



TB at the centre of airborne Pandemic Preparedness and Response

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Stop TB Partnership Board Meeting, Geneva
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Play video first: <https://vimeo.com/139926588>

COVID-19 Pandemic Experience

TB program resources and expertise were used to fight Covid:

- TB human resources
- Hospitals, laboratories / diagnostics
- Airborne infection control practices

TB programs were familiar with measures used in COVID:

- Masking, contact tracing, respiratory care, social distancing, ventilation, UV lights, etc.

TB programs were underfunded & capacity was already stretched; this led to:

- Disruptions to TB services
- Inadequate support to COVID

Tuberculosis and COVID-19 – more in common than you think

Illustrative

Common manifestations

Airborne infections transmitted through breath
1 untreated TB infects 15/yr; 1 C19 infects many



Causing similar symptoms (e.g., cough, fever)



Affecting primarily the respiratory tract



Both have high mortality
TB kills slowly but untreated TB has 50% mortality



Common responses

Testing



Tracing



Masking



Isolating



Airborne infection control



INTEGRATED APPROACH NEEDED FOR PREVENTION AND CARE OF LETHAL RESPIRATORY INFECTIONS – COVID-19, TB AND FUTURE AIRBORNE PANDEMICS

Why TB needs to be in the centre of future pandemic preparedness and response?

- Very likely that next pandemic will be an **airborne** infection
 - Particularly if it is of a magnitude like COVID-19
- TB is an airborne infection, **ever present everywhere**, likely to outlive COVID-19 pandemic
- Adding investments to strengthen infrastructure and capacity of TB programs will help in **developing surge capacity** to fight any new airborne infection of pandemic potential
- Monitoring progress in TB could serve as a **marker** of the state of preparedness to fight any new airborne infection

Areas of investments which will help TB and also prepare the world for the next airborne pandemic

- Airborne infection prevention and control (AIPC)
- Diagnostics: labs, multiplex testing platforms for respiratory pathogens, genome sequencing for drug/vaccine resistant variants, X-ray/imaging with a.i., mobile diagnostic units
- Contact tracing: human resources and infrastructure
- Community systems: community care, community led systems
- Digital health tools: a.i. based CADs, DATs
- Respiratory care: human resources, beds, equipment, supply, surge capacity, pvt sector care
- Disease surveillance and data: ILI/SARI as starting point of surveillance, next gen sequencing capacity for variants
- Vaccine research

Airborne Infection Prevention and Control

- A component of TB programmes for decades, but missing from health system and public spaces/buildings
- Time to change this to prepare for the next airborne pandemic

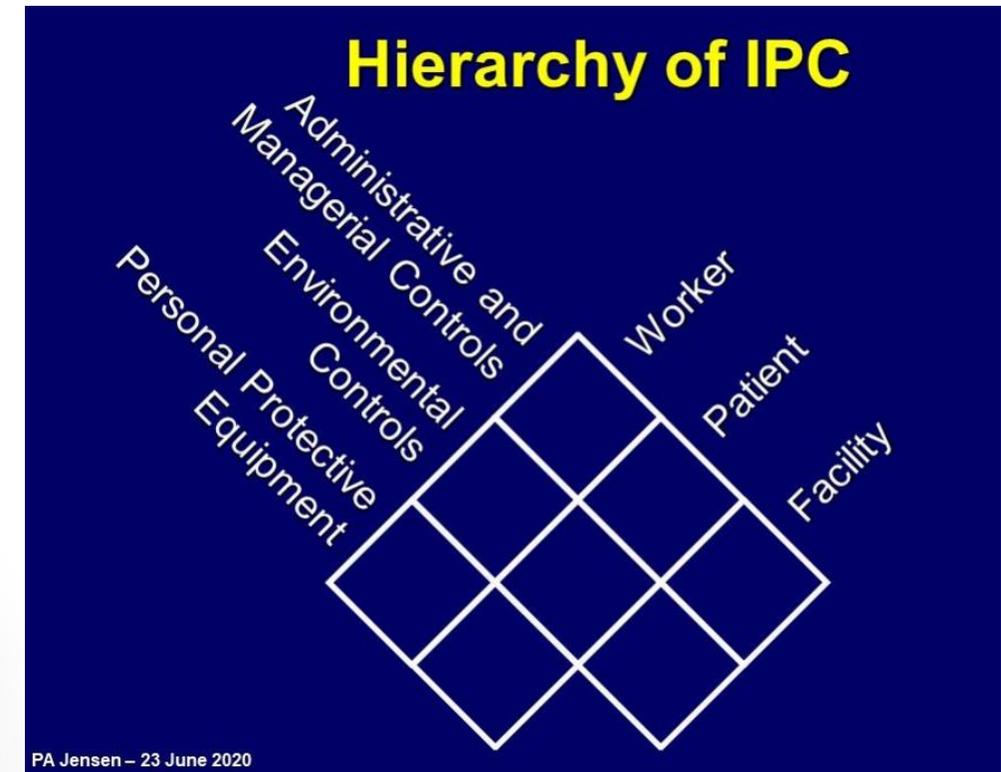
1. Administrative controls

- Triage those with respiratory symptoms
- Isolation
- Respiratory hygiene

2. Environmental controls

- Upper-room germicidal ultraviolet (GUV) systems
- Ventilation systems and filters

3. PPE



Taking respiratory care to the people- INVEST in the same TECHNOLOGY for TB as well as other airborne respiratory illness

Ultraportable Xray with CAD, being used in Pakistan



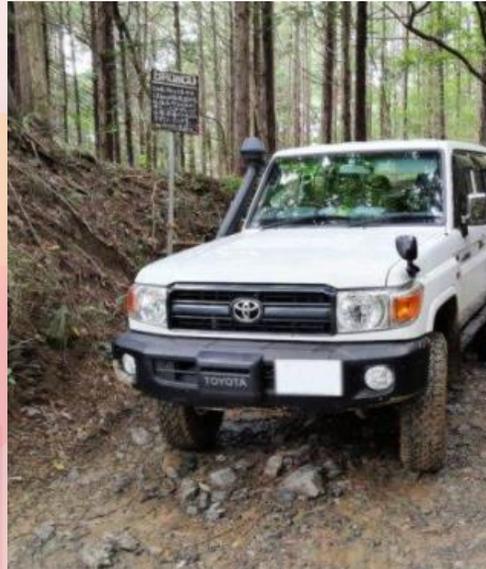
Rapid molecular test for TB & C19 - portable



A standardized van with onboard diagnostics developed by private sector partners

Philippines, in a C19 quarantine facility:
 “How are your lungs? Free Chest X-ray”

<https://www.devex.com/news/how-manila-is-using-its-covid-19-response-to-find-tb-patients-101594>



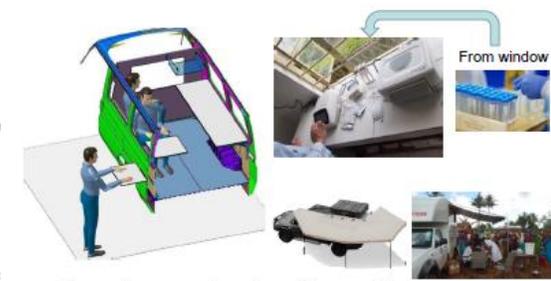
1. X-ray + AI for Chest screening
2. If positive, PCR test in the car



4 passengers can be on board in a car,
 Ex) Radiographer x 1, LAB tech x 2, Driver x 1



X-ray & Panel can be hold at the rear door



Rear door can be closed to avoid contamination
 Or LAB/X-ray test could be managed at outside.

Thank you

Secretariat would like to have Board guidance on making TB the centre of future airborne pandemic preparedness.