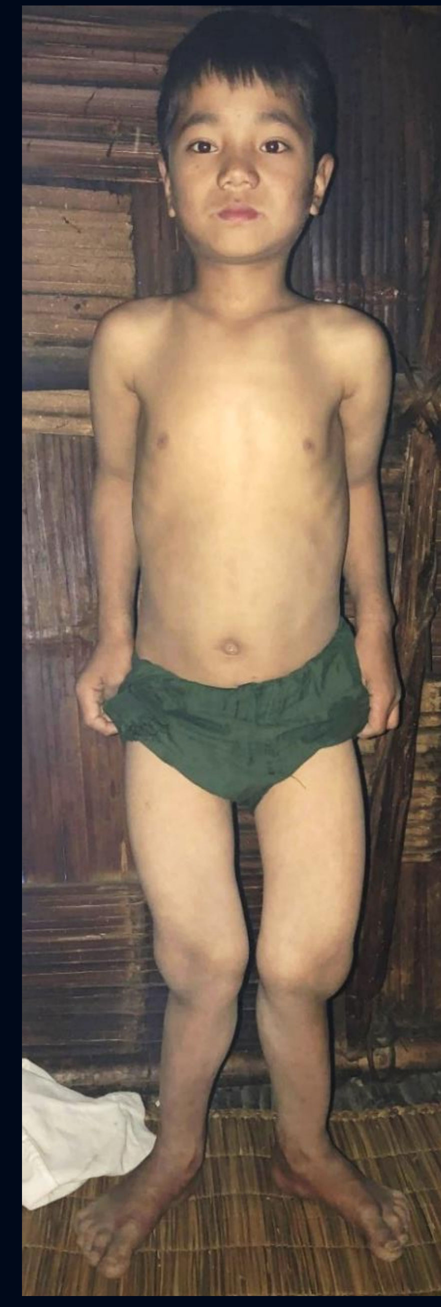
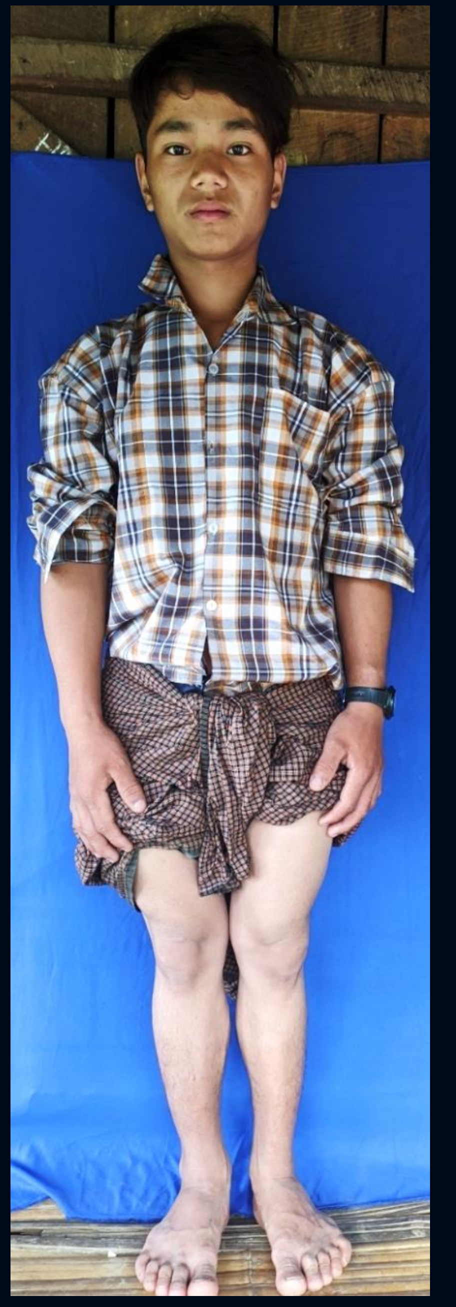
Rickets

Rickets is hidden in the most remote communities. Children often not mobile, at home.

490 children identified and on treatment (+/- 2 years) by CHWs in Naga region

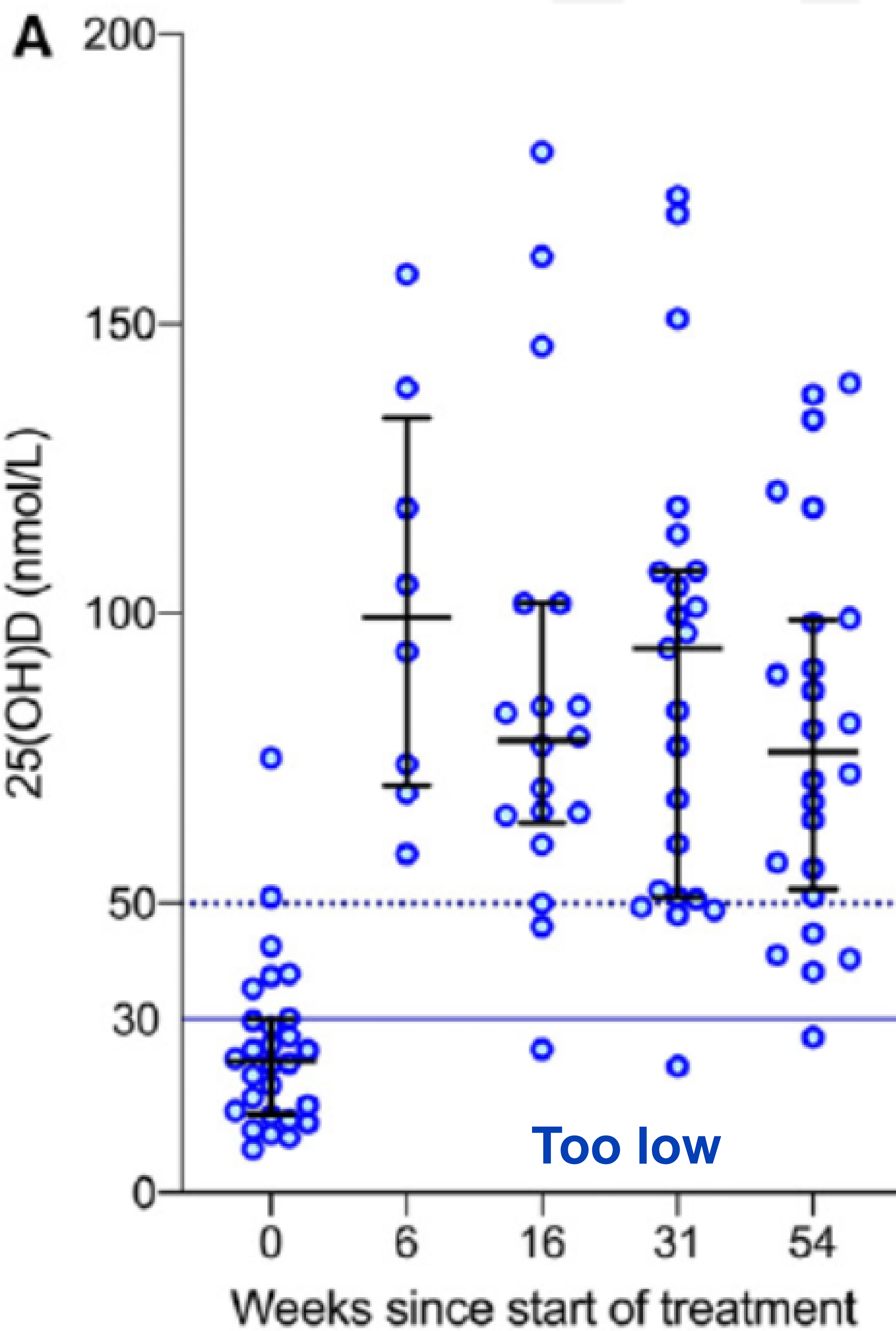


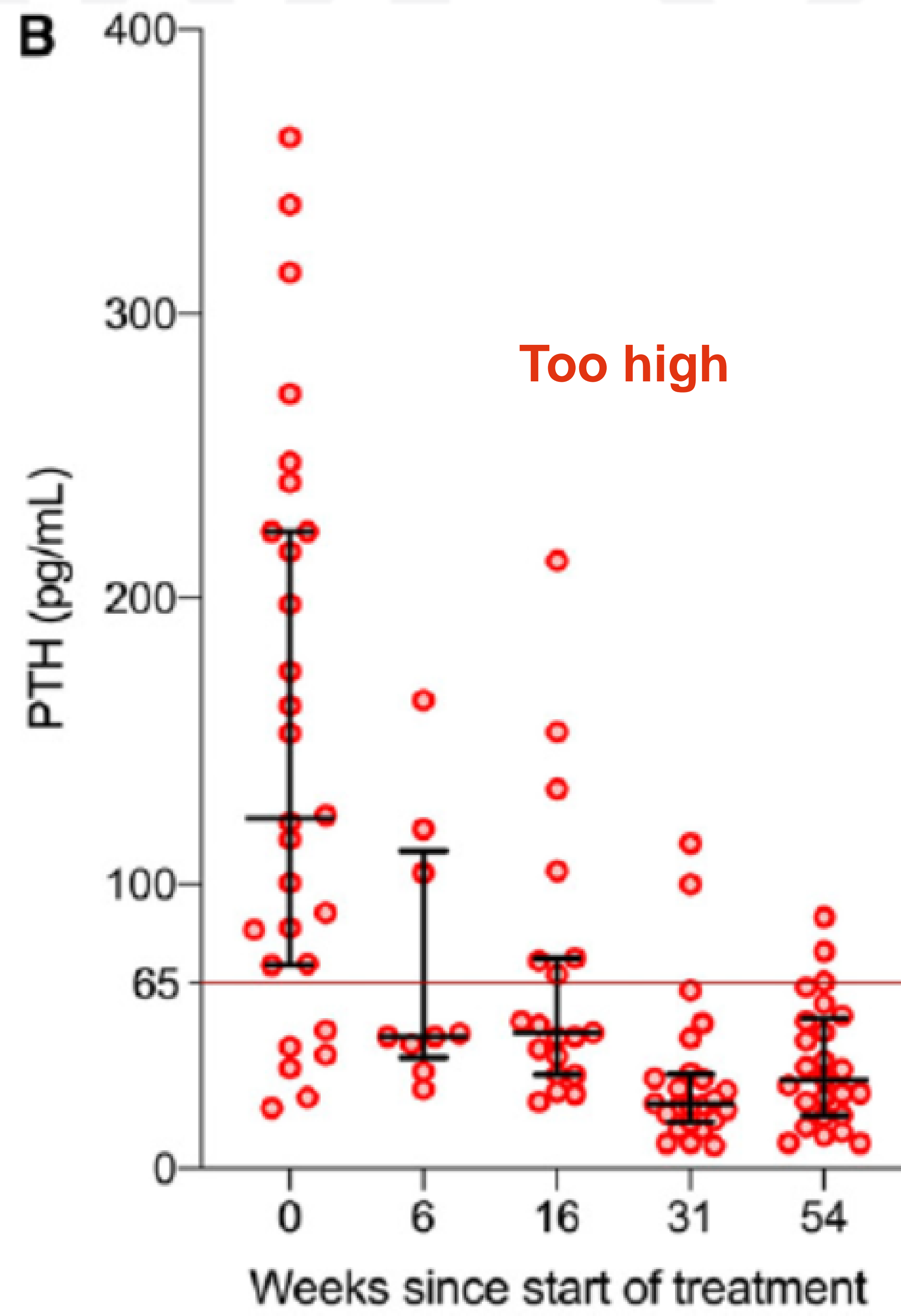


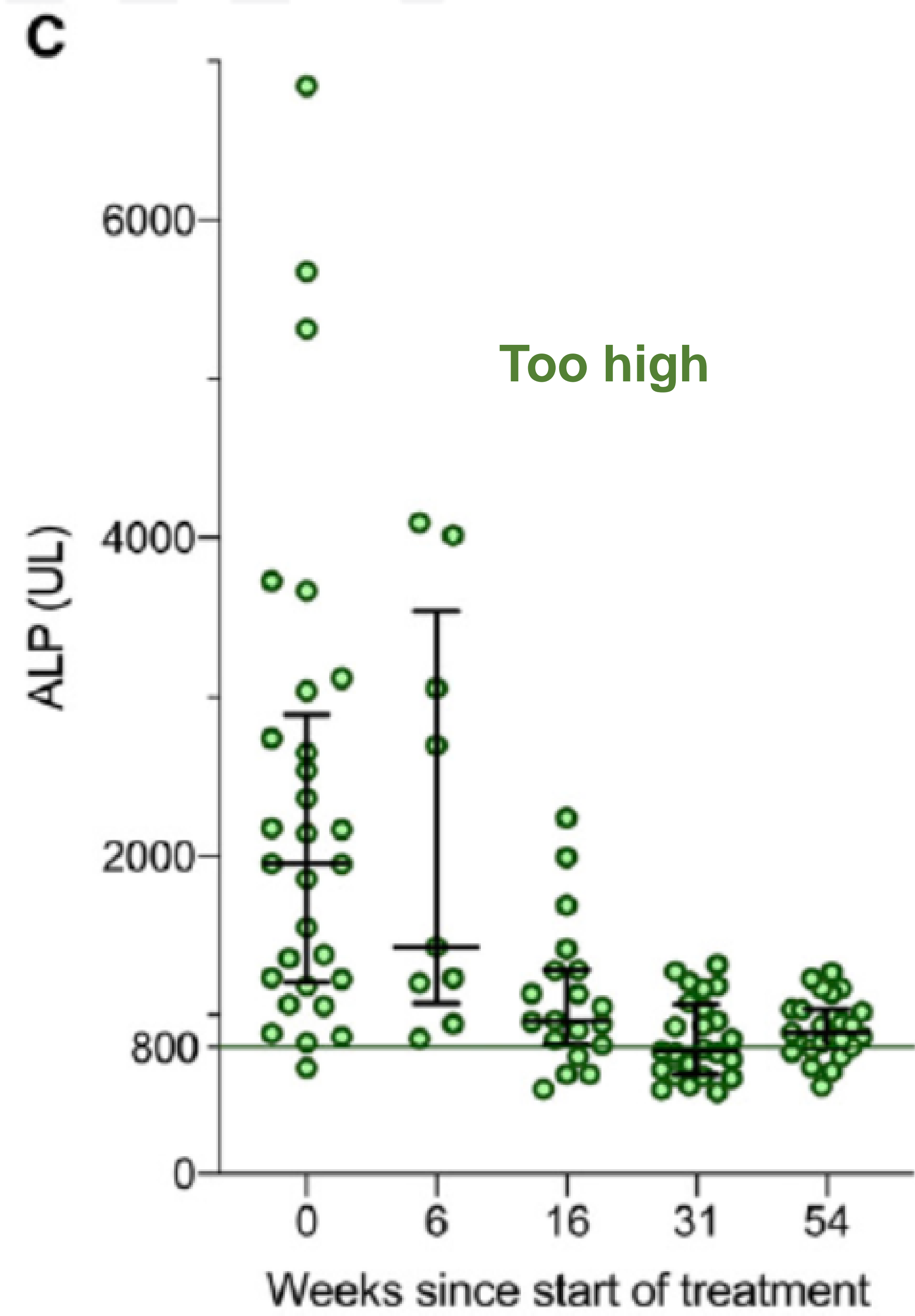



Children tested for Vit D, PTH and ALP

Before and after treatment with Vit D and calcium







A 41 year old man who was never treated for rickets.

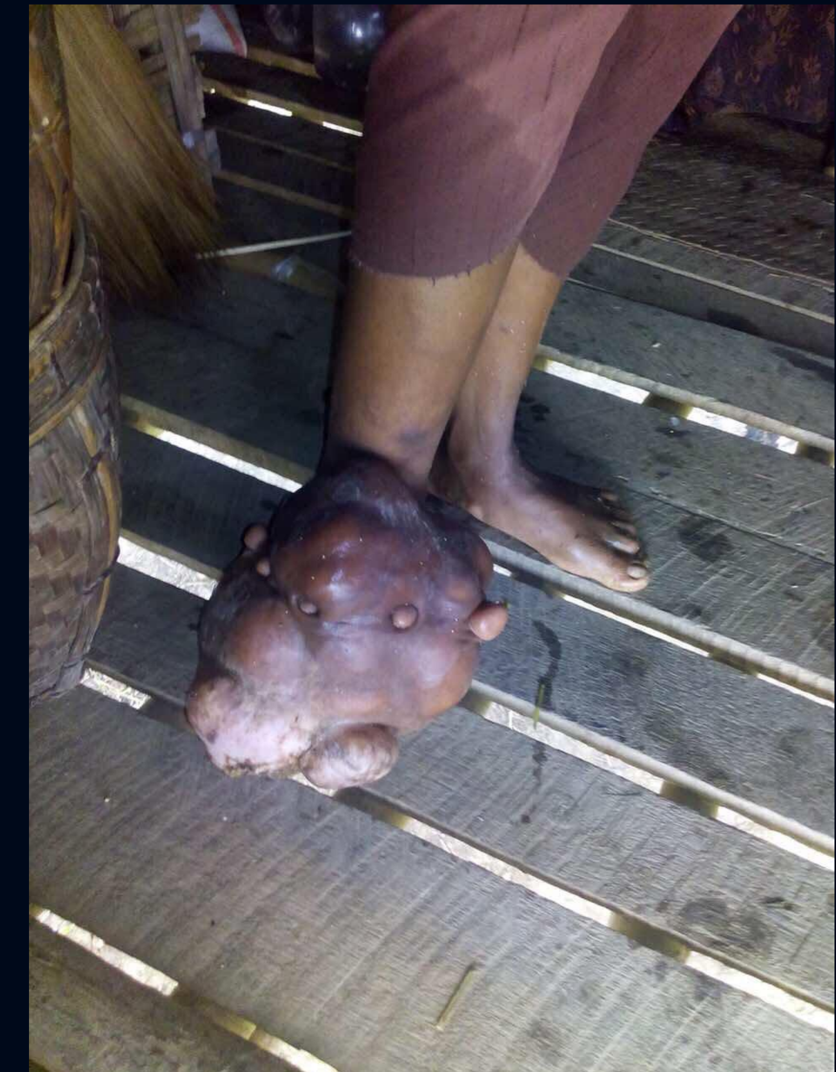
He can barely walk and uses an animal bone to prevent his tibia bone from breaking.

Team Leader giving on the job training of blood glucose testing at village in Hpakant Township

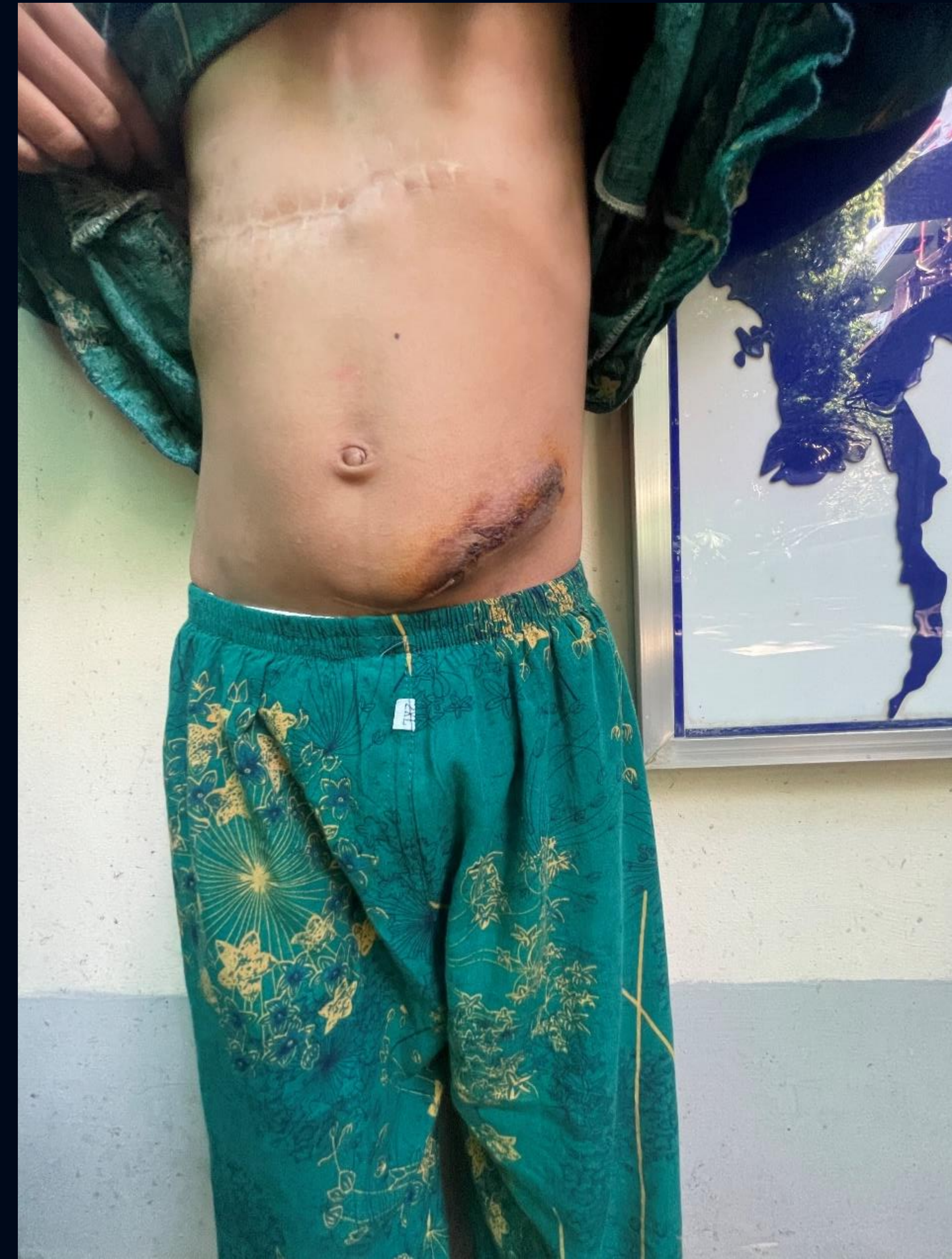
MEDICAL ACTION MYANMAR

Referral Support to nearest hospital (that can deal with the problem!)

1. Support transportation and investigation costs
2. For severe, treatable conditions
3. Life or disability saving or to decrease suffering
4. Transport cost can be high
5. Important support for CHW



Girl from Kale referred for abdominal surgery



Emergency referrals

6000
5000
4000
3000
2000
1000
0

- Others
- Pediatrics
- Surgical
- Obst&Gyn
- Medical

2014 2015 2016 2017 2018 2019 2020 2021 2022 2023

Tuberculosis

50,000 TB deaths in 2022 in Myanmar (WHO)

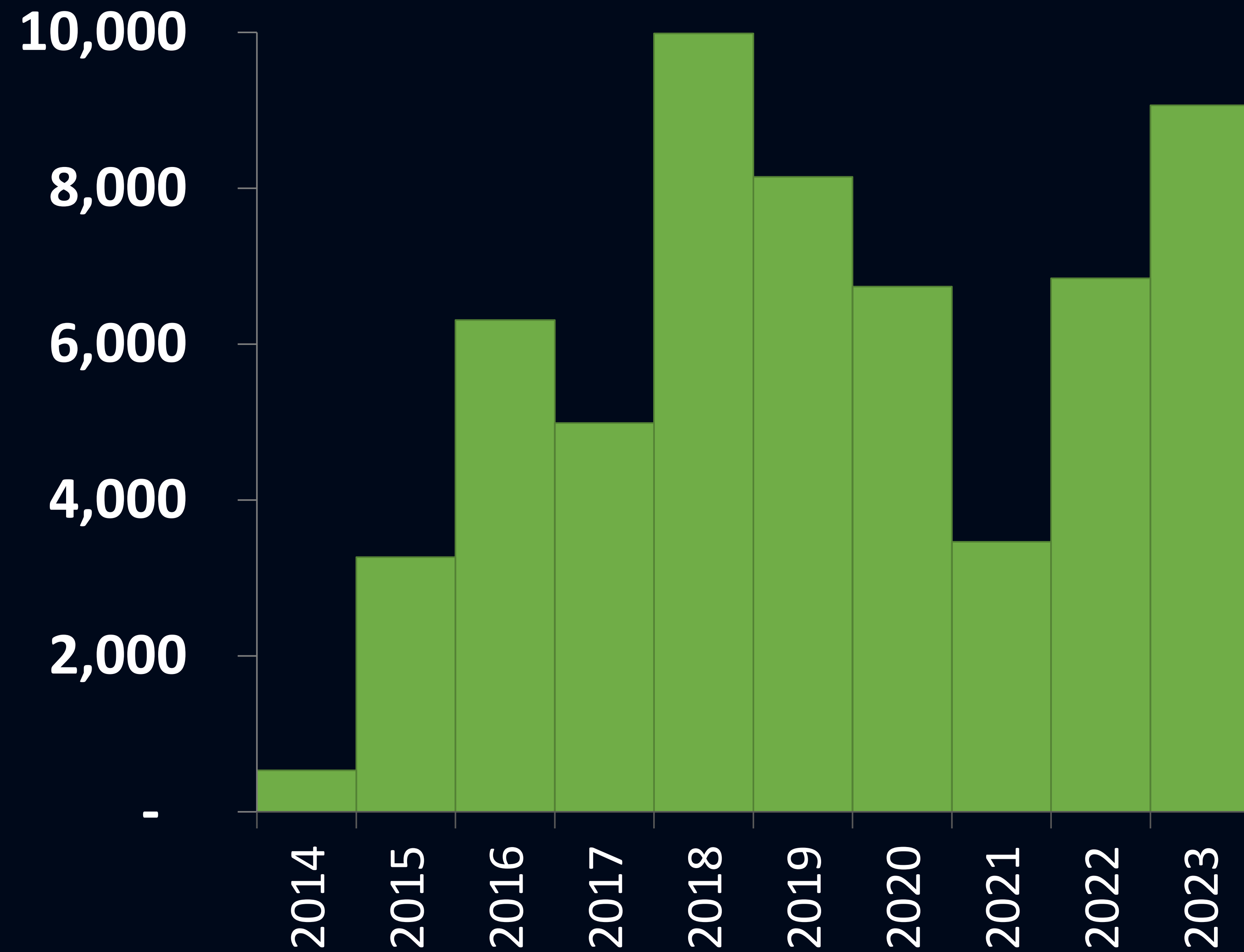
Tuberculosis

Similar rationale;
No health care.
Cough and fever. Quack has poor diagnostics.
Diagnosis delayed, transmission continues

Train CHW to recognize signs & symptoms of TB and refer presumptive TB patients to the hospital

Refer ALL presumptive TB patients to the hospital?

But the diagnostic criteria are very weak and non-specific



MANY patients refused to go

Many missed patients!

Improve the diagnosis in the community?

TB mobile teams

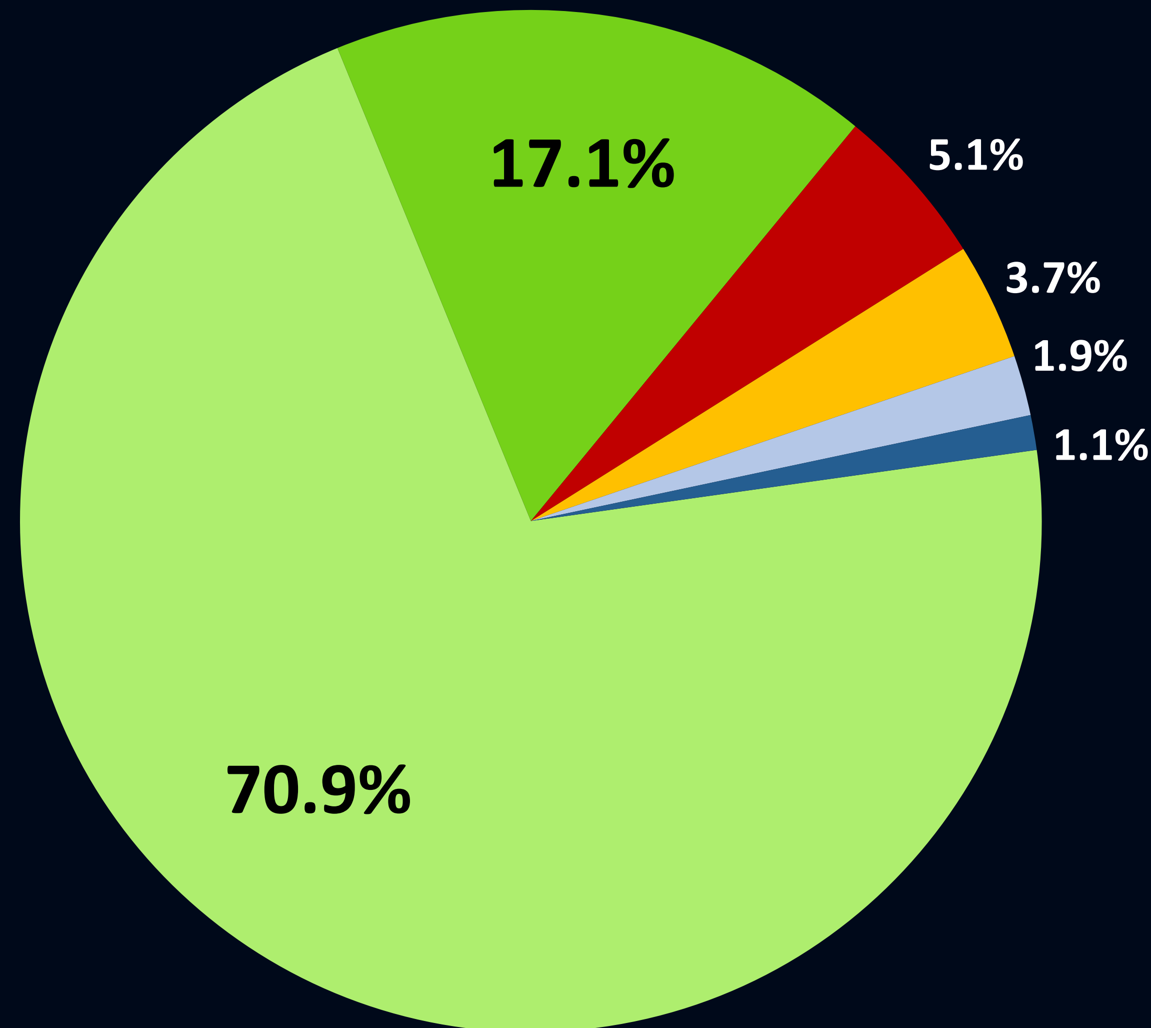
Mobile CXR (+AI) by TB mobile teams

Screening in the village can make referrals more selective. Higher specificity and less missed cases (who refused referral) ... Waiting for approval from DoH.

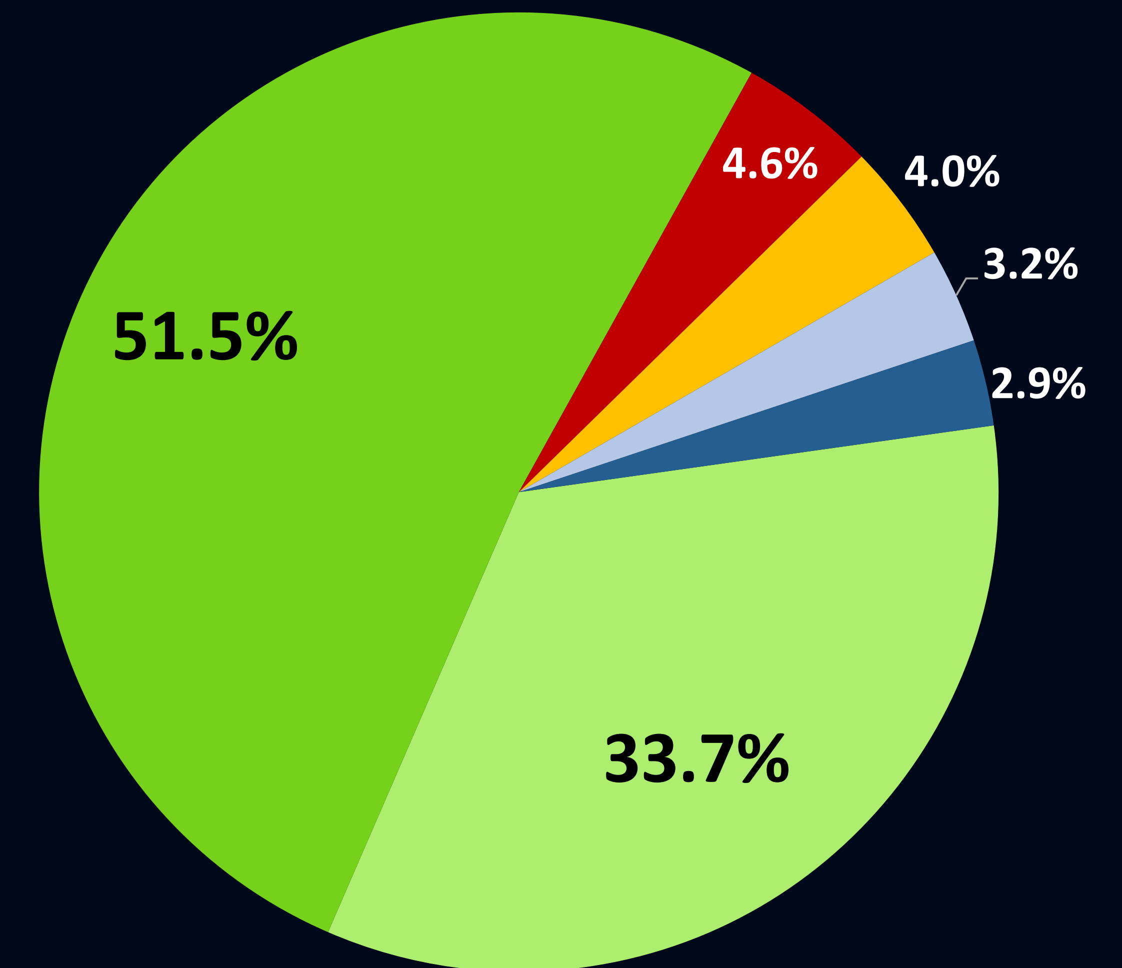
Household screening by CHWs (compliance and contact tracing)

TB treatment success rate; CHWs (88%) to Clinics (85%)

(2019-2022)

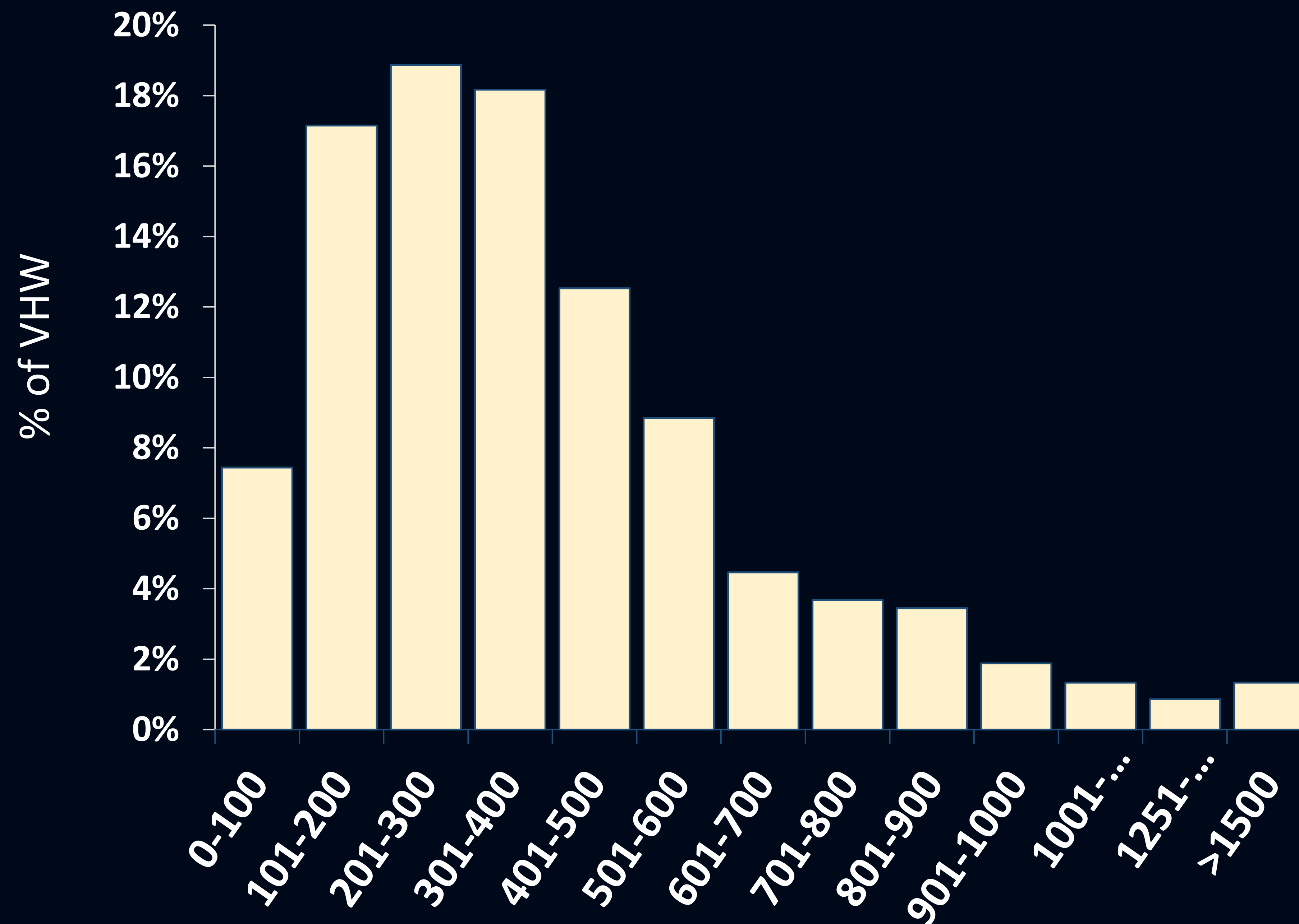


Completed
Cured
Died
Loss to FU
Transferred Out
Failure



PRACTICAL CONSIDERATIONS INTEGRATION

Workload of integrated health care package (2018)



Consultations	per year	per day
10th %	114	0.3
25th %	203	0.6
50th %	**331**	**0.9**
75th %	508	1.4
90th %	755	2.1
Average	**402**	**1.1**

Most CHWs work ≤ ½ hour per day

Additional costs to provide integrated health care?

Are marginal!

The system of CHWs, supply and monitoring already set up

Additional costs are minimal.

Incentives only for part-time

And the benefits are enormous

Worries; Poor education-level CHWs. Antibiotic over-use ?

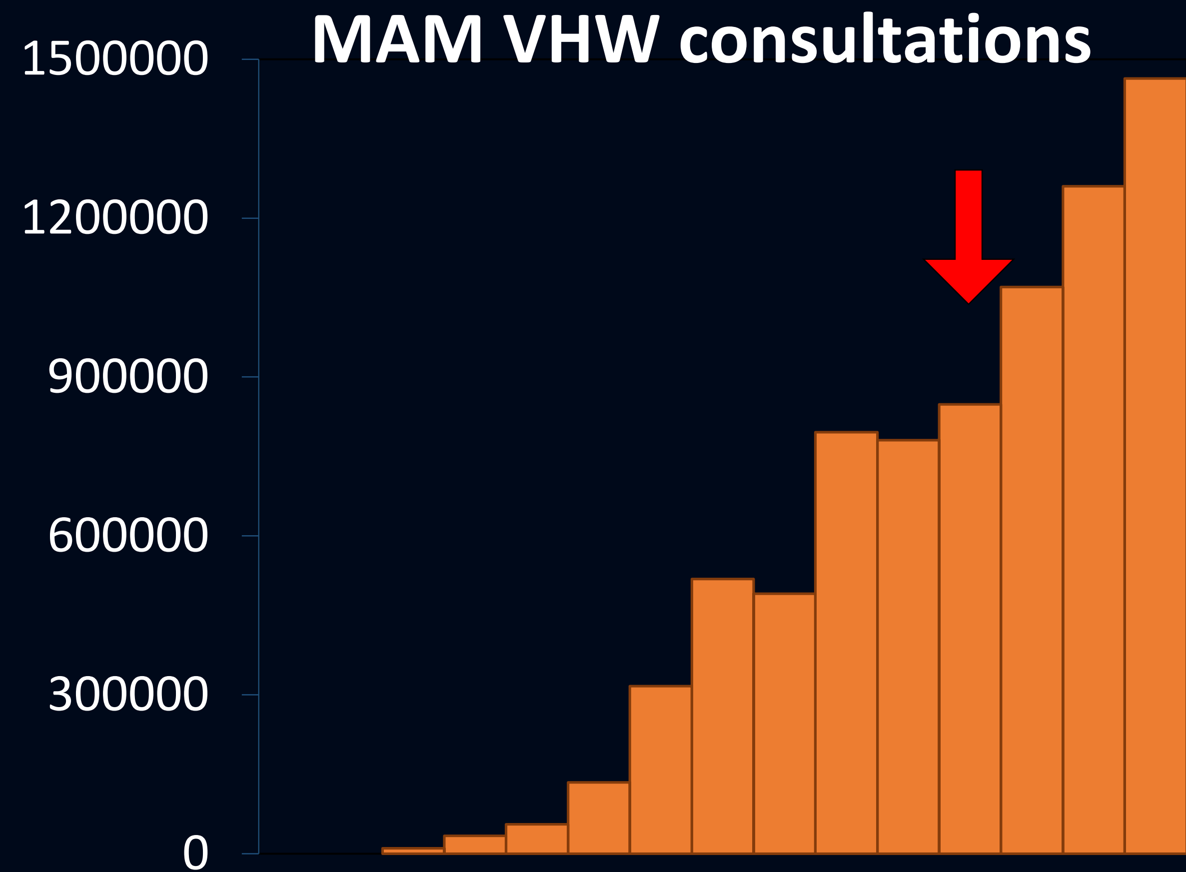
Compared to the current situation.

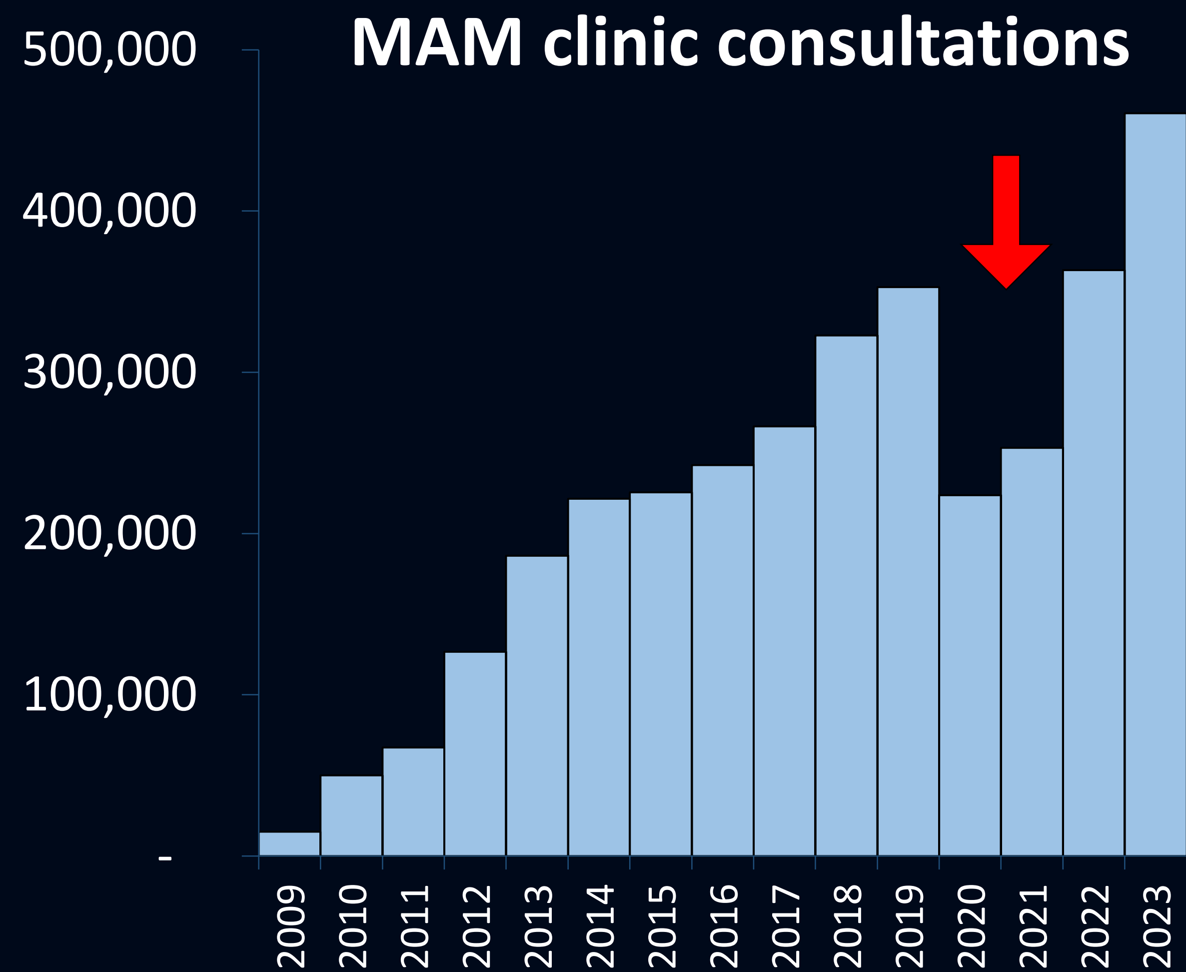
The alternative is a Quack / Pharmacy with many ABs

1. **CHW are trained / Quacks not**
2. **CHW have AB guideline / Quacks don't**
3. **CHWs are monitored / Quacks are not**

And private practitioners prescribe much more ABs

Integrated health care in the community by CHW will <u>not</u> lead to more AB over-use





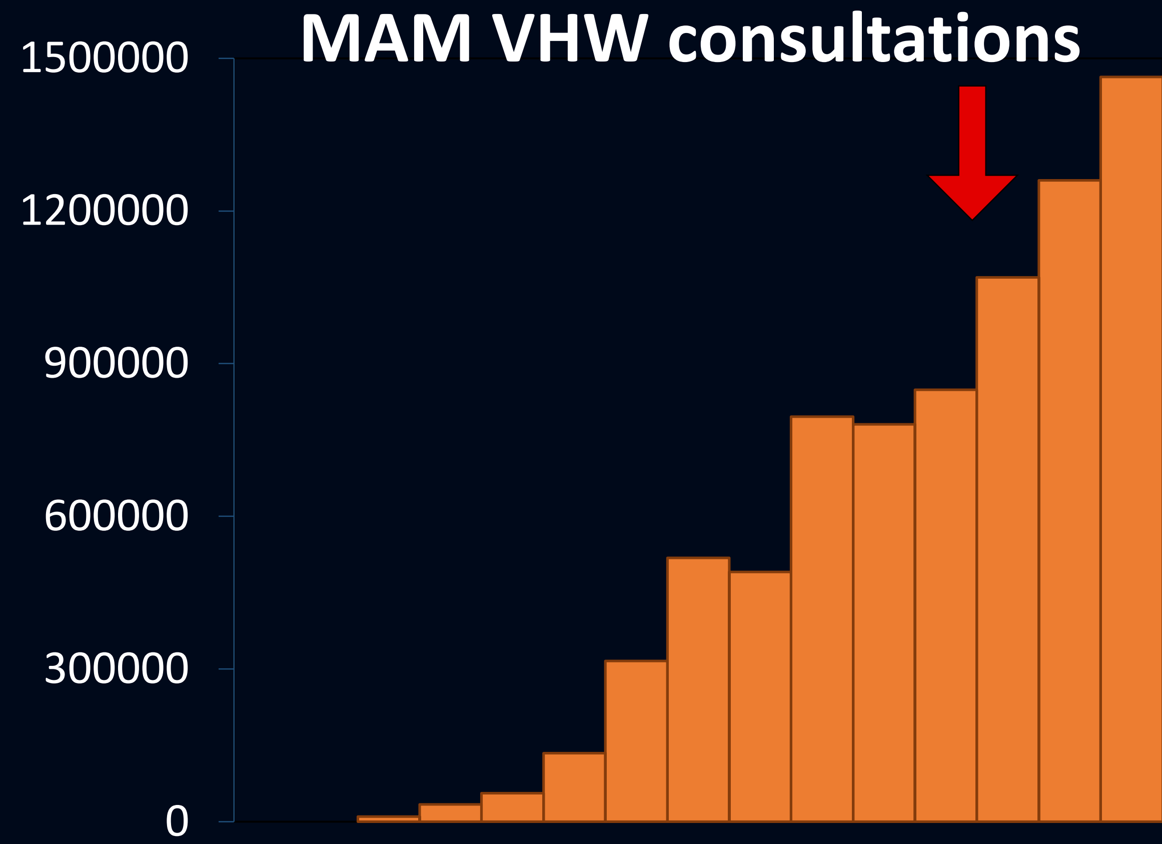
VHWs activities

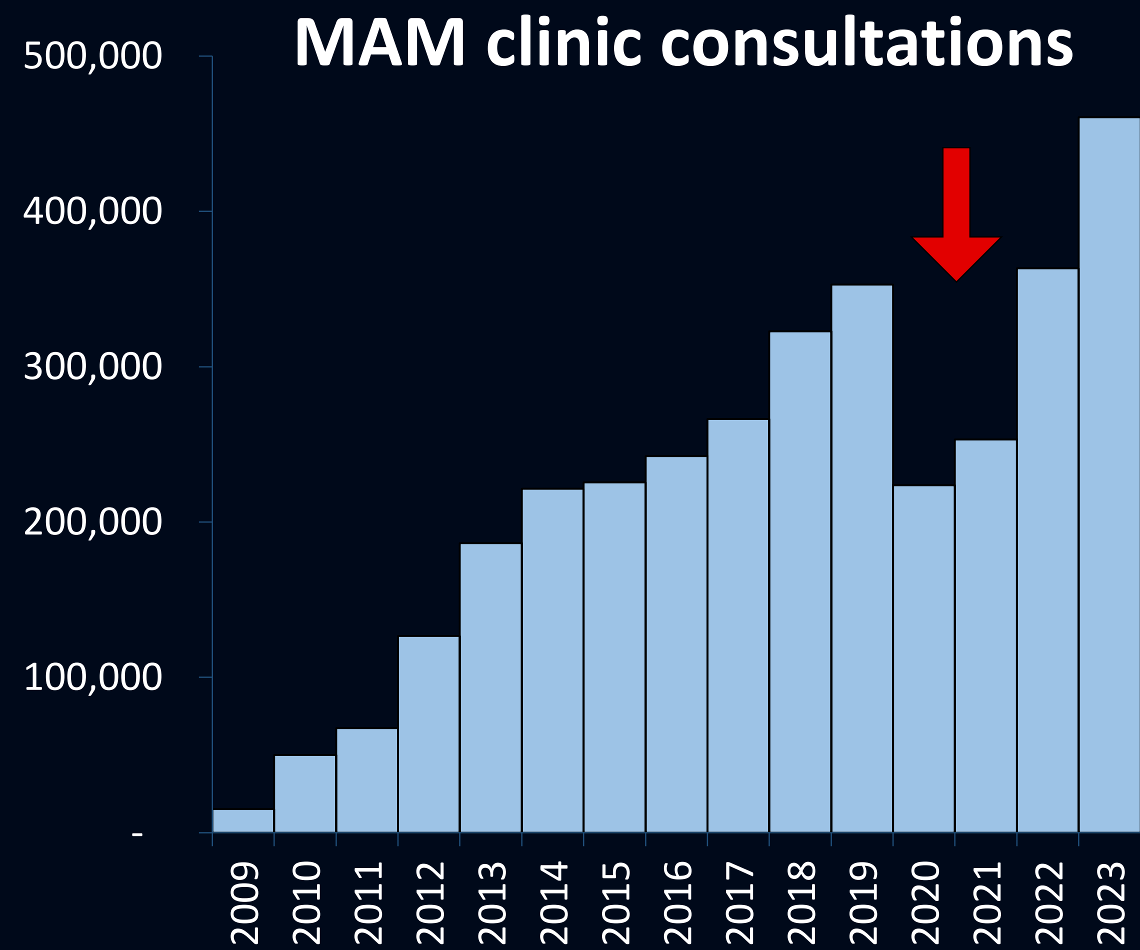
- **COVID and Conflict ‘resistant’**
- **Patients can visit in the safety of their village**

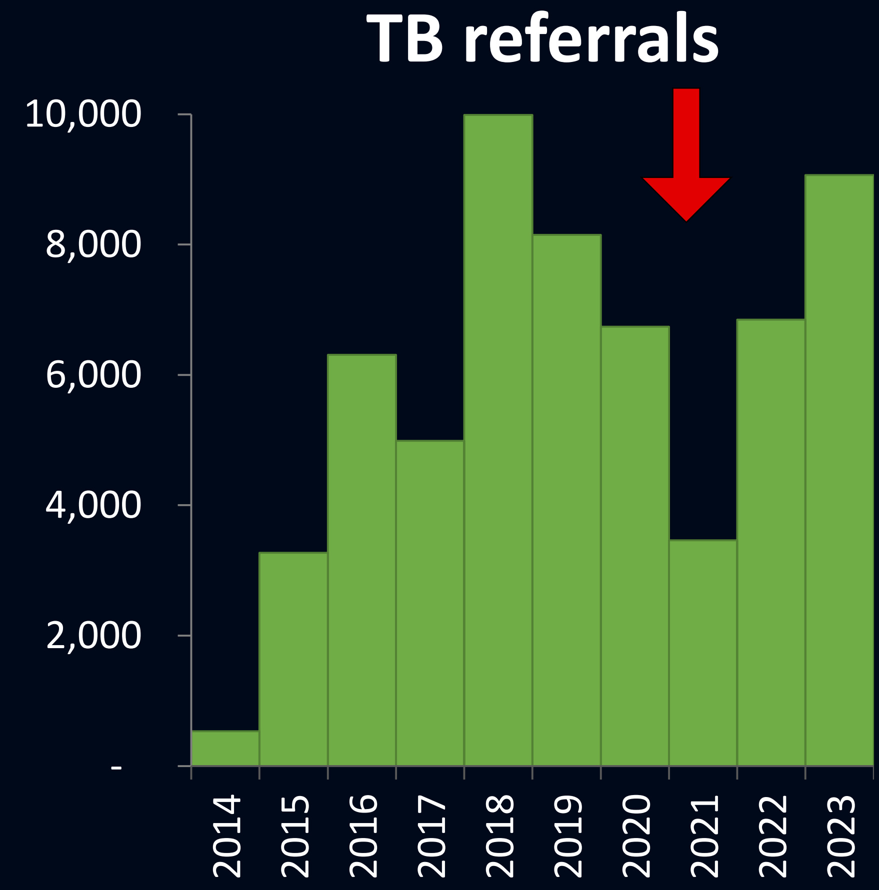
Clinics and hospitals

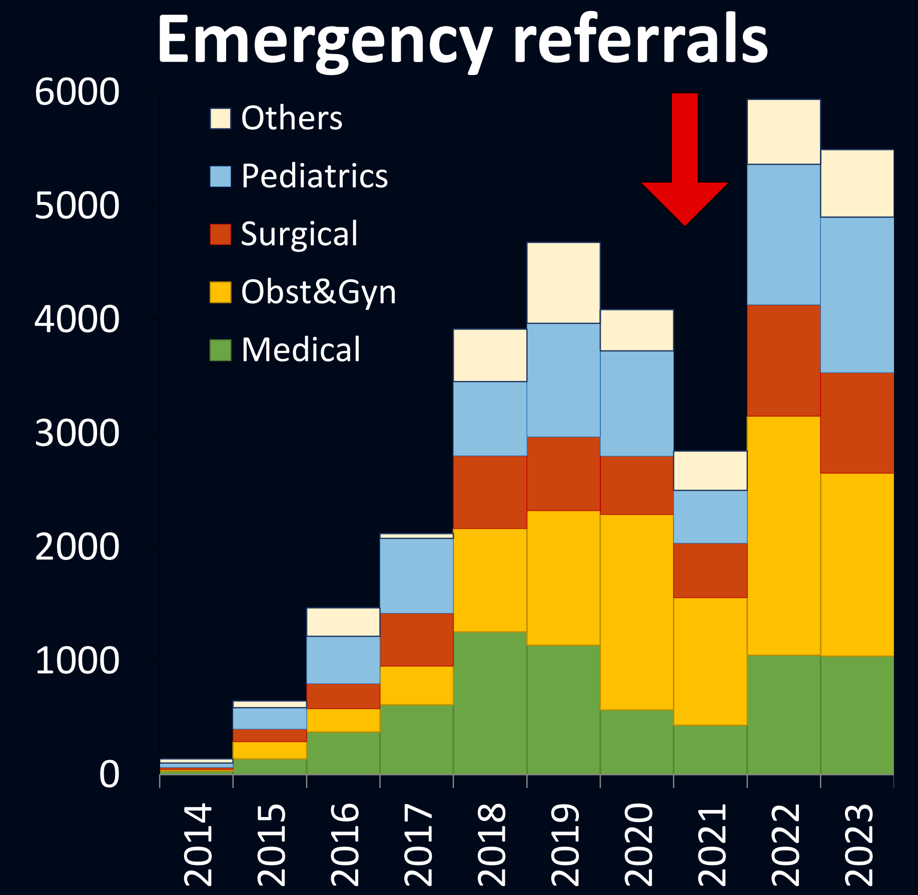
- **Fear of COVID**
- **Fear of armed conflict**

All hospital related activities down during COVID and armed conflict









Conclusion of community-based health care

Malaria successful because improved access to Dx & Tx.

Why not improve access for other common diseases? CHW already there!

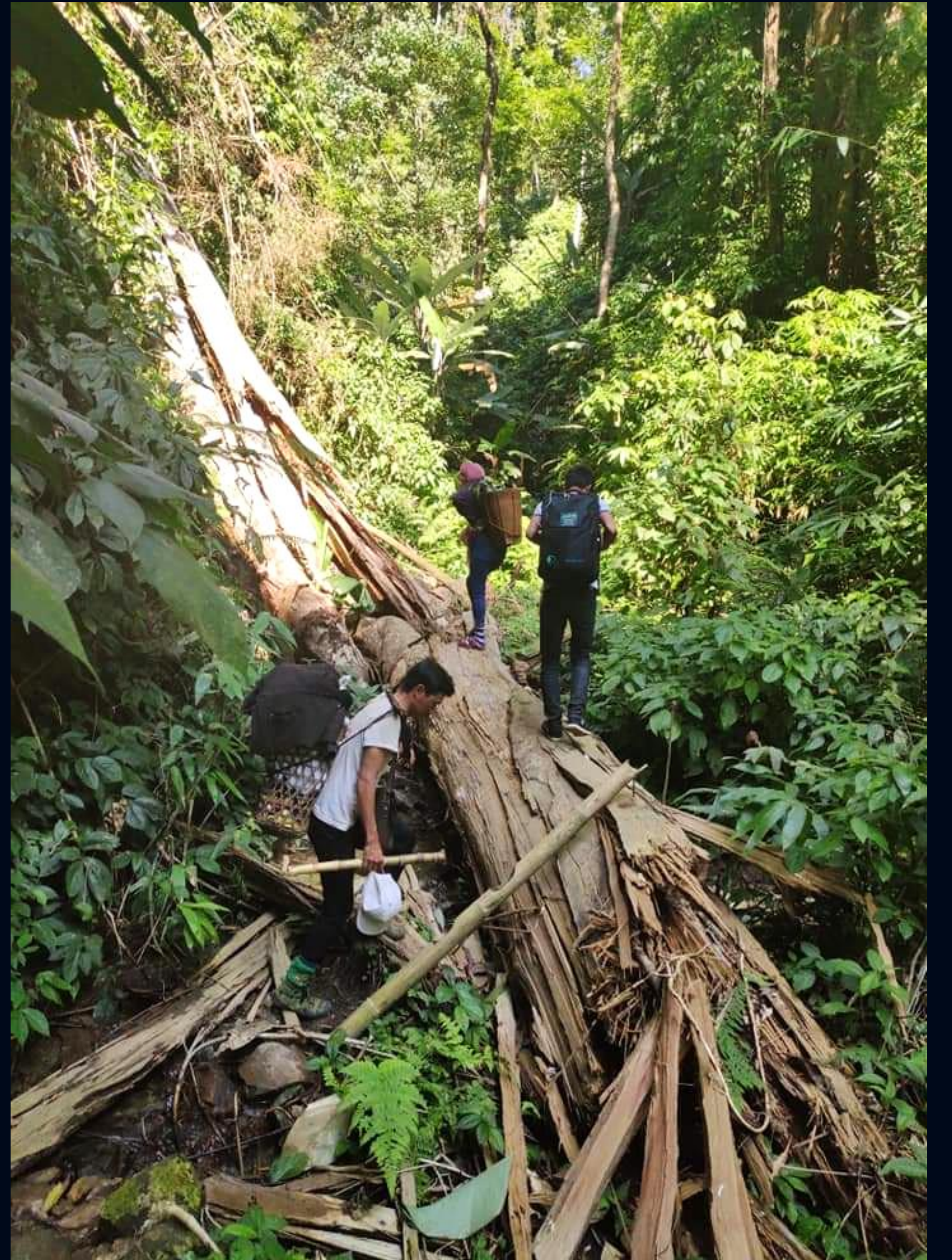
Sustainability of CHW network & Cost effectiveness.

Costs are shared with other diseases which makes it relatively cheap.

Integrating malaria into a broader package improves the chance to eliminate malaria.

And – more important – improves health and save lives

Very popular in the community; increased community trust



Road conditions in Naga

Unpacking medical supplies for the Community Health Worker
in a remote community only accessible by elephant (in the rainy season)

Thank you !

MEDICAL
ACTION
MYANMAR