

Modelling private sector engagement in India
and
What does UHC really mean to modellers?

Nim Arinaminpathy, Imperial College London

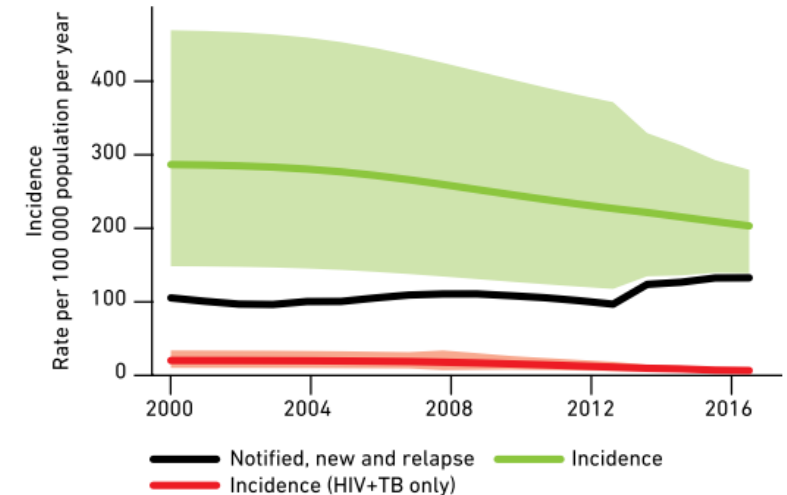
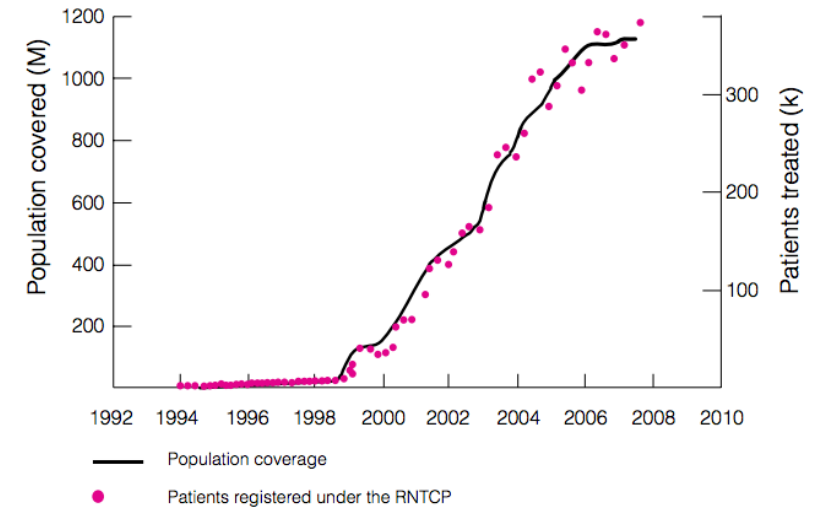
TB-Mac meeting 2019, Istanbul

Talk outline

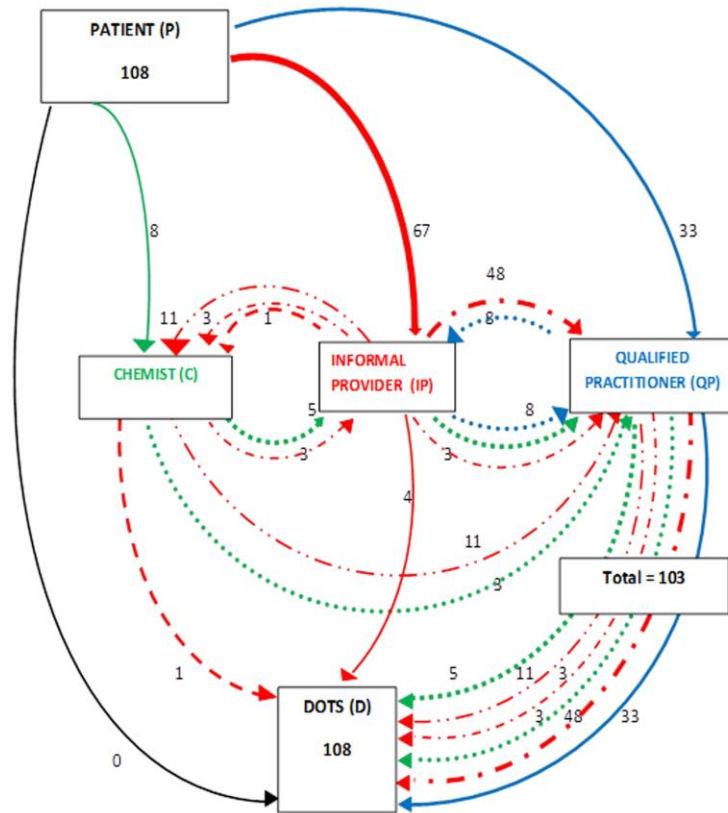
- Background: the private healthcare sector in India (and other South-Asian countries)
- Modelling the impact of private sector engagement
 - Why fixing the 'supply side' may not always be enough
- Broader reflections: what do we think UHC would mean, for TB transmission?

Background

- India is the country with the world's largest TB burden
 - 25% of estimated incident cases in 2017,
 - 26% of estimated TB deaths
- Massive scale-up of public sector TB services in the 1990s, but...
- Still only slow declines in TB incidence



The private healthcare sector in India



Kapoor et al (2012) PLoS ONE

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PLoS one

Delays
in India

Tuberculosis Management by Private Practitioners in Mumbai, India: Has Anything Changed in Two Decades?

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Epidemiology

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THE LANCET
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Abstract

Setting: Mumbai
(TB) management
progress in
public-private

ARTICLES | VOLUME 15, ISSUE 11, P1305-1313, NOVEMBER 01, 2015

Use of standardised patients to assess quality of tuberculosis care: a pilot, cross-sectional study

Jishnu Das, PhD, Ada Kwan, MHS, Benjamin Daniels, MS, Srinath Satyanarayana, MD, Ramnath Subbaraman, MD

PLOS MEDICINE

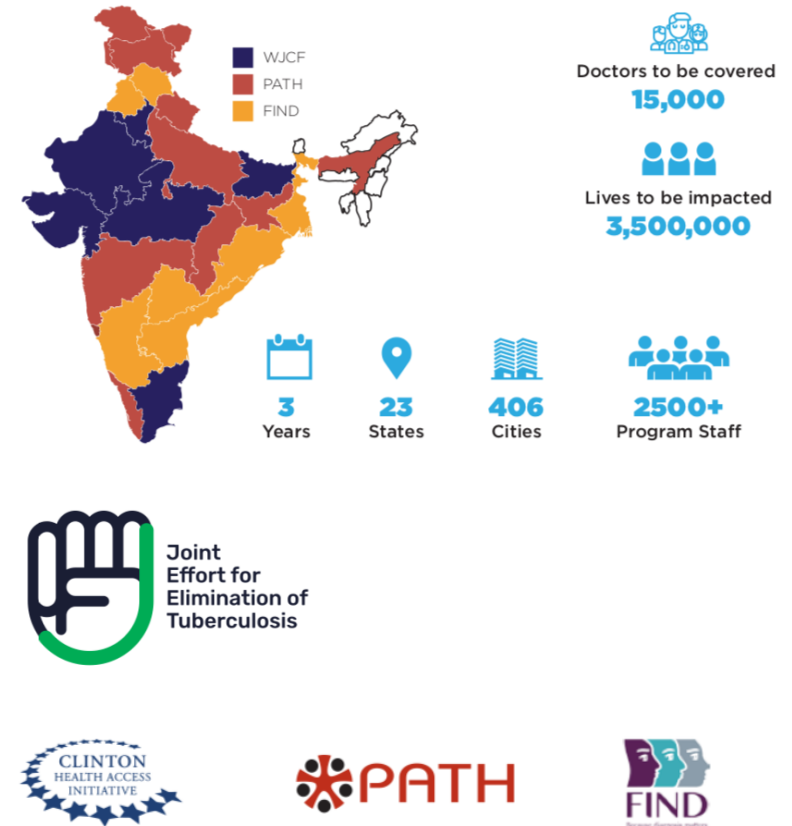
RESEARCH ARTICLE

Variations in the quality of tuberculosis care in urban India: A cross-sectional, standardized patient study in two cities

Ada Kwan^{1,2*}, Benjamin Daniels^{1*}, Vaibhav Saria³, Srinath Satyanarayana⁴,
Ramnath Subbaraman⁵, Andrew McDowell⁶, Sofi Bergkvist⁷, Ranendra K. Das³,
Veena Das⁸, Jishnu Das^{1,9*}, Madhukar Pai^{10,11*}

Engaging effectively with the private sector

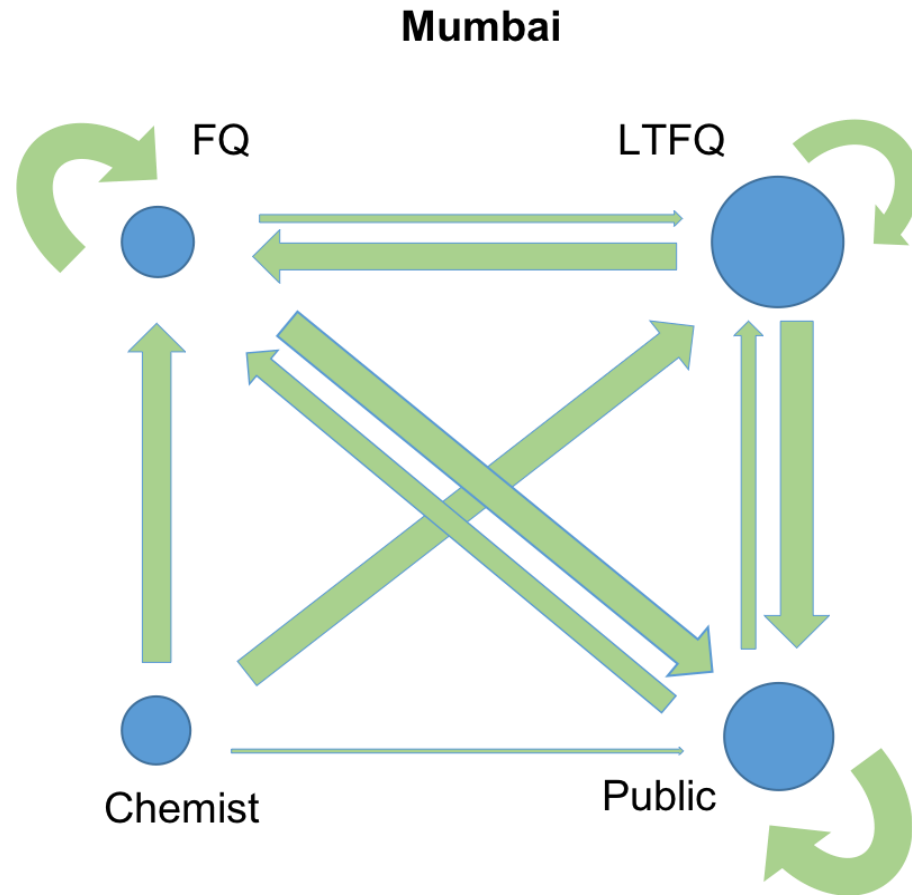
- PSE forms important part of India's NSP
- BMGF pilots in India: Mumbai, Patna and Mehsana
 - 'Public-Private Support Agencies' to incentivize high-quality TB care in the private sector, and better reporting
 - Led to >40% increase in notifications
- Now country-wide expansion of these efforts (JEET projects)



Private sector engagement as a microcosm of UHC

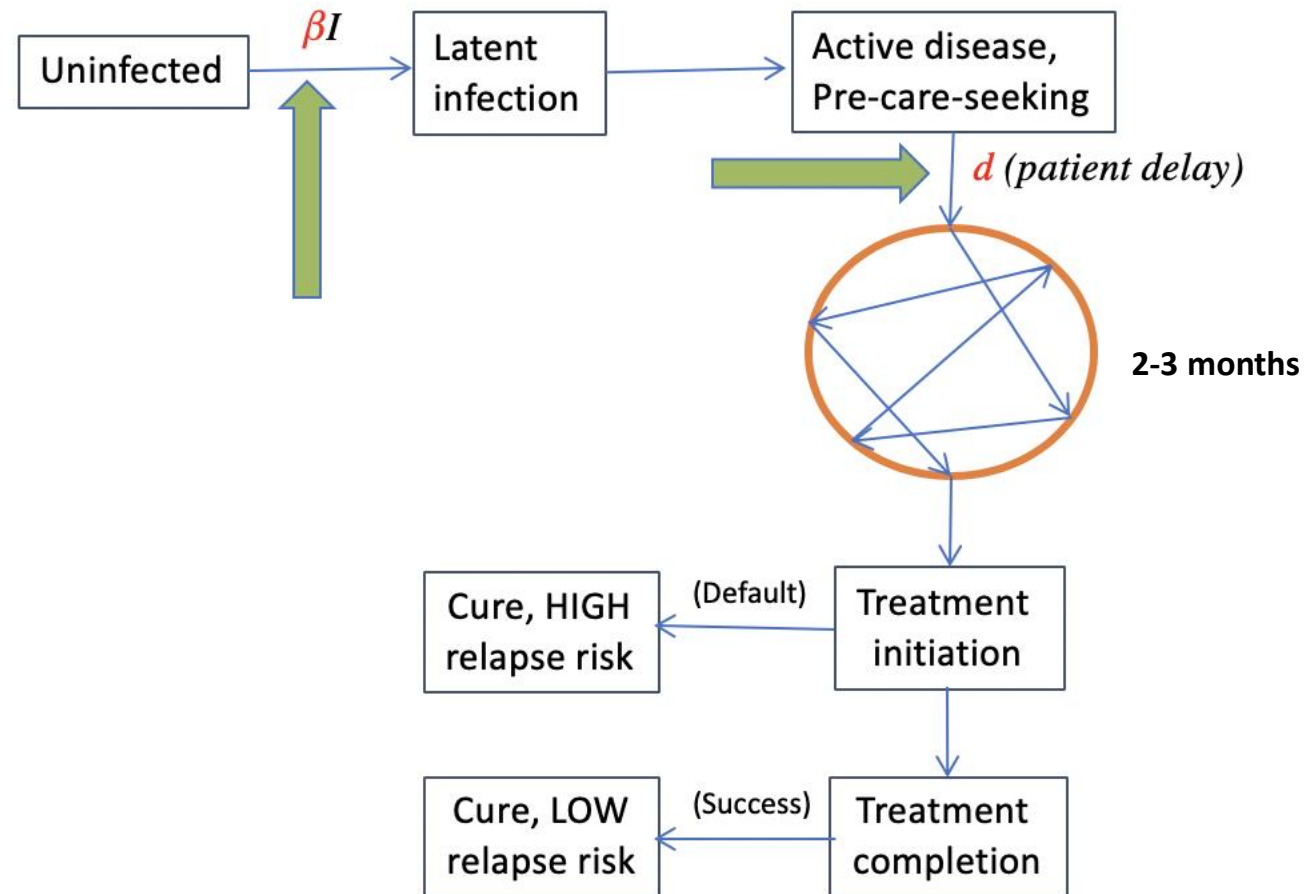
- “Initiate and sustain all patients on appropriate anti-TB treatment wherever they seek care, with patient friendly systems and social support”
 - India TB NSP, 2017 - 2025
- Govt supplies free, first-line TB treatment for diagnosed TB patients
- Social welfare support for all those on TB treatment
- Subsidised access to high-quality TB diagnostics
- **How might all of these measures impact TB transmission?**
- Modelling needs an understanding of the *patient journey* to TB treatment initiation

Patient movement through the healthcare system

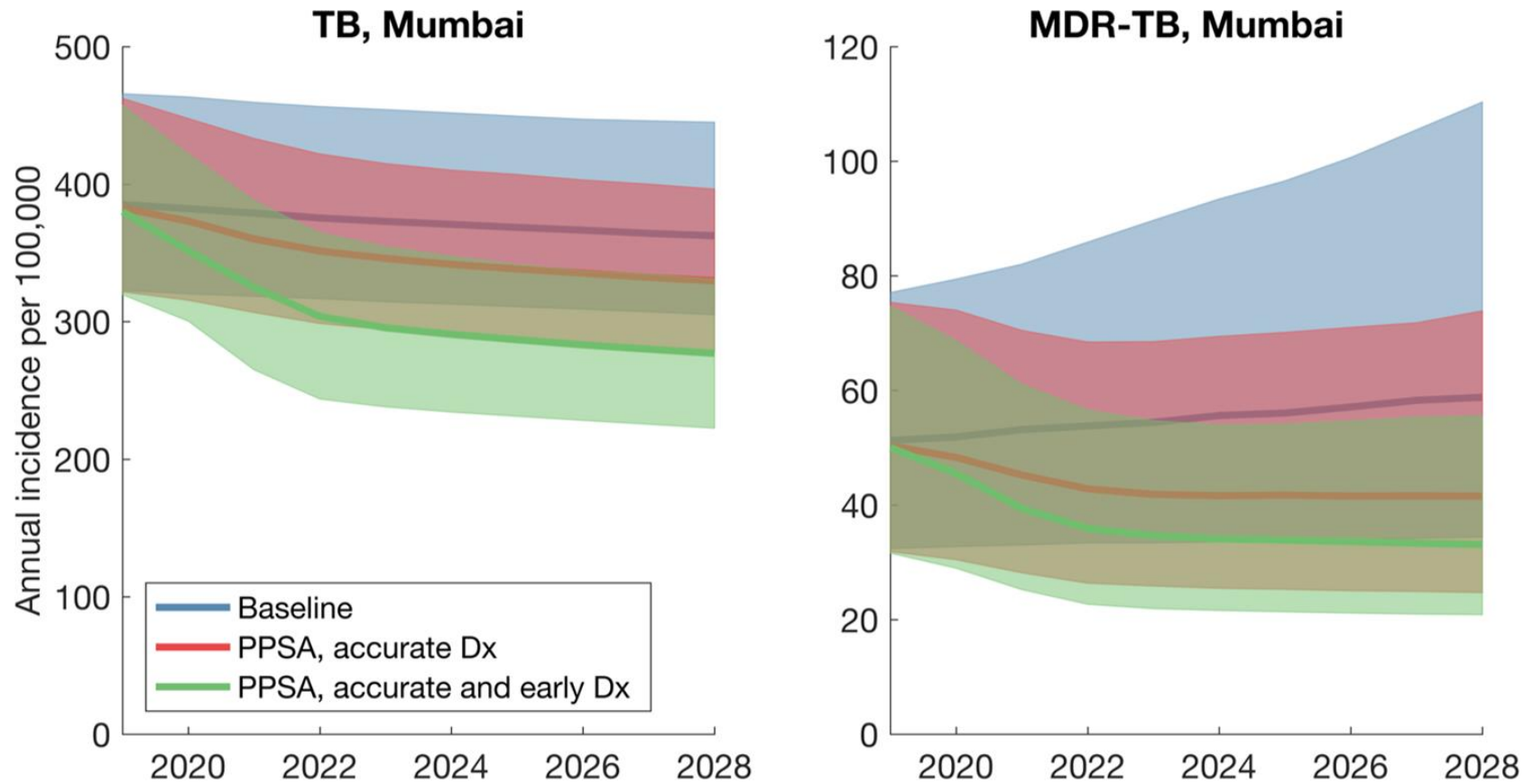


Analysis of data in: Mistry et al, *PLoS ONE* (2016)

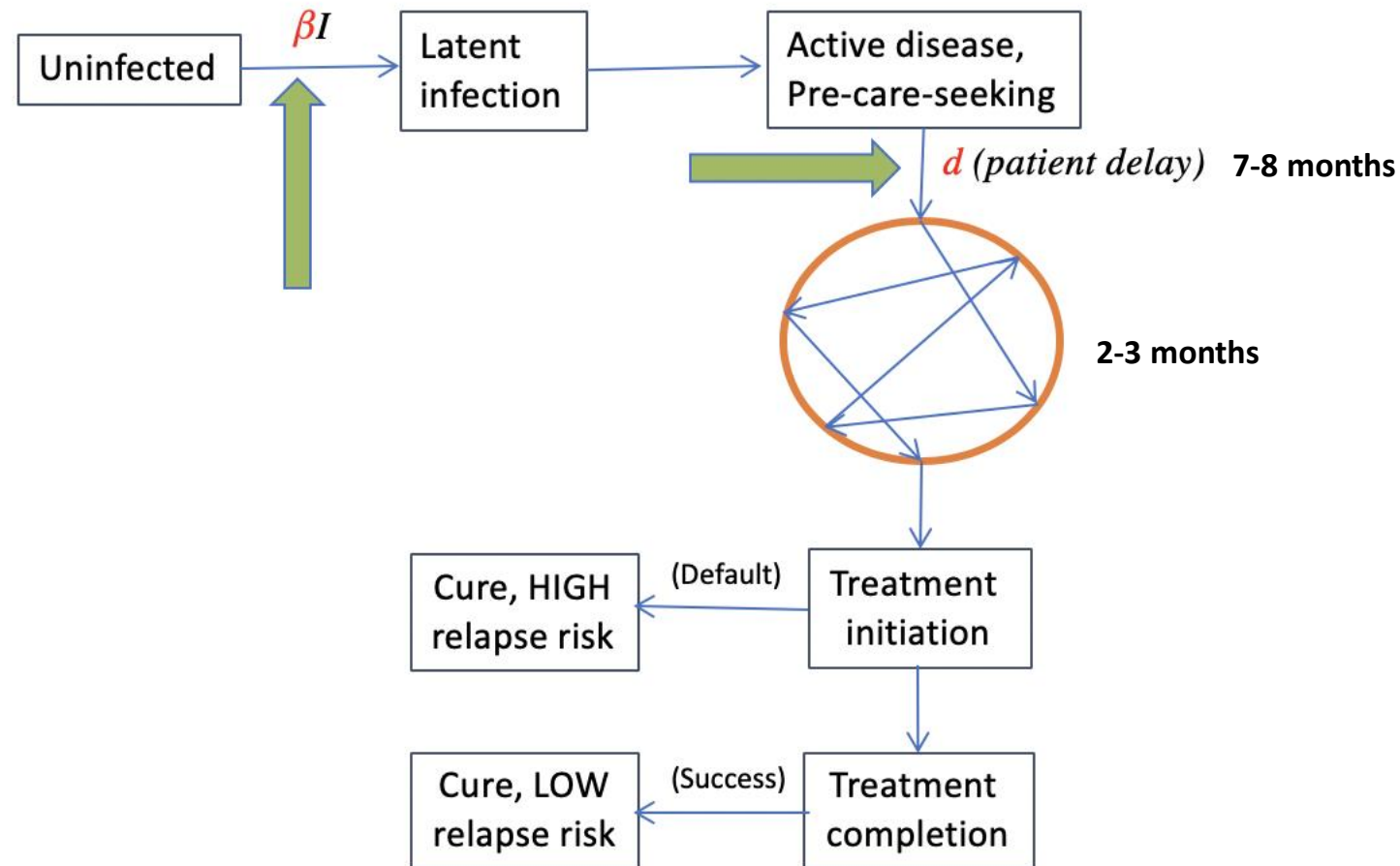
Modelling the potential impact of PSE



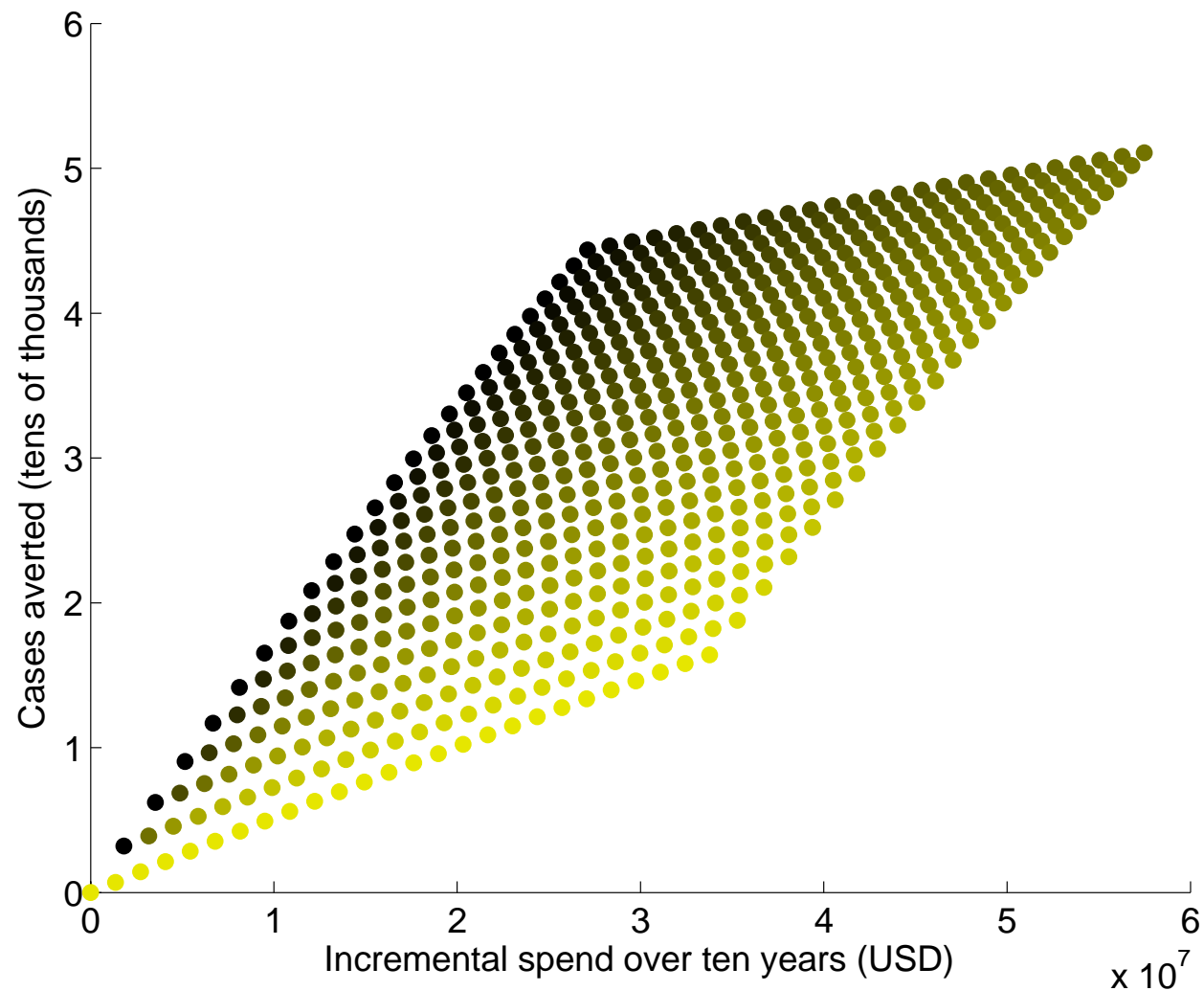
Modelling the potential impact of PSE



Modelling the potential impact of PSE



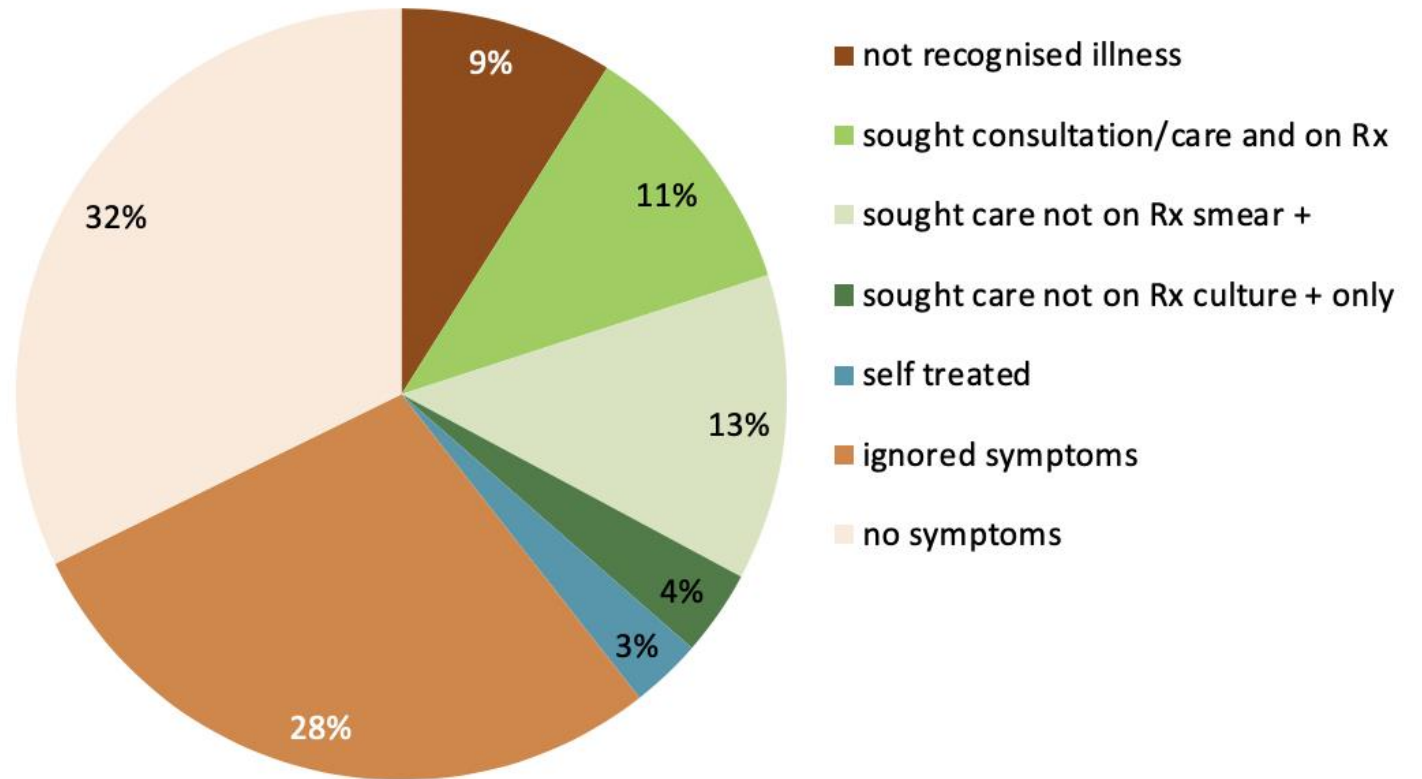
Formal or informal providers?



(Manuscript in prep)

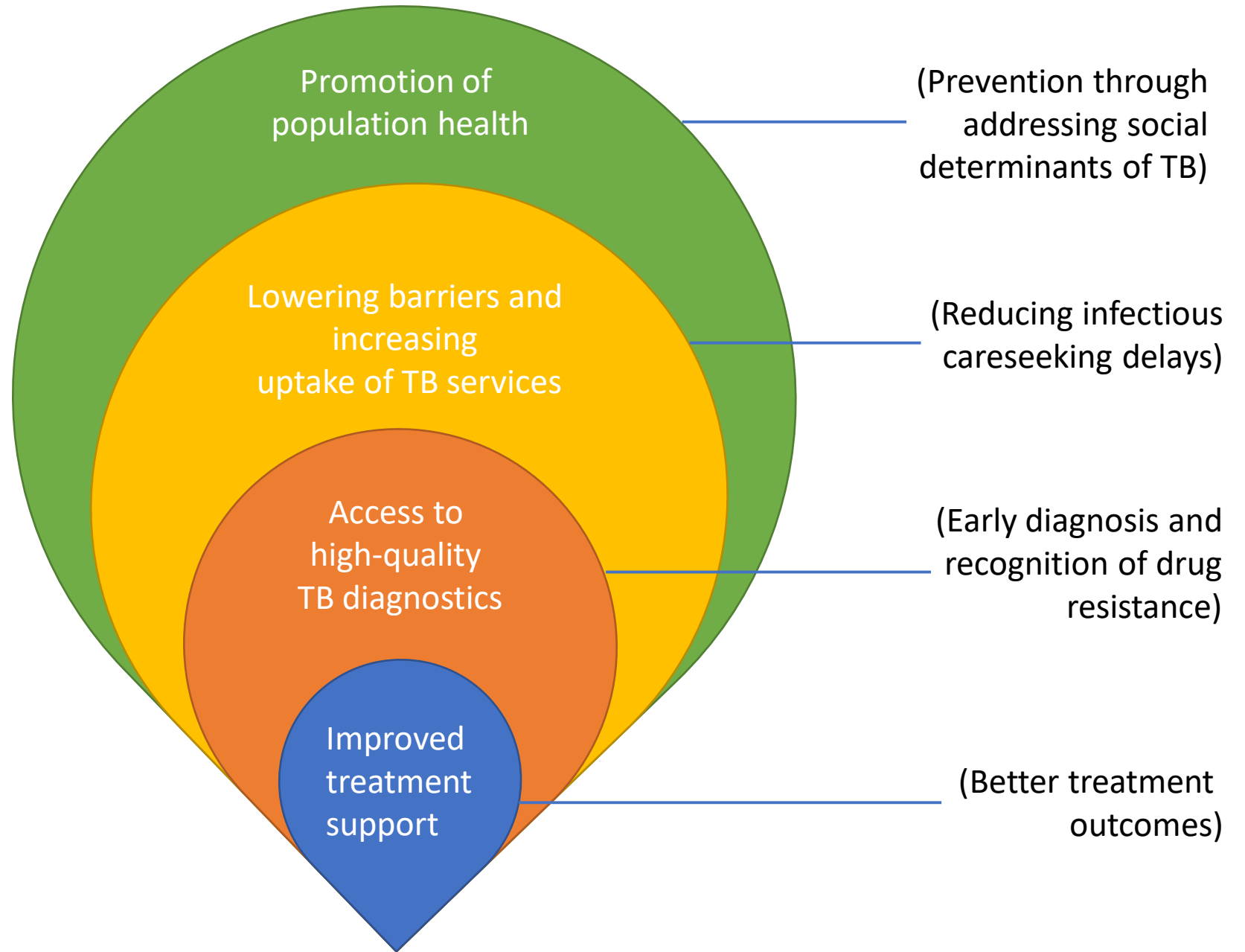
A recurrent picture

- If UHC is primarily a means of optimizing the 'supply side' of TB care,
- ...It may have only modest impact on TB burden
- But will be a *critical foundation* for future interventions



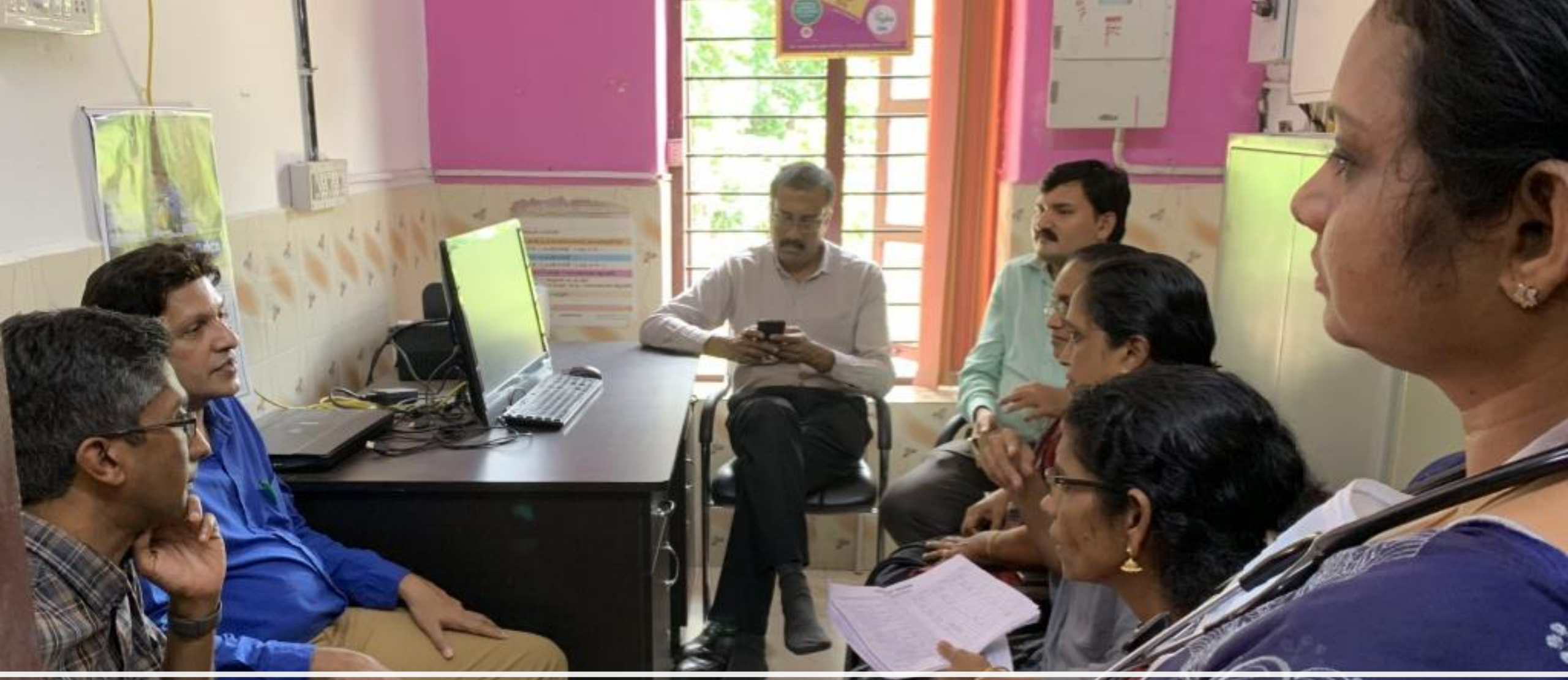
Gujarat prevalence survey, 2011

UHC and TB transmission



UHC in TB: another angle





UHC in TB: another angle

Conclusions

- Private sector engagement is a critical foundation for TB control in India...
- But may not move the needle on incidence much by itself
- Similarly, if effect of UHC is limited to improved treatment outcomes, it may also have only a modest effect on TB burden
- In theory, more substantial impacts may result from:
 - Shortening the time from symptoms to first contact with a TB diagnostic test
 - Promoting health and alleviating social determinants to prevent TB
- **Are these things we expect from UHC?**
- **Can we quantify these potential effects?**