

Introduction

The National External Quality Assessment Program (PNAEQ) provides tools for carrying out External Quality Assessment in pre and post-analytical phase, including Internal Audits, through scheme **PNAEQ-3F Audits of the Pre and Post-Analytical Phases**, since 2016. This tool allows verification and improvement of the processes effectiveness, and provides valuable insights to laboratory management about the course of work within the laboratory.

Aims

The aim of this work is to characterize PNAEQ participants in scheme **PNAEQ-3F Audits of the Pre and Post-Analytical Phases** in 2022-2023, analyze results evolution in this period, and conclude about the suitability of the checklist used in this scheme.

Methods

Scheme **PNAEQ-3F Audits of the Pre and Post-Analytical Phases** is available by PNAEQ to clinical participants that has a professional with competence and adequate training¹ in audits area. Consists on a checklist² (108 questions) sent once a year (May), to be used as audit, carried out by the participants, on central lab and/or stations, during 2 weeks (Figure 1).

PNAEQ-3F AUDITS OF THE PRE AND POST-ANALYTICAL PHASES

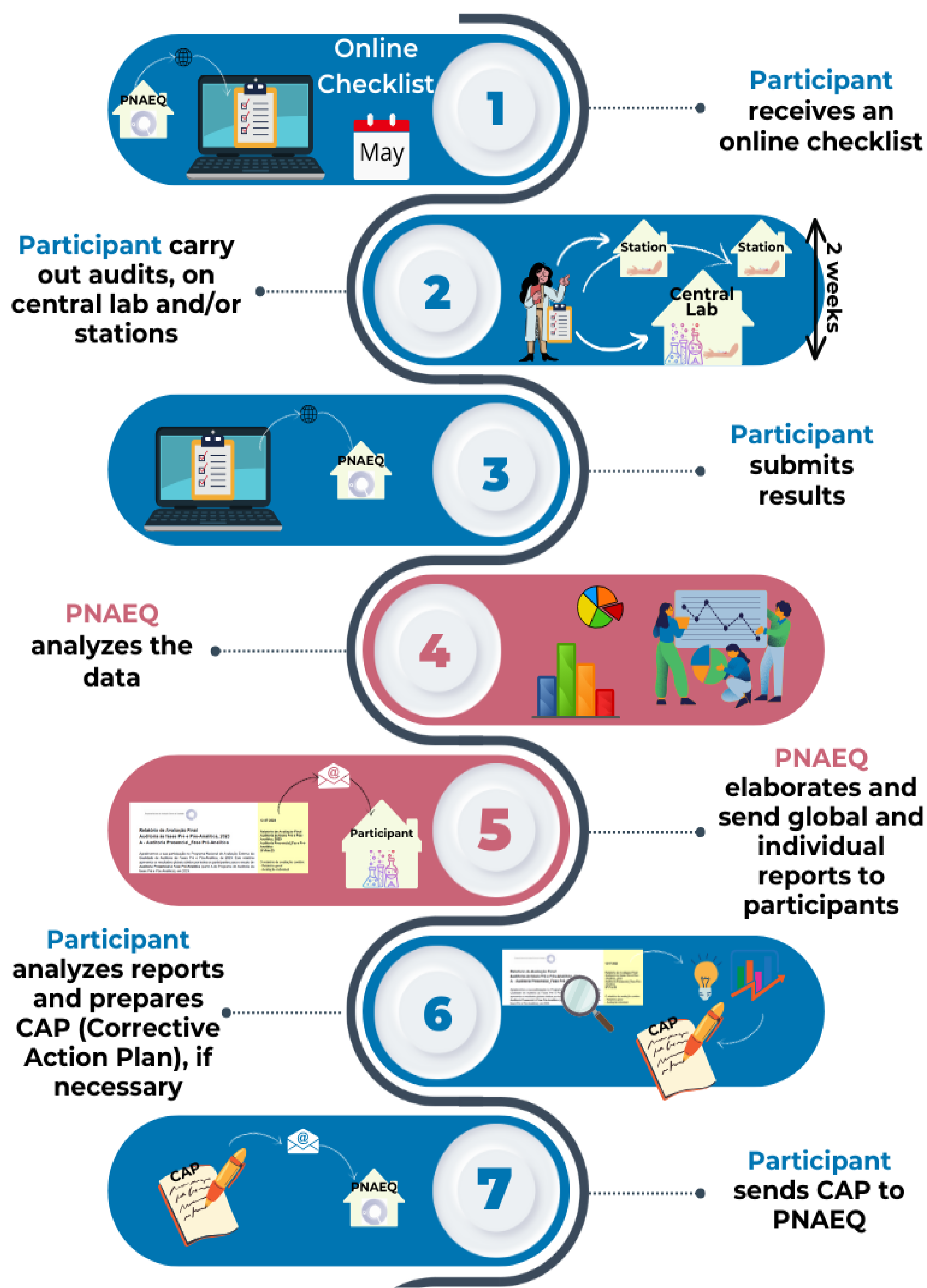


Figure 1: Operation diagram of PNAEQ's scheme PNAEQ-3F Audits of the Pre and Post-Analytical Phases

The study focused on answers, from 27 participants, to **82 relevant and common questions** included in 2022 and 2023 schemes, to analyse the **evolution of compliance** with guidelines^{2,3}, and it was considered a significant worsening whenever the percentage of non-compliant responses increased by more than 3%.

Results

Characterization of PNAEQ participants in scheme PNAEQ-3F Audits of the Pre and Post-Analytical Phases in 2022-2023, is represented in Figure 2 and Graphs 1 to 4.

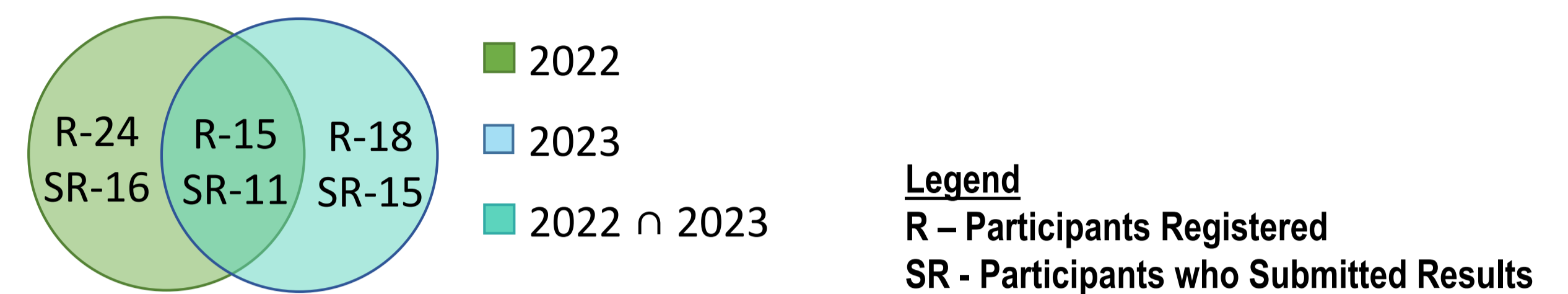
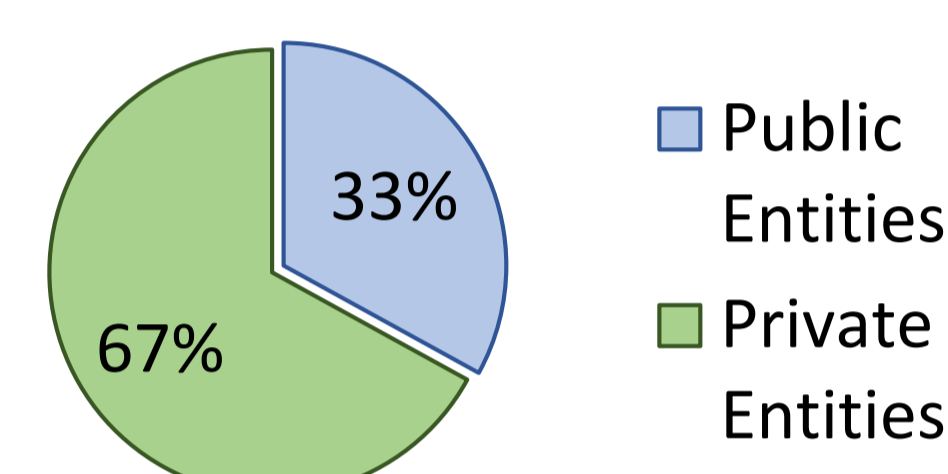
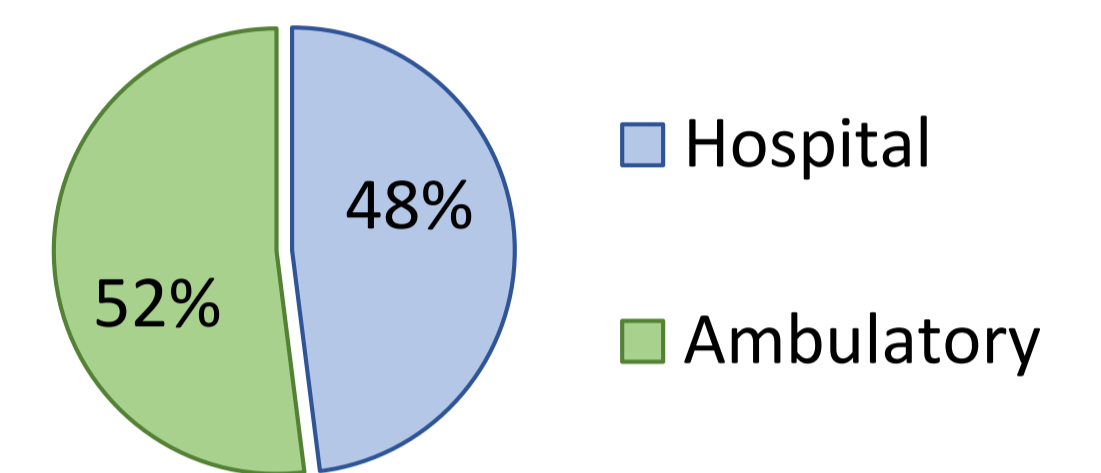


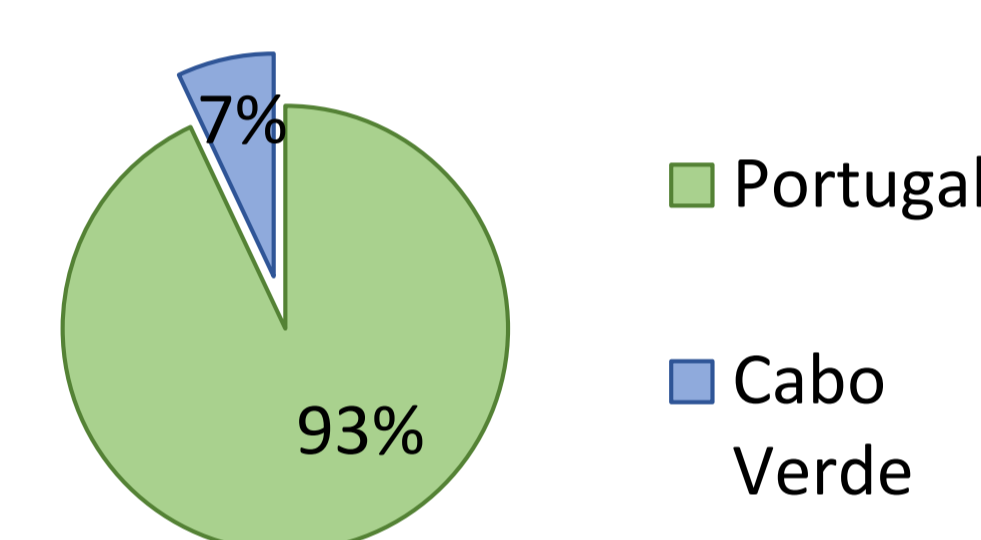
Figure 2: Number of participants (registered and who submitted results), in 2022, 2023 and in common in two years.



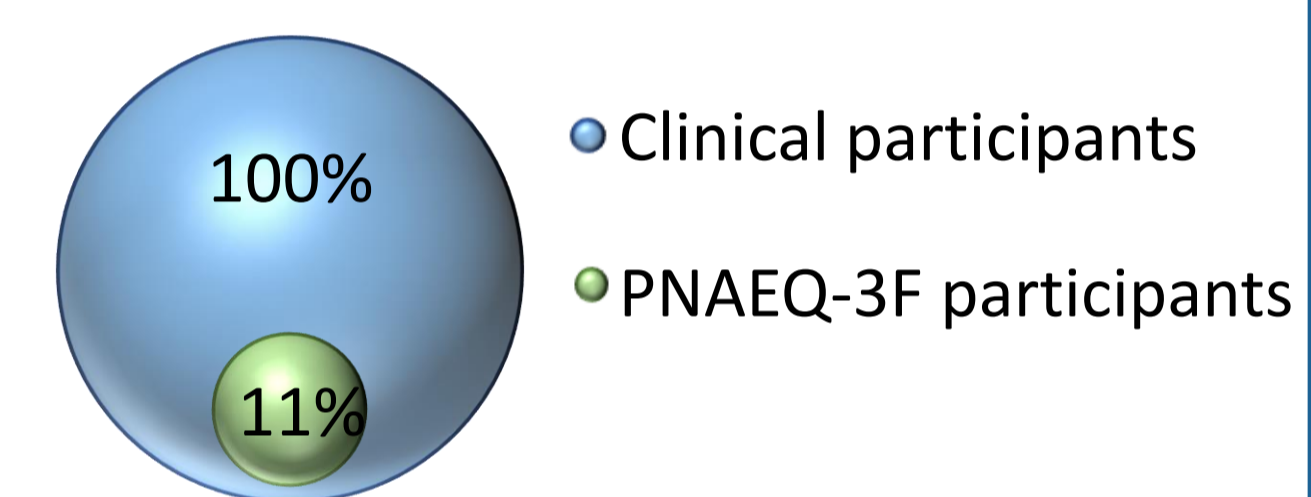
Graph 1: Participant's distribution by type of entity



Graph 2: Participant's distribution by type of service



Graph 3: Participant's distribution by country



Graph 4: Proportion of PNAEQ participants in the PNAEQ-3F scheme, in relation to participants in the clinical area

The analysis of the **evolution of compliance**, between 2022 and 2023 results, is presented in Figure 3.

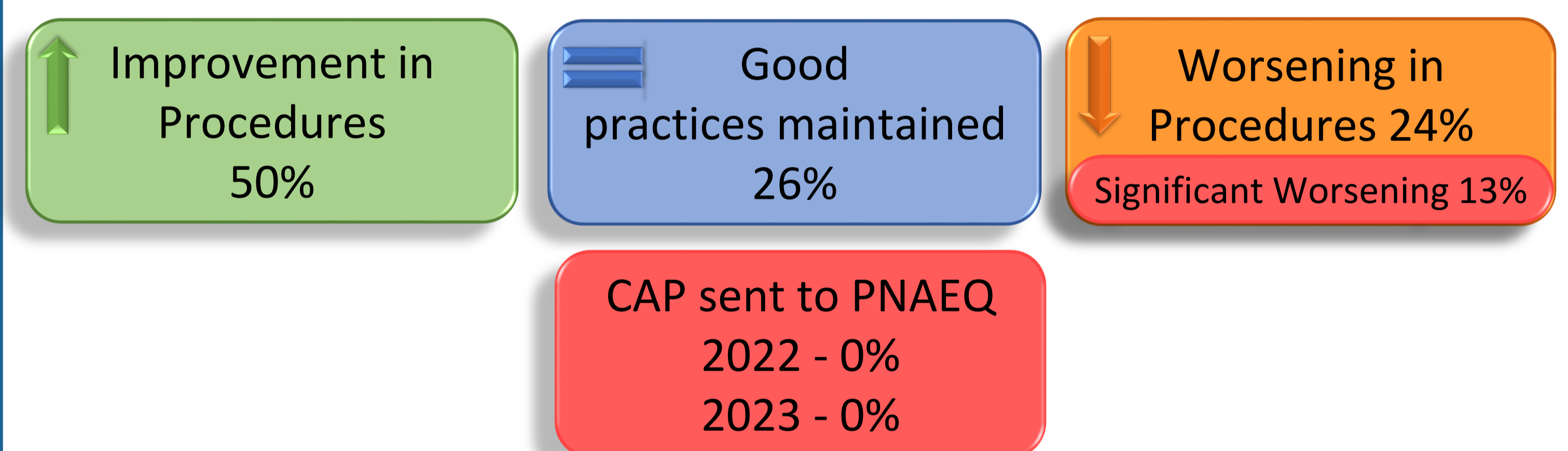
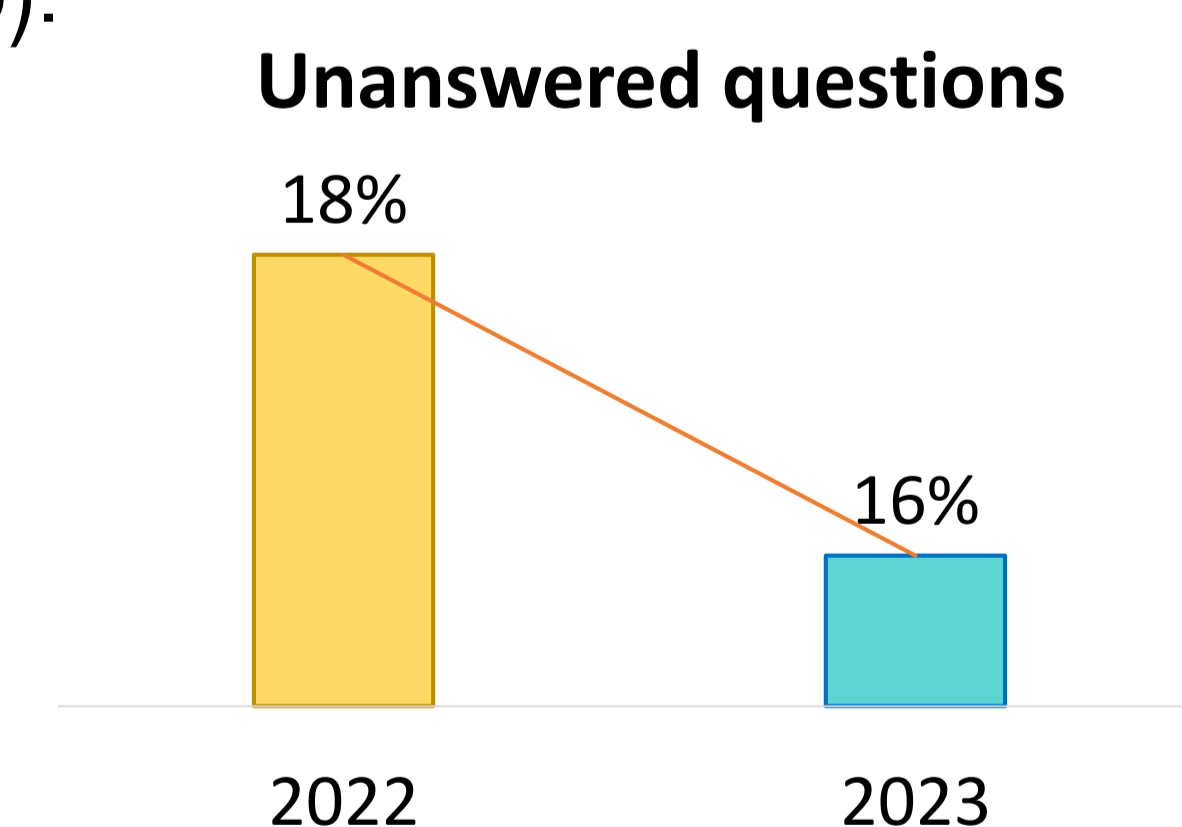


Figure 3: Results of the evolution study between data from 2022 and 2023, relation to PNAEQ-3F scheme

Regarding the **suitability** of the **checklist** used in this scheme, the percentage of unanswered questions slightly decreased from 2022 (18%) to 2023 (16%) (Graph 5).



Graph 5: Unanswered questions, in percentage, to the PNAEQ-3F scheme checklist, in 2022 and 2023

Conclusion

PNAEQ will make efforts to involve more participants in this scheme, since although they are diverse they are still few.

Majority of answers showed improvement or maintenance in procedures (76%), so we can affirm that using this tool is being effective. The checklist included is suitable, since the percentage of unanswered questions is low and slightly decreased.

However, PNAEQ proposes to recommend bibliography and training to the participants, and monitor them more closely, for example by carrying out remote audits for participants with worse results, since corrective action implementation plans are not being sent to PNAEQ.

Internal audits plays a critical role in strengthening quality within a laboratory. By conducting regular and systematic audits, is possible to identify areas for improvement and ensure that processes align with strategic objectives and applicable standards, as well as verify practices and evaluate professionals.