

REVIEW OF INTERNAL PROFICIENCY TESTING USING INTER-LABORATORY COMPARISON AT WESTERN CAPE BLOOD SERVICE

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Objectives

- Introduction & purpose of proficiency testing (PT)
- Role of the provider & the participating laboratory
- Overview of programme
- Reporting system
- Limitations
- Recommendations
- Conclusion



**Proficiency Testing:
Testing the test**

Introduction

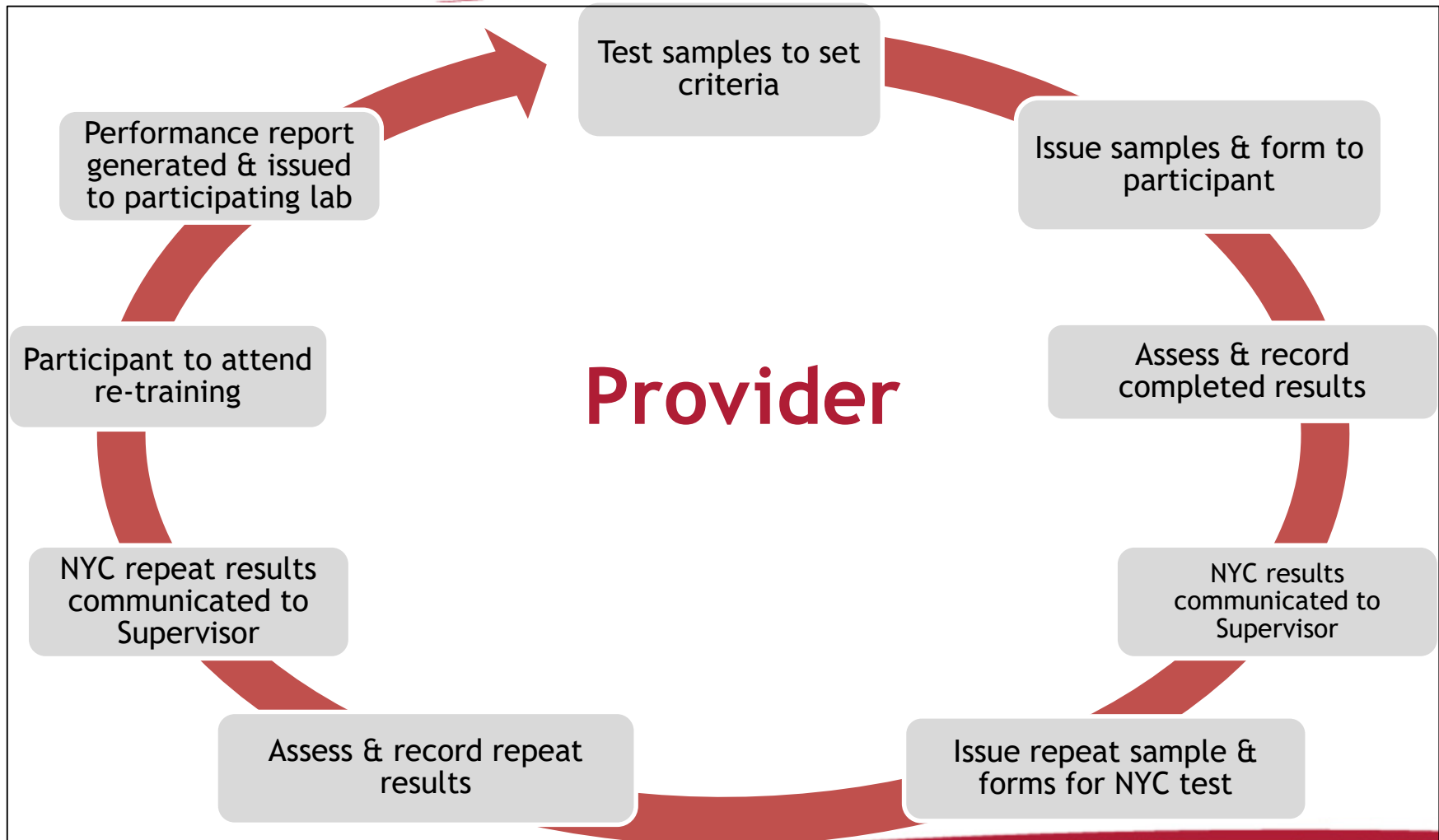
- Is an important factor of ISO 17025 accreditation
 - ❖ PT has it's own ISO standard: ISO 17043:2010
- Supplements internal QC procedures
- Internal PT done in areas where EQA is unavailable
- Independent dept. to pre-establish criteria used to assess staff performance (SANAS R-80)
- Test sample to resemble routine test material
- Same testing methods used for inter-laboratory comparison (ILC)



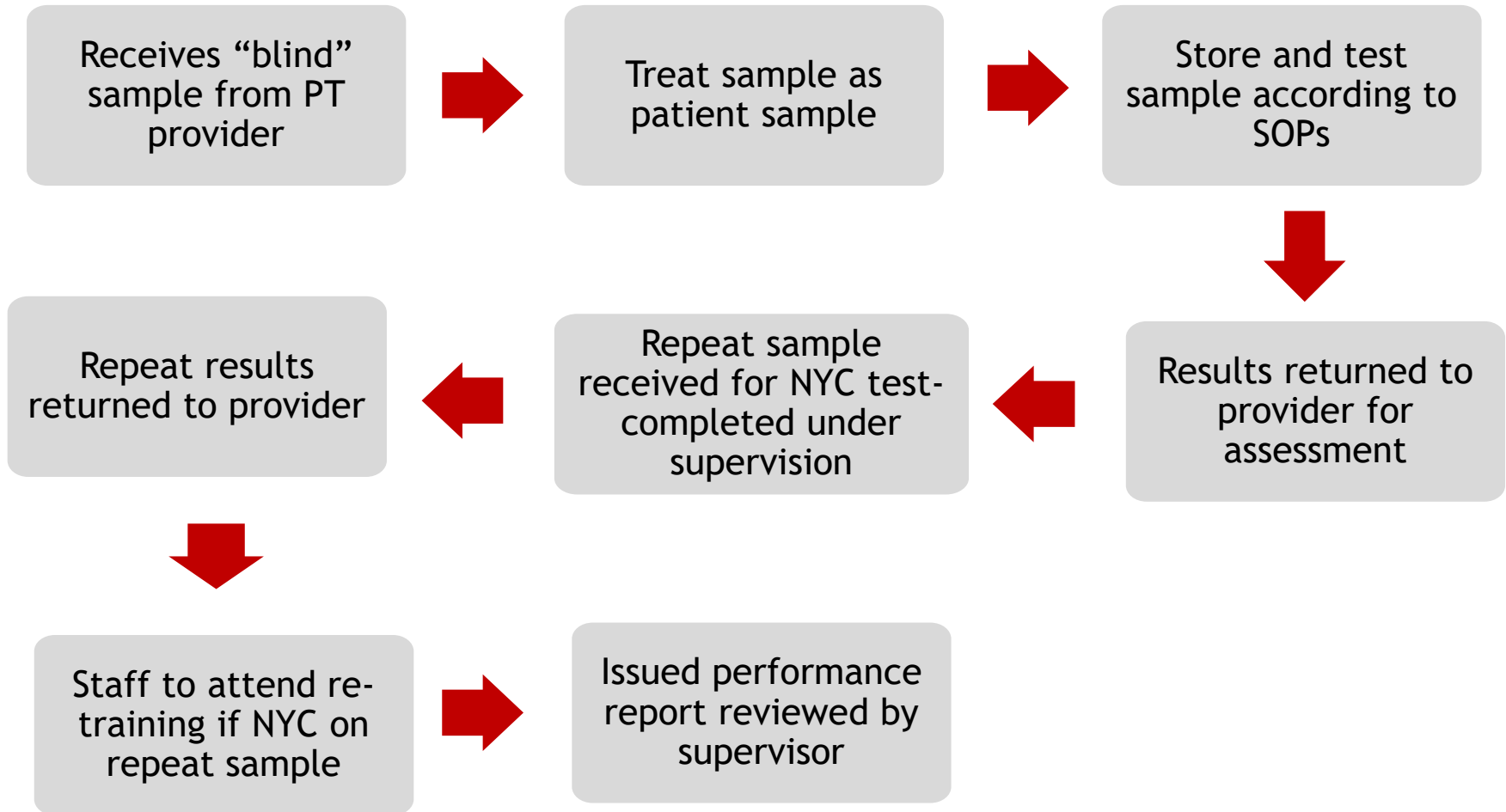
Purpose

- Assesses the consistent reliability of routine test results
- Evaluates staff performance
- Demonstrates technical competence using ILC
- Proof of laboratory competence to clients and management
- May alert laboratory supervisor to non-conforming trends relating to testing and/or staff

Role of provider



Role of participating laboratory



Overview of PT programme 1994 - 2018

- 1994 - 2009
 - ❖ Theory and practical assessments
 - ❖ Poor record-keeping lead to inconclusive outcomes
- 2010 - 2017
 - ❖ A more structured approach
 - uniquely numbered samples, timeframes adhered to
 - ❖ PT 1: 50% of routine tests in 1st half of the year
 - ❖ PT 2: 50% of routine tests in 2nd half of the year

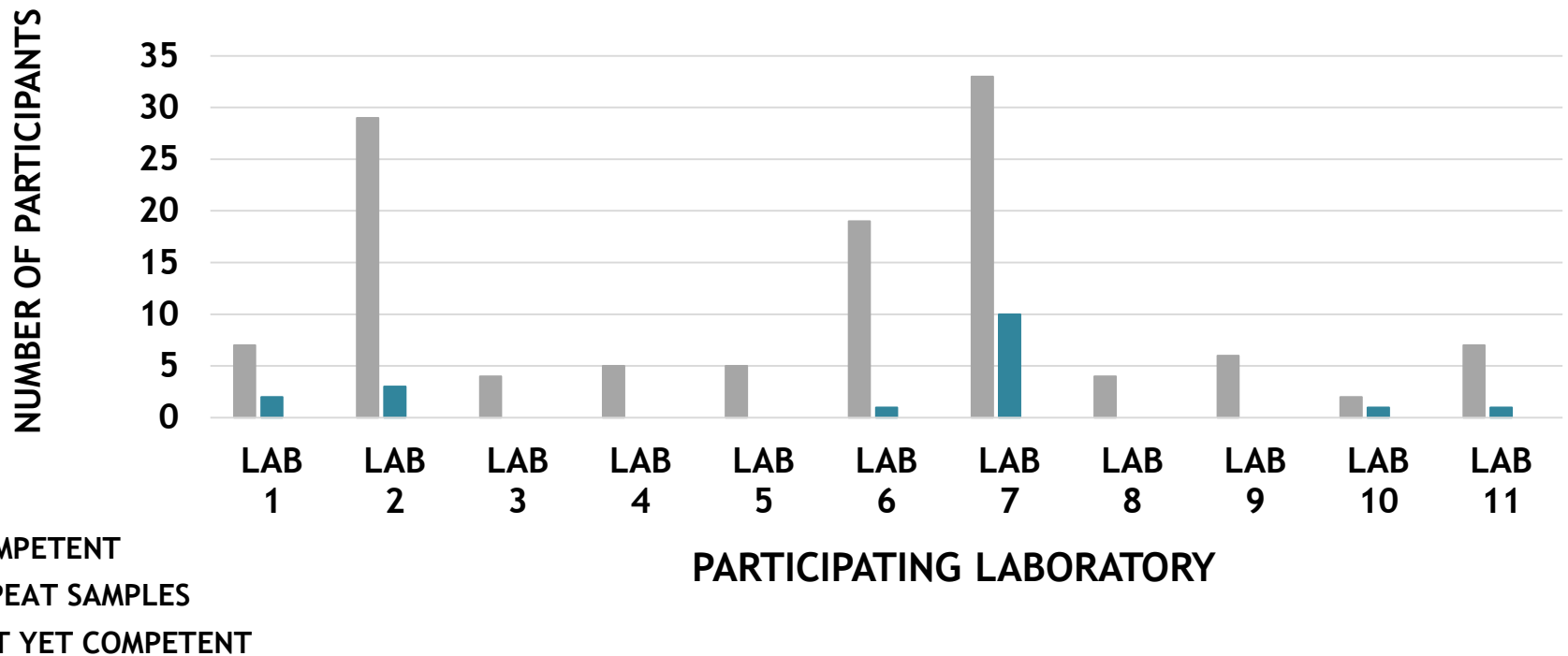
Overview cont..

- 2018 onwards - bi-annual practical PT
 - ❖ Practical: ABO + Rh, Anti A₁, type + screen, DAT, Ab ID, titration, compatibility, crypt antigen, Rosette & NaOH

NAME	PROFICIENCY TEST (PT) SAMPLE NUMBER	REPEAT PT SAMPLE NUMBER	ABO GROUP	Rh	ANTI A ₁	ANTIBODY SCREEN	DAT	COMPATIBILITY	CONCLUSION
			A	NEG	POS	NEG	NEG	NEG	
			TARGET						
XXX	2018-47		A	POS	NEG	NEG	NEG	NEG	COMPETENT
XXX	2018-48		A	POS	NEG	NEG	NEG	NEG	COMPETENT
XXX	2018-49		A	POS	NEG	NEG	NEG	NEG	COMPETENT
XXX	2018-50		A	POS	NEG	NEG	NEG	NEG	COMPETENT
XXX	2018-51		A	POS	NEG	NEG	NEG	NEG	COMPETENT

ILC reporting system

PROFICIENCY TEST 1 2018: LABORATORY PARTICIPANTS COMPETENT vs NOT YET COMPETENT NUMBER OF REPEAT SAMPLES ISSUED



Limitations

- Proficiency in 1 test ≠ indicate competence in another
- Unable to detect all laboratory problems
- Problematic laboratory trends indicated without resolution
- Not a substitute for routine internal quality control
 - ❖ PT & performance report is retrospective

Recommendations

An electronic programme identical to the Blood Bank system

- PT provider to issue samples for testing
- Generation of digital communication
- Electronic form displayed on pc screen
 - ❖ Staff to use a unique PIN code to record test results
- ILC reports may be generated for review
 - ❖ Electronically signed by laboratory supervisor

Conclusion

- Compare performance of different analytical methods
- Reduce laboratory errors, produce accurate patient test results and improve patient care
- Staff competency is continuous - PT only 1 indicator of overall performance



Thank you!