

# BPaL-L Implementation for WHO meeting



South Africa's experience

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Chief Director: Prof N Ndjeka  
Deputy Director: Drug Resistant TB  
**Ms Y Kock**

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3<sup>rd</sup> July 2024



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# Outline



1. Background and Rationale
2. Preparatory phase
3. Scale-up phase
4. Maintenance phase
5. Conclusion

# **1. Background and Rationale**

# RR/MDR-TB treatment in South Africa - Evolution

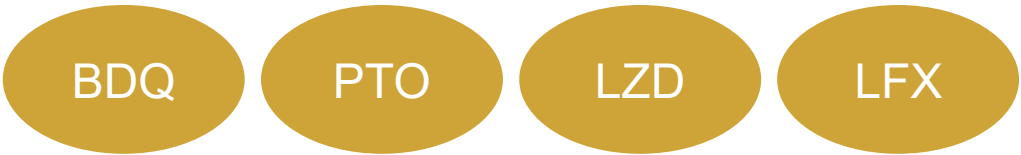
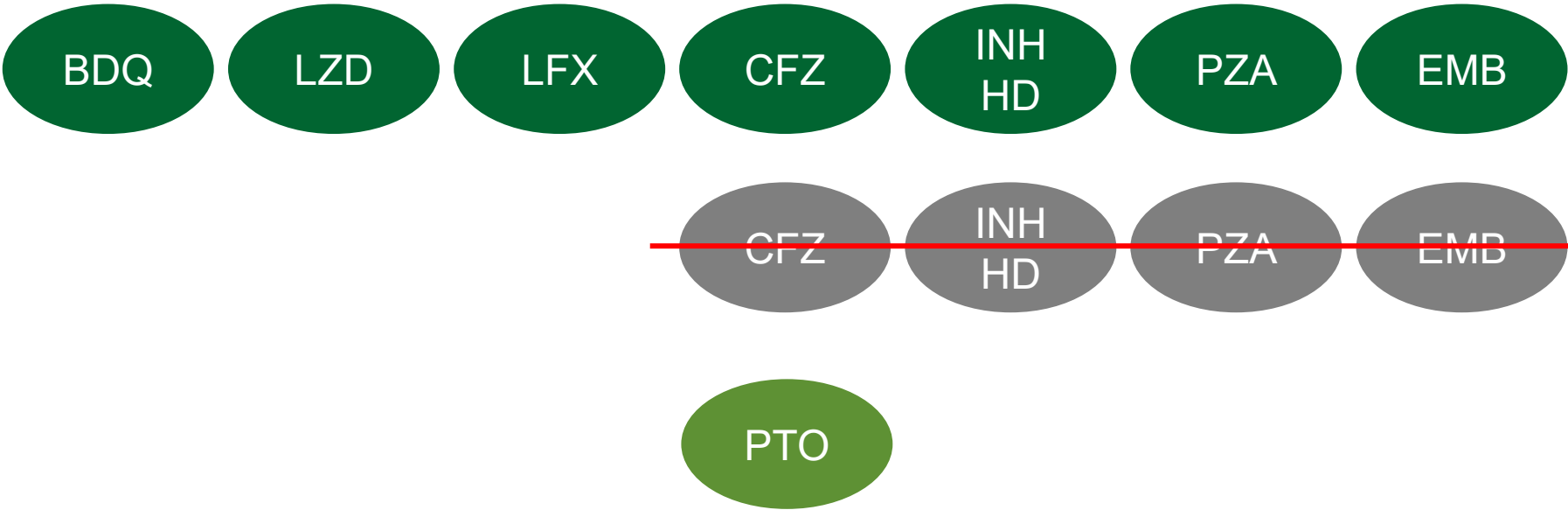


Period	RR/MDR-TB Shorter Regimen	RR/MDR-TB Longer Regimen	XDR-TB Longer Regimen
2011 – 2016	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	<ul style="list-style-type: none"> <li>24 months (at least)</li> <li>5 drugs</li> <li><b>180 injections + 7 200 pills</b></li> </ul>	<ul style="list-style-type: none"> <li>24 months (at least)</li> <li>7 drugs</li> <li><b>180 injections + 7 200 pills</b></li> </ul>
2017 – 2018 (Aug)	<ul style="list-style-type: none"> <li>9 – 11 months</li> <li>7 drugs</li> <li><b>Up to 180 injections + at least 2 880 pills</b></li> </ul>	<ul style="list-style-type: none"> <li>18 – 20 months</li> <li>5 drugs</li> <li><b>Up to 180 injections + at least 5 400 pills</b></li> </ul>	<ul style="list-style-type: none"> <li>18 – 20 months</li> <li>5 drugs</li> <li><b>All-oral: at least 3 968 pills</b></li> </ul>
2018 (Aug) – 2023	<ul style="list-style-type: none"> <li>9 – 11 months</li> <li>7 drugs</li> <li><b>All-oral: at least 3 038 pills</b></li> </ul>	<ul style="list-style-type: none"> <li>18 – 20 months</li> <li>5 drugs</li> <li><b>All-oral: at least 5 048 pills</b></li> </ul>	<ul style="list-style-type: none"> <li>18 – 20 months</li> <li>5 drugs</li> <li><b>All-oral: at least 3 968 pills</b></li> </ul>

# RR/MDR-TB treatment in South Africa - BPaL-L



Old 9-month regimen:  
~3,038 pills



New 6-month BPaL-L regimen:  
~860 pills



## **2. PREPARATORY PHASE**



# Preparatory needs analysis – gaps (June 2022)



National	Green means positive response/satisfactory/available									
	Red means negative response/unsatisfactory/unavailable									
Questions	Provinces already Implementing BPaL CAP				Provinces for scale-up					
	KZN	GP	WC	NW	FS	NC	EC	MP	LP	
• Health and regulatory: DG's approval	Y	Y	Y	Y	N	N	N	N	N	
• Drug supply and procurement: Listing of pretomanid on EML	Y	Y	Y	N	N	N	Y	Y	Y	
• Case management: Guideline revision & training	N/A	N/A	N/A	NA	N	Y	N	N	N	
• M &E: Update of data system (EDRWeb)	Y	Y	Not Specified	Y	N	N	Y	Y	Y	
• Pharmacovigilance: Capacity building	Voted fund	Demand Plan	Not Specified	TB/HIV Conditional Grant	TB/HIV Conditional Grant	TB/HIV Conditional Grant	TB/HIV Conditional Grant	TB/HIV Conditional Grant	TB/HIV Conditional Grant	
• Financial resources: Funding landscape reviewed	Y	N	Not Specified	Y	N	Y	N	Y	Y	
Provincial	Adequate training on BPaL?	N	N	N	N	N	N	N	N	
• Training	Does the province have DR-TB Training programme supported by RTC	Y	N	Relies on NDoH	Y	Not Specified	Y	N	Y	Y
• Partner support in one province	Do you have adequate equipment	Y	Y	Y	Y	Y	N	N	Y	Y
• Laboratory test: long TAT in certain provinces	Does the facilities have access to 2nd line LPA testing	Y	Y	Y	Y	Y	N	Y	y	Y
	Does the facilities have access to blood investigations?	Y	Y	Y	Y	Y	N	Y	y	Y



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Slide 7



# Method of implementation



## CLINICAL MANAGEMENT OF RIFAMPICIN-RESISTANT TUBERCULOSIS

Updated Clinical Reference Guide

September 2023



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- Approval by NEMLC
- GF Donation acquired for pretomanid
- NCAC: Guidelines updated, and training materials/ manual developed
- DR-TB stationery & data systems updated
- Dashboard developed →
- Constant training: webinars
- Phase-in approach
  - Training conducted across the 9 provinces

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#### BPaL Programme Dashboard

##### Aim

Monitor the implementation of the new 6-month TB treatment regimen  
Monitor accurate, clean, timeous data capturing

##### Inclusion criteria

All patients initiated on RR-TB treatment  
Patients above 15 years of age  
All patients registered with Pretomanid in their current treatment

##### Exclusion criteria:

Patients diagnosed with XDR-TB treatment  
Patients less than 15 years of age  
Pregnant women





# Key facts: drugs required for BPAL-L



Medicine	What do patients need	Unit(s)	Regimen length
Bedaquiline; 100mg; Tablet; 188 Tablets	1	pack	6-month course
Delamanid; 50mg; Tablet; 48 Tablets	15	packs	12-month course
Pretomanid; 200mg; Tablet; 30 Tablets	6	packs	6-month course
Levofloxacin; 500mg; Tablet; 28 Tablets	12*	packs	6-month course at 1000mg per day
	6*	packs	6-month course in a 750mg combination
Levofloxacin; 250mg; Tablet; 28 Tablets	6*	packs	6-month course in a 750mg combination
Linezolid; 600mg; Tablet; 10 Tablets	18	packs	6-month course



**Visit to the pharmaceutical depot to discuss drug's availability (Left) and DR-TB Training (Right)**



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# Certification Trained NIMDR-TB Nurses, Free State Province



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# DR-TB Clinical Audit Field Activities



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# World Health Organization (WHO) Green Light Committee (GLC) Review



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### **3. SCALE – UP PHASE**

# DRUG RESISTANT TB CAN BE CURED

## NEW REGIMEN for MDR-TB

BPaL – L is better for you!



ONLY 6 months  
of treatment



3 to 4  
medicines



90% cure  
rate



Simplified  
regimen



The new regimen for **MDR-TB patients** has many advantages, including:

- Fewer pills required – only 23 pills per week
- Shorter treatment – only 6 months
- Fewer facility visits, which means a lower costs for you to get treated

Speak to your healthcare worker today to find out if you are eligible!



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## BPaL-L Launch







# BPaL-L LAUNCH

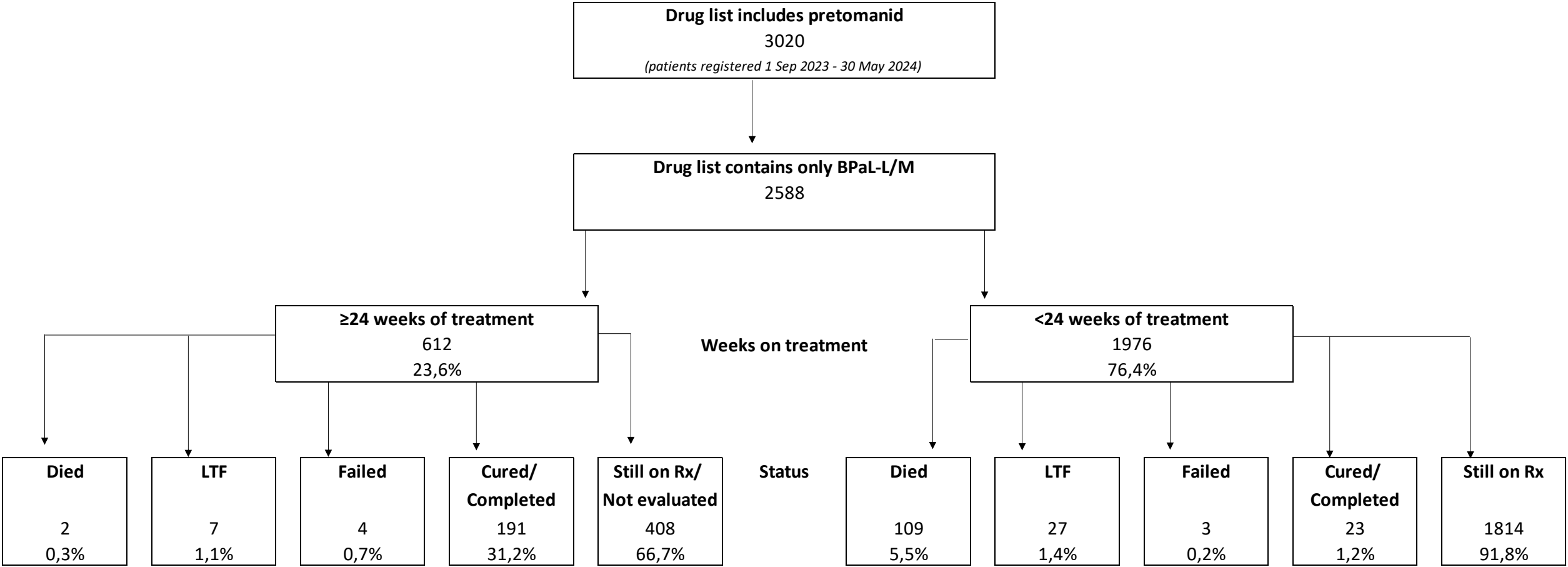
September 1<sup>st</sup>, 2024



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# Treatment Status of BPaL-L/M Patients – 30 May 2024



# Characteristics of BPaL-L/M Patients – as of 30 May 2024



Source: EDRWeb	N	%
Number of patients on BPaL-L/M	2 588	
Nurse initiations	1 015	39,2
<b>Patient Category</b>		
- New	1 573	60,8
- Relapse	580	22,4
- Retreat after Loss to Follow-up	225	8,7
- Retreat after Treatment Failure	182	7,0
- Other	28	1,1
<b>Drugs</b>		
- BPaL-L	2 276	87,9
- BPaL-M	35	1,4
- BPaL-L+M	44	1,7
- BPaL	233	9,0
<b>Gender</b>		
- Male	1 594	61,6
<b>HIV Status</b>		
- Positive	1 618	62,5
- On ART	1 501	92,8
<b>Baseline measures (select)</b>		
- Body mass index	19,0 (IQR: 16,9 – 22,1)	
- Electrocardiogram: QTcF	401 (IQR: 380 – 422)	
- Haemoglobin	11,4 (IQR: 9,8 – 12,9)	

- Significant progress with NIMDR
- Majority of patients with DR-TB have never been diagnosed/treated for any kind of TB before – community transmission of different strains of resistant TB
- Majority of patients receiving BPaL with levofloxacin as per guidelines
- More than a quarter of patients are underweight



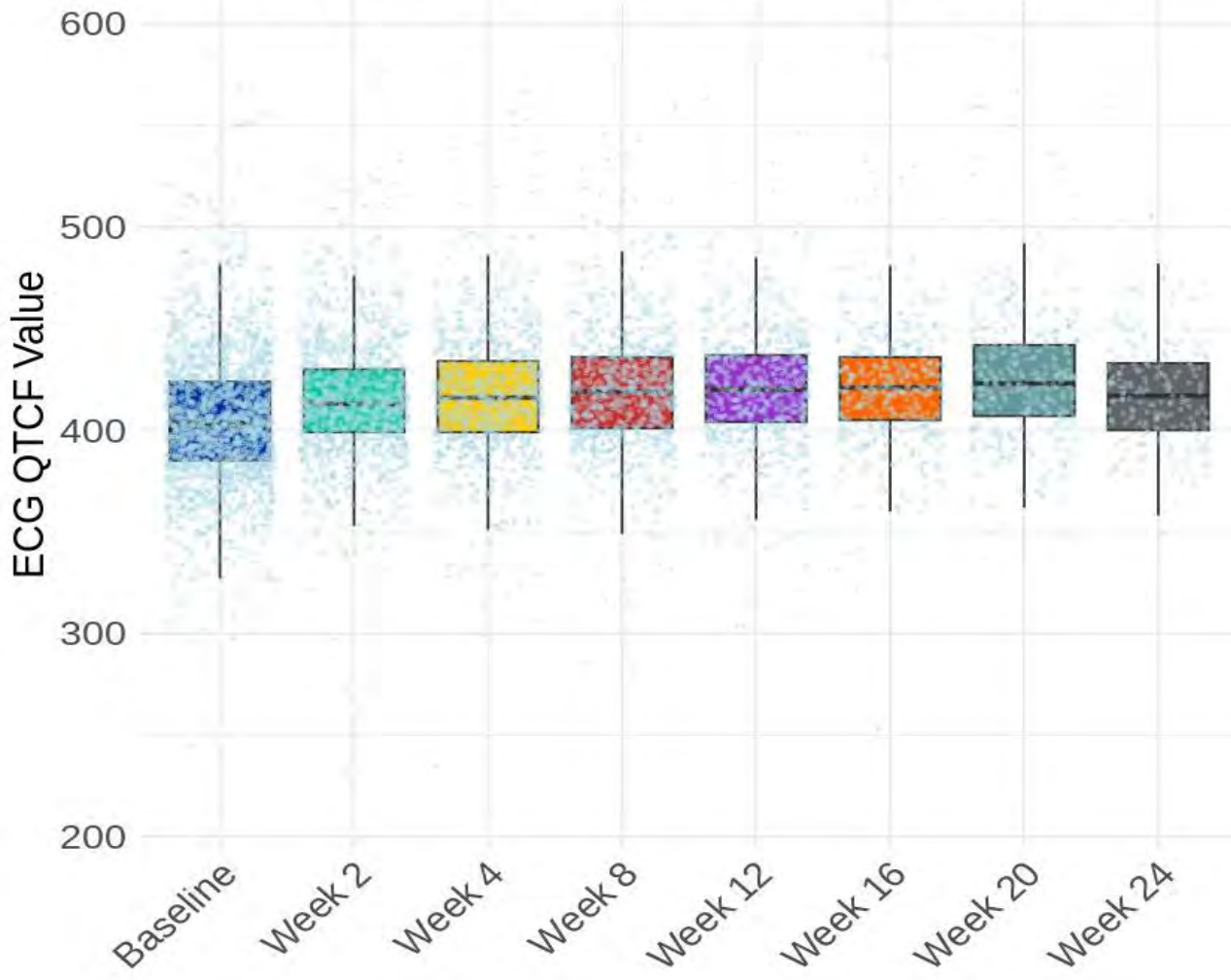


# QTcF and Hb Monitoring



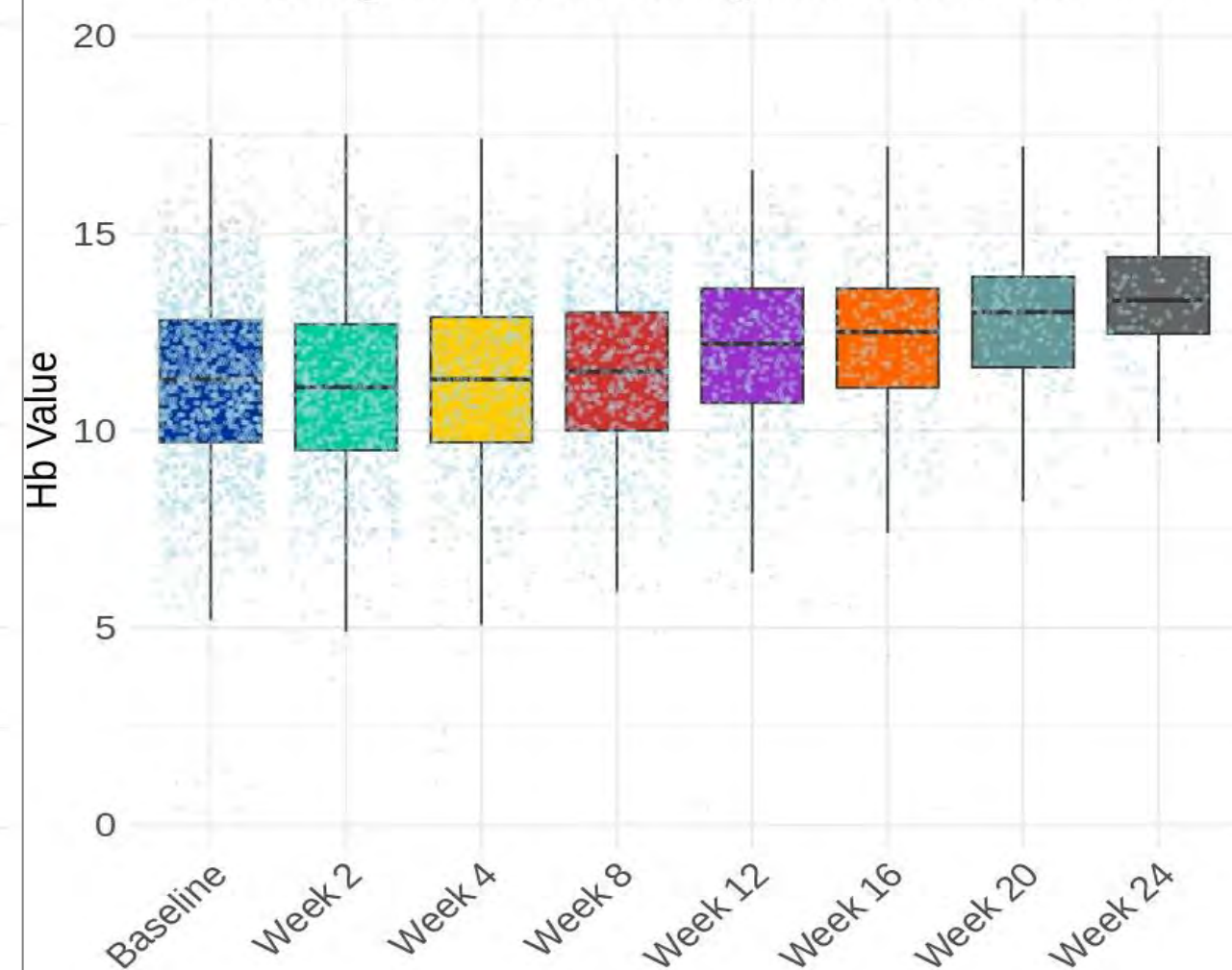
- Number at baseline = 2,181

**QTcF monitoring shows that most readings remain below 450, not reaching the 500 threshold**



- Number at baseline = 1,603

**Hb monitoring for BPAL-L patients takes place, showing that Hb levels get better over time**



# Successes



- Implementation across the country within 3 months
- 23 trainings in 9 provinces with 1,188 participants
- To date 2,815 patients have been enrolled on BPaL-L
- Implementation of NIMDR-TB for BPaL-L
- BPaL-L symposiums
  - Patients advocates
- Launched #MyTBStory: <https://mytbstory.co.za/>



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Patients on BPaL-L/M as % of BPaL-L/M eligible by Province									
Province									
	Sep-2023	Oct-2023	Nov-2023	Dec-2023	Jan-2024	Feb-2024	Mar-2024	Apr-2024	May-2024
EC	46%	49%	52%	51%	64%	74%	75%	85%	85%
FS			10%	50%	47%	74%	86%	92%	82%
GP	26%	51%	73%	75%	72%	81%	80%	91%	91%
KZN	7%	27%	50%	72%	72%	80%	68%	63%	38%
LP	5%	56%	82%	92%	83%	83%	100%	91%	76%
MP		9%	62%	74%	71%	73%	83%	93%	82%
NC	12%	94%	100%	88%	95%	100%	91%	93%	96%
NW	35%	48%	44%	57%	76%	54%	70%	76%	69%
WC		1%	6%	30%	55%	67%	71%	79%	83%
Total	19%	32%	46%	60%	66%	75%	75%	81%	75%



## **4. MAINTENANCE PHASE**

# Challenges



- We are almost ready to achieve our key objective assigned during the scale-up phase which is to provide BPAL-L regimen to at least 90 % of all eligible individuals in all districts of all provinces
- Once we achieve the above objective, we have to address the following gaps during maintenance phase:
  - Drug security, especially pretomanid is a challenge. Insufficient supplies at certain sites.
  - DR-TB reflex / XDR-TB cartridge testing not being done routinely
  - Phenotypic bedaquiline resistance tests not done routinely, yet tests are available in all provinces
  - *Data incompleteness particularly for:*
    - XDR-TB cartridge (10 colour GeneXpert cartridge)
    - Phenotypic DST to Bedaquiline and Linezolid
    - Capturing of outcomes in the treatment register are delayed in some instances

## **5. CONCLUSION**



# Three phases of implementation



## PREPARATORY PHASE

- Release of WHO guidelines, May 2022
- NCAC discussion regarding updating guidelines
- Submission to NEMLC → Requested data from WHO
- Review indicated BPaL-L
- GF funding: drugs and training
- Readiness assessment
- Updating of guidelines
- Development of training materials
- Updating M & E systems
- Sensitizing provinces: pharmacy managers, programme managers

## SCALE-UP PHASE

- Initial training conducted in August 2023
- Drugs and updated stationery disseminated
- Launch of BPaL-L: 1<sup>st</sup> Sept 2023
- Training conducted in all 9 provinces (NDoH and NCAC members)
- Training done in phases – implementation done in phase-in approach
- Active monitoring done - dashboard
- aCSM plan in place –
  - Patient advocates identifies
  - #MyTBStory launched

## MAINTENANCE PHASE

- ≥90% eligible patients initiated on BPaL-L ↓
- Stop active monitoring
- Trained trainers continuing training
- AREAS OF IMPROVEMENT
- Drug stability
- Data completeness
- Bedaquiline and linezolid monitoring



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*Thank you!*