

## Impact of laboratory accreditation on the performance of quality indicators in an International Indicator Benchmarking Program

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### INTRODUCTION

Laboratory Accreditation Programs play a crucial role in ensuring that laboratories (labs) adhere to quality management systems based on best practices, meeting stakeholders' key requirements. To assess their processes, organizations employ performance monitoring systems, often relying on quality indicators (QI). In Brazil, the Metricare Indicators platform (Metricare), facilitates the benchmarking of QI for laboratories' performance across dimensions and aims to help labs identify improvement opportunities and enhance overall market performance.

### AIM

This study aims to compare laboratory performance metrics within the indicator's platform, focusing on the impact of laboratory accreditation.

### METHOD

This study, conducted from Jan/22 to Jul/23, focused on 6 essential QIs: Proficiency Test Performance (PTP), Incorrect Reports (IR), Failure to Communicate Critical Results (FCCR), Delay in Outpatient Results (DOR), Sample Recollection (SR), and Patient Satisfaction (NPS). The QI, aligned with IFCC harmonization, were submitted monthly by participating laboratories to Metricare. The performance evolution analysis involved comparing group medians for each QI in a global sample. Labs were stratified in groups based on accreditation status: (A) Accredited by the Brazilian Society of Clinical Pathology and Laboratory Medicine (SBPC/ML); (B) Accredited by other programs; (C) Non-accredited labs. Sigma ( $\sigma$ ) metrics were used for all QI, except for the patient satisfaction QI, expressed as a percentage.

### CONCLUSIONS

This study underscores the positive impact of laboratory accreditation programs on organizational performance, benefiting patients and stakeholders. Notably, differences in performance among laboratories accredited by different programs highlight the importance of careful program selection. Laboratories should consider these findings when choosing accreditation programs to ensure optimal outcomes and overall excellence.

### ACKNOWLEDGEMENT

Not applicable.

### REFERENCES

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### RESULTS

Two QI (IR,  $\sigma$  5.2; SR,  $\sigma$  3.9) performed similarly across all 3 groups. The remaining 4 QI showcased superior performance by group A. For instance, in the PTP, group A labs exhibited  $\sigma$  3.7, outperforming groups B ( $\sigma$  3.6) and C ( $\sigma$  3.4). The pattern persisted across other QI, including DOR (groups A, B, and C  $\sigma$  3.7, 3.5, and 2.7 respectively), FCCR (groups A, B, and C  $\sigma$  4.6, 3.4, and 4.0 respectively), and NPS (groups A, B, and C percentages, 91%, 88%, and 74%, respectively).

Table 1: Indicators Sigma ( $\sigma$ ) or percentage (%) results between the different groups evaluated.

Indicator	Group A	Group B	Group C
IR ( $\sigma$ )	5.2	5.2	5.2
SR ( $\sigma$ )	3.9	3.9	3.9
PTP ( $\sigma$ )	3.7	3.6	3.4
DOR ( $\sigma$ )	3.7	3.5	2.7
FCCR ( $\sigma$ )	4.6	3.4	4.0
NPS (%)	91	88	74

Legends to Table 1: Incorrect Reports (IR); Sample Recollection (SR); Proficiency Test Performance (PTP); Delay in Outpatient Results (DOR); Failure to Communicate Critical Results (FCCR); Patient Satisfaction (NPS); Group A (Labs Accredited by the Brazilian Society of Clinical Pathology and Laboratory Medicine (SBPC/ML); Group B (Labs Accredited by other programs); Group C (Non-accredited Labs).

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