EXTERNAL QUALITY ASSESSMENT IN LABORATORY SAFETY AREA (PNAEQ-1S SEGURANÇA LABORATORIAL)

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Introduction

The National External Quality Assessment Program (PNAEQ) provides tools for carrying out external quality assessment in Laboratory Safety area, since 2010. These tools have changed over the years, but all of them allow the identification of occurrences and/or critical points in the operation, installations or equipment, that could have impact on the safety of patients and workers, beyond prioritize the necessary improvement actions.

Objective

Presentation of the data and methodology implemented in PNAEQ since 2010, for the External Quality Assessment (EQA) in Laboratory Safety area, through scheme PNAEQ-1S Segurança Laboratorial

Methods

For 2023 PNAEQ catalogue includes a scheme of External Quality Assessment in area of Laboratory Safety, named **PNAEQ-1S Segurança Laboratorial**, with 3 exercises (Figure 1):

Figure 1: Summary of exercises included in PNAEQ-1S Segurança Laboratorial scheme, in 2023

1. **Monitoring Indicators**: The participants collect data to a result form, every six months, from 10 safety indicators previously defined by PNAEQ, related to 5 areas: accidents/incidents with patients; accidents/incidents with staff; occurrences with equipment; prevention exercises and Laboratory Bioprotection. In the end of each semester, the participants send the result form to PNAEQ, which analyse all data and prepare general and individual reports, for each participant.
2. **Internal audit**: PNAEQ distributes a checklist to the participants to be used in an audit that is carried out by the participants themselves. There are 9 areas included (laboratory facilities and working conditions; storage, packaging and transport; risk identification; incidents, injuries, accidents and occupational diseases; workers' health and safety; laboratory equipment; waste treatment; fire prevention and risk assessment in the context of biological safety), distributed within 51 questions.

   After participants submit the results, PNAEQ analyse them and prepare general and individual reports, for each participant.
3. **Case-Study**: The participants are invited to answer multiple-choice questions (#2-3), based on photographs that illustrate some laboratory situations, through an online questionnaire. After submitting results, PNAEQ analyse them and prepare general and individual reports, for each participant.

Results

During 2010 and 2011, the Laboratory Safety AEQ scheme was under development, working as a pilot study, but between 2012 and the present day, improvements have been made to the scheme to make it more appropriate and to cover a wide range of subjects in the area of laboratory safety. (Figure 2):

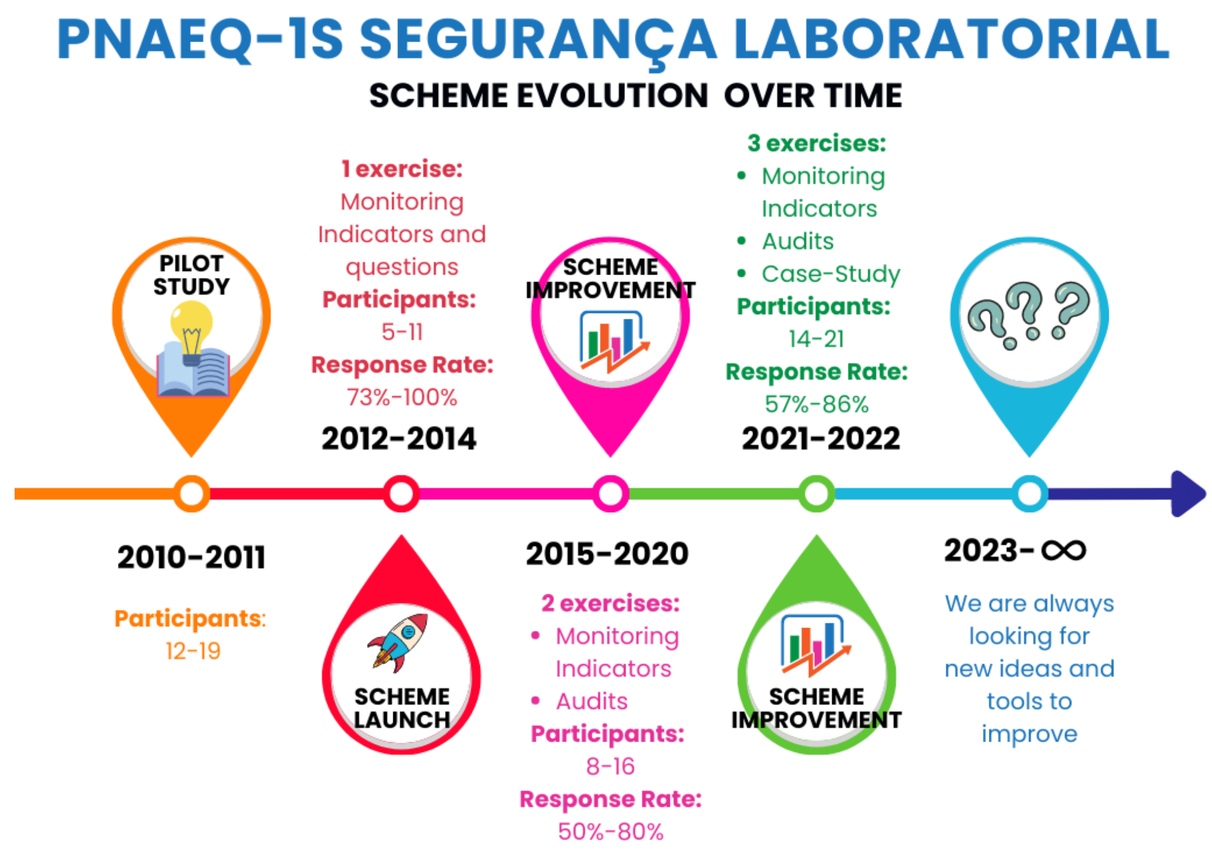

Figure 2: Evolution overtime of scheme PNAEQ-1S Segurança Laboratorial

For **2022**, we present the data of the participants and the response rate in each of the tools of the scheme PNAEQ-1S Segurança Laboratorial (Figure 3):

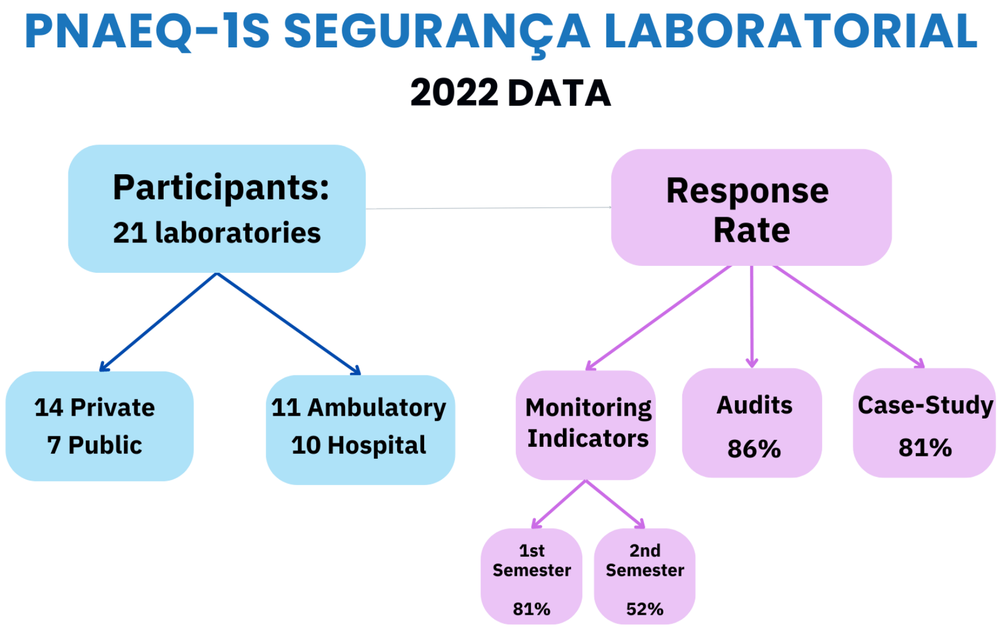

Figure 3: Data on participants and the response rate of the PNAEQ scheme PNAEQ-1S Segurança Laboratorial , for the year 2022

Conclusions

Participation in this AEQ scheme, when carried out periodically, allows the implementation of preventive and/or corrective actions to eliminate and/or reduce the causes of occurrences, sharing of knowledge, and establishing and maintaining a safe working environment for workers, patients and visitors.

Participation Rate in this scheme has been steadily increasing, and PNAEQ will continue to focus on implementing improvements in order to assist participants in their laboratory safety process.

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