

# Zero TB Karachi: Targeting Multiple Diseases from a Single Disease Platform

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# LONDON

## FAST-TRACK CITIES 2019

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## Cast out by HIV

How hundreds of children have been infected

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## Reused Syringes, Drips Infected Hundreds of Pakistani Children With HIV

More than 700 people have tested HIV positive in a southeastern Pakistani town

By [Preetika Rana](#)

Updated June 14, 2019 10:52 am ET

Unsafe, but common, practices such as reusing syringes and drips caused hundreds of Pakistani children to be infected with HIV, according to a World Health Organization team investigating an outbreak in a poor southeastern town.

The WHO's preliminary findings, reviewed by The Wall Street Journal and presented to Pakistani health officials Friday, offer a window into how more than 650 children tested positive for HIV in one town during six weeks of government tests, while nearly all their parents tested negative.

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Suhail Gadhi-PYO @Suhail\_gadhi · May 25

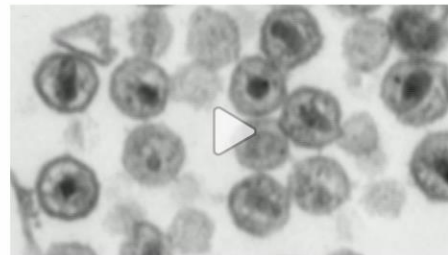
The Young global leader Chairman [#PPP](#) @BBhuttoZardari Visited Taluka Hospital [#RatoDero](#) to Monitor [#HIV](#) Screening Center & enquired about health of AIDS Patients and also chaired meeting regarding prevention of [#AIDS](#). [#AidsFree](#) Larkana/ Sindh.



51 61

## The Pakistan city where almost 700 people have been infected with HIV

By Zulfikar Kumbhar, Sophia Salli and [Julia Hollingsworth](#), CNN  
Updated 05:42 GMT (13:42 HKT) May 30, 2019



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## The Guardian

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## Pakistan doctor held diagnosed with HIV

Authorities investigating if Muzaffar Gh knownly spread virus



1,098

# Outbreak Response: community-based TB/HIV screening

## Zero TB Working with Provincial HIV program



- HIV outbreak response - collaboration across public and private sector
- Concurrent TB & HIV screening camp
- 1000 HIV positive individuals found
  - >800 were children
- 3 MTB positive individuals identified
- Continued active screening for TB/HIV





**Zero TB CITIES** is a global initiative targeted at creating “islands of elimination” with strong local ownership in high burden settings

Zero TB implements evidence-based **Search, Treat & Prevent** approaches from around the world shown to be successful in controlling TB





# Zero TB Cities and districts – current, new and potential

Almaty, Kazakhstan\*\*

Balti, Moldova

Bangkok, Thailand\*\*

Chennai, India

Dhaka, Bangladesh\*

Geissen, Germany

Hai Phong, Vietnam

Hanoi, Vietnam

Ho Chi Mihn City, Vietnam

Indore, India\*\*

Karachi, Pakistan

Kathmandu, Nepal\*\*

Kano, Nigeria\*\*

Kisumu, Kenya

Lagos, Nigeria \*\*

Lima (Carabayllo), Peru

Manila, Philippines\*\*

Melbourne, Australia\*\*

Mexicali, Mexico

Mtata, South Africa\*\*

Mumbai, India\*\*

Muscat, Oman\*\*

Odessa, Ukraine

Pattaya, Thailand\*\*

Peshawar, Pakistan

Quetta, Pakistan\*\*

Shenzhen, China\*

Sofia, Bulgaria\*\*

Tbilisi, Georgia\*\*

Ulaanbaatar, Mongolia

Vladimir, Moscow



\* First of multiple cities planned

\*\* Discussions of alignment underway

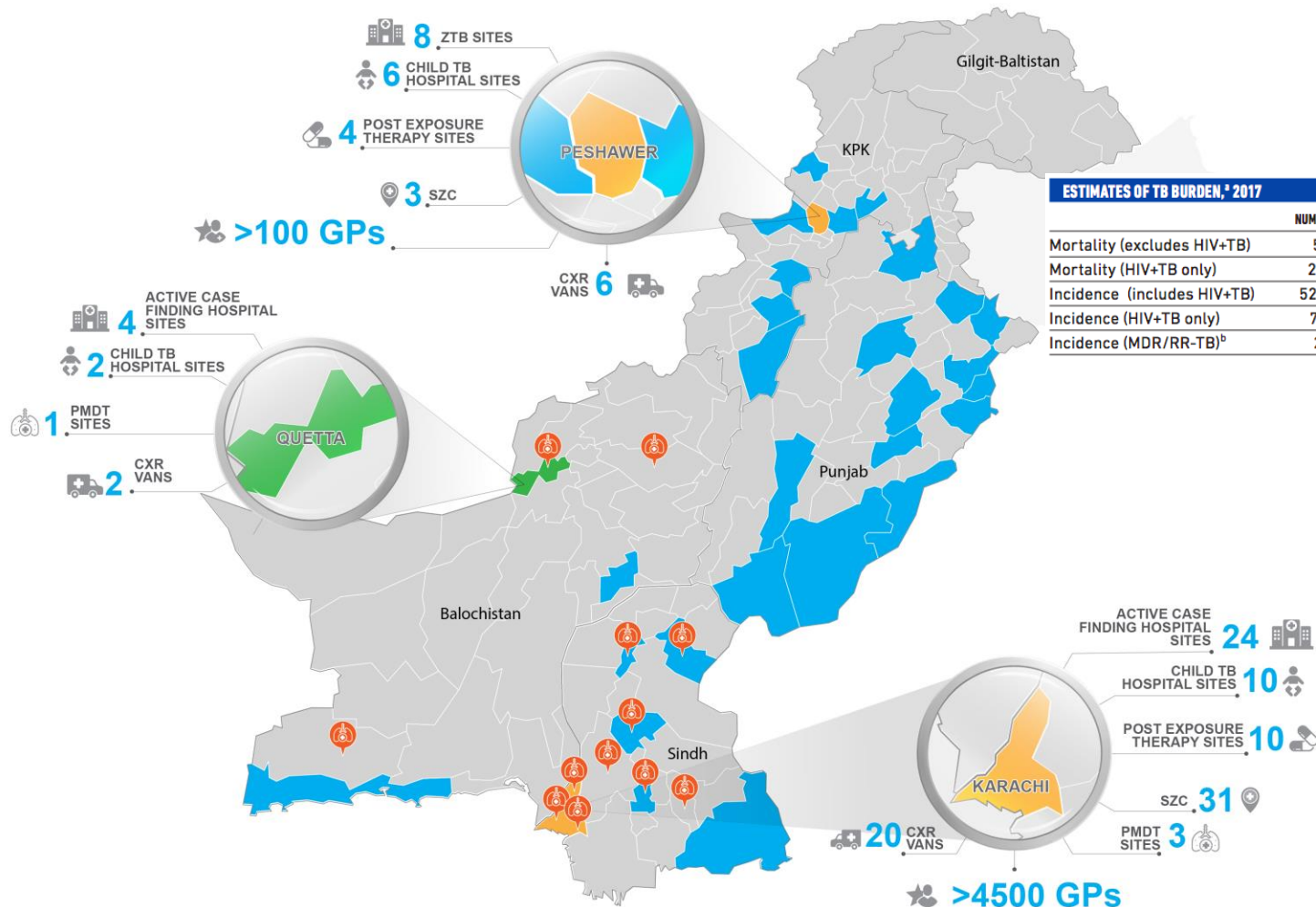
# Pakistan's Zero TB Initiative

Global Fund Support

2016-2017 USD 40m – Zero TB Karachi +32 districts

2018-2020 USD 40m – Zero TB Karachi, Peshawar, Quetta + 32 districts





**ESTIMATES OF TB BURDEN, \* 2017**

	NUMBER (THOUSANDS)	RATE (PER 100 000 POPULATION)
Mortality (excludes HIV+TB)	54 (42–67)	27 (21–34)
Mortality (HIV+TB only)	2.2 (1.1–3.8)	1.1 (0.56–1.9)
Incidence (includes HIV+TB)	525 (373–704)	267 (189–357)
Incidence (HIV+TB only)	7.3 (3.6–12)	3.7 (1.8–6.2)
Incidence (MDR/RR-TB) <sup>b</sup>	27 (17–39)	14 (8.8–20)





3 Zero TB  
Cities /  
32  
districts

~1200  
staff

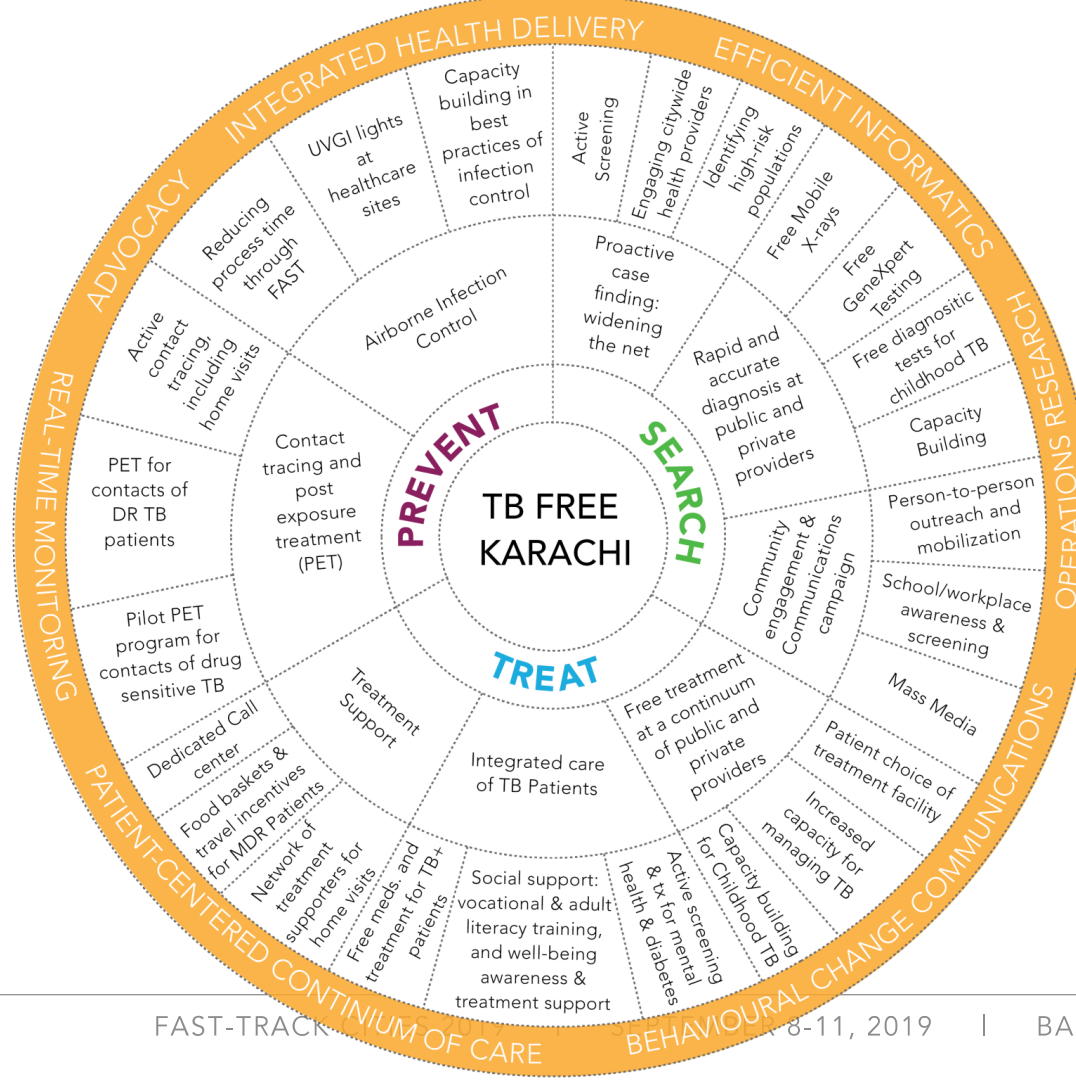
>3  
million  
symptom  
screened

55  
mobile  
X-ray  
vans

>1.5  
million  
Screened  
by CXR

>61,000  
TB  
patients  
notified







# Karachi: All Forms TB Notifications

## 2008 – 2018



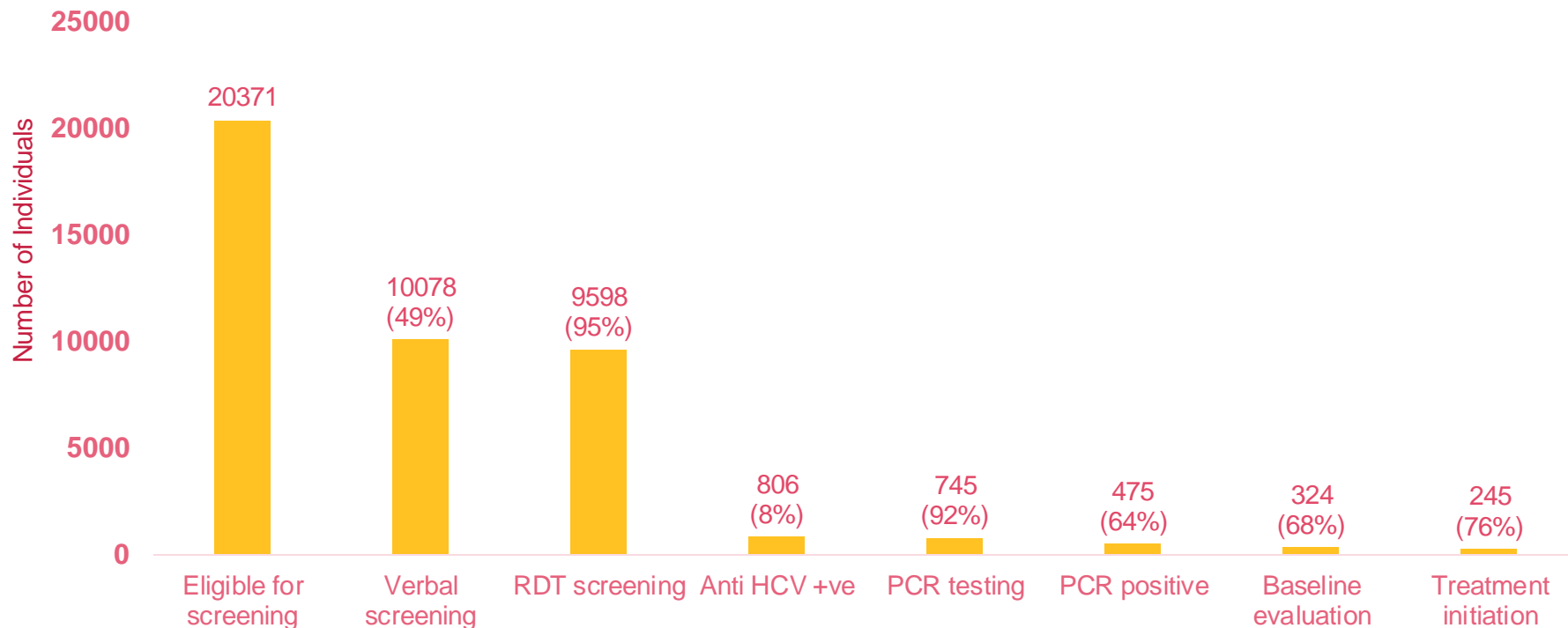
# TB-HCV Integrated Screening and Treatment



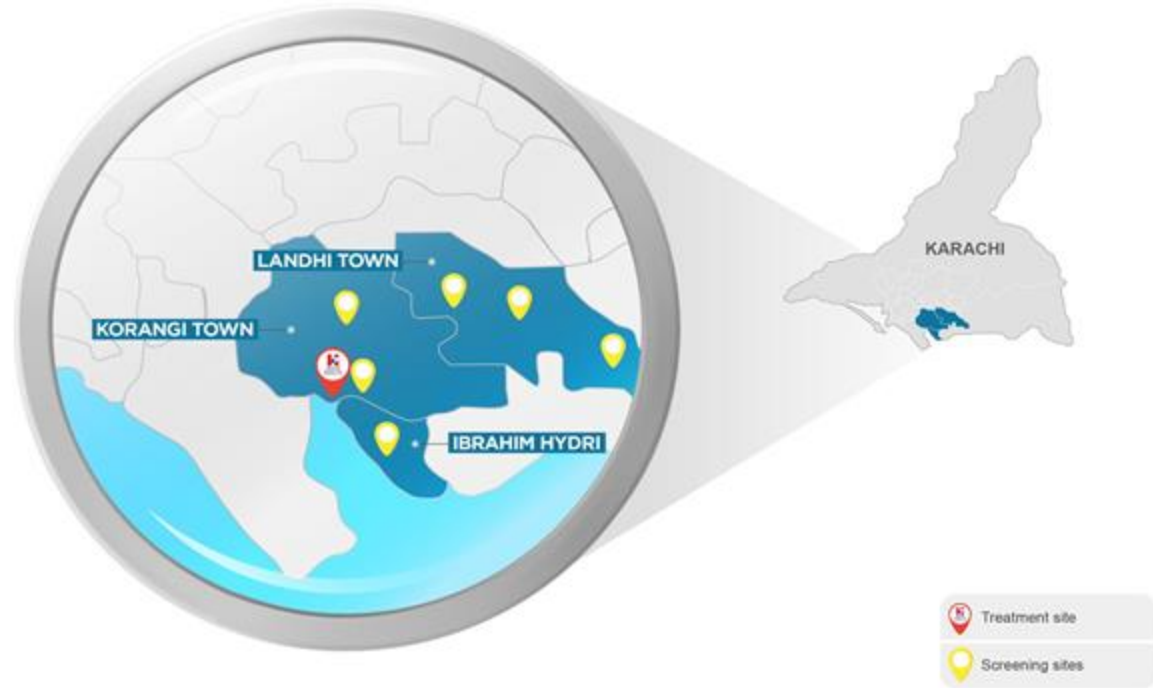
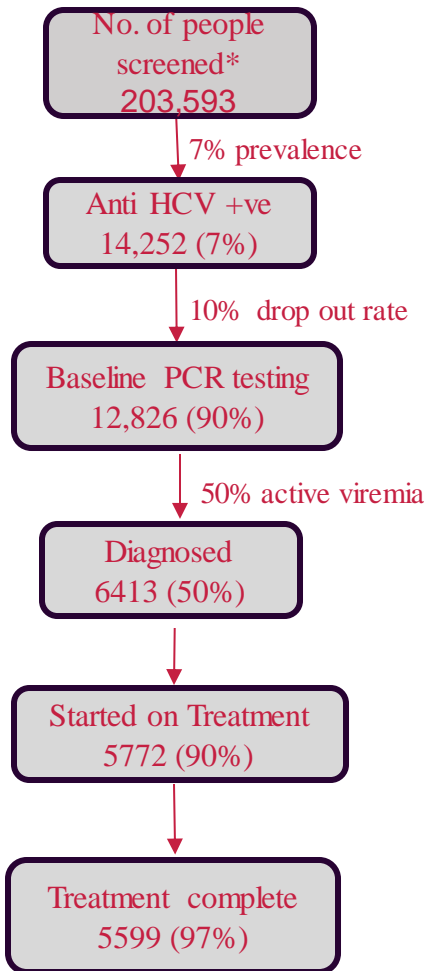


# HCV Testing and Treatment Cascade

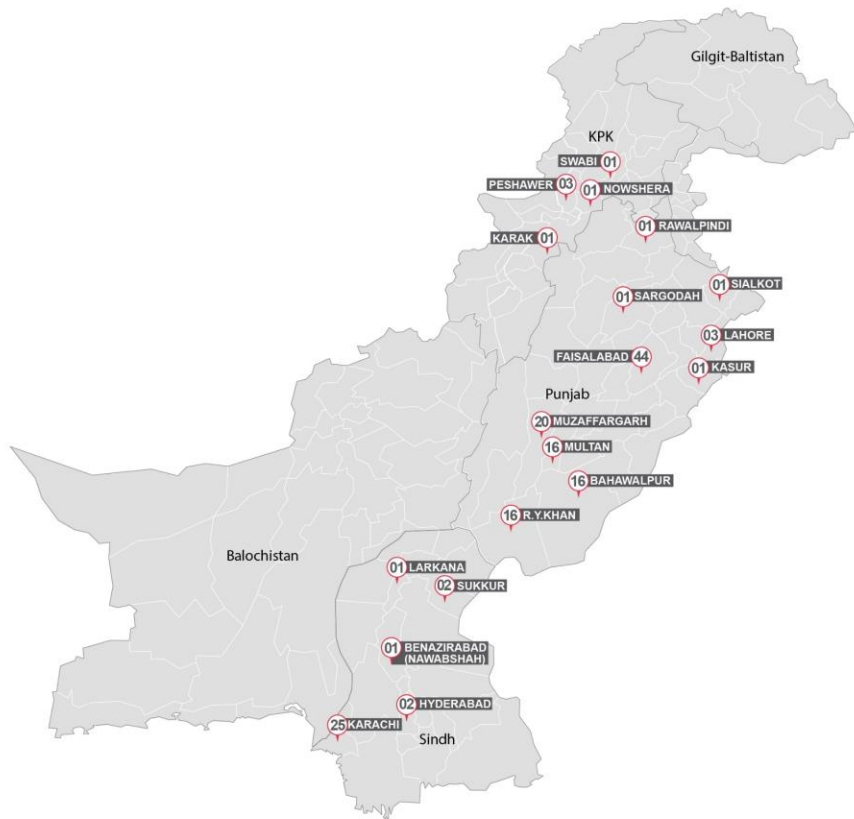
## Jan to July 2019



# Karachi HCV Micro-Elimination Plan: Korangi, Landhi, Ibrahim Hyderi



# Integrated HCV-TB Diagnostic Services



Expansion of HCV services via integration with **GeneXpert** testing facilities throughout the private and public sector

Number of GeneXpert machines

**157**

# Integrated Practice Units (IPU)

*Supported by the Harvard  
Medical School-Center for  
Global Health Delivery-Dubai*

Integration of mental health and diabetes services with 6 existing TB facilities to improve adherence, treatment outcomes and provide holistic care



Mass screening for  
Depression & Anxiety



TB Adherence & Mental  
Health Counseling



Psychologist-Severe  
Case Consultation



Diabetes Screening  
and Consultation



Diabetes Medication and  
Counseling



# Integrated Practice Units (IPU)



6

IPUs developed  
across public and  
private hospital  
settings

10

Counselors trained  
and deployed

3,500

Screened for  
Depression and  
Anxiety. **30%**  
Symptomatic

1,012

Enrolled and given  
baseline adherence  
counselling. **562**  
completed MH  
intervention

3,441

Screened for  
Diabetes. **21%**  
Symptomatic

## Key Finding from Integrated Practice Unit (IPU) for Mental Health and TB

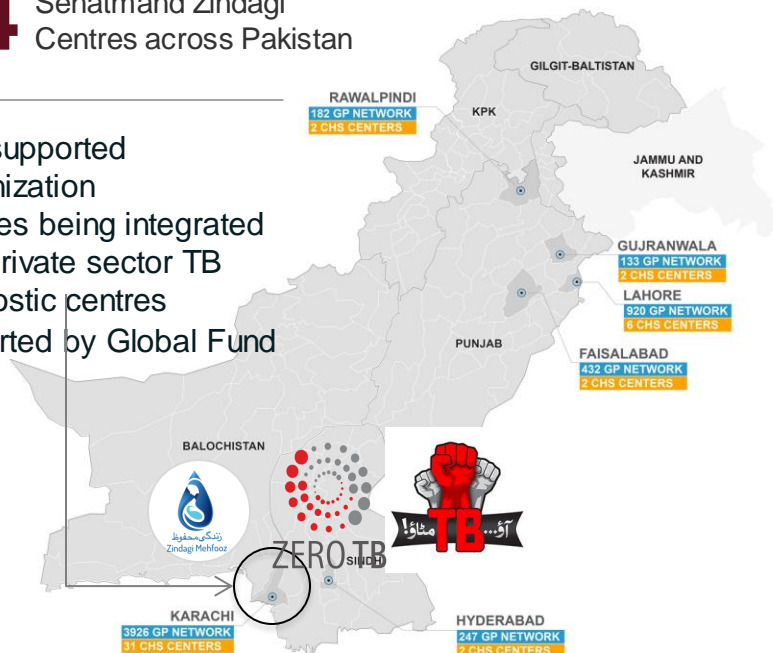


**92%** of patients who completed the mental health intervention also completed TB treatment, compared to a **75%** TB treatment completion rate in those who did not complete the mental health intervention *(Unpublished data)*

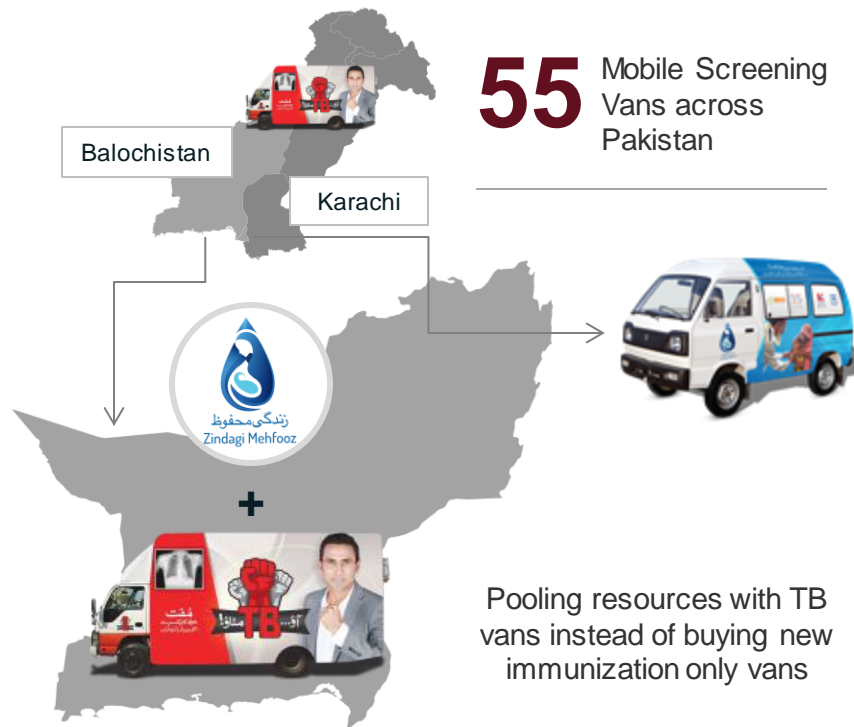
# Gavi Pilot - Integrating Immunization & Mobile Van TB Screening Services in Pakistan

**64** Sehatmand Zindagi Centres across Pakistan

Gavi supported immunization services being integrated in to private sector TB diagnostic centres supported by Global Fund



**55** Mobile Screening Vans across Pakistan



Pooling resources with TB vans instead of buying new immunization only vans



## Conclusions

### Targeting Multiple Diseases from a Single Disease Platform

- Demonstrated feasibility in Zero TB Karachi context
  - TB, HIV, mental health, routine immunization, diabetes
- Responsive to needs of patients and communities
  - Improved community engagement and treatment outcomes
- Synergizes investments from multiple sources
  - cost savings, more efficient use of testing platforms, pooled procurement
- More focus required from donors and governments for multi-disease platforms (i.e. health systems strengthening)