EPIDEMIOLOGY OF TB
TB AND DR-TB IN THE AFRICAN REGION

Status of Programmatic Introduction of Latest WHO Recommendations

Michel Gasana

TB MORTALITY AND MORBIDITY 2022

Global Tuberculosis deaths (TB)

1 297000

Global TB incident cases

10 600 000

Deaths from Tuberculosis in the African region

424 000

AFRO TB Incident cases

2 480 000

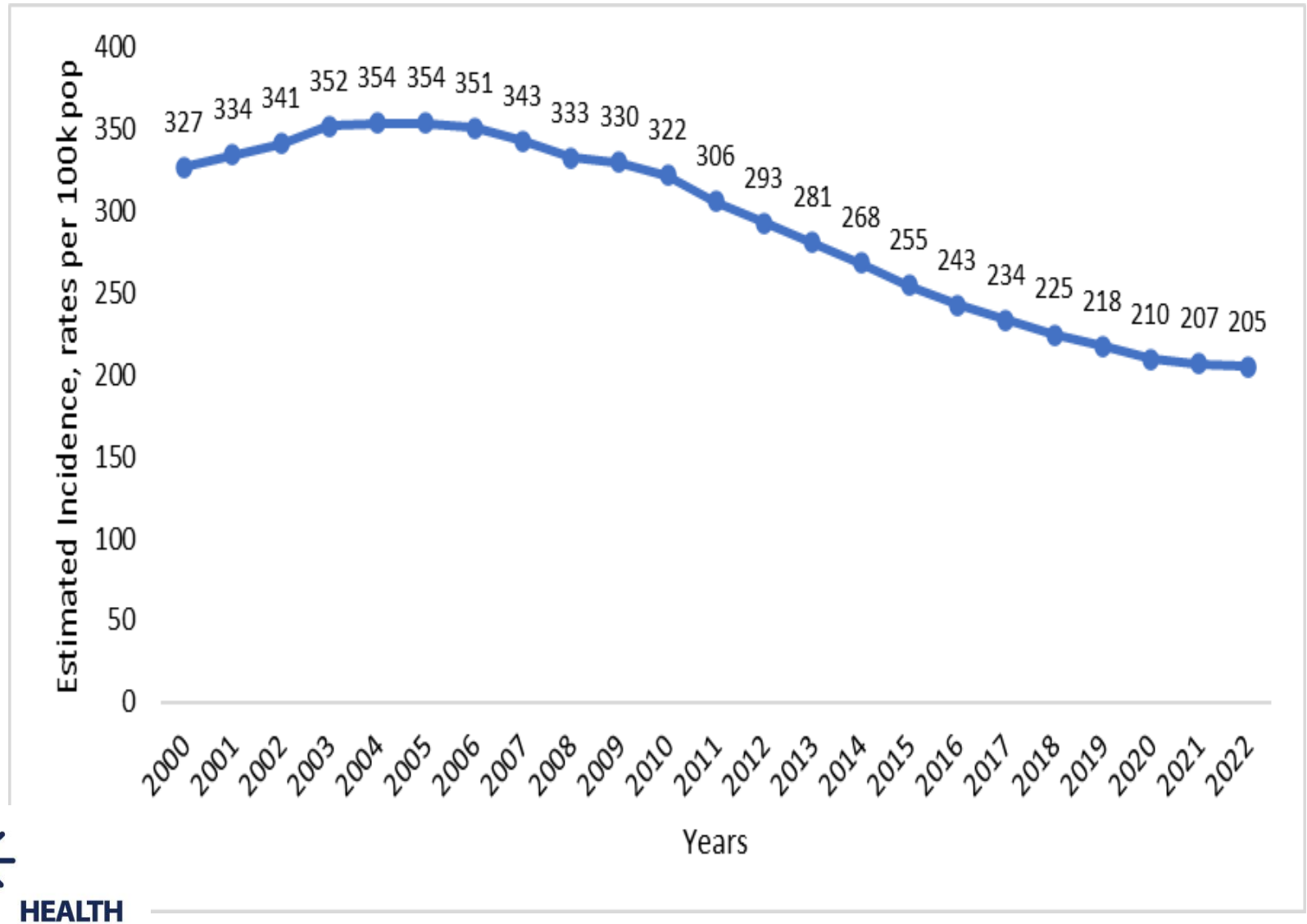
AFRO Notified TB Cases

1 746 962

World Health Organization
REGIONAL OFFICE FOR Africa

END TB

Estimated tuberculosis incidence rates (per 100k pop, 2000-2022, AFRO Region



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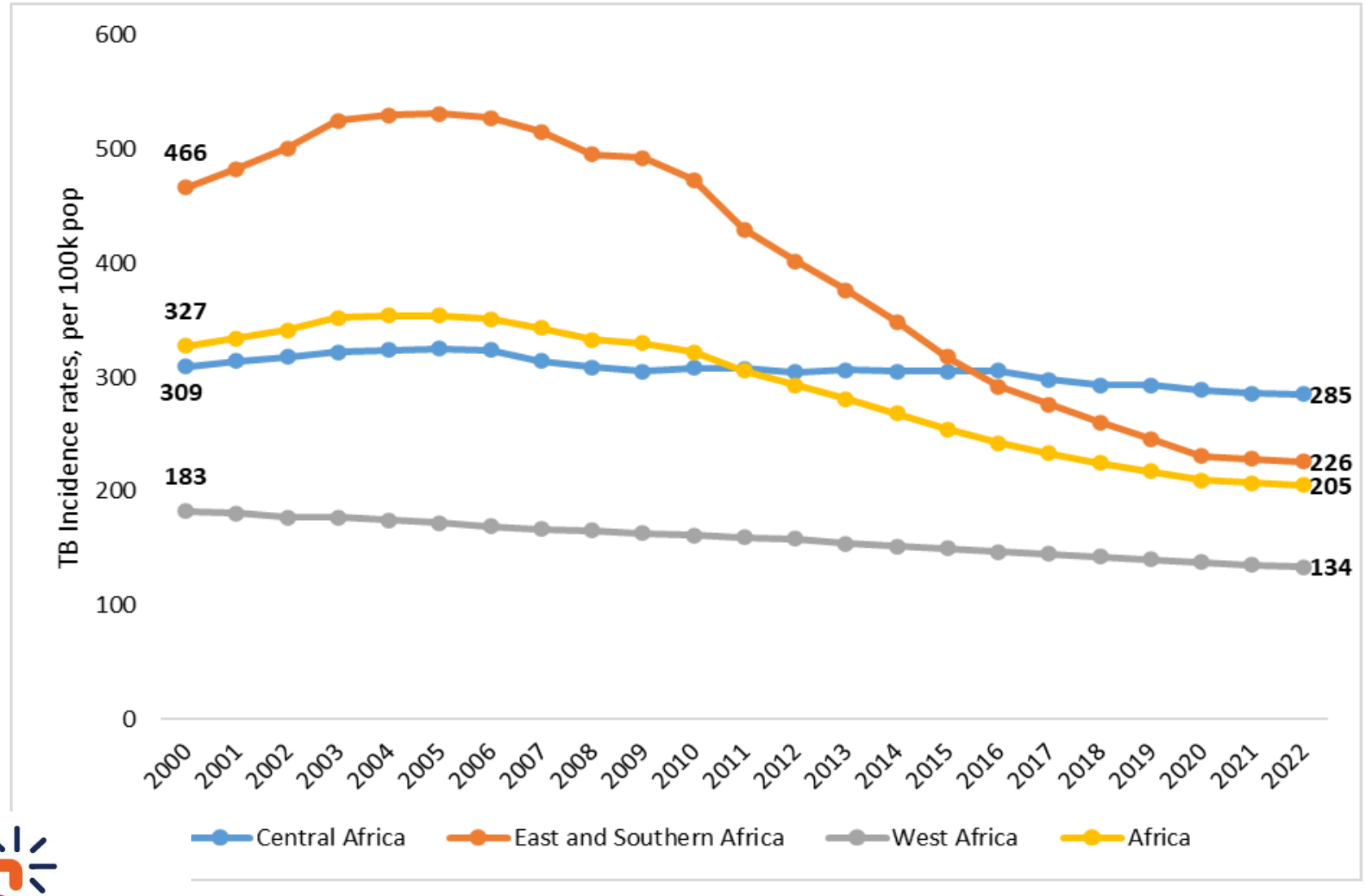
Estimated incidence TB, Sub-regions , AFRO, 2000-2022



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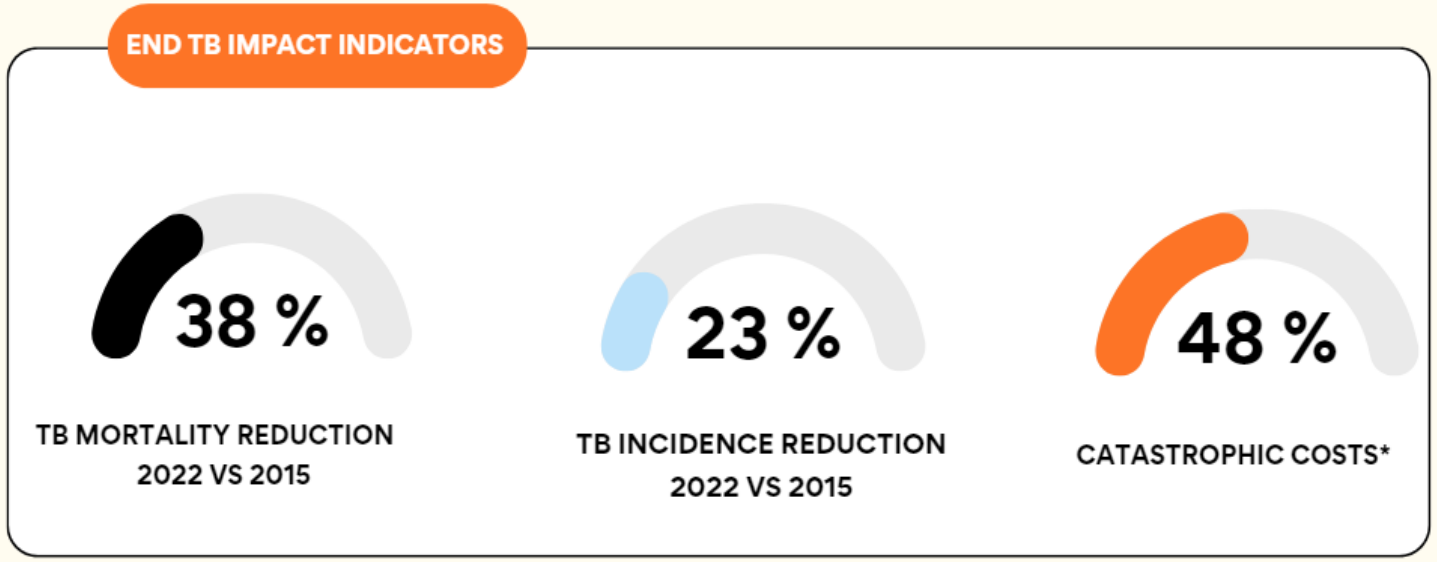
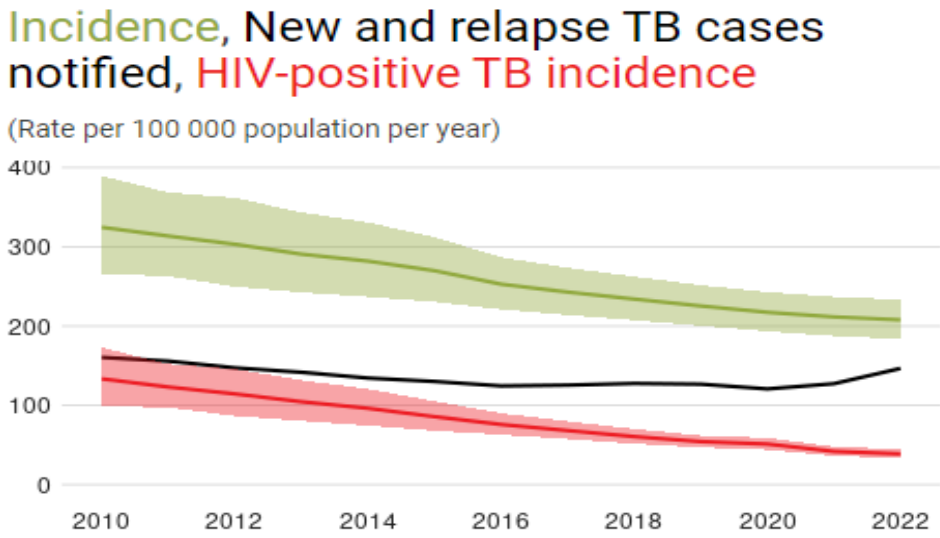


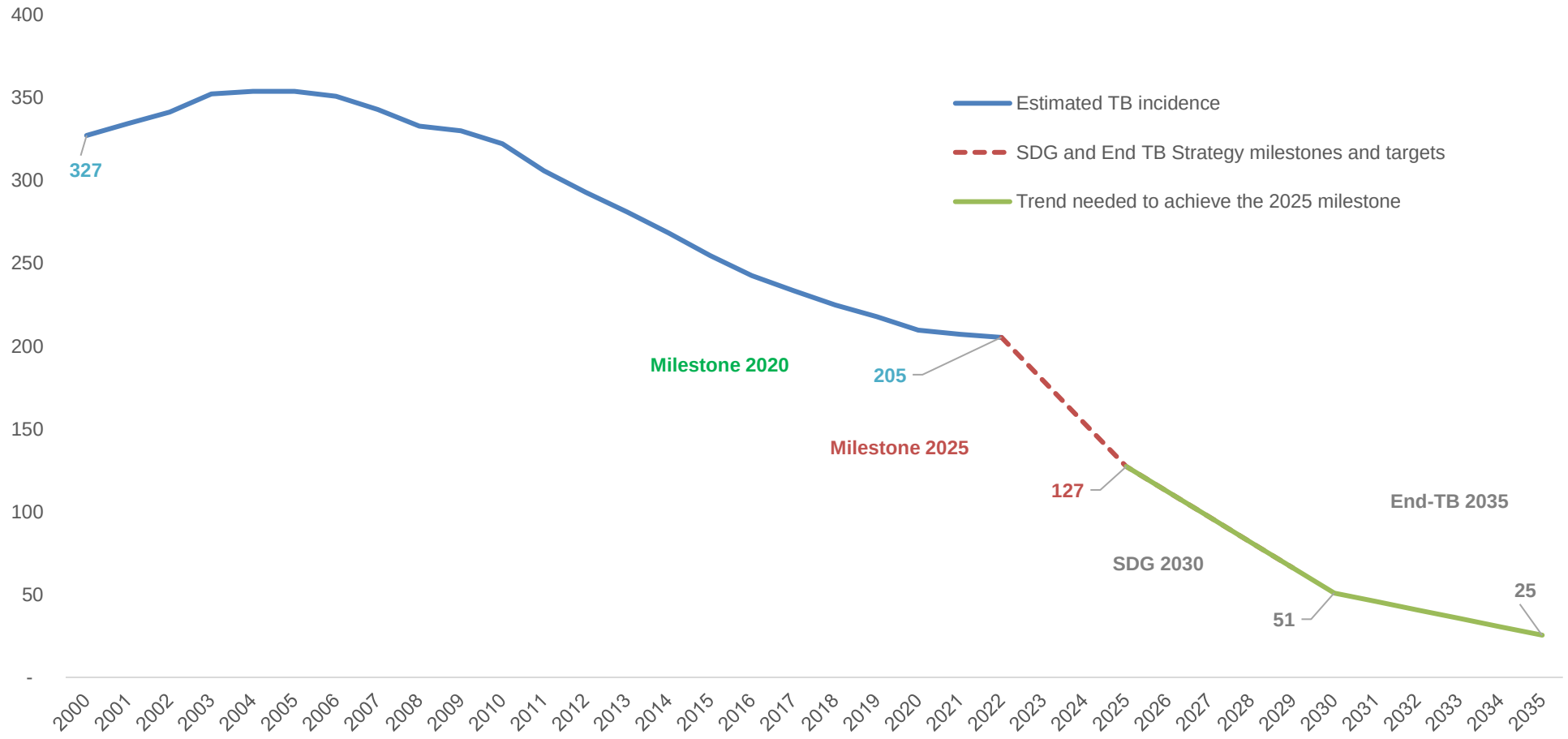


Major Milestone Achieved in Implementing the End TB Strategy in the AFR Region:

In 2022, TB treatment coverage (notified/estimated incidence) reached 71% (63-80)

This marks the **first time** a significant **increased treatment coverage** has been **achieved**

Estimated tuberculosis incidence rate, trend and forecast, Africa, 2000-2035



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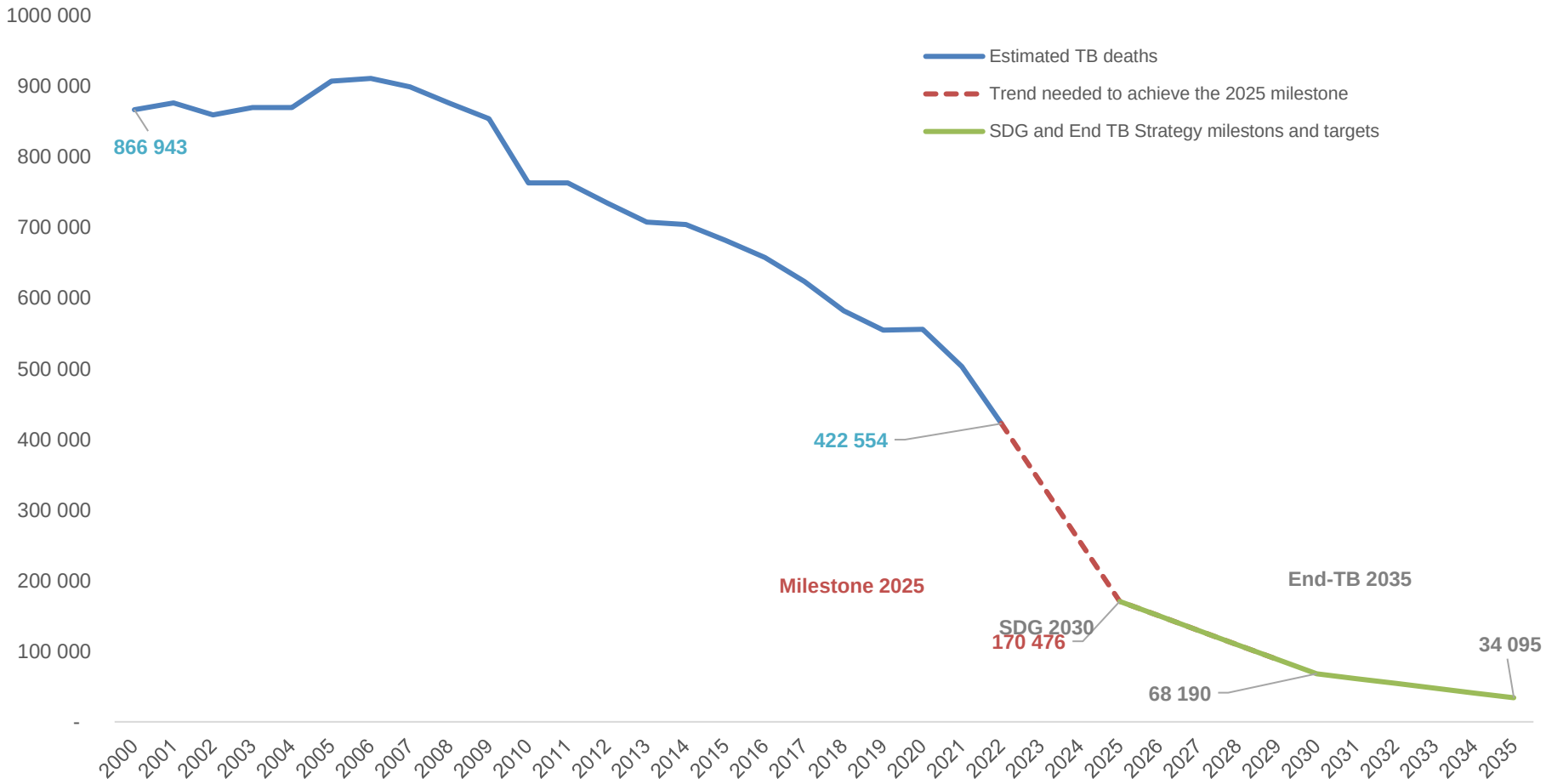
Trends and forecasts of the estimated number of deaths from tuberculosis, Africa 2000-2035



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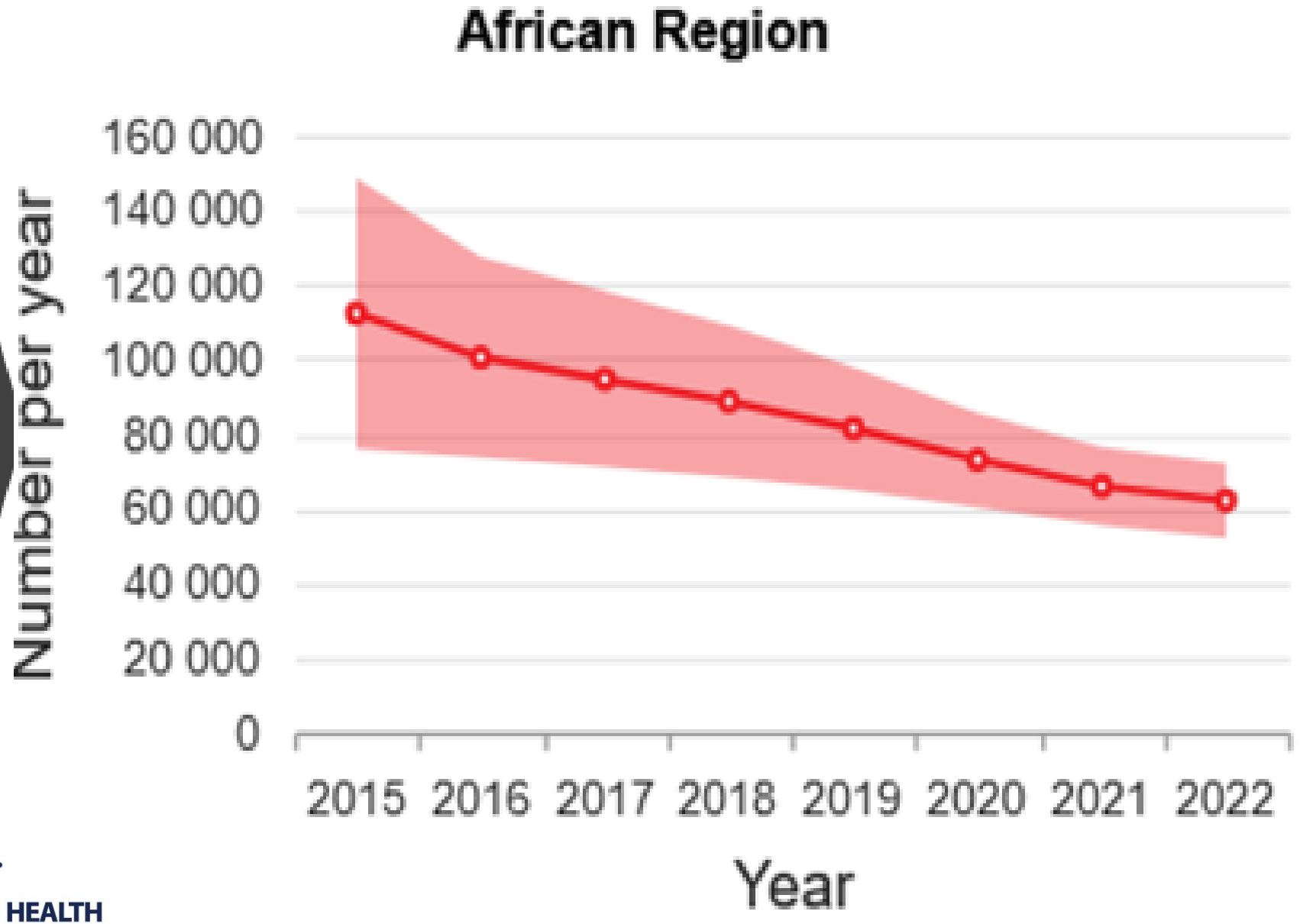
Regional trends in the estimated number of people who developed MDR/RR-TB (incident cases), 2015–2022



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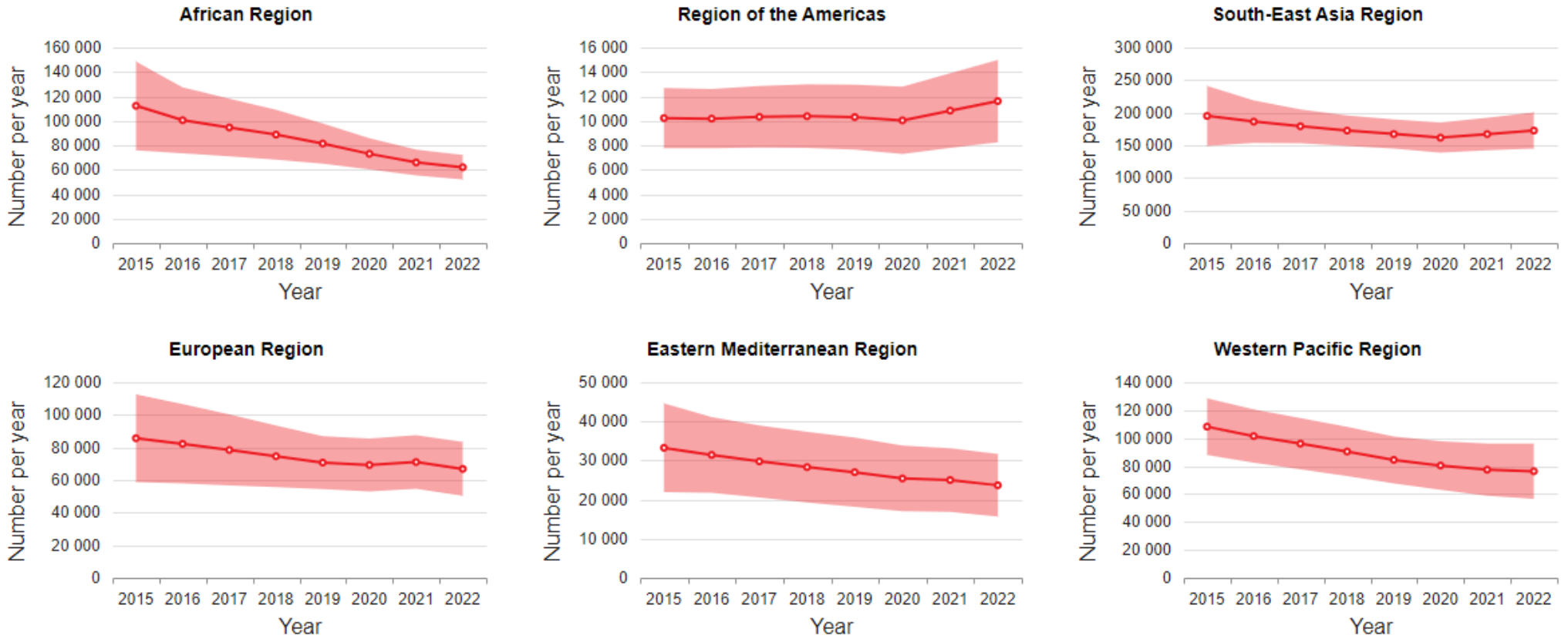
Global trends of MDR TB across WHO regions regions

Fig. 1.3.3 Regional trends in the estimated number of people who developed MDR/RR-TB (incident cases), 2015–2022

The shaded area represents the 95% uncertainty interval.

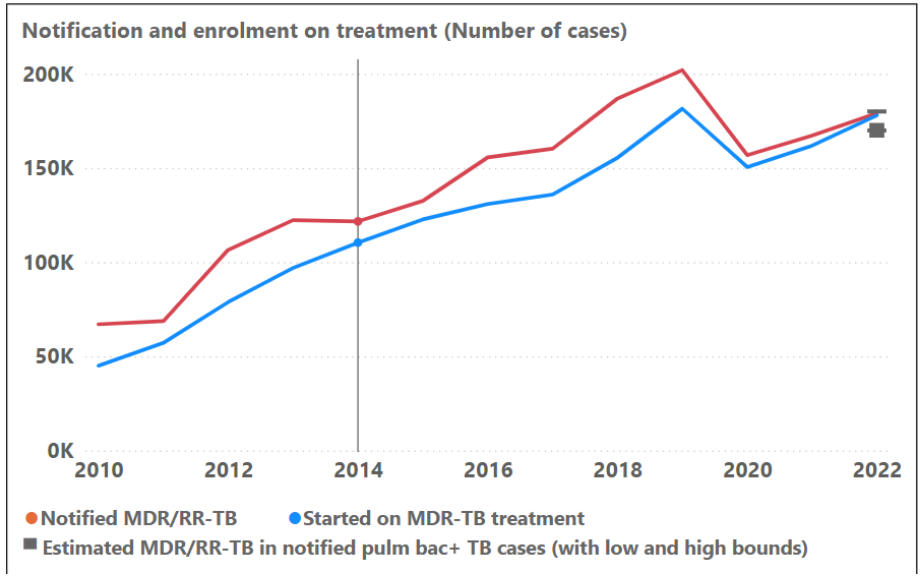


MDR TB Global 2022

Notified 153 396 (27 030 XDR)

Enrolled in MDR TB treatment 152 896

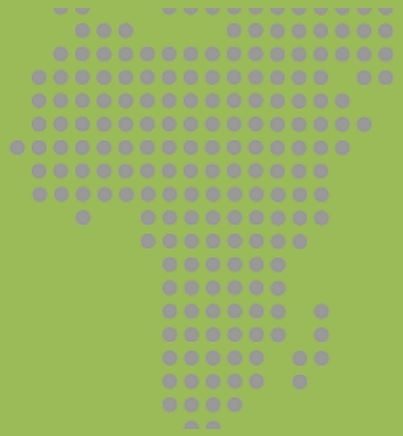
[Global]



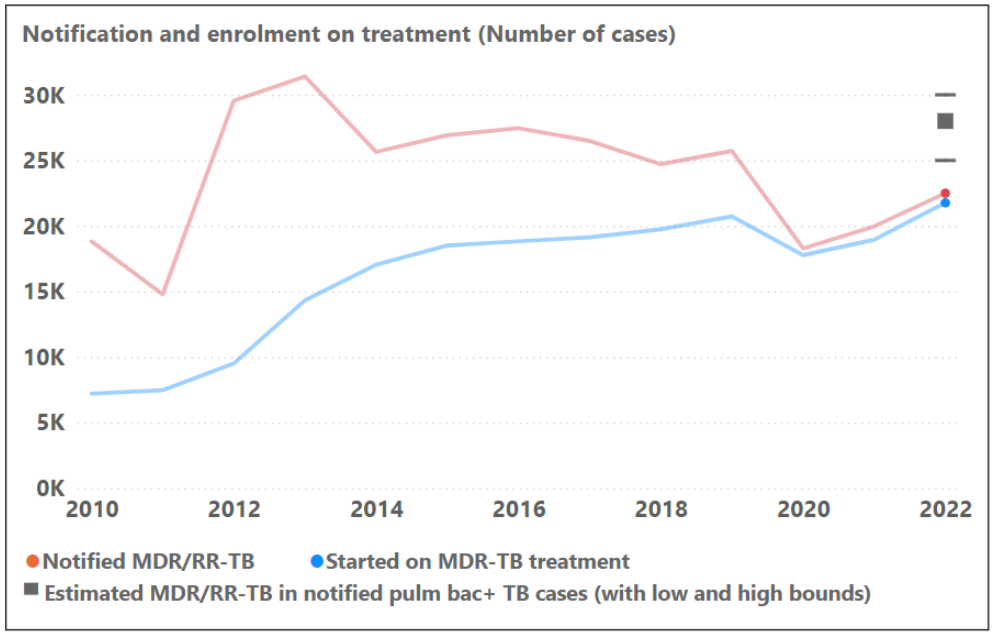
MDR TB AFRO 2022 Among notified cases cases

Notified 22495 (1093 XDR)

Enrolled 21 767

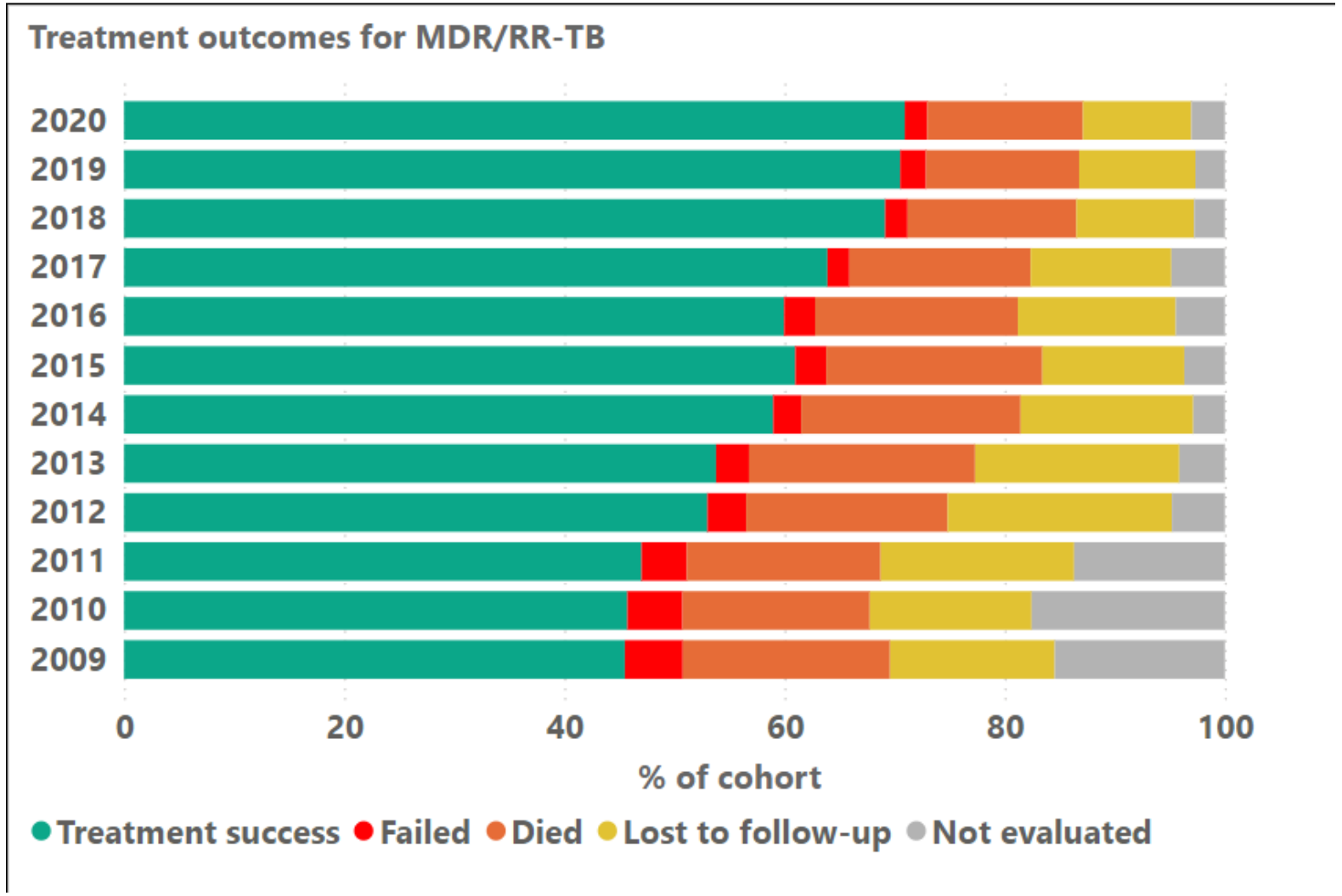


- The treatment enrollment gap for multidrug-multidrug-resistant tuberculosis (MDR TB) is TB) is narrowing, with the notification line line approaching the lower bound of estimated MDR TB cases among diagnosed TB diagnosed TB patients.



Estimated MDR/RR-TB in notified pulm bac+ TB cases (best estimate)	28 000
Estimated MDR/RR-TB in notified pulm bac+ TB cases (low bound)	25 000
Estimated MDR/RR-TB in notified pulm bac+ TB cases (high bound)	30 000

Trend of treatment outcomes in AFRO 2009-2020

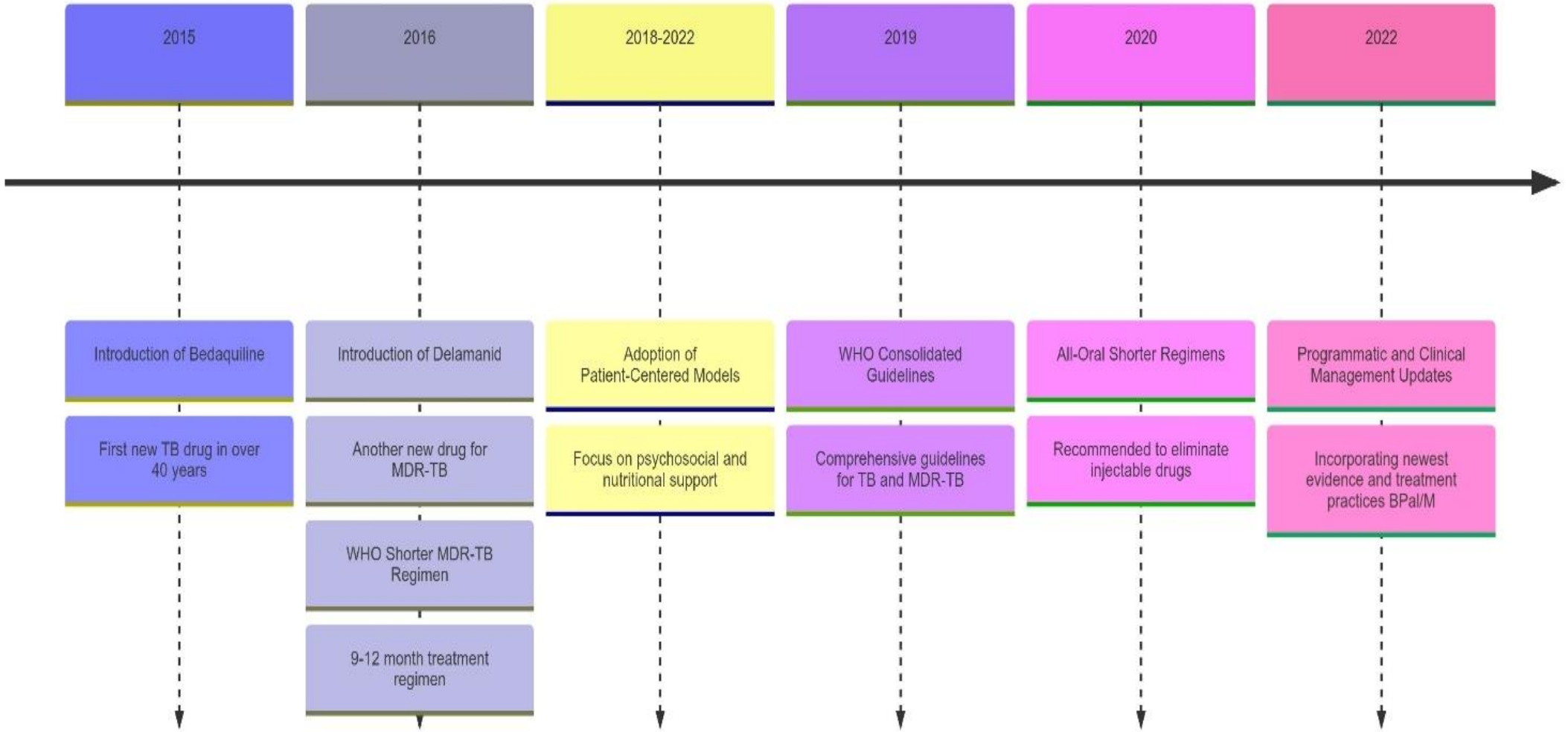


- 70.93% treatment success rate among MDR TB cases

DR-TB in the AFRO Region(High Burden countries)

Country	Reported MDR/RR-TB cases		
	Number	Percentage	Rate
South Africa	6,381	34%	10.7
Nigeria	2,938	16%	1.4
Democratic Republic of Congo	1,236	7%	1.3
Mozambique	1,253	7%	3.9
Angola	1,232	7%	3.6
Zambia	426	2%	2.2
Zimbabwe	243	1%	1.5
Total	**13,709**	**73%**	

Major Changes in MDR-TB Treatment (2015-2022)



Uptake of BPaLM and BPaL Regimens(current status)

Achievements

- The World Health Organization (WHO) has endorsed 6-month all-oral regimens, such as BPaLM (bedaquiline, pretomanid, linezolid, and moxifloxacin) and BPaL (without moxifloxacin for pre-XDR-TB).
- These regimens have shown high efficacy, with an 90 % success rate in trials, and are being adopted across various countries in Africa. Shorter regimens have demonstrated significantly improved treatment outcomes, including higher cure rates and reduced mortality.
- Increased Access: Programs funded by international organizations have been pivotal in scaling up access to these shorter regimens, particularly in countries with high TB burdens.
- 24 countries in AFRO are at different levels of implementation(updating guidelines, ordering drugs, starting implementation etc)

Challenges:

- Ensuring adequate training for healthcare providers and maintaining a consistent supply of medications.
- Ensuring patient adherence to the treatment regimen is crucial for success. Challenges include managing side effects and providing sufficient support to patients throughout the treatment period.
- The presence of additional drug resistance (e.g., fluoroquinolone resistance) complicates treatment, requiring careful selection and monitoring of regimens

COUNTRIES REPORTING USE OF BPAL/M AS OF 2022 DATA

- Burkina Faso
- Democratic Republic of Congo
- Namibia
- Nigeria
- Sierra leone
- South Africa

New developments in 2022: Guidelines & Handbooks

DS-TB

DS-TB guidelines & handbook 2022

- **4-month 2HPMZ/2HPM** regimen
- **4-month 2HRZ(E)/2HR** regimen for children and adolescents
- Consolidating all recommendations on DS-TB (2022)

TB Care & Support

Guidelines & Handbook 2022

DR-TB

Guidelines and handbook 2022 update

- **6-month BPaLM regimen, comprising bdq, Pa, Lzd (600 mg) & Mfx**, may be used programmatically in place of 9-month or longer (>18 months) regimens, in patients (aged ≥15 years) with MDR/RR-TB
- **9-month, all-oral, bedaquiline-containing regimens*** are preferred over the longer (>18 months) regimen in adults and children with MDR/RR-TB
- Longer regimen for patients with extensive forms of DR-TB (e.g., XDR-TB)

Treatment regimen options

BPaLM/BPaL regimen (MDR/RR-TB and pre-XDR-TB)

- in patients (aged ≥14 years) with MDR/RR-TB who have not had previous exposure to bdq, Pa or Lzd (defined as >1 month exposure).
- This regimen may be used without Mfx- BPaL in pre-XDR-TB patients.
- DST to Fq is strongly encouraged, but it should not delay treatment initiation.
- if DST confirms susceptibility can be used in those exposed to Bdq, Pa, or Lfx for more than 1 month
- no Severe EPTB

9-month regimens (MDR/RR-TB)

- rapid DST for ruling out fluoroquinolone resistance is required
- no extensive PTB or severe EPTB
- can be used in all age groups
- 2 months of linezolid (600 mg) can be used as an alternative to 4 months of ethionamide.
- regimen with linezolid can be used in pregnant women

Longer regimens (18-month, individualized, mostly in XDR-TB)

- Last resort regimen
- Those who failed or not eligible for two shorter regimens
- XDR-TB patients
- Individualized based on current recommendations

World Health Organization

END TB

Advantages of the BPaL/M regimen:

- **Duration**: The older treatment regimen required 9-18 months or even more than two years, whereas the BPaL/M regimen is completed in just six months.
- **Pill Burden**: Patients on the older regimen had to take over 14,000 pills throughout the course of treatment. In contrast, the BPaL/M regimen reduces the pill burden to fewer than 850 pills.
- **Efficacy**: The success rate of curing DR-TB with the older regimen was approximately 50-60%. The BPaL/M regimen has dramatically improved the success rate to around 90%.
- **Impact**: The BPaL/M regimen has the potential to save lives and accelerate global efforts to end TB, given its higher efficacy and shorter, more manageable treatment course.

African Region: Challenges

Diagnostics	1. Low coverage of molecular diagnostic tools 2. Low use of existing machines 3. Weak diagnostic algorithm
Patient-Centered Approaches	1. Barriers to access: Lack of awareness, stigma, and financial constraints 2. Out of pocket expenses, catastrophic costs 3. Need for a holistic approach addressing medical, social, economic and psychological needs of patients
Monitoring and Evaluation	1. Indequate data management 2. Limited resources 3. Lack of capacity: limited training and expertise
Programme Management	1. Inadequate funding: Dependency on external funding 2. Limited human resources: Shortage of trained health care professionals dedicated to TB management 3. Inadequate coordination among different levels of government and between health and social service providers

How to accelerate BPAL/M implementation (way forward) in the AFRO Region:

- Regional consultation to update countries and relevant partners
- Country level consultation to update key technical working groups and partners
- Use Self-assessment tool shared by country on the programmatic introduction status, identify implementation gaps and define the country priorities:

✓ Assess funding implications and availability

✓ Advocacy to national authorities

✓ Secure necessary technical assistance