Using Data to Find Missing People with TB

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Improved program planning

To find the missing people with TB

-> tailor program planning to the local setting/needs

-> informed by appropriate (local) data

Who is being missed?

Where are they?

Why are they missed?

What is needed?

During a cross country hike you run into a murky river

YOU CANT SWIM!!

You are assured that *on average* the river is only 50 cm deep.

Would you cross the river???

Poverty Rate in Bangladesh

Commonly, national programs monitor national statistics to monitor and evaluate program efforts, progress and effectiveness

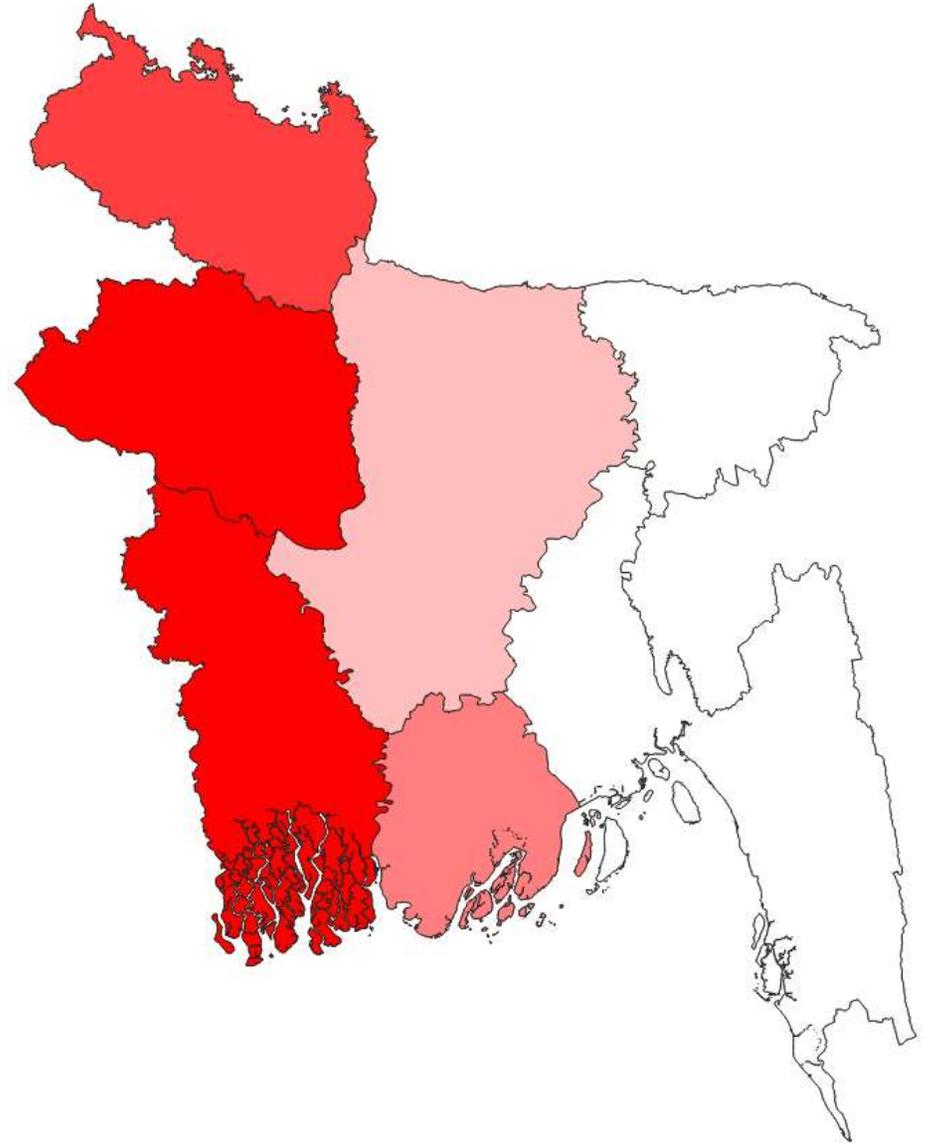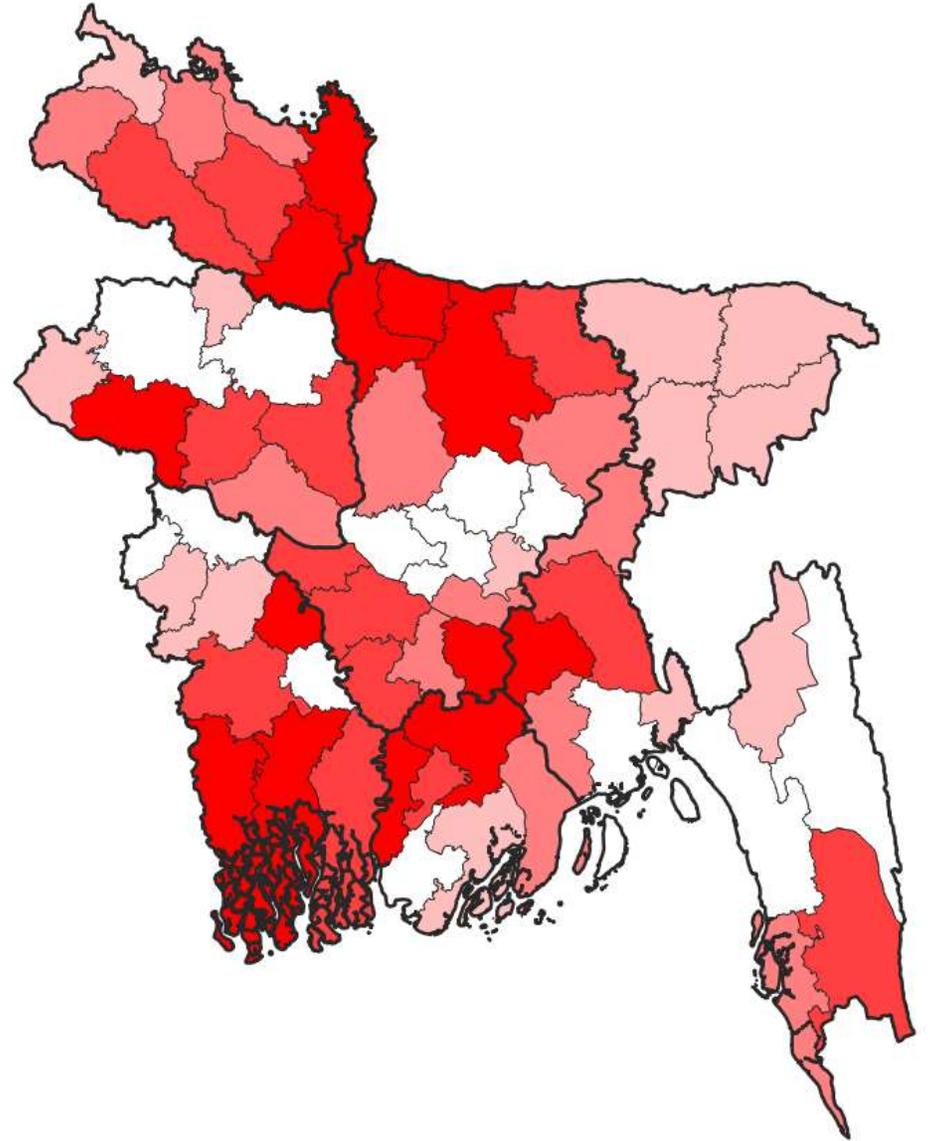*Where will you concentrate resources to alleviate poverty?*

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Geographical disaggregation

Disaggregating by division will change your initial view of how to best allocate resources.

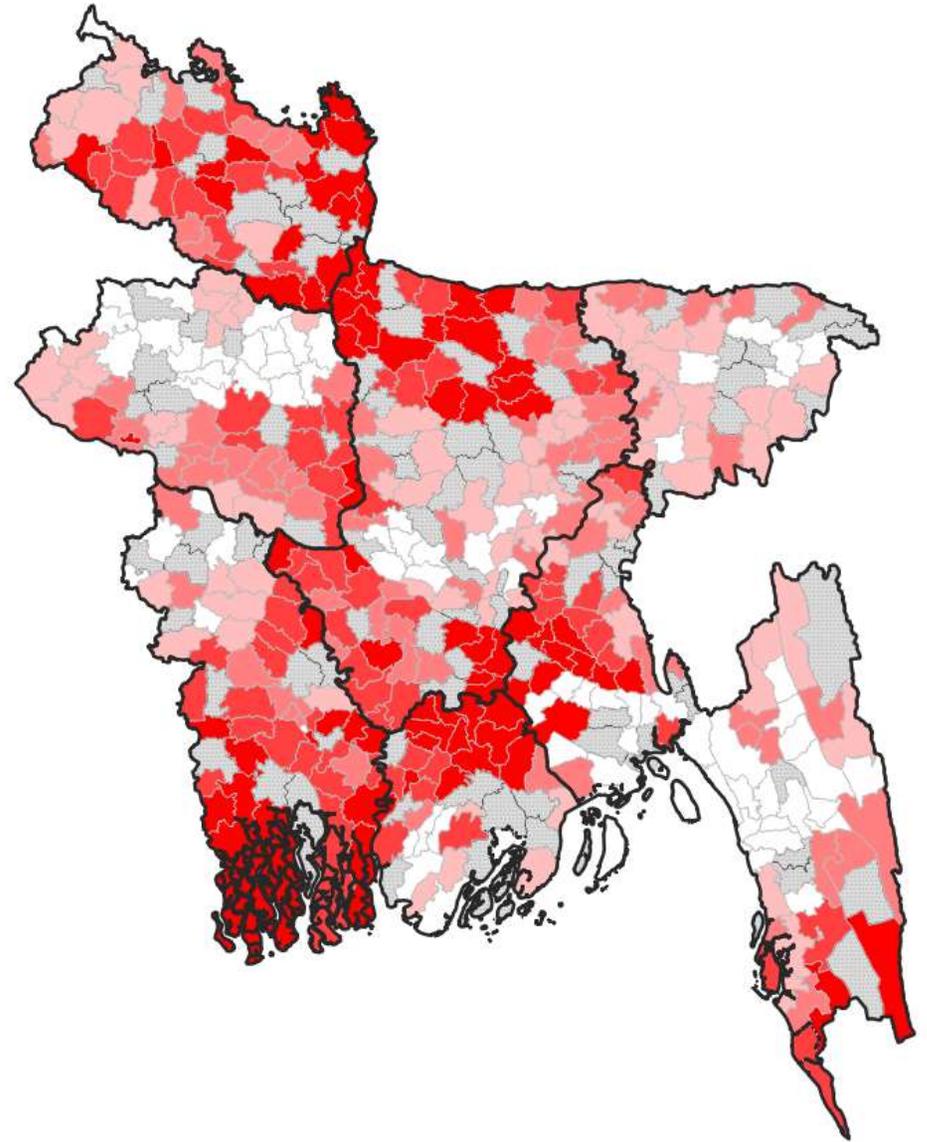*How does this change your view on where to concentrate resources?*

Further disaggregation will again
change views.

Missing data before becomes apparent by further disaggregating data

- Missing numerators = under-estimation
- Missing at random or missing spatially clustered?

Data disaggregation can show trends which can be used to investigate signals (associations) and noise (quality) aspects of your data

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What are the most salient programmatic priorities or questions?
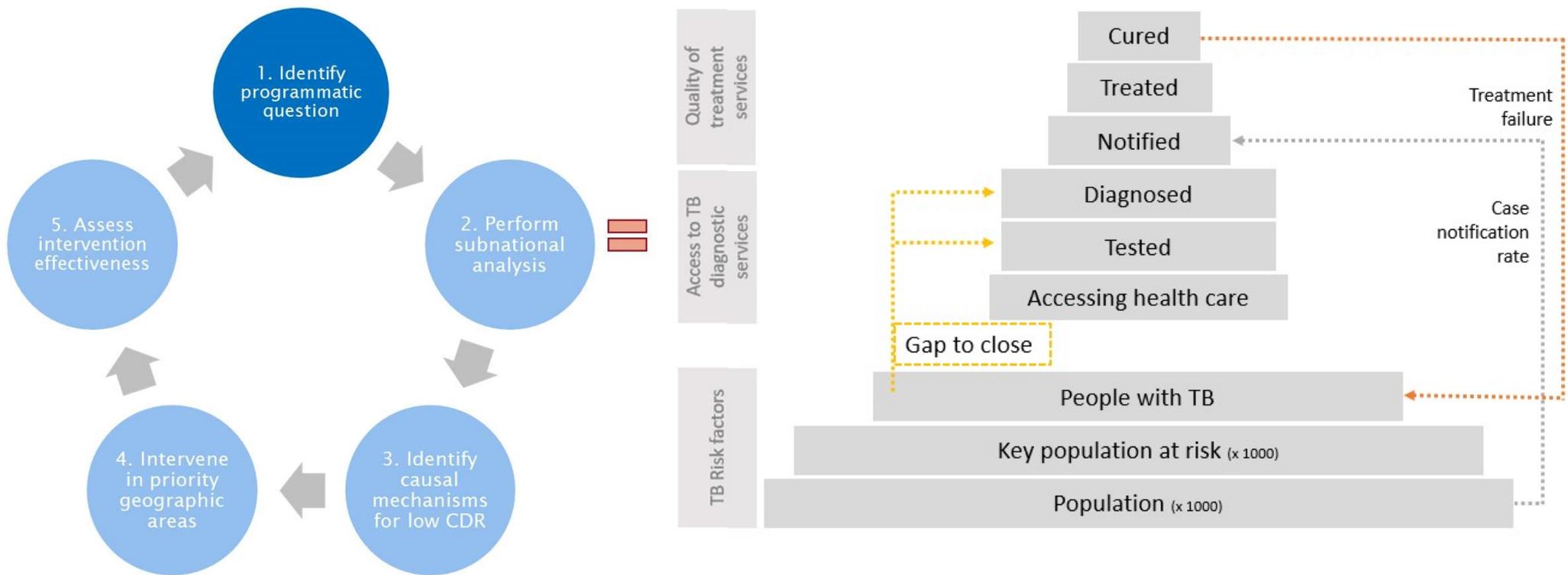
Rationalizing decision making through the use of data

Analysis/questions at national level:
from national to local

Understand subnational heterogeneity in burden and efforts
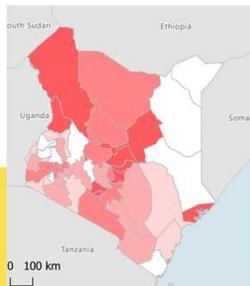
Where do we place Xpert machines?

Where is community outreach most needed?

Which key populations need attention?

How do we align demand and supply?

How best to involve the private sector?

…

Analysis/questions at local level:
from local to national
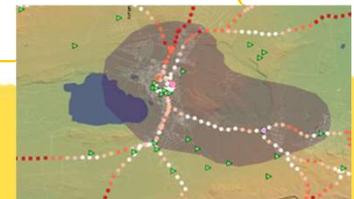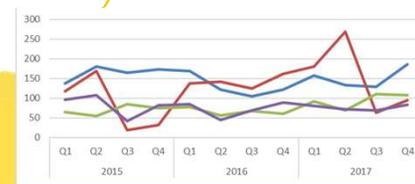
Local trends/gaps in time and space

Access analysis – what are the bottlenecks in accessing care?

Patient cascade analysis – where do people drop off? What can we do to prevent this?
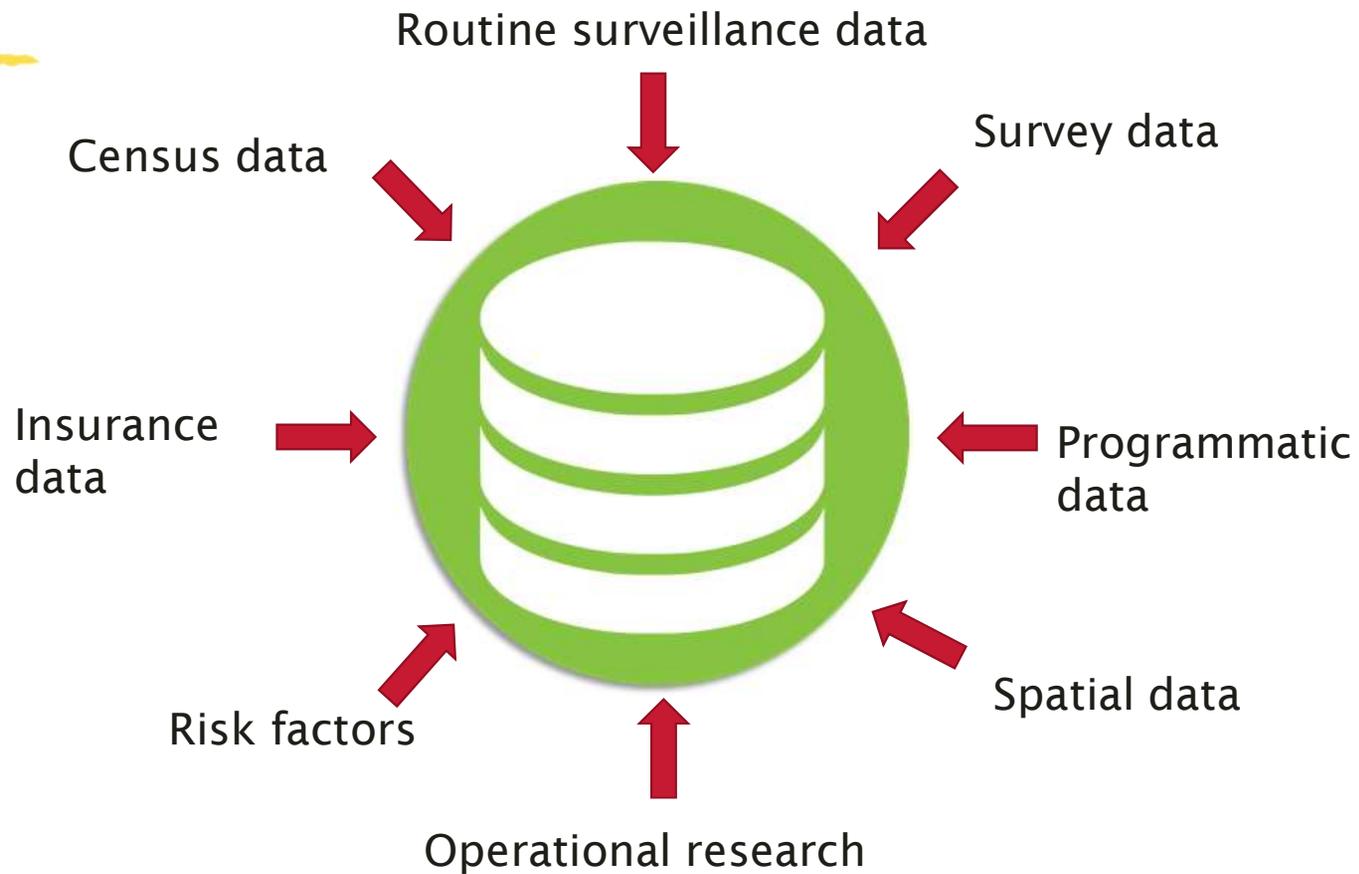
What are the needs of our key populations?

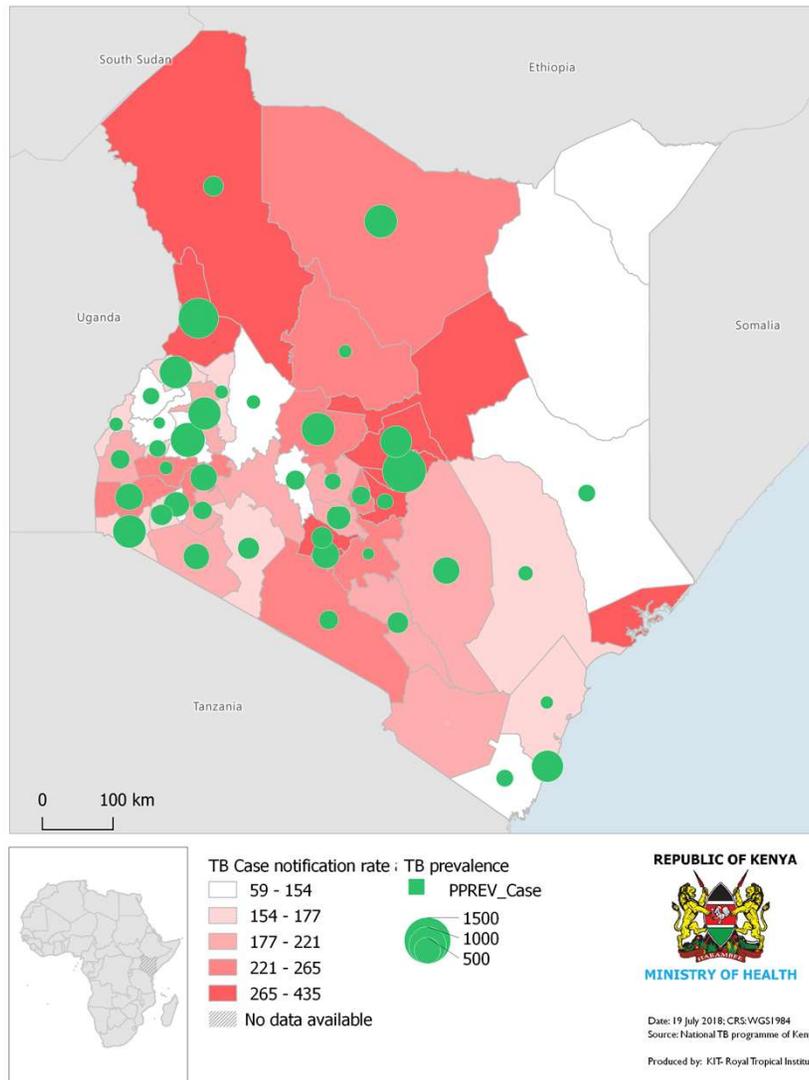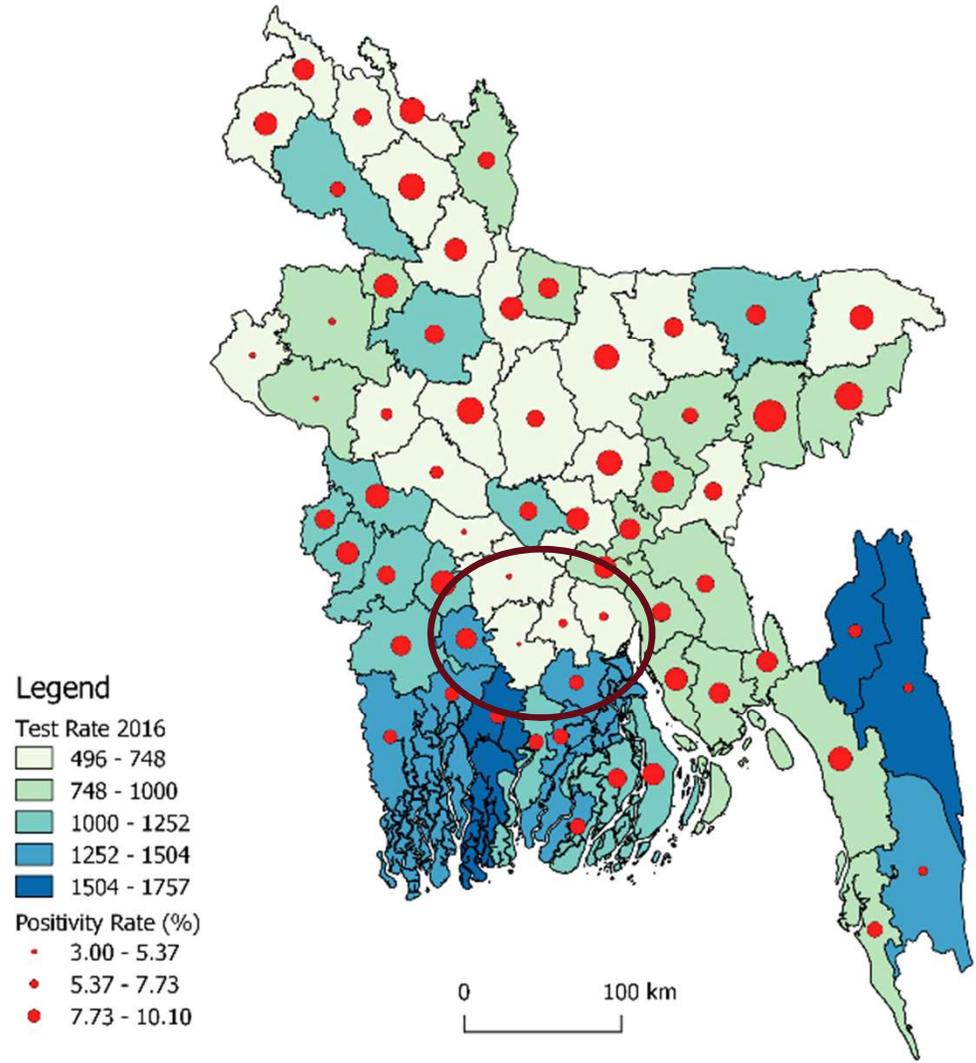What can we learn from our neighbours?

…

What data to use?

Routine surveillance data

Census data

Survey data

Insurance data

Programmatic data

Risk factors
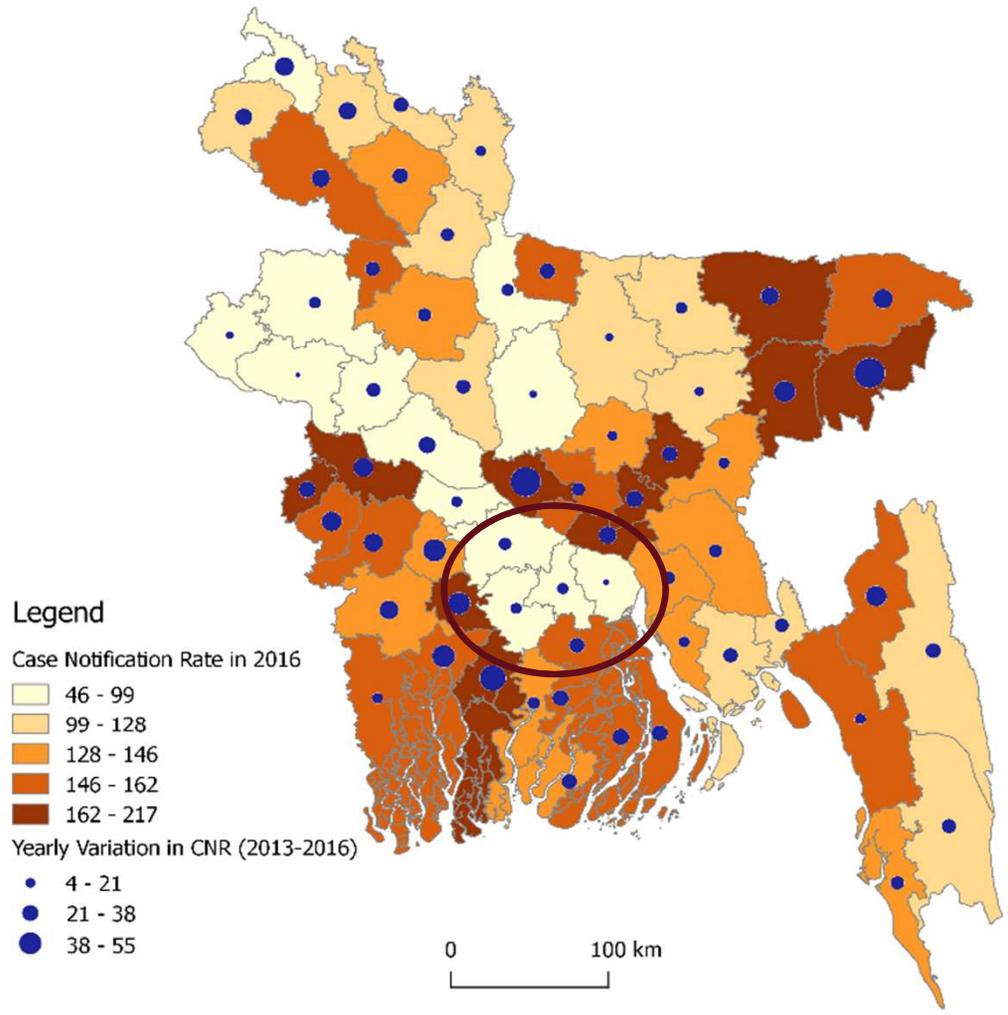
Spatial data

Operational research
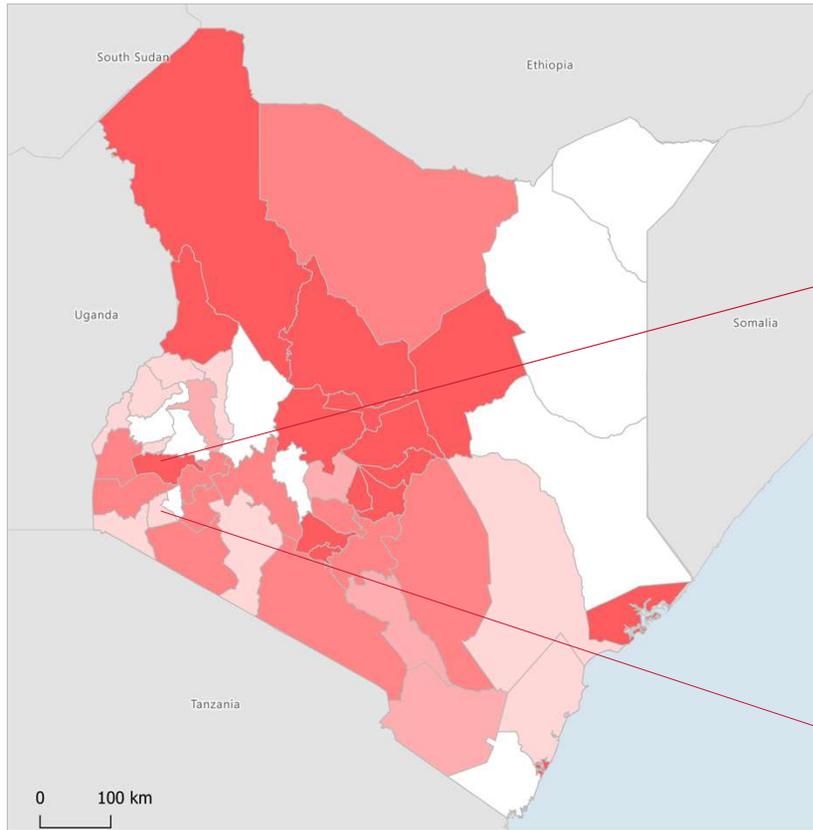
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Kenya TB case notification rate 2017 vs TB prevalence

- TB prevalence survey in 2015
- National prevalence rate: 558 per 100,000 adult population
- 99 clusters over 44 counties
- 0-10 clusters per county
- County level prevalence varied between 0 – 1541 (after merging clusters)
- These raw data cannot be used as county level prevalence estimates, but contain valuable information on spatial trends
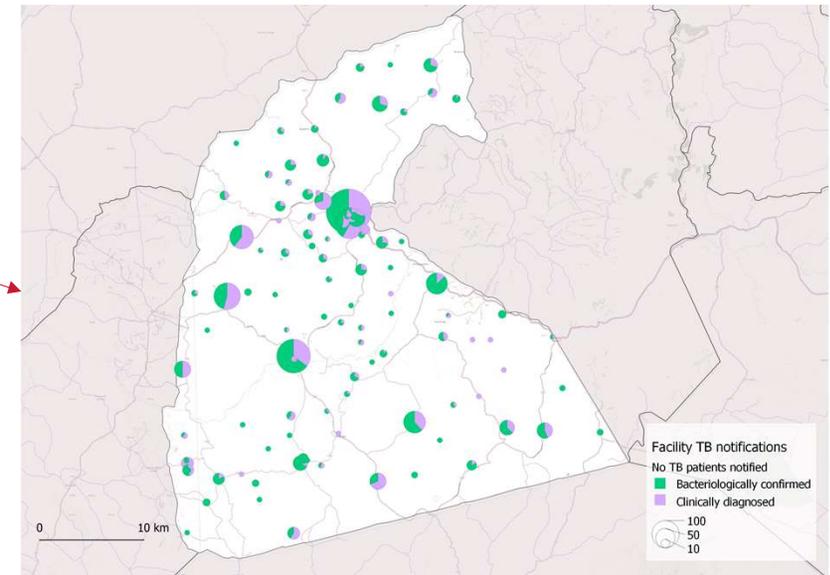
Legend

Case Notification Rate in 2016
- 46 - 99
- 99 - 128
- 128 - 146
- 146 - 162
- 162 - 217

Yearly Variation in CNR (2013-2016)
- 4 - 21
- 21 - 38
- 38 - 55

0   100 km

Legend

Test Rate 2016
- 496 - 748
- 748 - 1000
- 1000 - 1252
- 1252 - 1504
- 1504 - 1757

Positivity Rate (%)
- 3.00 - 5.37
- 5.37 - 7.73
- 7.73 - 10.10

0   100 km

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County TB case notification rates in 2017

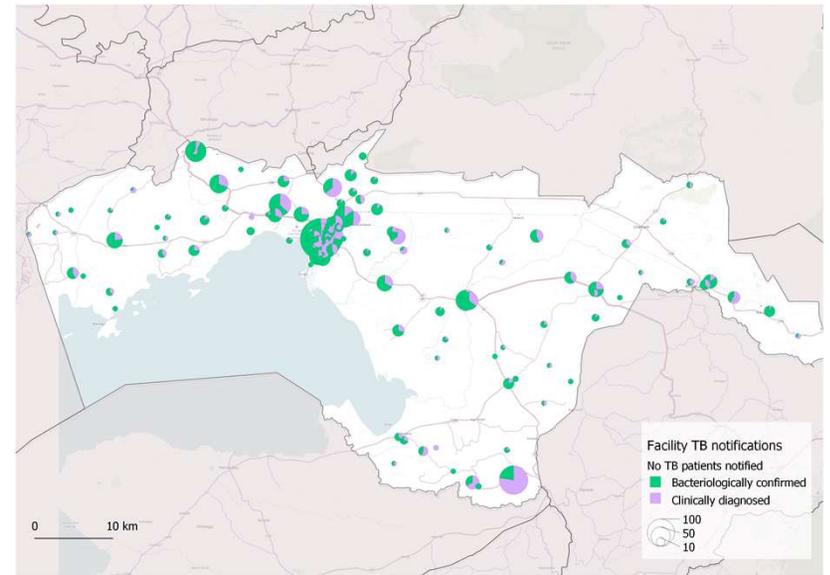**New and relapse TB case notification rate**

- 59 - 150
- 150 - 175
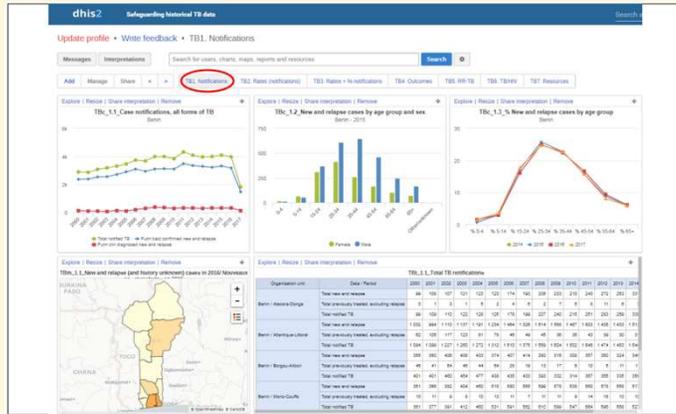- 175 - 200
- 200 - 250
- 250 - 435
- No data available

0   100 km

REPUBLIC OF KENYA

MINISTRY OF HEALTH

Date: 19 July 2018; CRS: WGS1984
Source: National TB programme of Kenya.
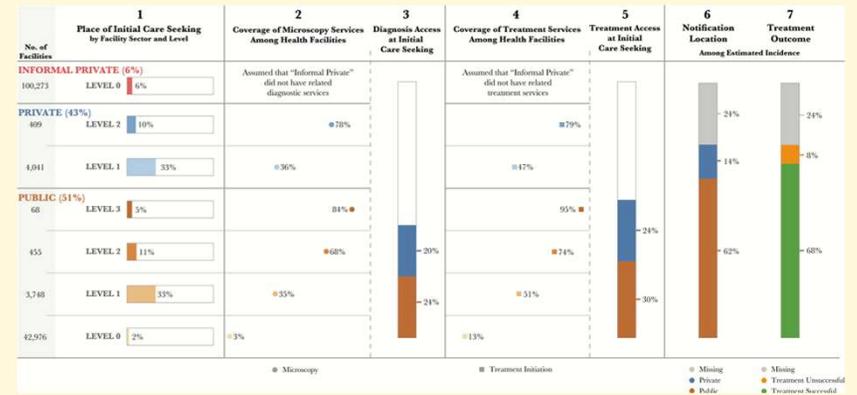
Produced by: KIT- Royal Tropical Institute.

Facility TB notifications

No TB patients notified
- Bacteriologically confirmed
- Clinically diagnosed

100
50
10

0   10 km

Which tools are available?

DHIS 2 Dashboard

Patient Pathway Analysis
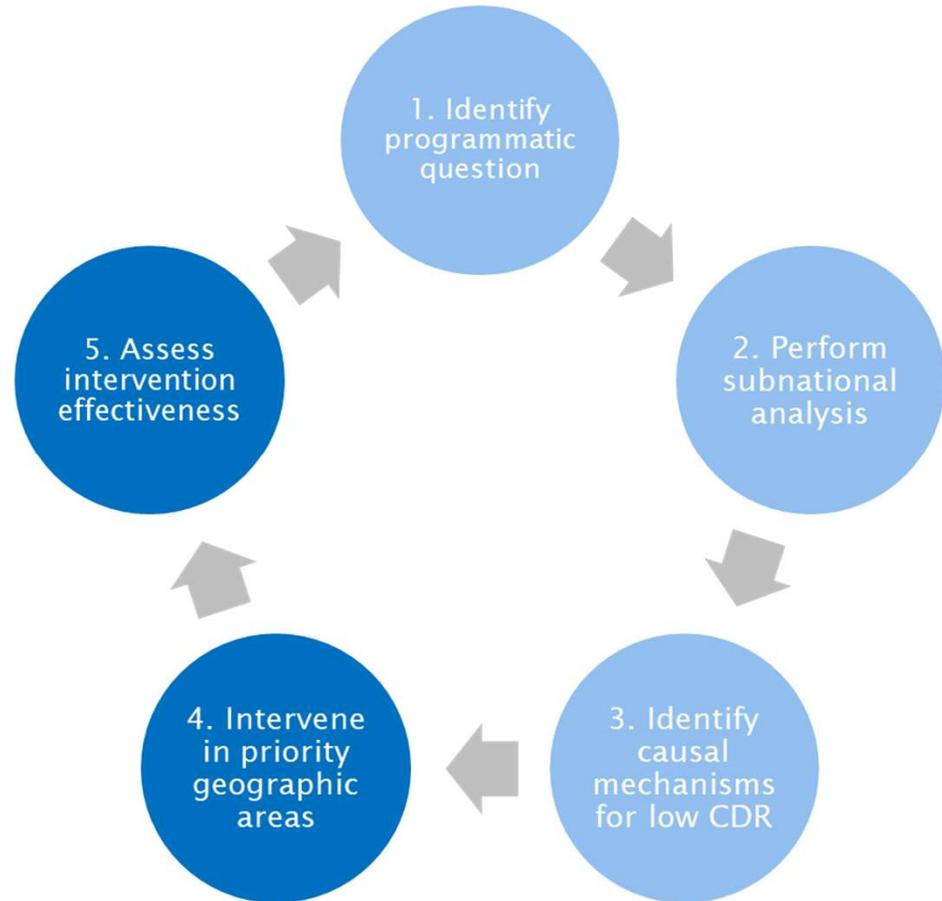

MATCH
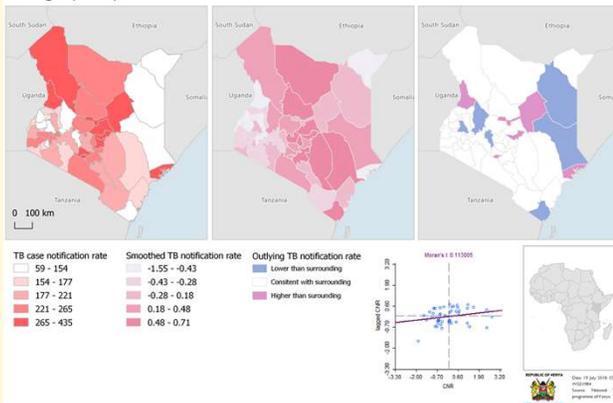
TB REACH M&E
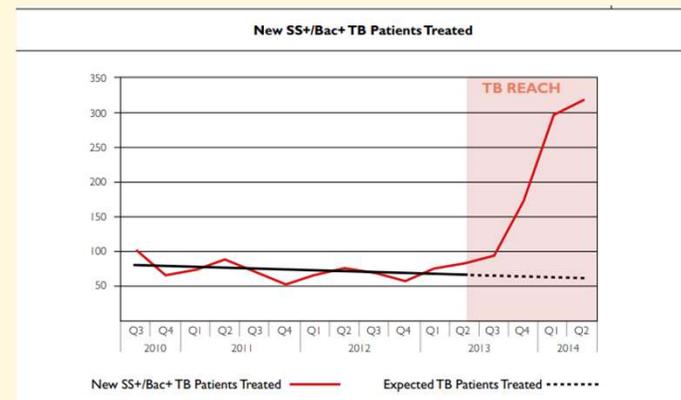
Acting upon the results

- Tailoring interventions to needs

- You will find subnational variation in your program performance and epidemic.

- You can program accordingly, analyze data on a subnational level to look for improvements in areas where improvements are needed.

1. Identify programmatic question

2. Perform subnational analysis

3. Identify causal mechanisms for low CDR

4. Intervene in priority geographic areas

5. Assess intervention effectiveness

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Let's discuss! Examples, barriers and solutions:

1. From data to information
2. From information to action

What are your lessons learned?

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