

## THE CASE FOR NEW TB VACCINES

Worldwide, TB is the  
second leading infectious  
killer after COVID-19



10.6 million  
People infected with TB  
each year  
1.6 million  
People killed by TB  
each year

Someone dies  
from TB every  
20 seconds



In 2020, more  
than two-thirds  
of TB cases were  
clustered in just  
3 high-burden  
countries



Nearly 1 in 2  
households spend  
more than 20% of  
their income on TB  
treatment costs



Drug-resistant  
TB accounts  
for  
approximately  
1 in 3  
AMR-related  
deaths



Developing new, more effective  
TB vaccines will take **US\$790M**  
in funding each year, but the  
average annual investment is  
currently just **US\$115M**



By 2050,  
a new TB  
vaccine  
could save  
**\$474B**

Every \$1  
invested in new  
TB vaccines  
could provide \$7  
in returns



# Key Principles to Ensure Equitable TB Vaccine Access to Maximize Health Impact

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# Why worry about equitable access now?

## TB Vaccine Pipeline

### TB vaccine candidates in active clinical trials

There are 12 candidates in active clinical trials as of September 2024.

#### Platform

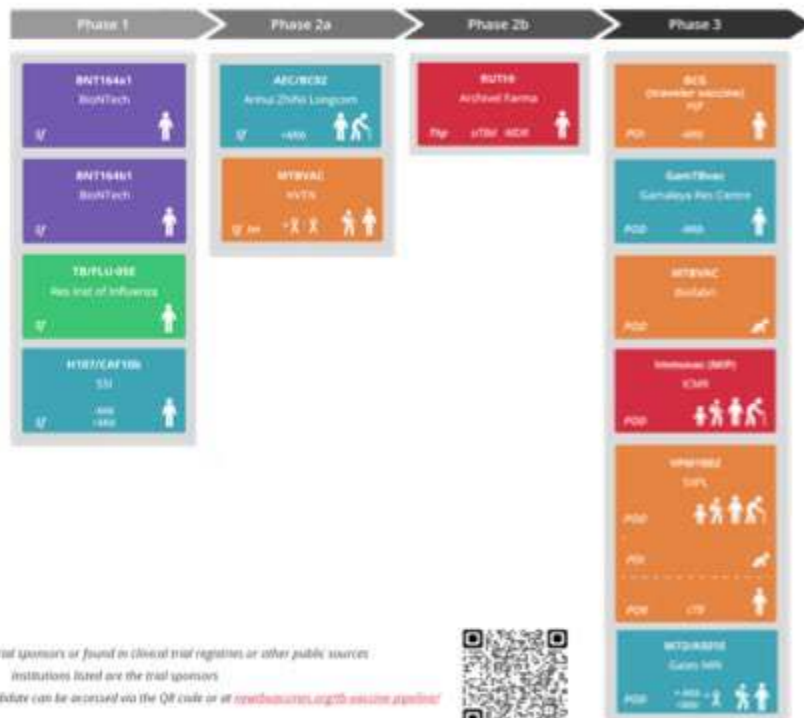
- Mycobacterial - Live attenuated
- Mycobacterial - Inactivated
- Viral vector
- Protein/Adjuvant
- BNA

#### Trial target population

- Elderly
- Adults
- Adolescents
- Children
- Infants
- People living with HIV
- People without HIV infection
- People without Mtb infection
- People with Mtb infection
- People with active TB disease
- People with MOR TB
- People cured of active TB

#### Primary endpoint

- Safety
- Immunogenicity
- Prevention of Infection
- Prevention of Disease
- Prevention of Recurrence
- Therapeutic



Information reported by trial sponsors or found in clinical trial registries or other public sources. Institutions listed are the trial sponsors.

Additional information about each candidate can be accessed via the QR code or at [open.tb.cdc.gov/tb-vaccine-pipeline/](https://open.tb.cdc.gov/tb-vaccine-pipeline/)



Last update: 2 September 2024

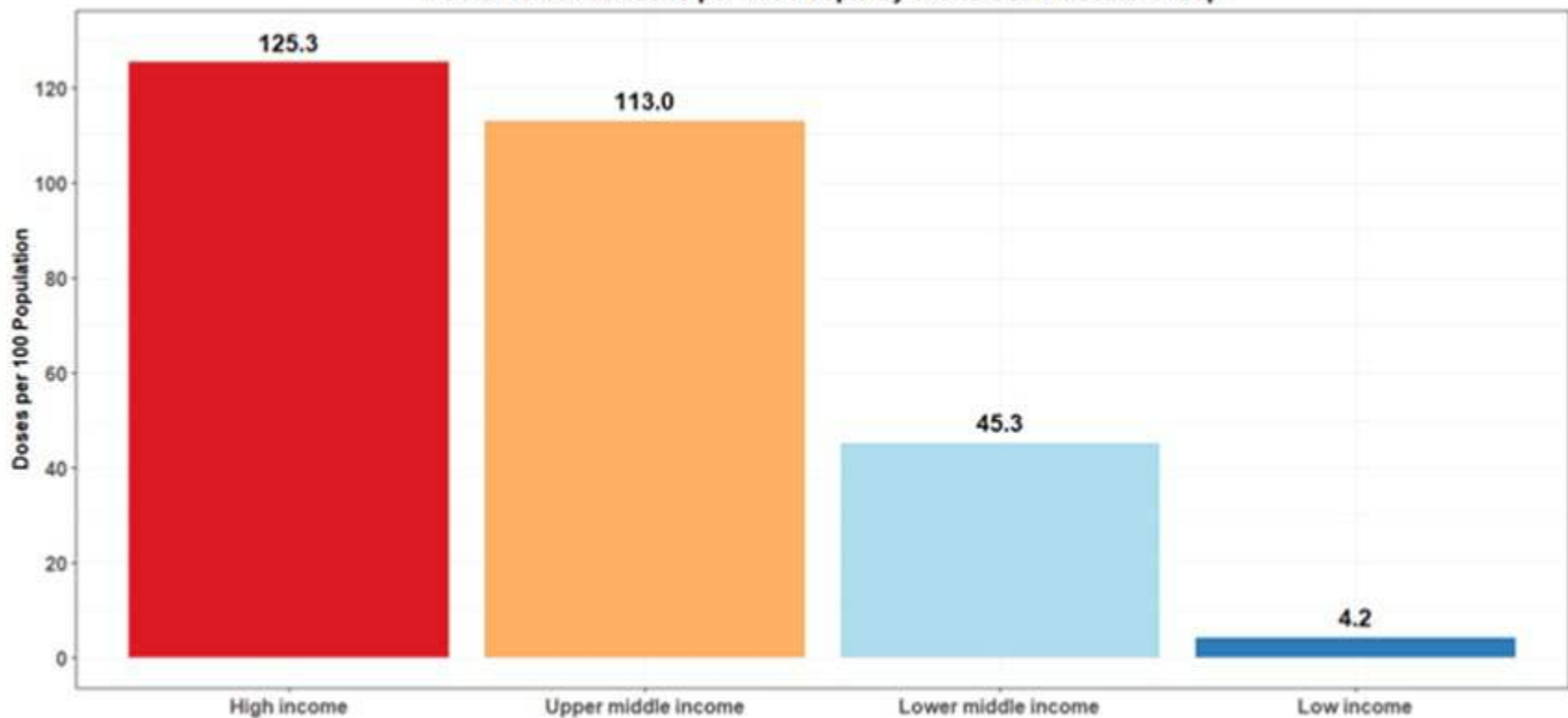


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COVID-19 Vaccinations per 100 People by World Bank Income Group



Rydland, H. T., Friedman, J., Stringhini, S., Link, B. G., & Eikemo, T. A. (2022). The radically unequal distribution of Covid-19 vaccinations: a predictable yet avoidable symptom of the fundamental causes of inequality. *Humanities and Social Sciences Communications*, 9(1).



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# Comparison of ethical frameworks – COVID-19 vaccines distribution

**Table 6** Comparison of ethical frameworks for distribution of COVID-19 vaccines

	Priority to frontline and essential workers?	Priority to high risk of severe disease/ death?	Priority to high risk of infection?	Priority to saving the most lives?	Other criteria?
<b>Global allocation criteria</b>					
Jecker, Wightman, Diekema	Yes	Yes	Yes	Yes	Narrow social utility, help the needy, reduce health disparities, show equal respect, build trust
WHO	Yes	No	No	No	Proportional to population
WHO/ SAGE	Yes	Qualified	Qualified	Qualified	Opening economies
Emanuel, Persad, Kern, et al	Yes	No	No	No	SEYLL, priority to the disadvantaged, reduce risk of transmission
<b>Domestic allocation criteria</b>					
NASEM	Yes	Yes	Yes	Yes	Reduce risk of transmission, equality
Johns Hopkins University	Yes	Yes	Qualified	Yes	Reduce risk of transmission, reciprocity, trust, opening economies
ACIP	Yes	Yes	No	Yes	Maximise benefits/minimise harms, equity

ACIP, Advisory Committee on Immunization Practices; NASEM, National Academies of Sciences, Engineering and Medicine; SAGE, Strategic Advisory Group of Experts; SEYLL, standard expected years of life lost.

## ILLUSTRATIVE SHARED LIMITED VACCINE SUPPLY PRINCIPLES



### Maximum Benefit

Prioritize protecting public health by reducing severe illness and death, especially for high-risk groups and essential workers. **Balance individual and societal needs** for maximum societal impact.



### Fairness

Ensure **transparent, inclusive, data-driven decisions** based on ethical principles, with input from affected groups and ongoing public engagement to promote legitimacy and acceptance.



### Greatest need

Focus on **areas with the highest disease burden** where vaccination programs can have the greatest impact. Maximize lives saved by targeting regions with the highest need.



### Transparency

Communicate vaccine allocation criteria clearly, including their ethical basis, to **build public trust and ensure accountability** in the vaccination process.



### Mitigation of health inequities

**Treat all individuals with equal dignity** and ensure non-discriminatory vaccine distribution. Use impartial criteria and, if necessary, random or weighted selection to ensure fairness.



### Evidence-based

Use the **best available scientific evidence** to guide vaccine phases, adapting as knowledge about disease risk and vaccine effectiveness evolves.



### Fair benefit Sharing

Give some **priority to countries involved in vaccine development**, but prioritize areas with the highest health impact. In cases of equal need, contributing countries may be given preference.

- Multiple frameworks include equity and impact as key considerations
- For example:
  - Framework for Equitable Allocation of COVID-19 Vaccine
  - WHO Framework for the Allocation of Limited Malaria Vaccine Supply



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# Key questions

- Prioritization of high-risk groups – which ones, and in which order? (health care workers, for example)
- Where do adolescents fall within priority groups, and what is the best way to engage with schools and parents?
- How do we balance creating demand with supply:
  - Generating demand with limited supply – backfire effect of vaccine hesitancy?
  - Expiring doses
- How can we work with manufacturers to secure more flexible licensing arrangements?



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# What should we do at the global level?

- Through iterative meetings and consultations, stakeholders should discuss principles from routine and emergency settings to inform key principles for limited TB vaccine supply distribution
- Key considerations to include:
  - Prioritizing based on need
  - Maximizing health impact
  - Ensuring equity
  - Ensuring access
  - Ensuring affordability
- The goal should be to create a transparent, evidence-based framework that informs national and global policy under conditions of limited supply.

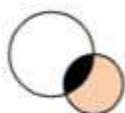


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# Stakeholder engaged process: example



## Effective and inclusive planning and coordination

*Coordinate with host country governments and partners to identify and reach high-risk, under-represented groups / populations*



## Transparent, data-driven approaches to identify, reach, and track vaccine recipients

*Providing data and modelling tools and on-ground support for micro planning, and to help countries create greater equity, transparency, and efficiency in vaccine prioritisation*



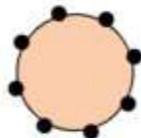
## Equitable and data-driven immunization supply and cold chain management and design

*Technical assistance to guide management and design decisions to ensure that vaccine is accessible to all, available according to plan, and quality and effective services at the point of delivery*



## Community engagement, mobilisation, demand generation and acceptance

*Qualitative and quantitative research, communications design, and tool deployment and implementation to support vaccine acceptance, confidence, and uptake efforts across priority populations*



## Health care worker and community health worker engagement and training

*Qualitative and quantitative research to support adaptation of trainings and guidelines. Where appropriate digital and fit-for-purpose tools to support remote mobilisation and capacity building*



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