



# The IRD Model

An Integrated Community Response to the COVID Pandemic

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## Mobile X-ray Van Based Integrated TB & COVID-19 Screening

Equipped with Triple Camera  
By Faisal  
Ahmedani



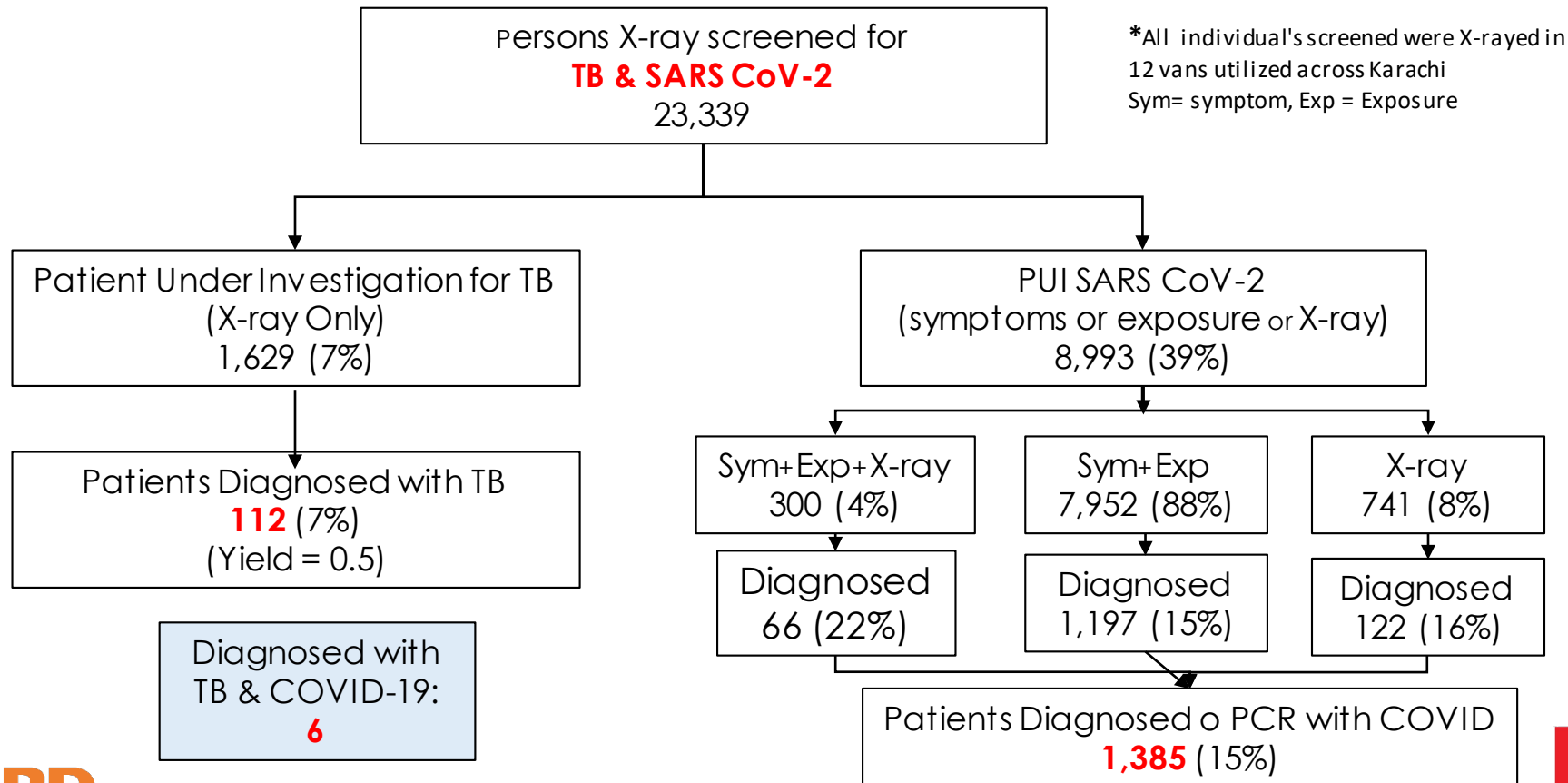


# TB and COVID-19 Screening



# Karachi: Mobile X-ray Van Based TB & COVID-19 Screening

April 1 - July 31, 2020





# The IRD Model



An **Integrated Community Response** to the **COVID-19** Pandemic

The IRD Model takes the fight against COVID-19 out of hospitals and emergency rooms, and back into the community where infections spread, where patients first experience symptoms and where transmission can be interrupted

We aim to empower local private providers, contact tracers, mental health counselors and high school girls with the tools to protect themselves and care for patients and families in the community



**10,000**

Kiran  
Sitaras



Masks



Training

Promote mask use  
and handwashing in  
neighborhood and  
screen households

**200**

Mental Health  
Counselors



Food Packages



Cash Packages

Provide psychosocial  
support, including  
food support and  
cash, to patients in  
isolation and families  
in quarantine

**200**

Contact  
Tracers



Phone App



Patient Database

Classify contacts of  
confirmed patients  
into high and low-risk  
in a centralised  
database and track  
home-based  
quarantine

**1,000**

Private  
Practitioners



PPE



Pulse  
Oximeter



Oxygen  
Therapy

Equip with PPE, pulse  
oximeters, oxygen  
cylinders and  
diagnostic referral  
links



# The IRD Model

An Integrated Community Response to the COVID-19 Pandemic



1. **Triage** at *neighborhood clinics*
  - Symptoms, pulse oximetry, oxygen therapy, oral or IV steroids at Chest Physician clinics
  - PPE for physician and clinic assistant
2. **Testing, O2 therapy** and referral via *local health centers*
  - Free chest X-rays, free oxygen therapy
  - PCR and antibody tests for a fee in private sector, PCR free at select public/charity labs.
  - Two-way referral to/from Emergency Rooms or Isolation Facilities
3. **Trace** all index patients through team of *contact tracers*
  - Centralized Electronic Contact Registry
  - Risk Classification – High or Low Risk – Quarantine at home
4. **Social support** and mental health services by *counselors*
  - Food or cash for families in quarantine, counseling
5. **Personal protection** and information via health workers *and Kiran Sitaras*
  - PPE for health workers in GP clinics
  - Masks for affected families and neighborhoods
  - Interventions to reduce stigma



# Screening and Oxygen Therapy in Private Clinics

June 1, 2020 – July 31, 2021



**200+** GP Clinics  
On-board



**566** GP Trainings  
Conducted



Photo Credits: Shehzad Noorani



**57,432** Screenings  
Conducted



**3,133** Oxygen  
Therapies Performed



Photo Credits: Shehzad Noorani

# 3,133 Oxygen Therapies Performed at GP Clinics

July 21, 2020 – June 27, 2021



1,578

51%

+46

since last week



1,555

49%

+96

since last week

90%

Average Oxygen Saturation Pre-Oxygen Therapy

4 l/min

Average Rate of Oxygen Therapy

34 min

Average Duration of Oxygen Therapy

96%

Average Oxygen Saturation Post-Oxygen Therapy

96%

Sent Home

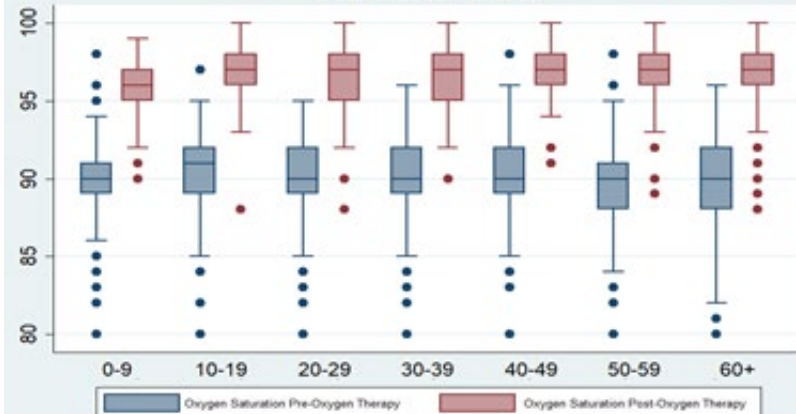
(3,013 out of 3,133 patients)

4%

Referred

(120 out of 3,133 patients)

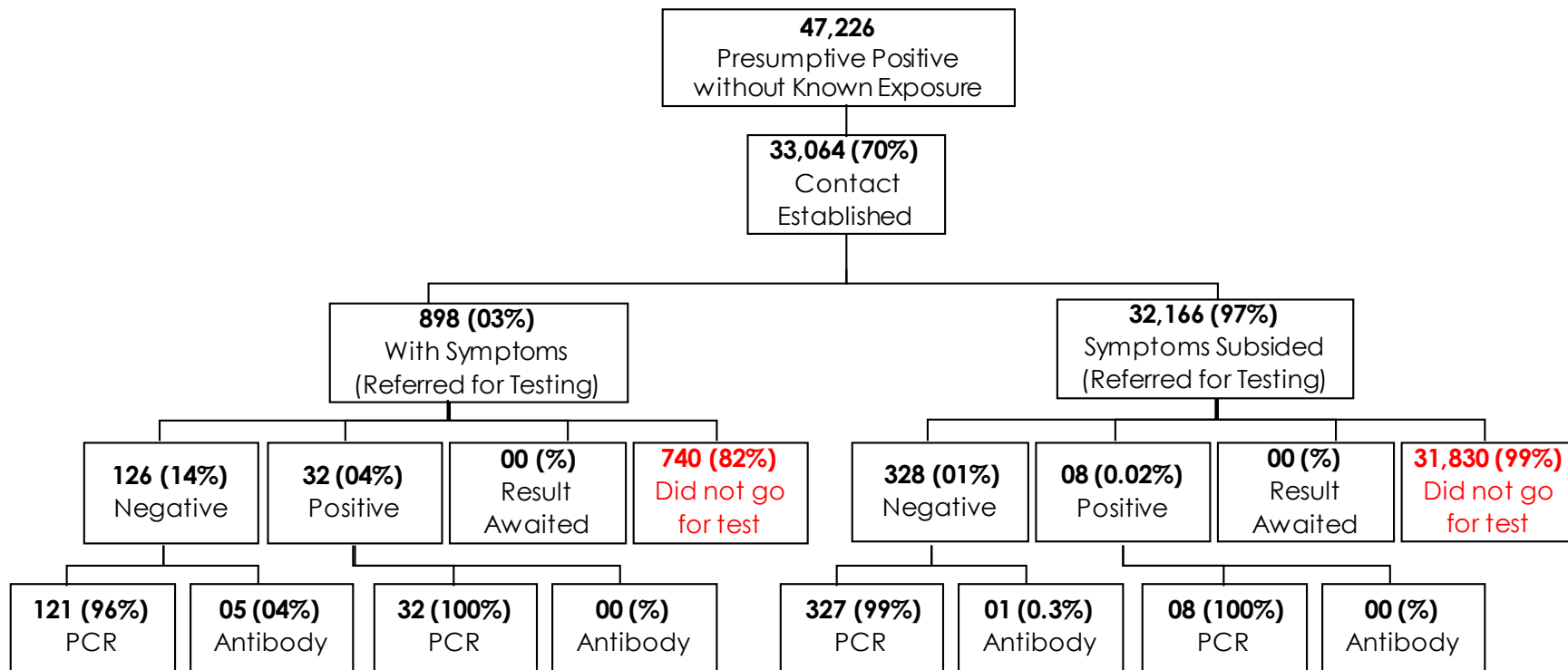
Box Plot of Oxygen Saturation by Age  
Data of 2602 Patients





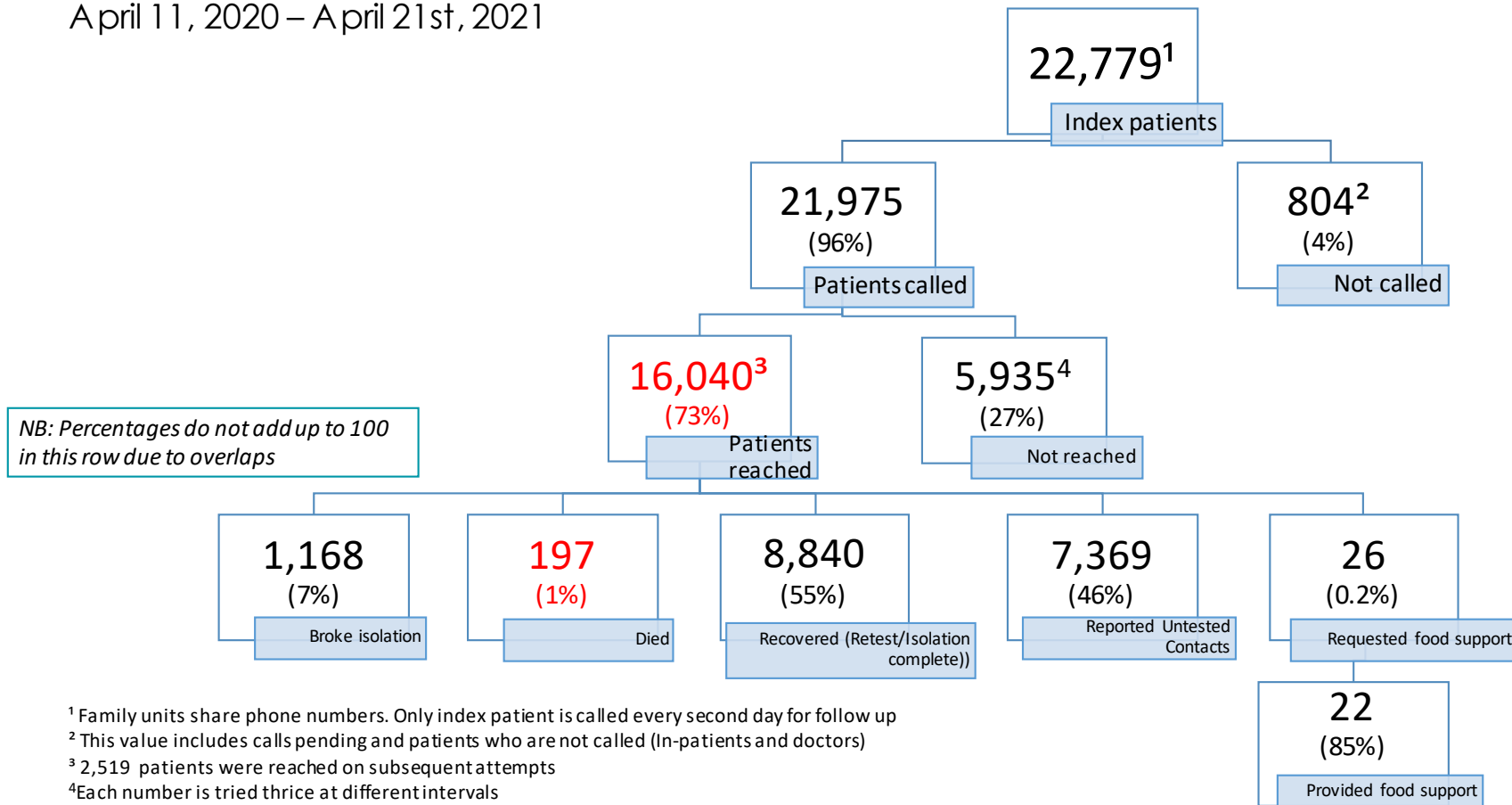
# COVID -19 Screening at GP Clinics - Karachi

## June 1, 2020 - June 27, 2021



# Phone-based Contact Tracing among Patients Tested Positive for COVID-19

April 11, 2020 – April 21st, 2021



<sup>1</sup> Family units share phone numbers. Only index patient is called every second day for follow up

<sup>2</sup> This value includes calls pending and patients who are not called (In-patients and doctors)

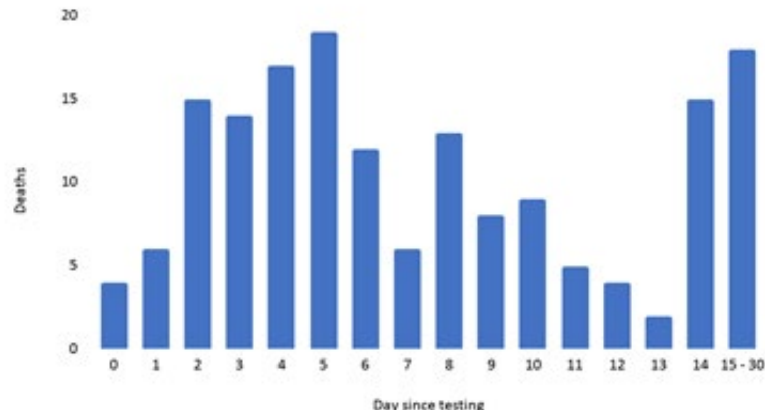
<sup>3</sup> 2,519 patients were reached on subsequent attempts

<sup>4</sup> Each number is tried thrice at different intervals

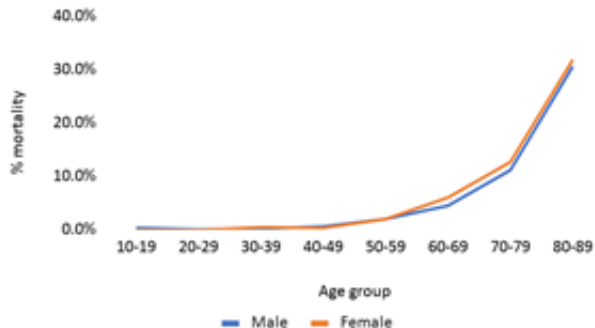
# COVID Test Positive Patient Day of Death since Testing (n = 128)

April 11 2020 – Mar 31, 2021

Total Deaths



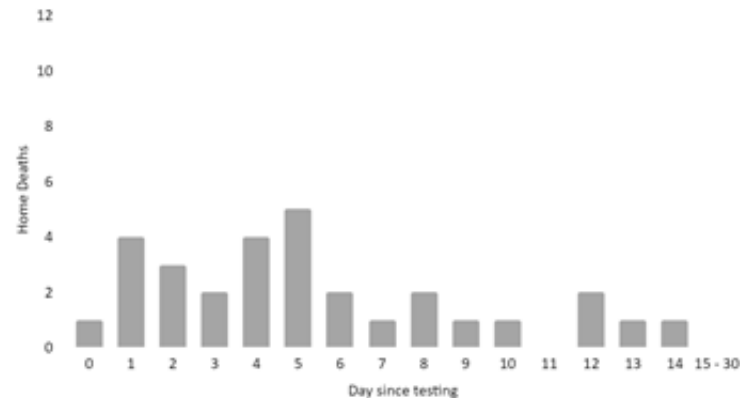
Patients tested positive for COVID-19



Facility Deaths



Home Deaths



# Conclusions

## **COVID-19 surge can quickly overwhelm active TB screening systems**

- 10 times as many COVID-19 patients identified as TB patients during mass X-ray screening during first surge
- Mass Antigen Rapid Diagnostic Tests (RDTs) screening will be key (now being introduced with support from FIND and Stop TB)

## **TB investments well suited to pivot to COVID-19 response**

- Contact tracing and mental health support for COVID positive patients
- Private sector provider networks – GP clinics
- Data collection and reporting systems





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An **Integrated Community Response** to the **COVID-19** Pandemic



## Donors



**GLOBAL  
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**Stop TB Partnership**  
**TB REACH**



**British Asian  
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**The  
Dawood  
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**FIND** **Diagnosis for all**