

# Roche Healthcare Consulting

## *2021 Clinical Chemistry Lab Benchmarking Data (India)*

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*Roche*



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# 2021 Clinical Chemistry Laboratory Benchmarking Survey

## *Main Menu*

Launched in **2010**, the Asia Pacific Laboratory Benchmarking Survey allows clinical chemistry laboratories to assess their performance on a wide range of **quality**, **speed** and **cost** indicators, helping them to identify areas for improvement and maintain competitive advantage.

More than **3,500 submissions since 2010** from over **20 countries** have participated in the survey since inception, providing a rich trove of longitudinal industry data.

[Benchmark Data](#)[Participants Data](#)[Survey Questions](#)

**Roche Healthcare Consulting**

*Powered by Roche Diagnostics*

# 2021 Clinical Chemistry Laboratory Benchmarking Survey

## *Benchmarking Data*

By visiting [Lab Insights](#), clinical laboratory managers can take the survey and view results via [interactive dashboards](#) that enable comparisons against [different peer groups](#).

The latest results, which cover all the data collected in [2019–2021](#), include [more than 1200+](#) unique responses—our largest annual sample yet.

Choose a session to [Start Exploring](#)

Quality

Speed

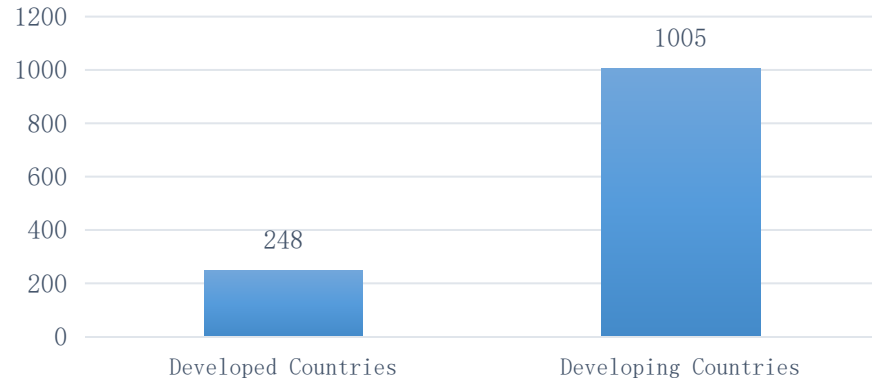
Cost



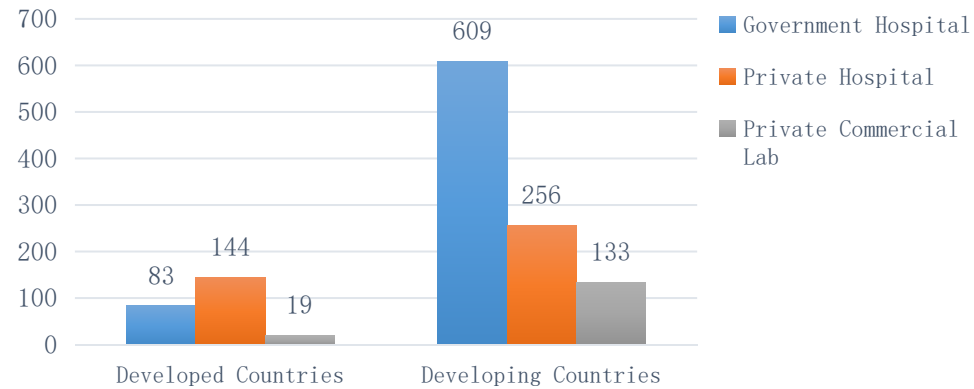
# 1253 participants join the survey in 2019–2021

## *80% participants from developing countries*

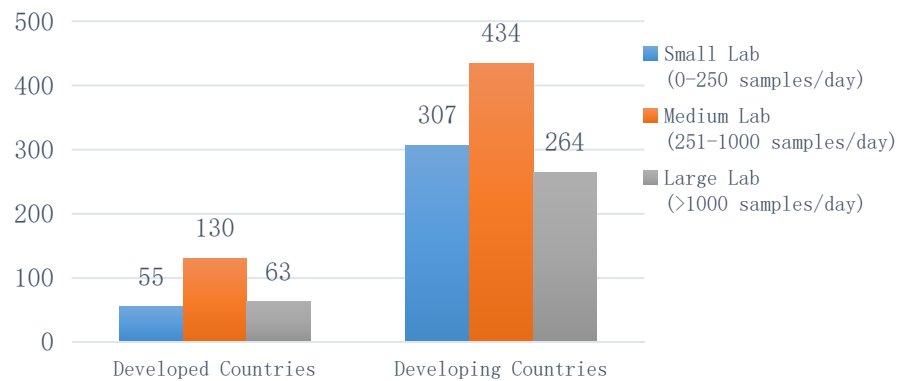
By Country Group



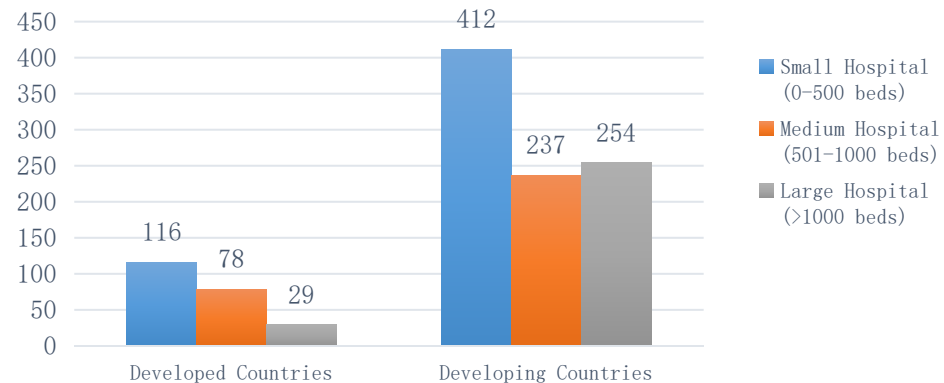
By Country Group



By Country Group



By Country Group



By Country Group

By Country

By Lab Type

By Lab Size

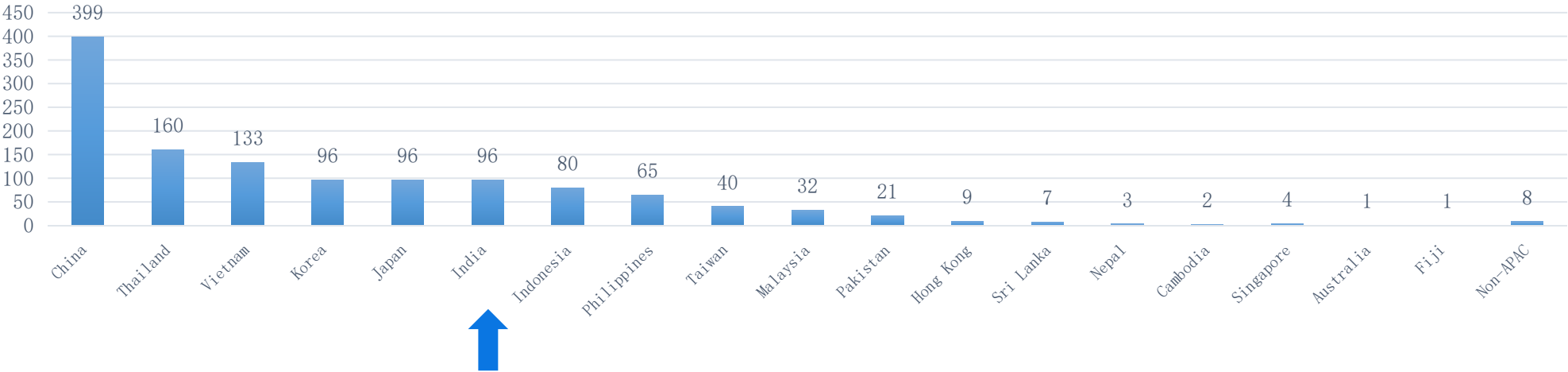
By Hospital Size

India

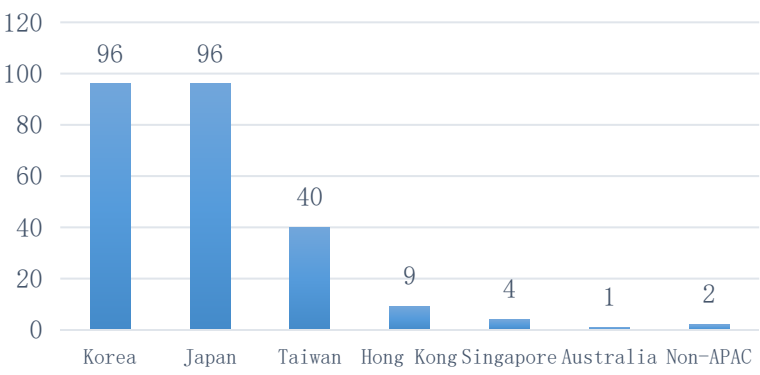
# 1253 participants join the survey in 2019–2021

## *Non-APAC countries start to take part in*

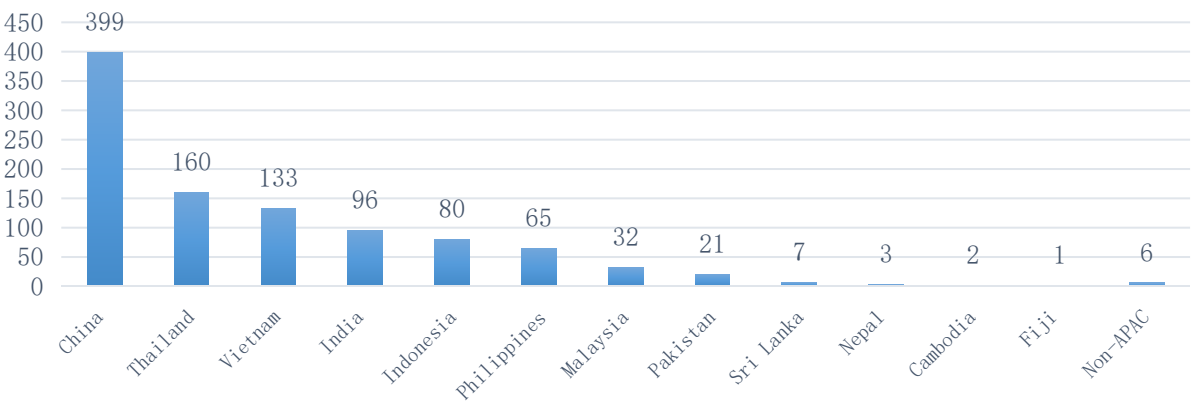
By Country



By Developed Country



By Developing Country



By Country Group

By Country

By Lab Type

By Lab Size

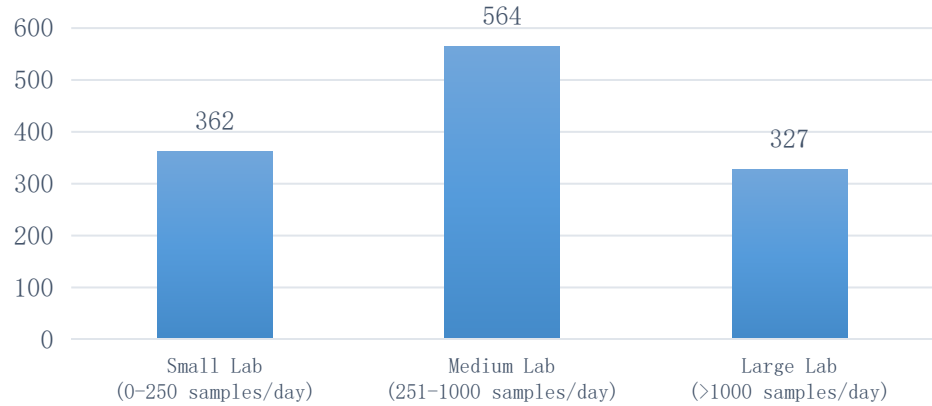
By Hospital Size

India

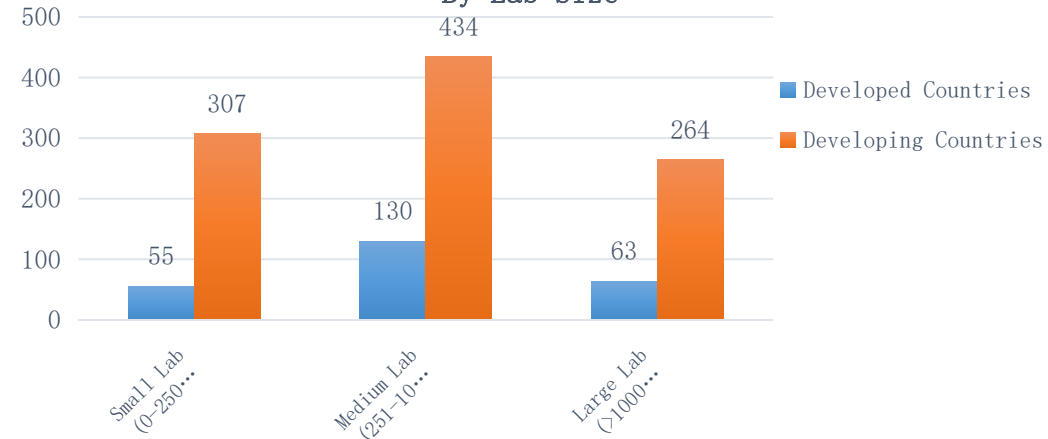
# 1253 participants join the survey in 2019–2021

## *45% of participants are Medium Size Laboratories*

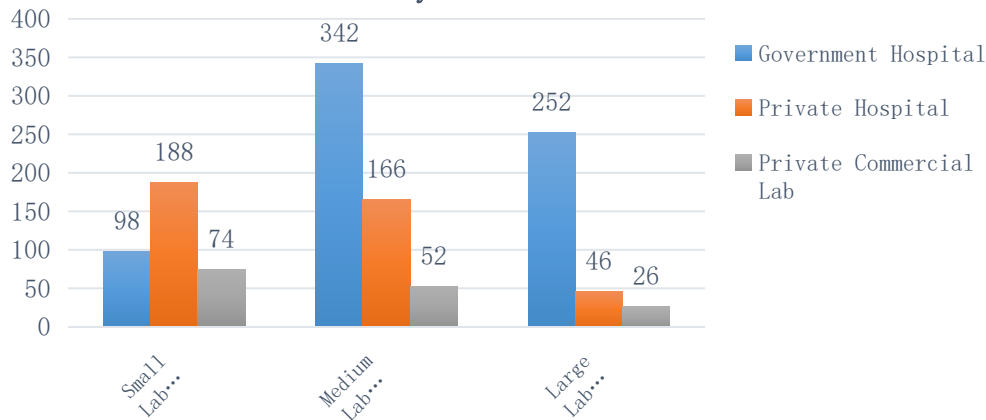
By Lab Size



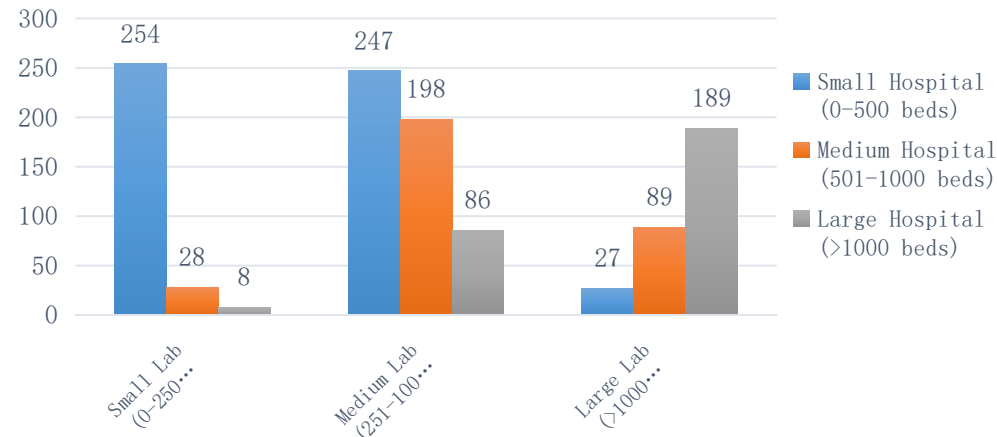
By Lab Size



By Lab Size



By Lab Size



By Country Group

By Country

By Lab Type

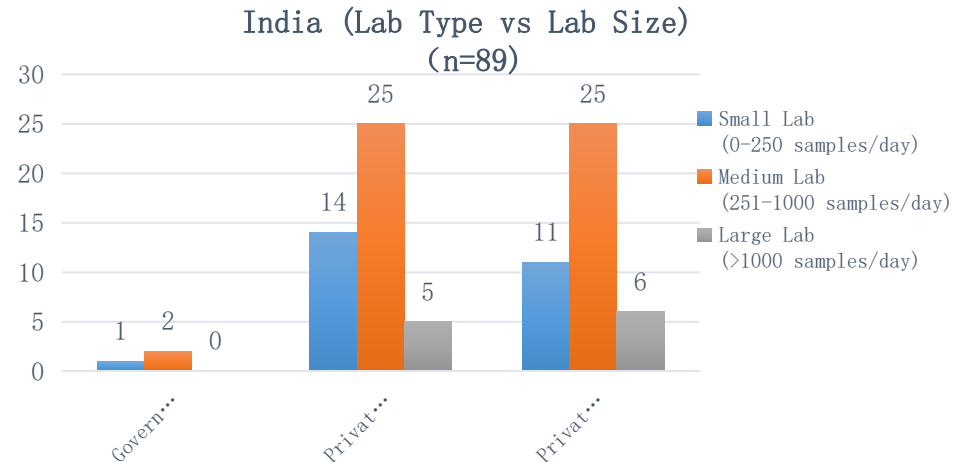
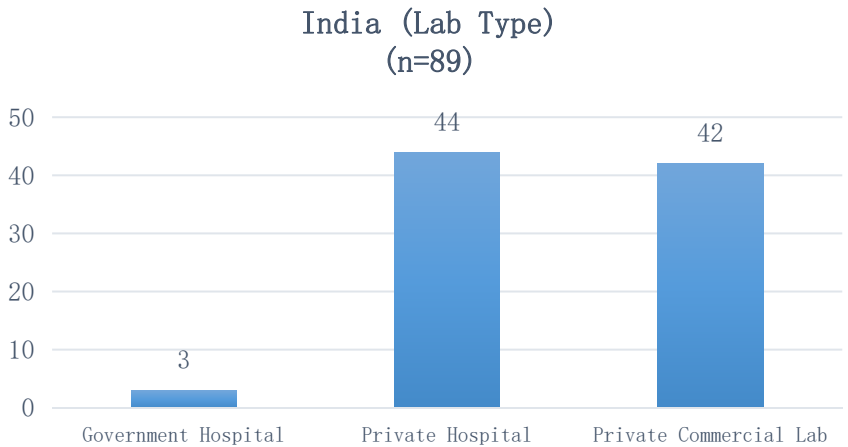
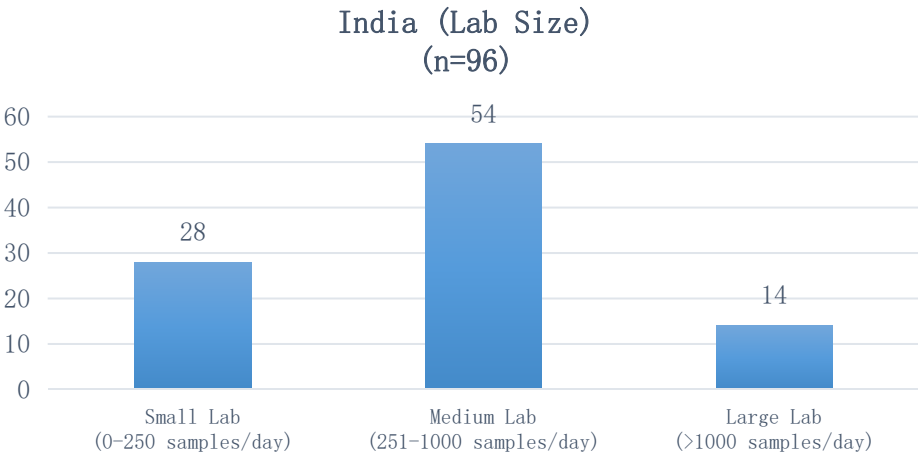
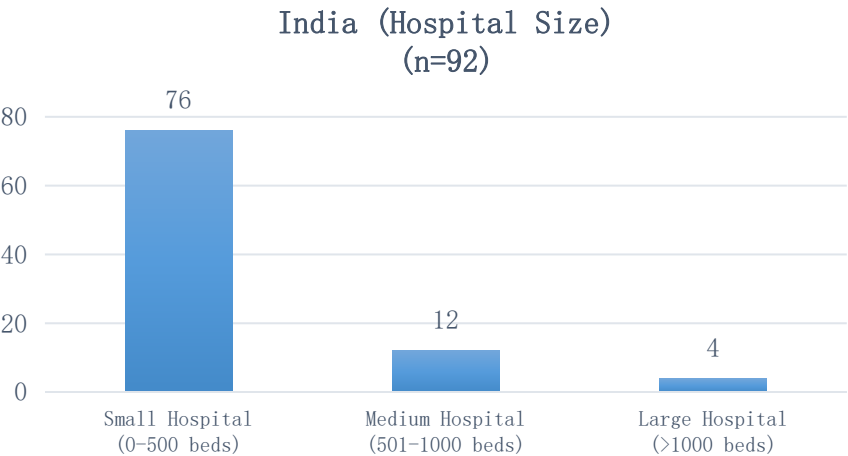
By Lab Size

By Hospital Size

India

# 96 participants in India join the survey in 2019–2021

## *Main participants are Small Hospital & Medium Lab*



By Country Group

By Country

By Lab Type

By Lab Size

By Hospital Size

India

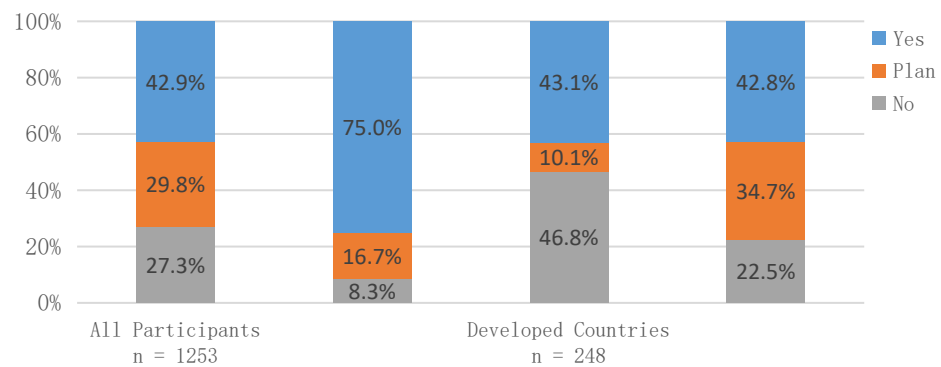
[Back to Main Menu](#)



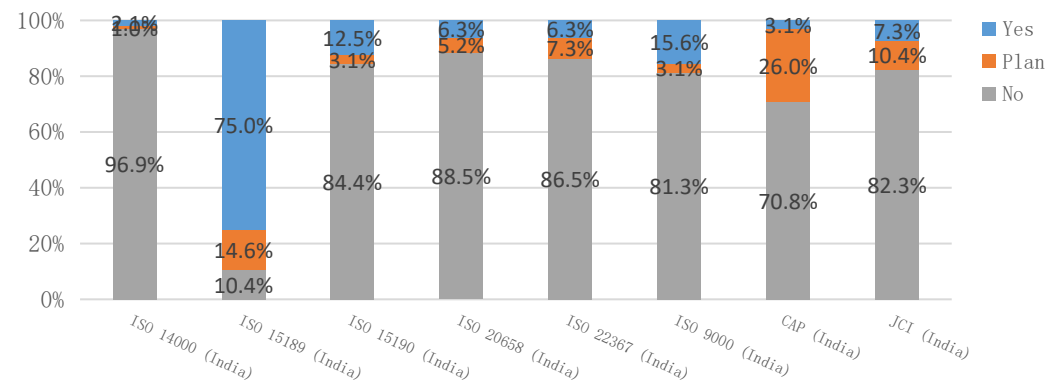
# International Accreditation

## *India has higher International Accreditation*

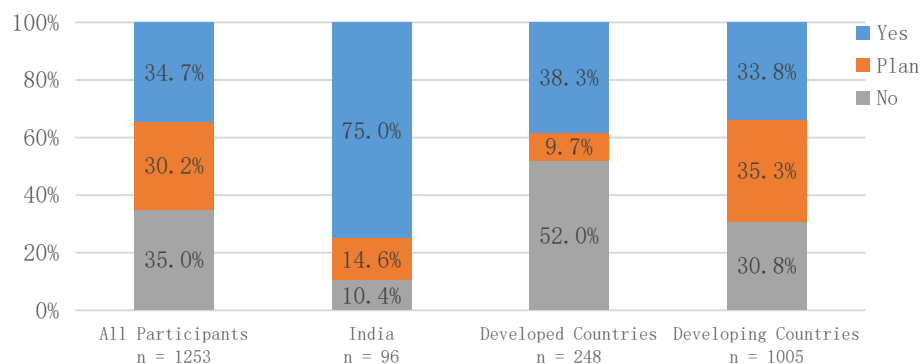
International Accreditation



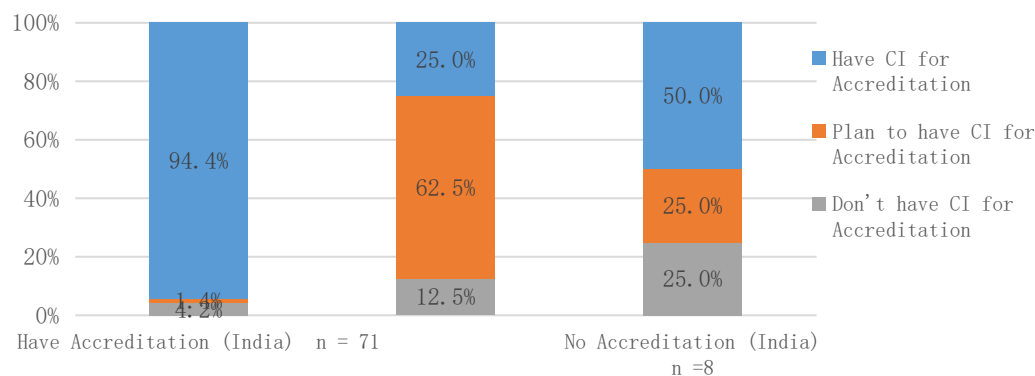
International Accreditation in India



ISO 15189



Coutinous Improvement Program for Accreditation



Accreditation

External QC

Continuous Improvement

KPI

Pre-Analytics

IT

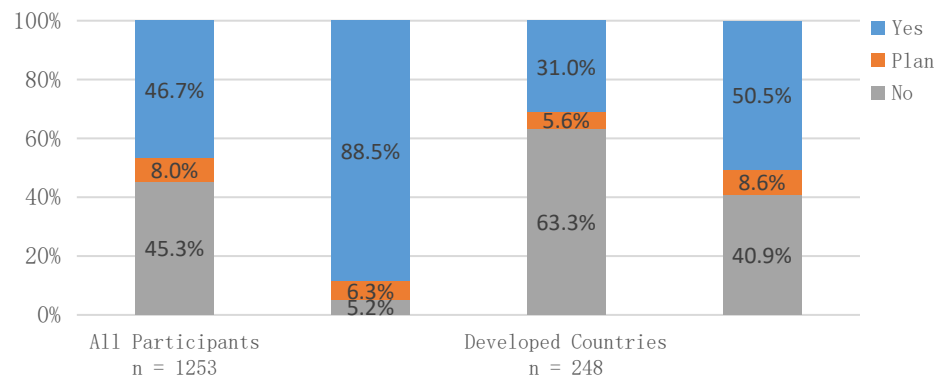




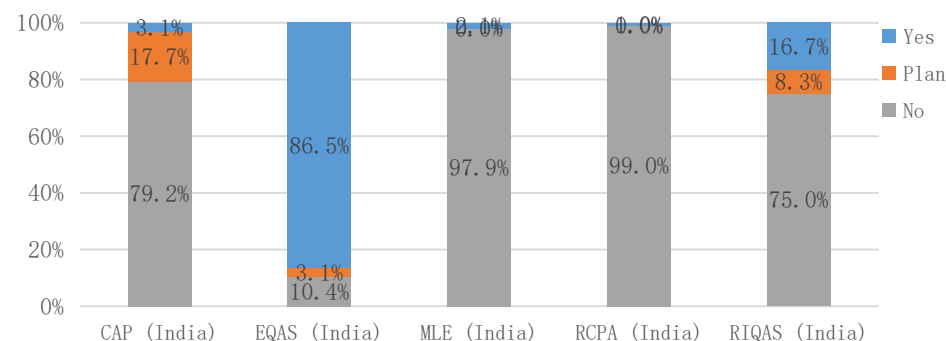
# International External QC Program

*International External QC is pretty popular in India*

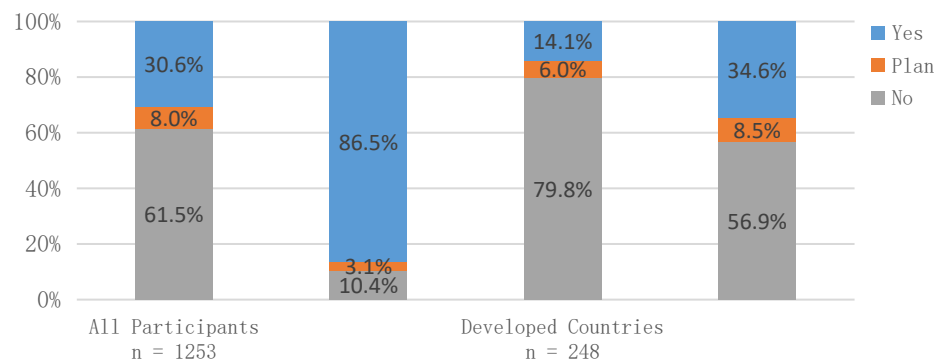
International External QC Program



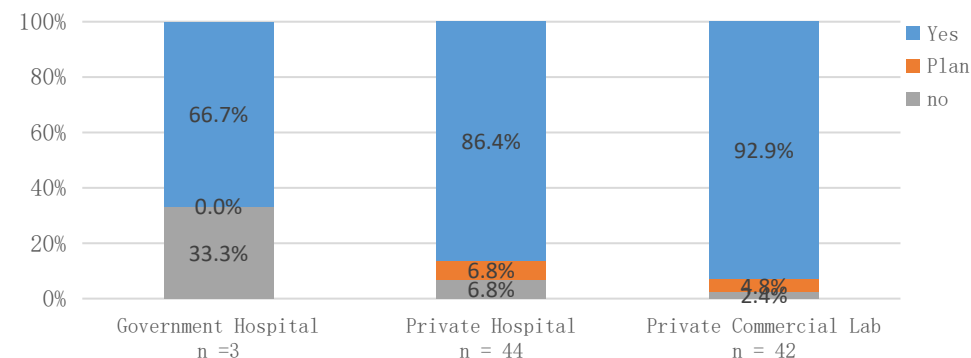
International External QC Program in India



EQAS



International External QC Program in India



Accreditation

External QC

Continuous Improvement

KPI

Pre-Analytics

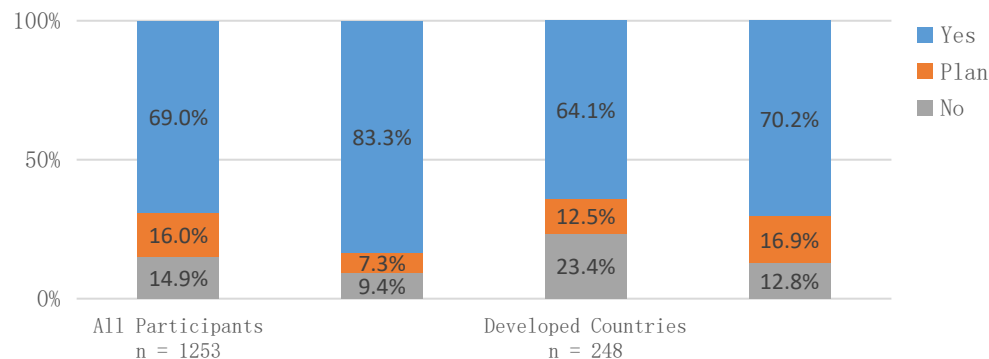
IT



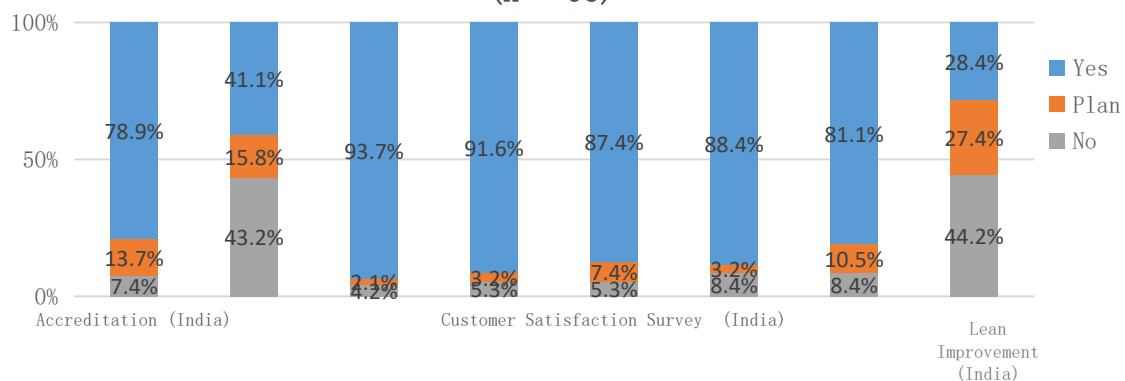
# Continuous Improvement Program

*Continuous improvement program is above par in India*

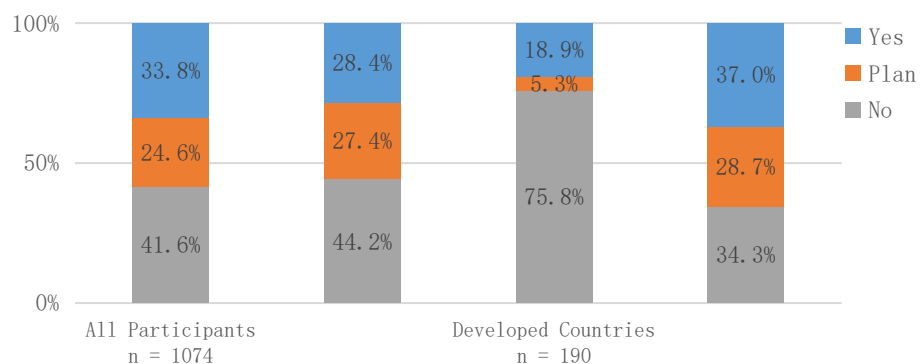
Continuous Improvement Program



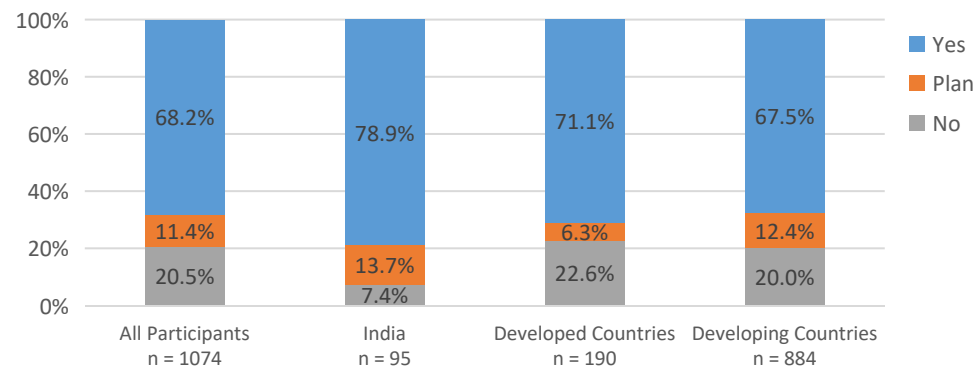
Continuous Improvement Program in India (n = 95)



Lean Continuous Improvement



Continuous Improvement for Accreditation



Accreditation

External QC

Continuous Improvement

KPI

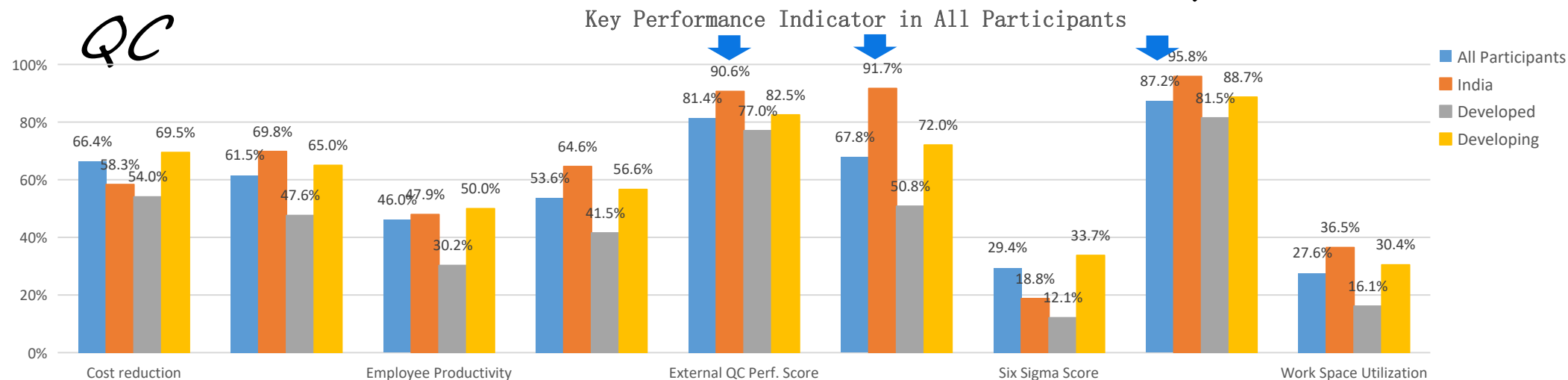
Pre-Analytics

IT

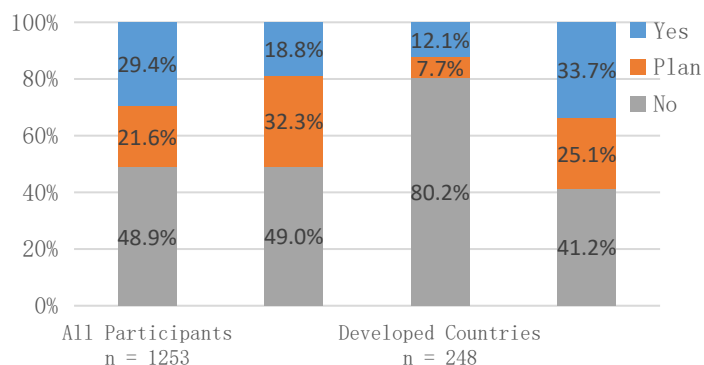


# Key Performance Indicator

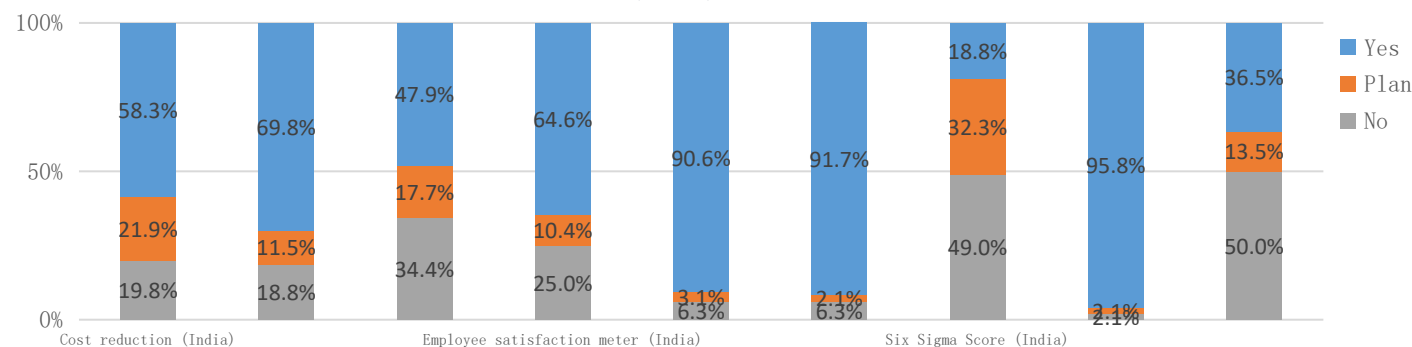
*India laboratories KPI focus on the employee and external QC*



Six Sigma KPI in All Participants



Key Performance Indicator in India (n=96)



Accreditation

External QC

Continuous Improvement

KPI

Pre-Analytics

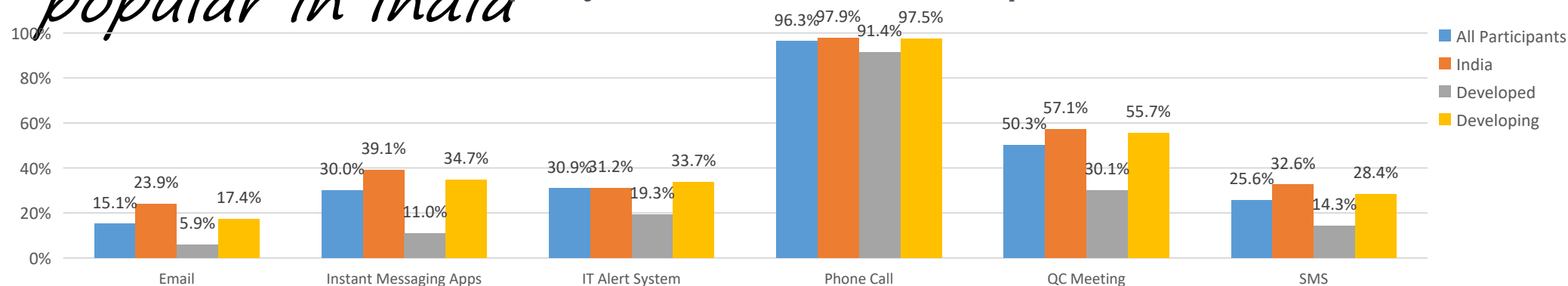
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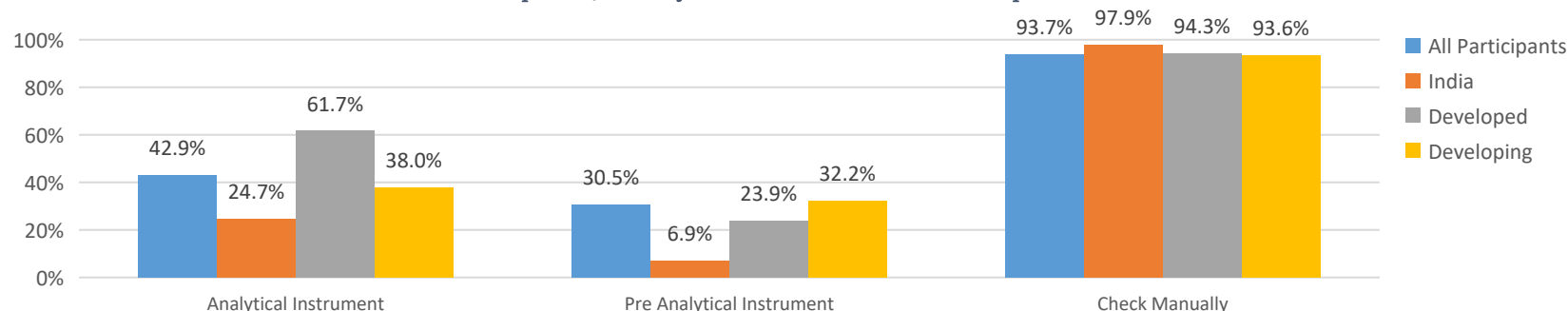
# Pre-Analytics

*Using instrument to check sample quality is not popular in India*

Sample Rejection Notification in All Participants



Sample Quality Check in All Participants



Accreditation

External QC

Continuous Improvement

KPI

Pre-Analytics

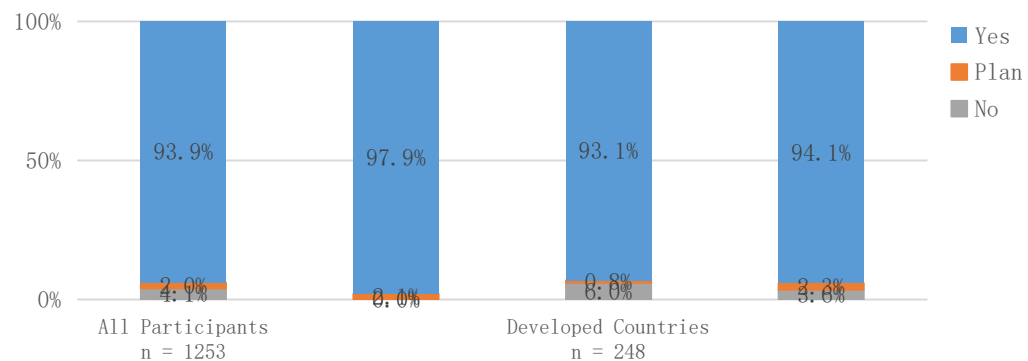
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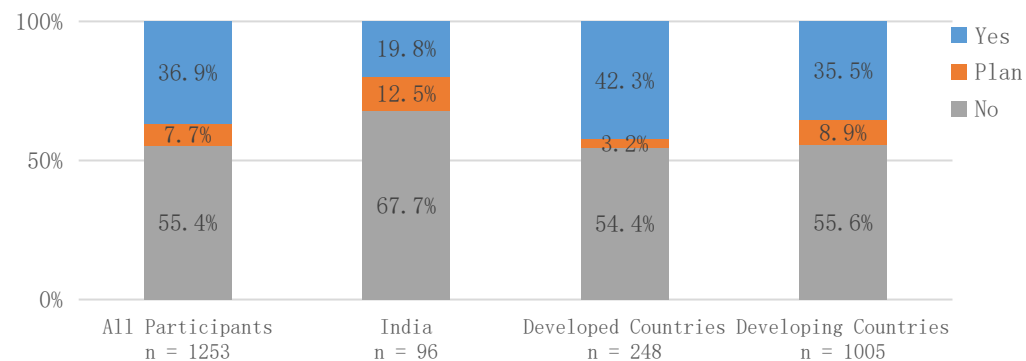
# IT Infrastructure

*Middleware is not so popular in India*

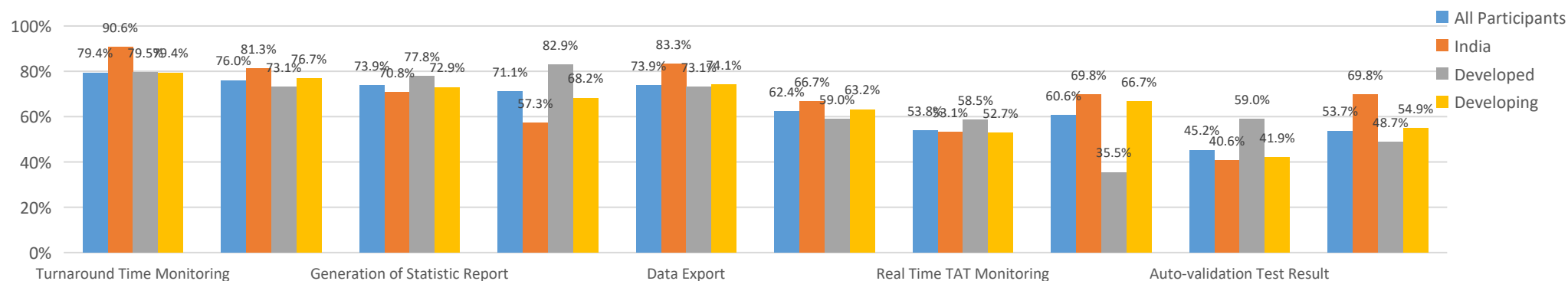
LIS in All Participants



Middleware in All Participants



Top 10 IT function in All Participants



Accreditation

External QC

Continuous Improvement

KPI

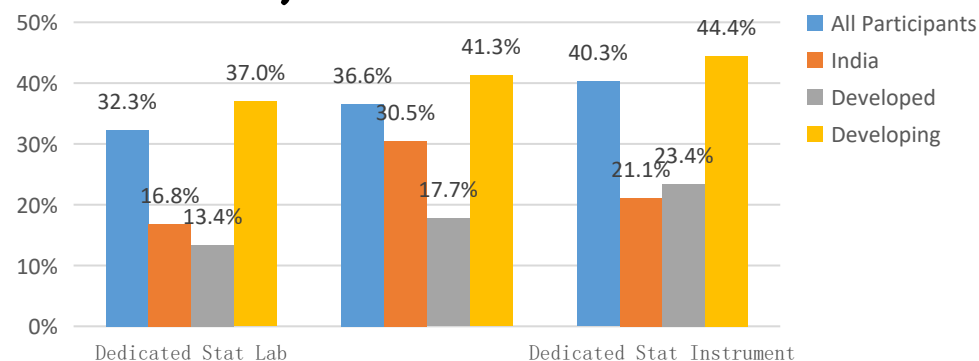
Pre-Analytics

IT

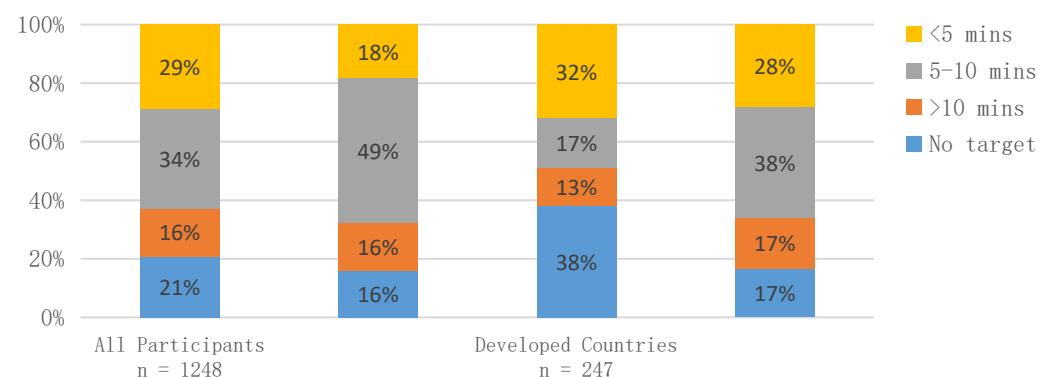
# STAT and Critical Result

*Dedicated Stat Lab isn't popular in India, similar to developed countries*

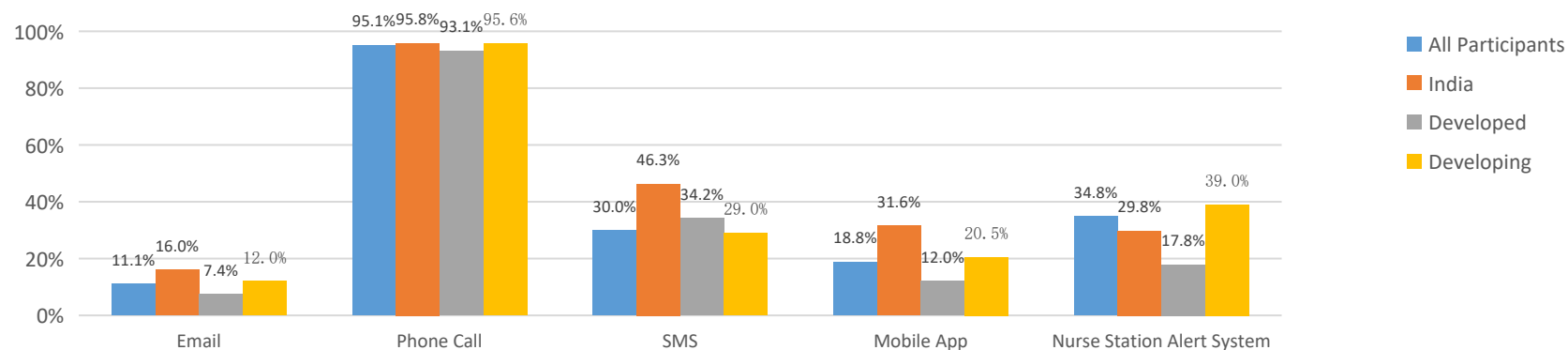
STAT Sample Handling in All Participants



Critical Result Reporting Target in All Participants



Critical Result Notification in All Participants



STAT and Critical Result

TAT Monitoring

TAT for Chemistry

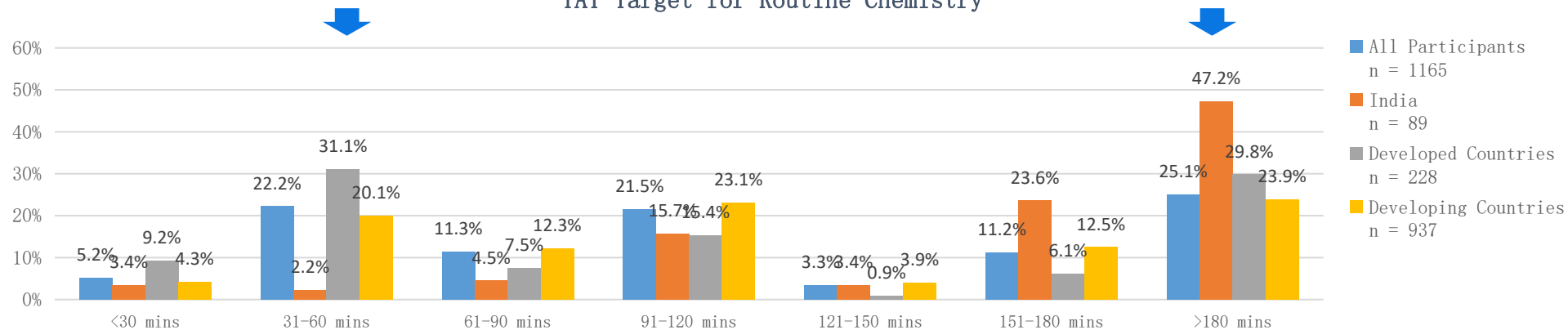
TAT for Immunology

TAT for Specific Assay

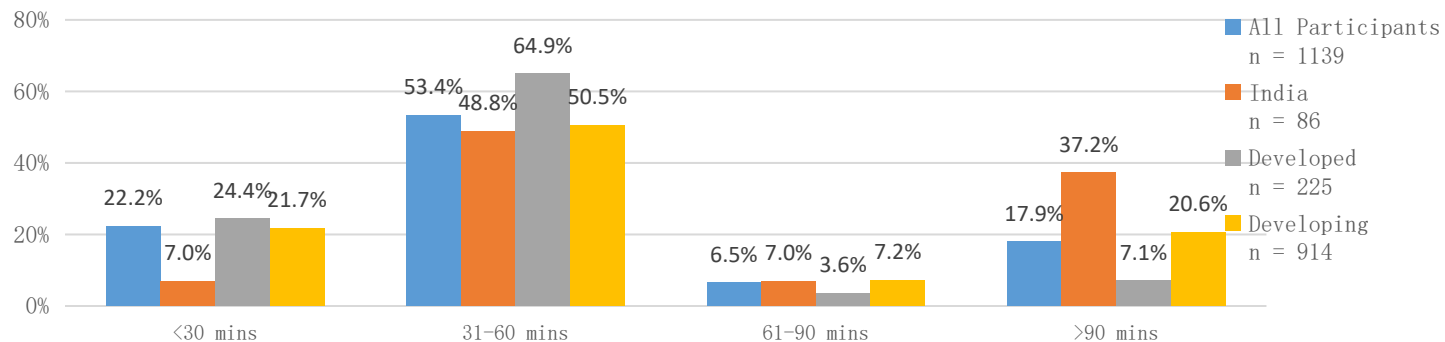
# TAT target for Chemistry Tests

*TAT Target for Chemistry Test is below par in India*

TAT Target for Routine Chemistry



TAT Target for STAT Chemistry



STAT and  
Critical Result

TAT Monitoring

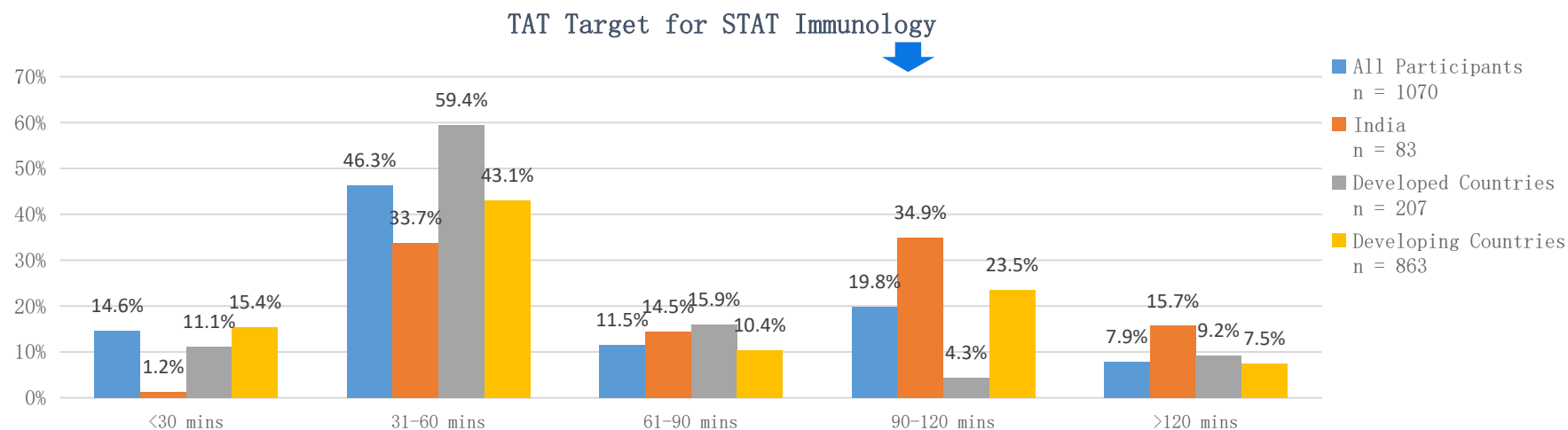
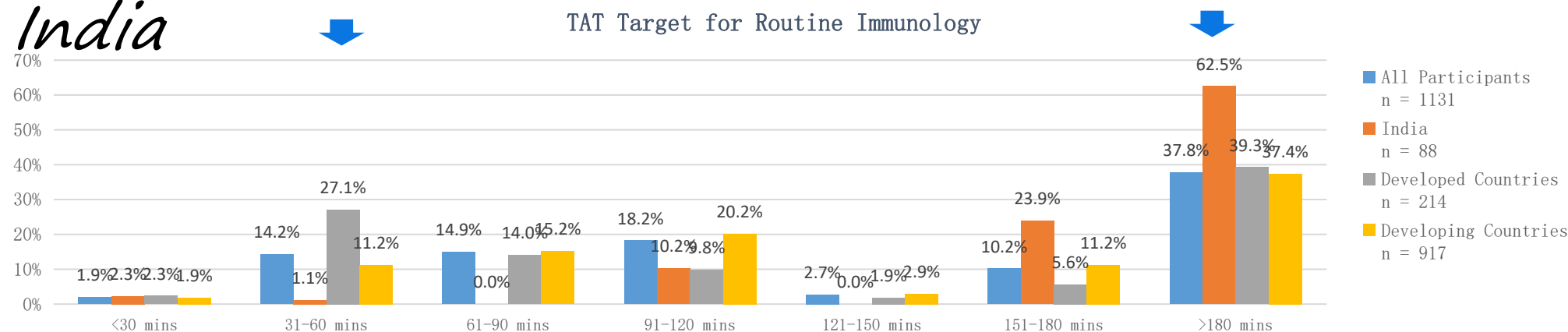
TAT for  
Chemistry

TAT for  
Immunology

TAT for Specific  
Assay

# TAT target for Immunology Tests

*TAT Target for Routine Immunology Test is longer in India*



STAT and  
Critical Result

TAT Monitoring

TAT for  
Chemistry

TAT for  
Immunology

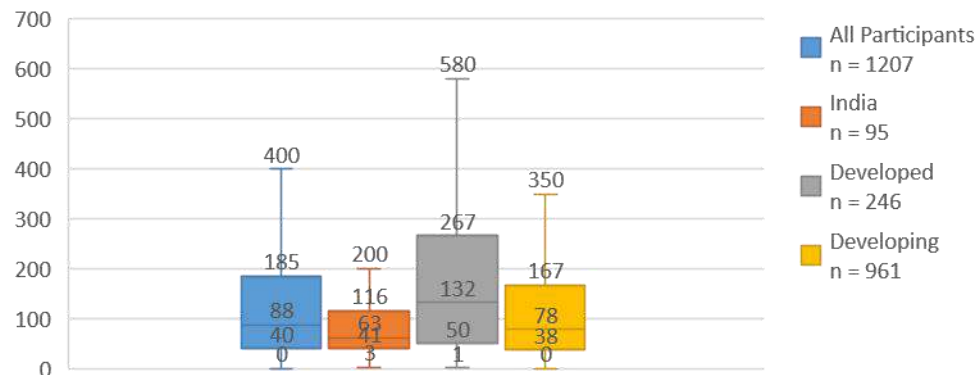
TAT for Specific  
Assay



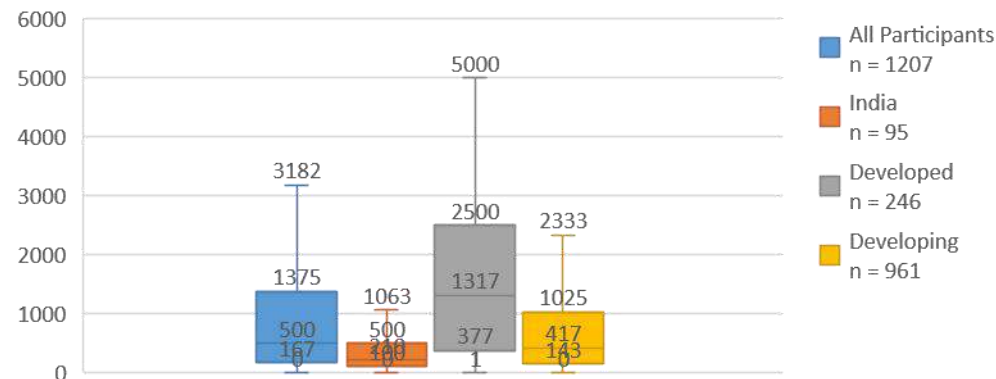
# Staff Productivity

*Lab staff productivity in India is below par*

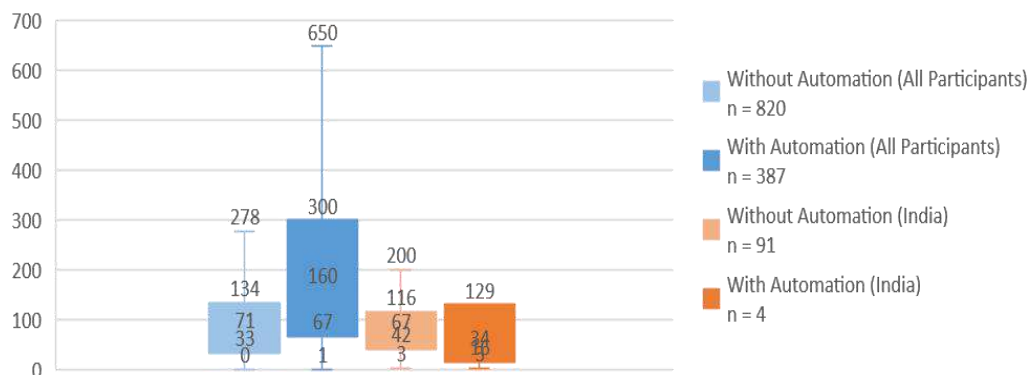
Sample / FTE in All Participants



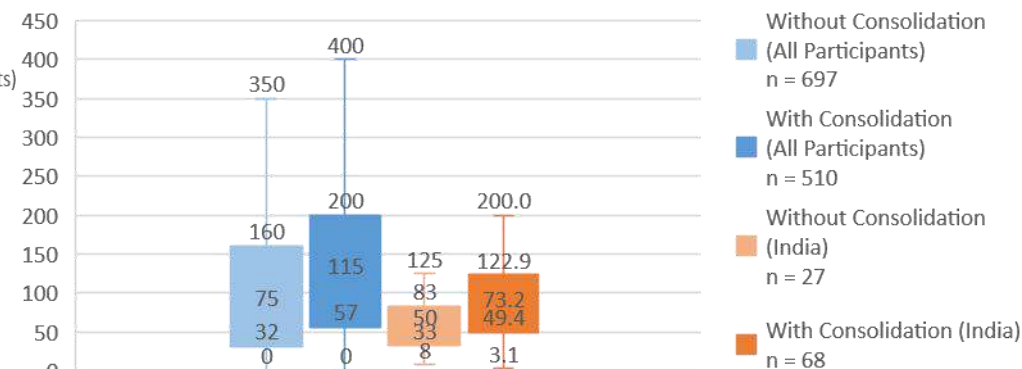
Test / FTE in All Participants



Sample / FTE and Lab Automation



Sample / FTE and SWA System



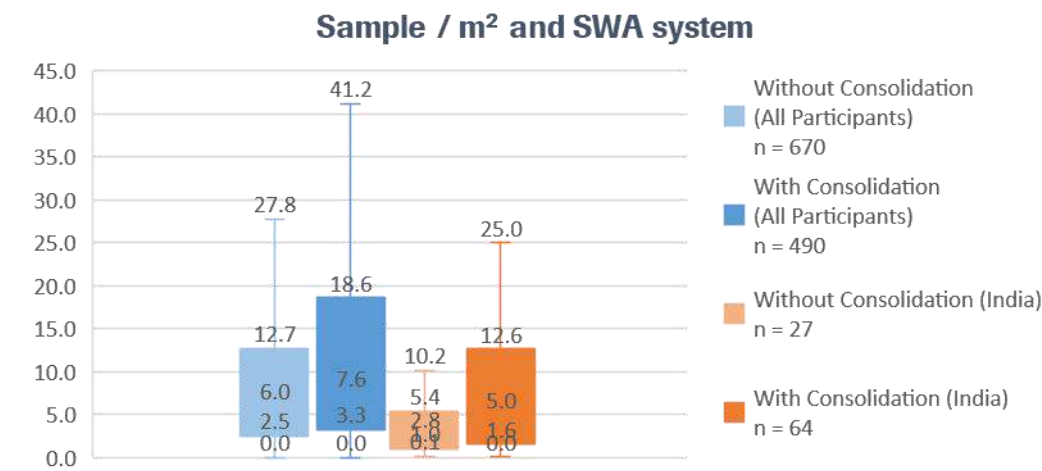
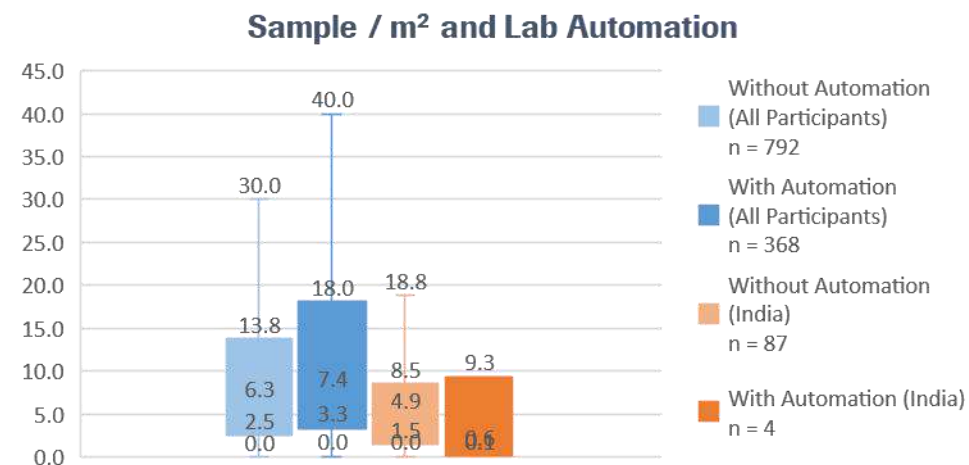
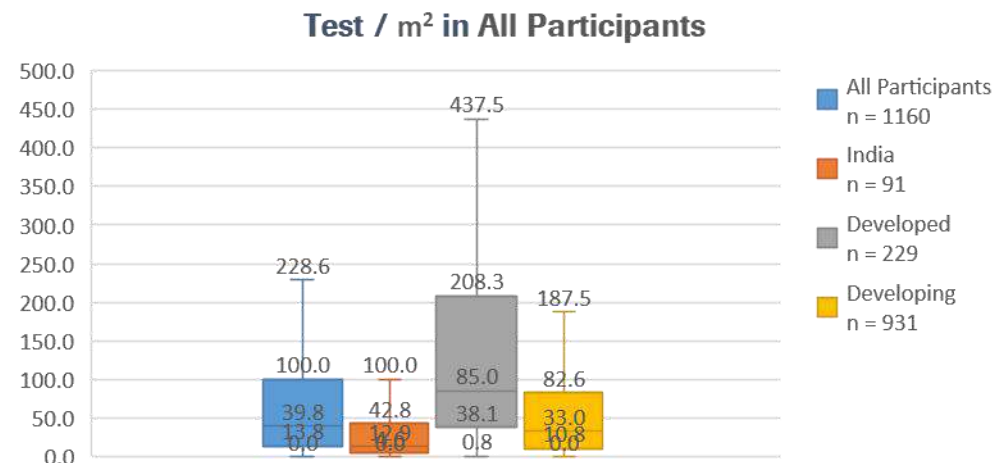
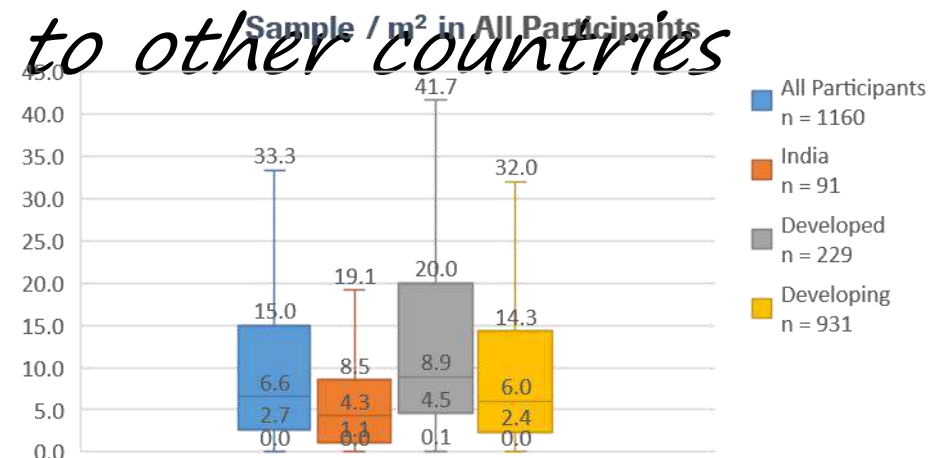
Staff Productivity

Lab Space Productivity

Instrument Productivity

# Lab Space Productivity

*Lab space productivity in India is below standard compare to other countries*



Staff  
Productivity

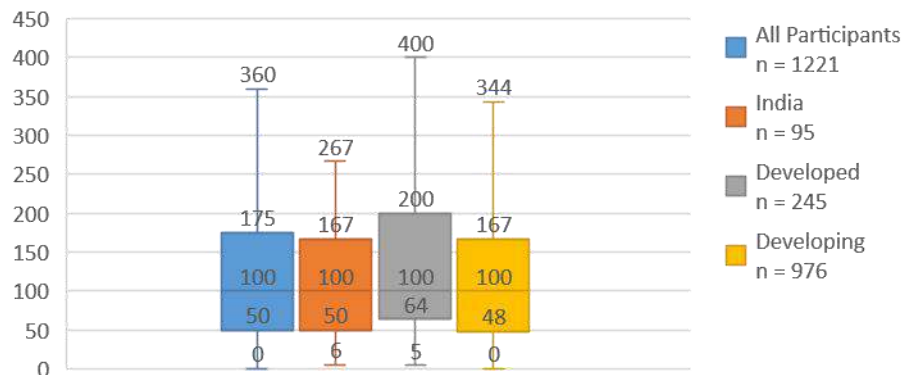
Lab Space  
Productivity

Instrument  
Productivity

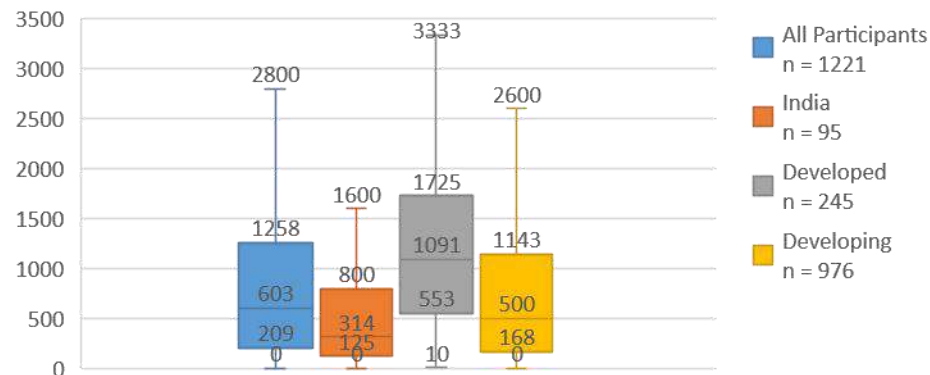
# Instrument Productivity

*Instrument Productivity is on average in India*

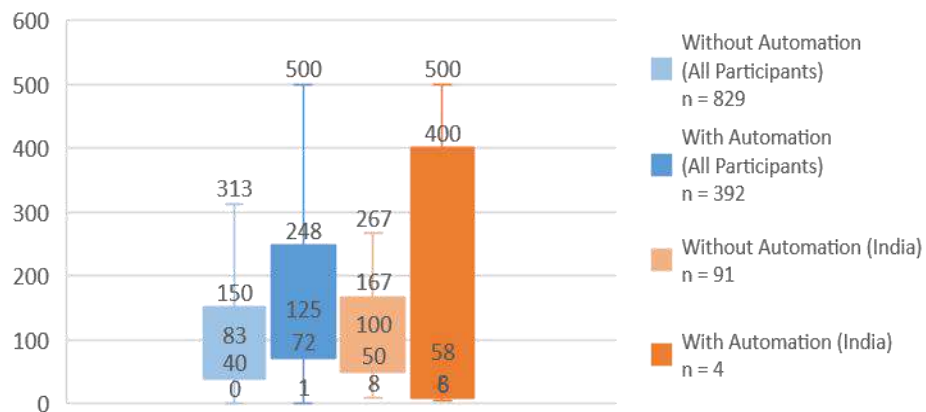
Sample / Instrument in All Participants



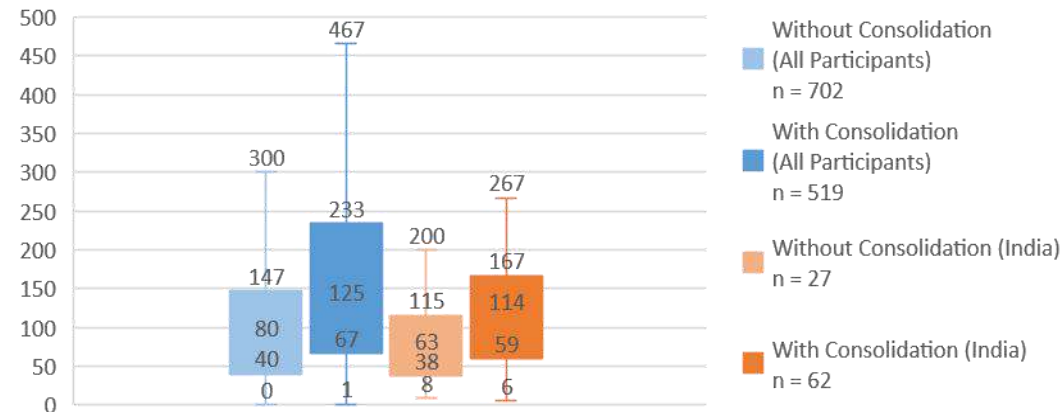
Test / Instrument in All Participants



Sample / Instrument and Lab Automation



Sample / Instrument and SWA system



Staff Productivity

Lab Space Productivity

Instrument Productivity



Diagnostic laboratories in Asia Pacific region: Investigation on quality characteristics and time of reporting

Article Reference: DOI  
10.1016/j.clinbiochem.2017.03.017  
Publication: 20 March 2017  
Journal: Clinical Biochemistry  
Volume / Issue: 50 (2017)  
Authors: Tony C. Badrick  
Anton Gutscher  
Nakako Sakamoto  
Daniel Chin



Diagnostic Laboratories in India: Investigating Quality Characteristics, Productivity and Time of Reporting

Article Reference: DOI 10.1007/s12291-017-0679-9  
Publication: 10 July 2017  
Journal: Indian Journal of Clinical Biochemistry  
Volume / Issue: 10.1007/s12291-017-0679-9  
Authors: Tony C. Badrick  
Anton Gutscher  
Daniel Chin



Philippines Diagnostic Pathology Laboratory Benchmarking

Article Reference: DOI 10.21141/PJP.2019.11  
Publication: 19 October 2019  
Journal: Philippine Journal of Pathology  
Volume / Issue: Vol. 4 No. 2 December 2019  
Authors: Tony C. Badrick  
Jozica Habijanac  
Sam Yew Mah  
Elizabeth Arcellana-Nuqui



Turnaround times and modes of reporting critical results in Asian laboratories

Article Reference: DOI  
10.1177/0004563221989361  
Publication: 27 January, 2021  
Journal: Annals of Clinical Biochemistry  
Volume / Issue: 2021 Jan 27  
Authors: Tony C. Badrick  
Saleem Mohamed  
Wesley Wong



A current analysis of quality indicators in Chinese clinical laboratories

Article Reference: 10.21037/jlpm-21-19  
Publication: 16 June, 2021  
Journal: Journal of Laboratory and Precision Medicine  
Volume / Issue: Vol 6 (July 2021)  
Authors: Tony C. Badrick  
Saleem Mohamed  
Wesley Wong  
Xian-Zhang Huang



What factors are associated with improvements in productivity in clinical laboratories in the Asia Pacific Region?

Article Reference:  
doi.org/10.1016/j.clinbiochem.2021.10.008  
Publication: 29 October, 2021  
Journal: Clinical Biochemistry  
Volume / Issue: 50 (2017)  
Authors: Tony C. Badrick  
Yichen Ge  
Jing Guo  
Wesley Wong

*Doing now what patients need next*