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Social Aspects of HIV/AIDS Research Alliance

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Mapping TB for stakeholders: problems and prospects

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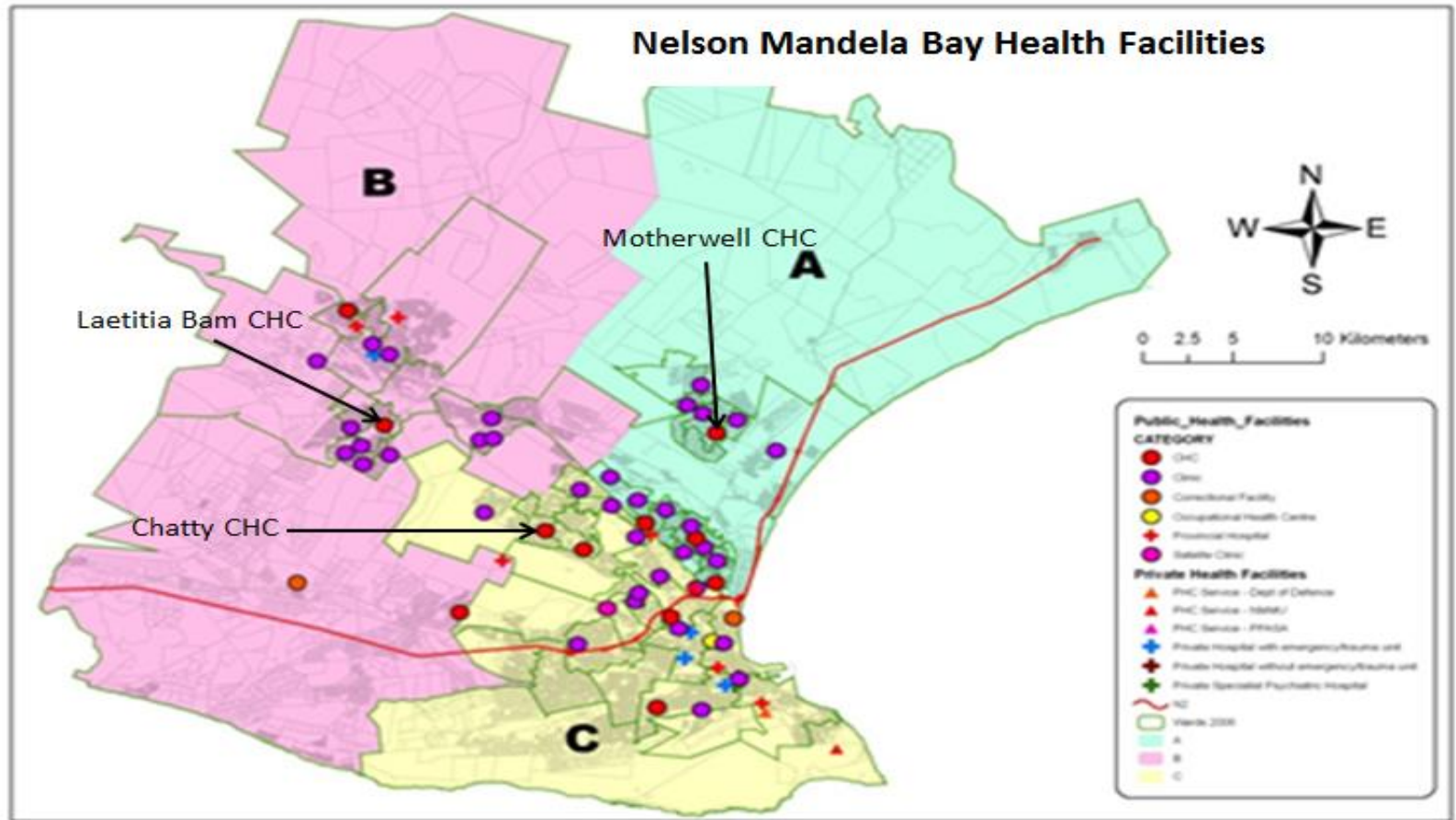
28 March 2017

Background

- Nelson Mandela Bay Health District (NMBHD) TB incidence rate: 938/100 000 (almost double national rate) (DHB 2015/2016)
- TB cure rate: 67,0% (about 10% below national level) (DHB 2015/2016)
- TB loss-to-follow-up rate: 8,8% paints a bleak picture of TB Control efforts to combat the scourge of TB.
- Geographic Information Systems (GIS) can contribute to strengthening adherence to TB treatment to improve TB control.
- Mapping and spatial analysis of case-based TB notification data is possible.



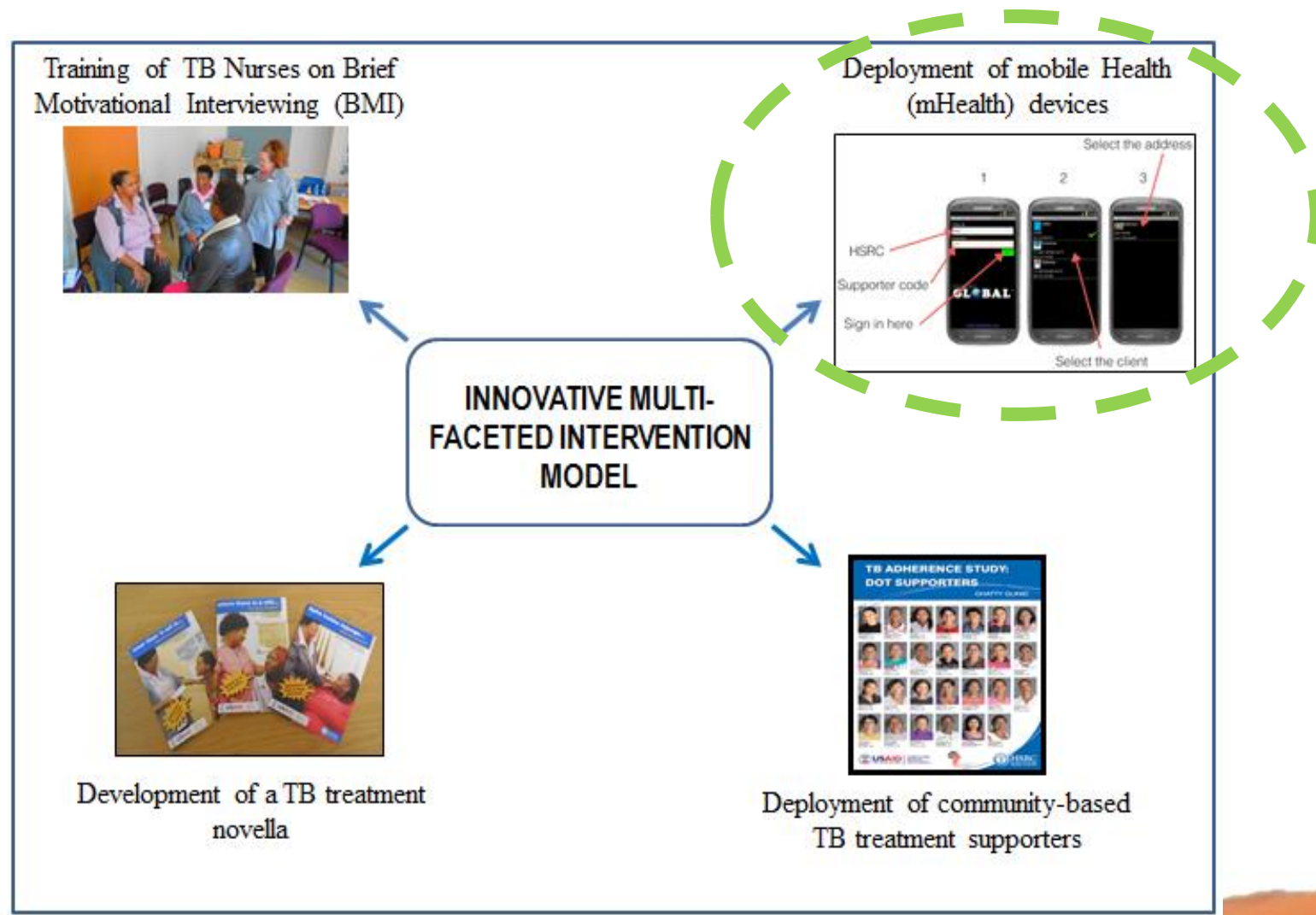
Study Sites



HSRC tested a four-pillared intervention

- Develop and test a multi-component intervention package for patient-centred care
- This intervention provides an opportunity to map newly-diagnosed GXP-positive TB cases, their DOT supporters, TB treatment progress and outcomes.
- Building strong local stakeholder involvement helps provide a supportive environment to improve treatment adherence.
- Addressing TB in under-developed urban areas clearly has a local dimension requiring activation of local stakeholders.

Structure of the intervention



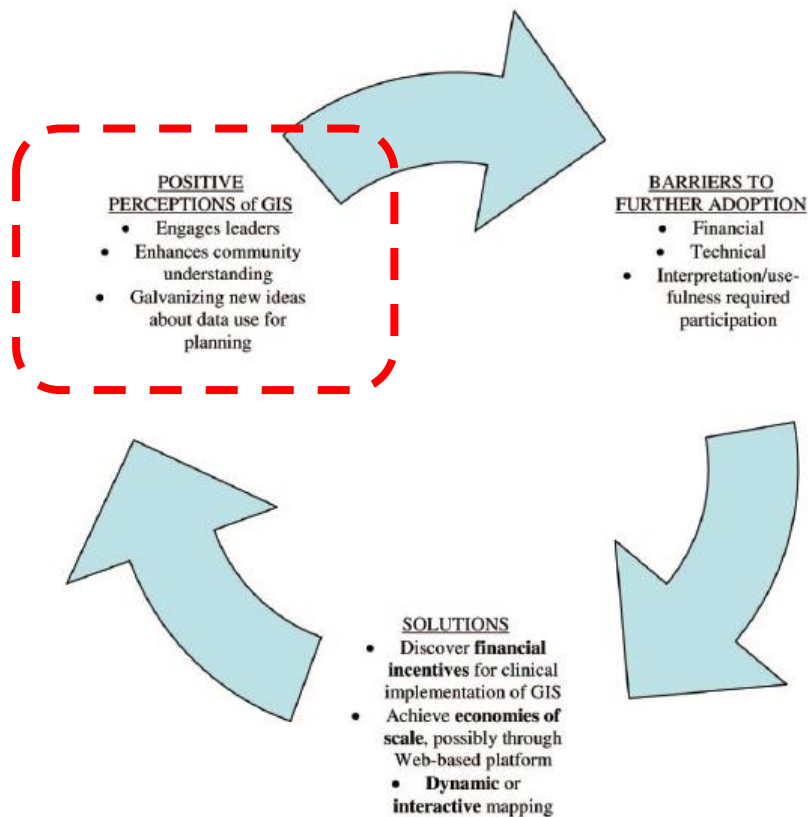
Intervention components

- **Brief Motivational Interviewing**
Nurse administers an adherence interview for 1-3 mins in a private setting
- **TB/HIV treatment educational photo-novella**
Local lay-actors enact a typical experience of TB treatment and support until cure
- **TB DOT Supporter network**
Close, accessible supervision and patient support for TB DOT
- **mHealth Monitoring**
Remote monitoring of daily community-based TB DOT

Aim of the study

- To elicit the views of stakeholders so as to assess the utility of maps developed from a Geographical Information System (GIS) database established for the TB treatment adherence intervention study in their district
 - *Stakeholders were local government ward councillors, clinic committee members and clinic managers*

Phases in the adoption of GIS in primary health care

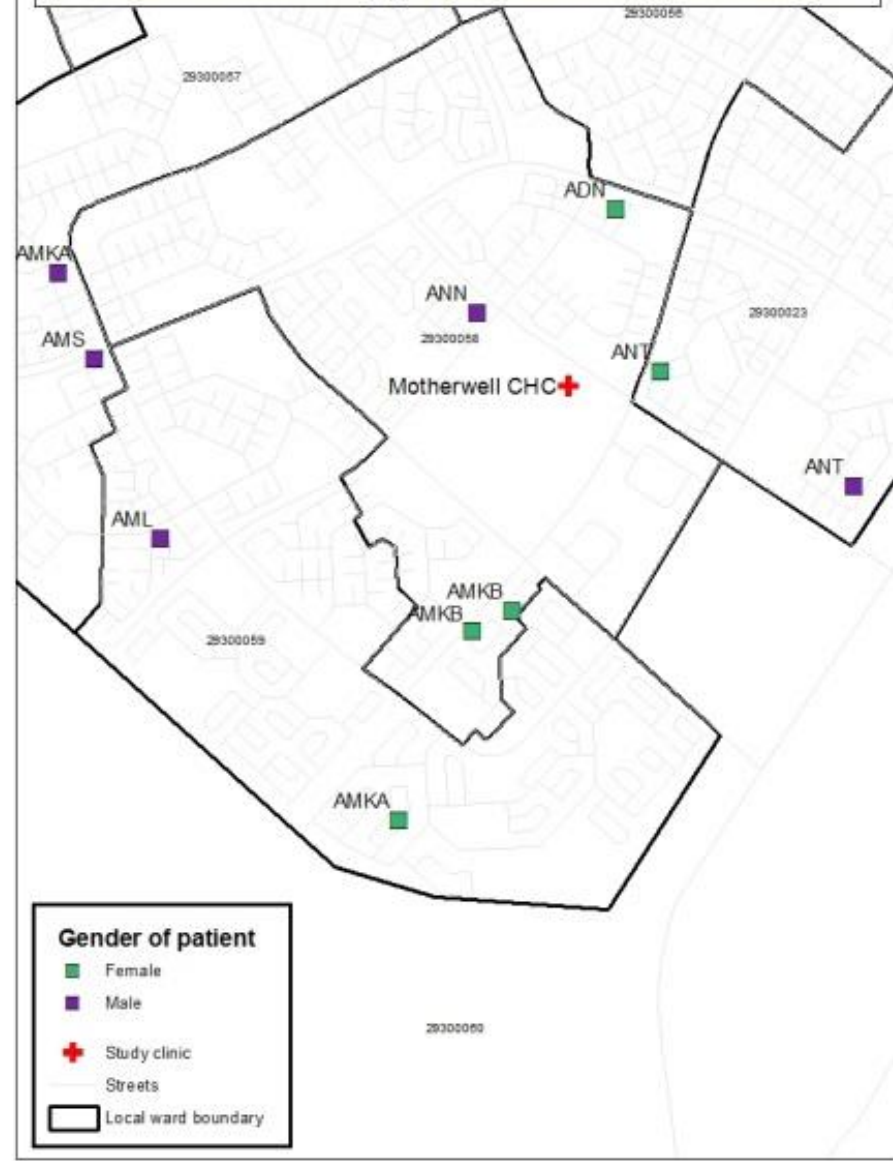


Bazemore A, Phillips RL & Miyoshi T (2010). *Harnessing Geographic Information Systems (GIS) to enable Community-Oriented Primary Care* JABFM, 23,1: 22-31

Rationale for map themes – patient distribution

- Distribution of TB cases registered at study site for the pilot intervention
- Mapping age and co-morbid conditions also possible
- Case-specific treatment support can be facilitated by stakeholders

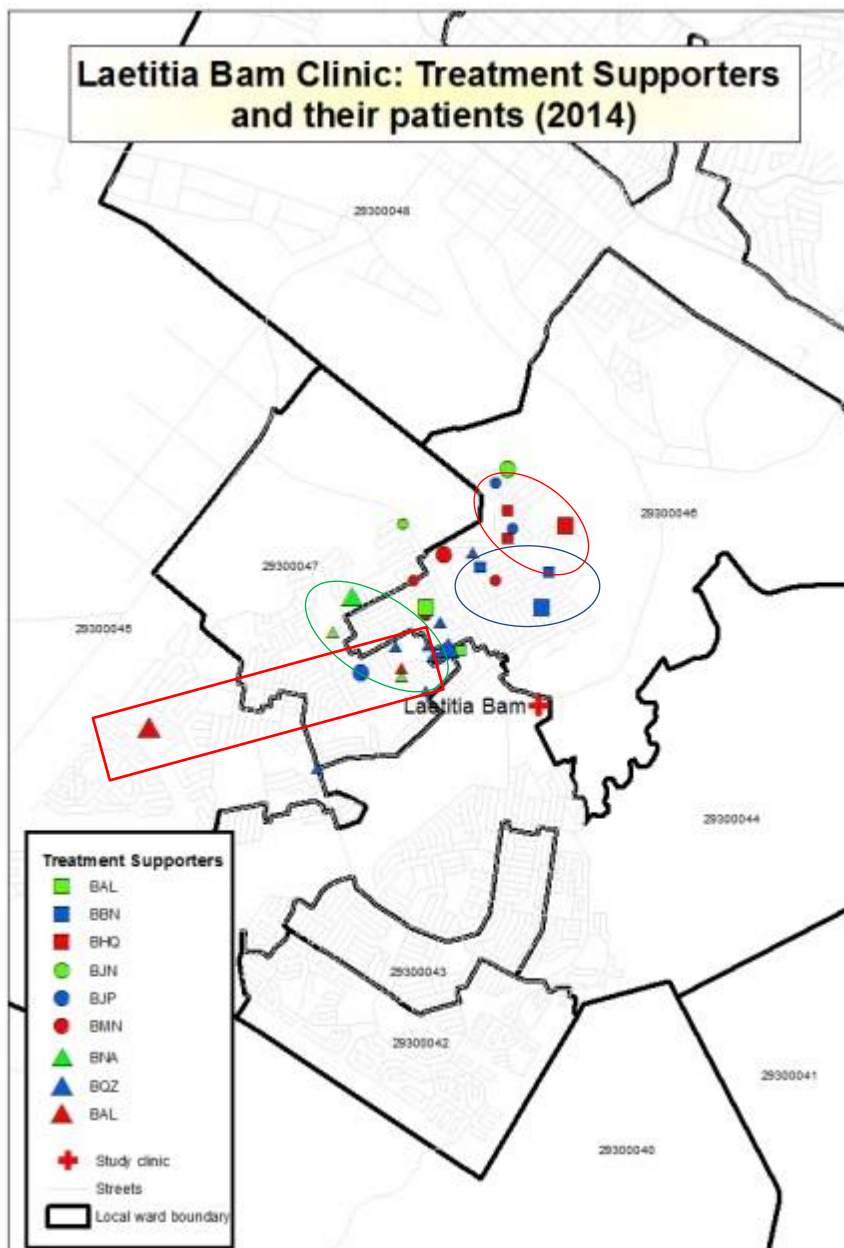
Motherwell Clinic: Patient gender and treatment supporter code



Rationale for map themes – distribution of DOT supporters

- Patient-centred TB patient care means a choice of a treatment supporter
- Map depicts the number of TB patients assigned to a treatment supporter
- Link between monitoring of treatment support and treatment adherence; physical distance from TB patient

Laetitia Bam Clinic: Treatment Supporters and their patients (2014)

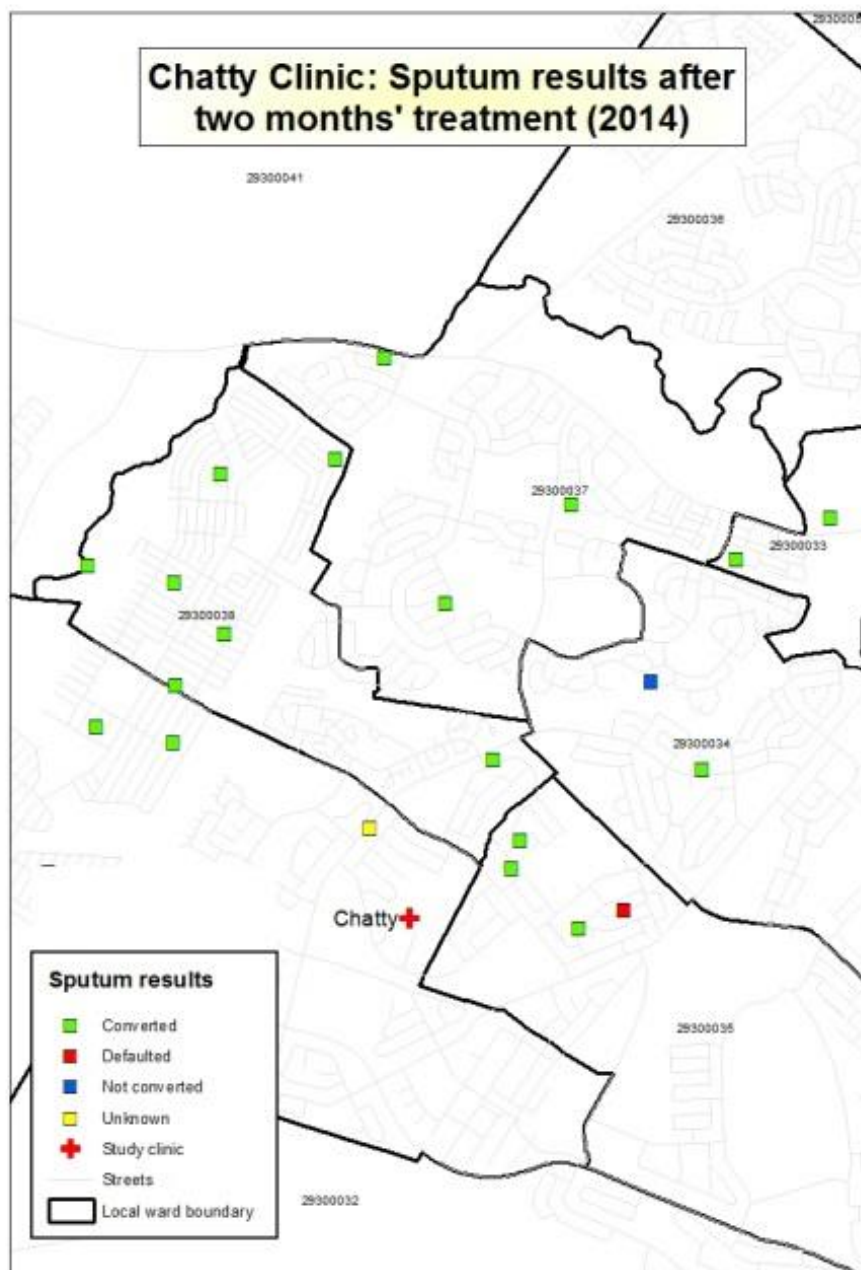


Rationale for map themes – sputum conversion

- Sputum conversion is a process indicator for the likelihood of cure
- Pro-active examination of ‘non-converted’ household contacts
- Sputum non-conversion during the intensive phase can alert to possible interruption and DR-TB
- Supportive and targeted TB outreach team deployment is possible
- The risk of treatment interruption cannot be masked by sputum converted TB patients
- The map can affirm exemplary adherence



Chatty Clinic: Sputum results after two months' treatment (2014)

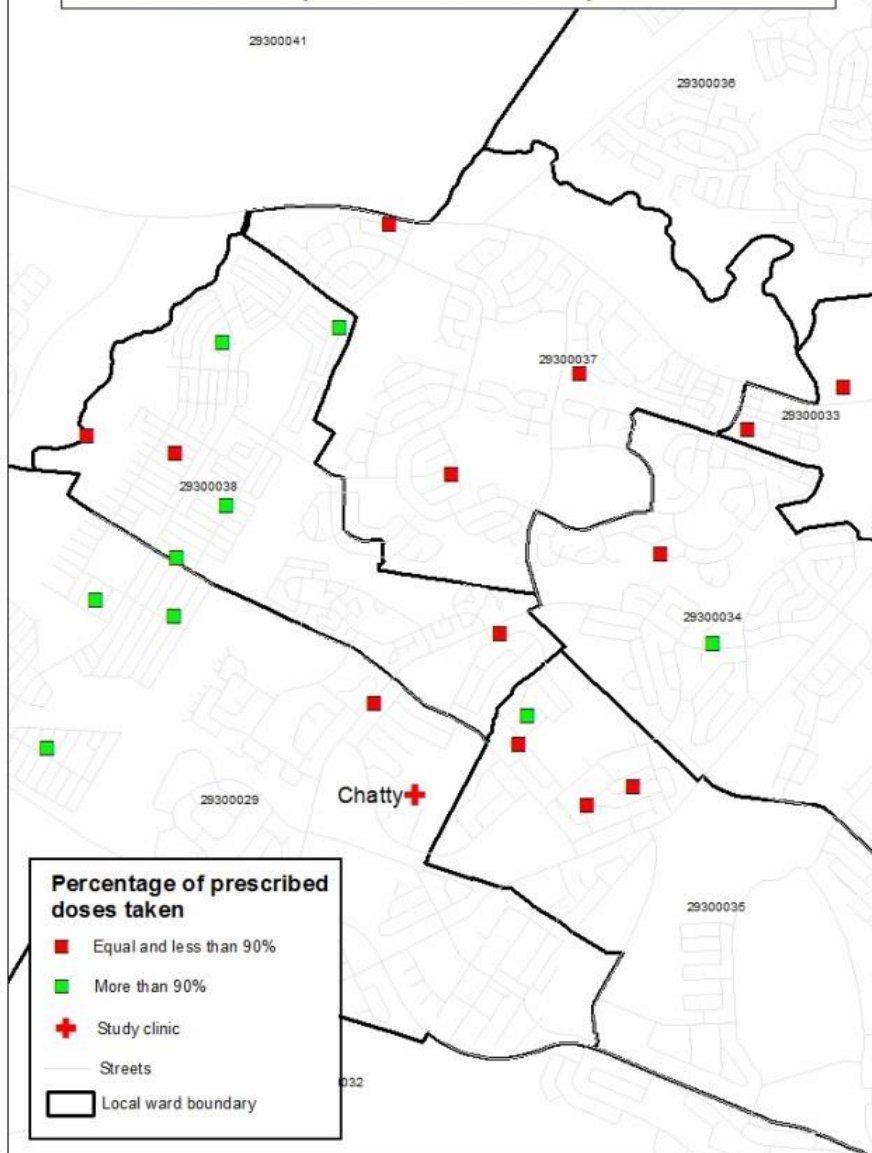


Assessment by Stakeholders

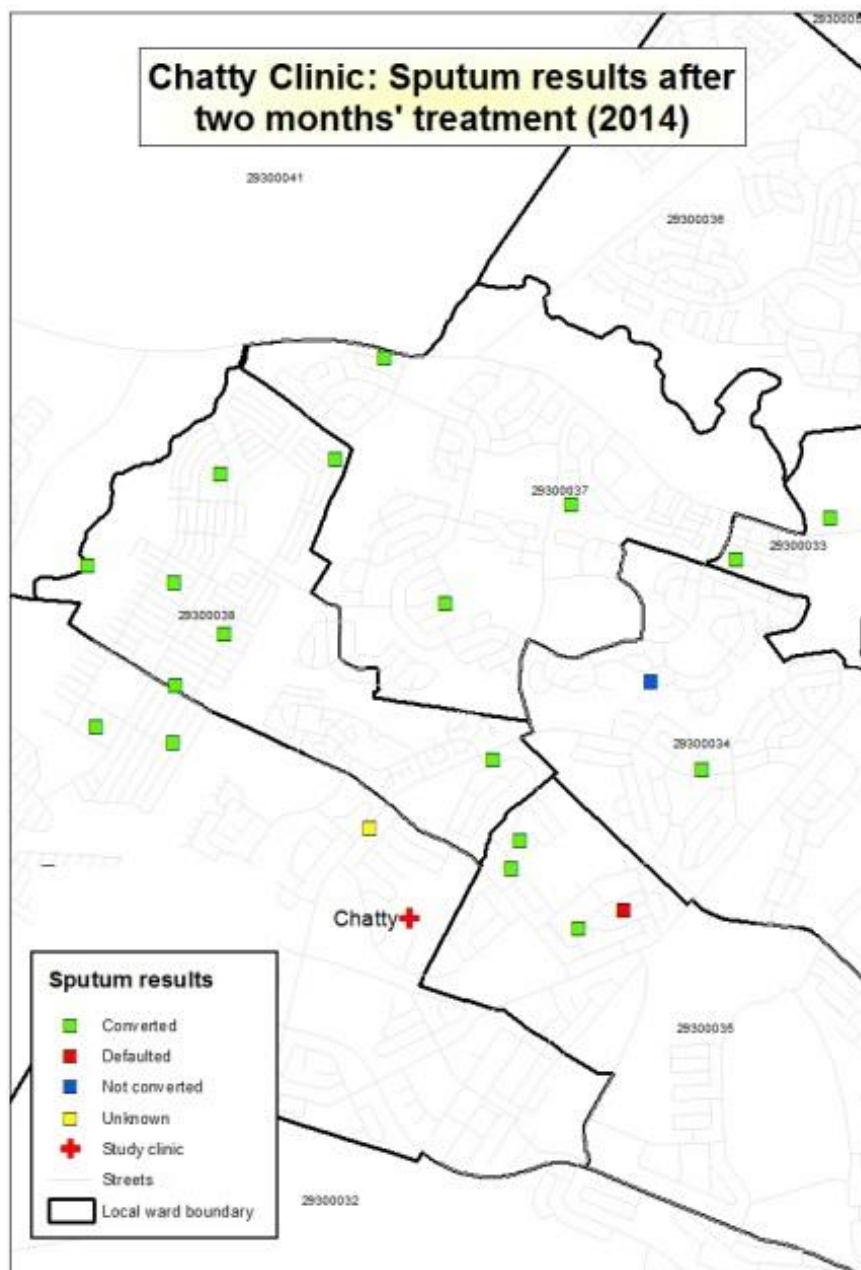
- Elicited the feedback from one study area through qualitative methods

Type	Participants (Number)
Focus Group Discussion (FGD)	Clinic committee members (4)
In-depth interviews (IDIs) A	Ward Councillors (2)
In-depth interviews (IDIs) B	Clinic managers (3)

Chatty Clinic: Risk of treatment interruption (Intensive Phase)



Chatty Clinic: Sputum results after two months' treatment (2014)



Guiding questions

- **Characteristics of maps depicting results from the TB Treatment Adherence**
 - Does the area look familiar?; Are symbols meaningful?; Does the map generate any interest?; Any salient features?; Does this map match expectations; amongst other probes
- **Usefulness of the TB adherence project maps**
 - Would the maps be useful?; Frequency of production?; Preferred format and size; Support for TB-related work in the area?; Will the maps be persuasive, have any value/clout? amongst other probes

Results: Themes Identified

- Depicting TB data on the maps
- Addressing operational requirements and resource allocation
- Frequency of maps to inform TB programming
- Monitoring TB Control Programme Performance
- Suggestions to improve map content and design

Depicting TB data on the maps

- *“I am saying it (the map) does not depict the true picture of this clinic area. I think it should be more...” - Respondent 3 (IDI B)*
- *“Not necessarily ..as far as I know my TB caseload has always been increasing” - Respondent 1 (IDI B)*
- *“There are some areas that are not dotted in any way. It gives me a bit of a concern.” - FGD participant*

Depicting TB data on the maps (ii)

- “...(this is) too less for the area.” - FGD participant
- “There is supposed to be a report on all the actual ailments that they are dealing with...diabetes and including TB of course...we are supposed to get those reports every month” – FGD participant

Addressing operational requirements and resource allocation

- *“When you do your operational plan and you focus on certain health days like World TB Day, you can focus on those areas that are problematic.” - Respondent 1 (IDI B)*
- *“For us at clinic level obviously it (maps) will help with our planning...so if this is a true depiction of what is happening out there then obviously we need to concentrate on the areas which have a high burden of disease and send our health promoters out there” – Respondent 3 (IDI B)*
- *“For me, these maps will work...to see where there are people (and help) them to take their treatment...motivate them to continue...to find out if they got enough food...”*
Respondent 1 (IDI A)

Addressing operational requirements and resource allocation (ii)

- *“It would give you a foot into acknowledge immediately what areas in this catchment ...is under control, who needs more effective help...”* - FGD participant
- *“We can get together and ask for a mobile clinic to move from area to area...”* - Respondent 1 (IDI A)
- *“More people signed up from a particular ward, but it is still too few...because I know what I am talking about because there are more people (with TB)”* - Respondent 1 (IDI A)
- *“It shows me that these people care for themselves, took medication... to lead a normal life...and they were supported”.* - Respondent 2 (IDI A)

Frequency of maps to inform TB programming

- *“Quarterly, look I know with quarters you might miss out on certain aspects, but at least quarterly you need to indicate your performance”*
– Respondent 1 (IDI B)
- *“Every quarter I would say....because in one quarter’s time there is so many things that we lose most of our patients, we lose most of them in a quarter”* – Respondent 2 (IDI B)
- *“Every six months, I would like to see it (a map)”*
– Respondent (IDI A)

Monitoring TB Control Programme Performance

- *“This is just the intensive phase... but at least in the first two months they’ve used the treatment... they have adhered, so it is very good.” – Respondent 3 (IDI B)*
- *“Yes, to interpret data ... to measure our performance and how to plan activities, if we start from the beginning of the map to where we are now and to sustain what we are implementing and planning...” - Respondent 2 (IDI B)*
- *“You obviously got a higher percentage of patients that will adhere to treatment in the intensive phase if you team them up with a TB DOT (supporter)....”- Respondent 1 (IDI B)*

Suggestions to improve map content

- “...if this was actually accurate, I would have to say I am happy in a way.” - Male FGD participant
- “Not necessarily ..as far as I know my TB caseload has always been increasing” - Respondent 1 (IDI B)
- ‘It is surprising that there are many people who are (sputum) negative’

Suggestions to improve map design (ii)

- *“I don’t know if it’s reference numbers of it’s probably the little suburbs in that area, I don’t know so if you can explain to me what that is...” - Respondent 3 (IDI B)*
- *“...there is no street names, it tells me where the different boundaries, the wards is, but there is no street names.” – Respondent 2 (IDI B)*
- *“....besides indicating wards (boundaries), it will also be better to indicate certain of the areas’ names, so that you know which areas are more prone to TB.” - Respondent 1 (IDI B)*

Conclusion

- The maps presented has limitations – content and design
- Mapping needs to be extended beyond the cases enrolled for the pilot multi-faceted intervention adherence study
- The maps have the potential to aid decision-making by ward councillors, clinic committees and clinic managers
- Various aspects of TB campaigns (e.g. active TB case finding) and routine TB treatment can be presented
- The utility of maps as decision-making tools for local politicians must be part of post-intervention assessments
- Maps have potential as advocacy tools in these settings

Conclusion (ii)

- The maps can inform the allocation or redistribution of scarce resources for treatment support
- Visits to selected households can be prioritized by outreach teams
- Progress towards completion can be mapped against mobile TB patients at risk for non-adherence (e.g. job-seekers, initiation candidates, holiday visits, etc.)



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