

## **Project Title**

Value-based Healthcare (VBHC): Harnessing Robotic Process Automation (RPA) for Implementation of Individual Clinician Report (ICR)

## **Project Lead and Members**

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- Rhoda Lew
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- Dr Jayanti Visvanathan
- Raymond Teo Chee Yang

## **Organisation(s) Involved**

Singapore General Hospital

## **Healthcare Family Group(s) Involved in this Project**

Healthcare Administration, Medical

## **Applicable Specialty or Discipline**

Organisational Planning & Performance, Office of Value Based Healthcare

## **Aim(s)**

- Efficient dissemination of personalised reports on clinical quality and cost performance to clinicians
- Robust and scalable solution to support growing volume of reports

## **Background**

See poster appended/ below

## **Methods**

See poster appended/ below

## **Results**

See poster appended/ below

## **Conclusion**

See poster appended/ below

## **Additional Information**

Singapore Healthcare Management (SHM) Congress 2023 – 1<sup>st</sup> Prize (Operations category)

## **Project Category**

Technology

Digitalisation, Digital Health, Data Analytics

## **Keywords**

Report Generation and Distribution, UiPath, Robotic Process Automation

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**Singapore Healthcare Management 2023**

# Value-based Healthcare (VBHC): Harnessing Robotic Process Automation (RPA) for Implementation of Individual Clinician Report (ICR)

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## Background

SGH started its Value-based Healthcare (VBHC) journey since 2019 to drive high quality and value clinical outcomes by reducing practice variability. To achieve its objectives, SGH sought to equip clinicians with data of their own performance through a personal report – the ICR. It aid clinicians in assessing their performance, facilitates benchmarking to peers, as well as identifying opportunities for practice standardization to improve quality and value of care delivered to patients. As high and growing volume of reports are disseminated quarterly, the capability of RPA is harnessed to automate the end-to-end process for a time-efficient report generation and distribution.

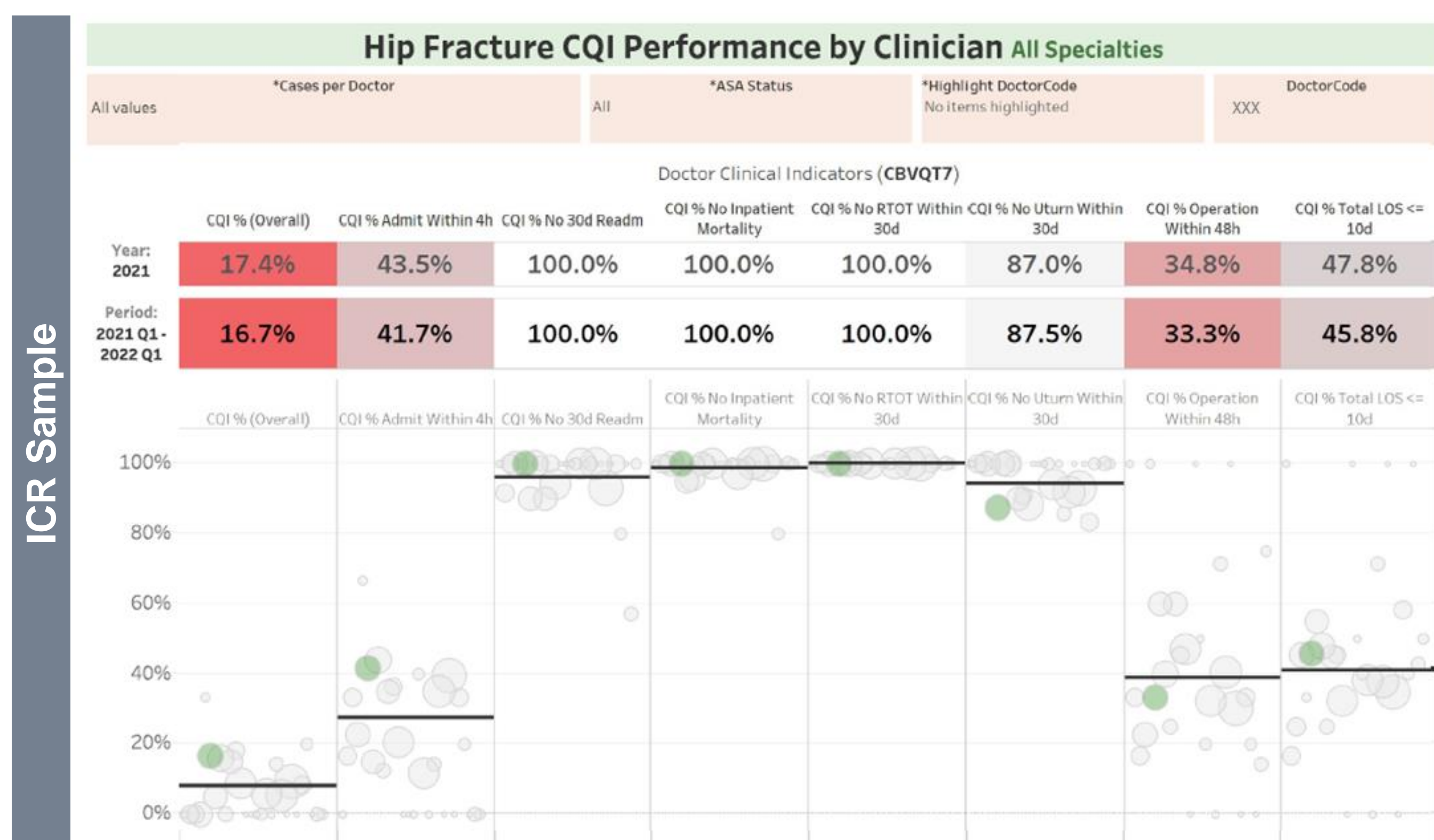
## Aim

1. Efficient dissemination of personalised reports on clinical quality and cost performance to clinicians
2. Robust and scalable solution to support growing volume of reports

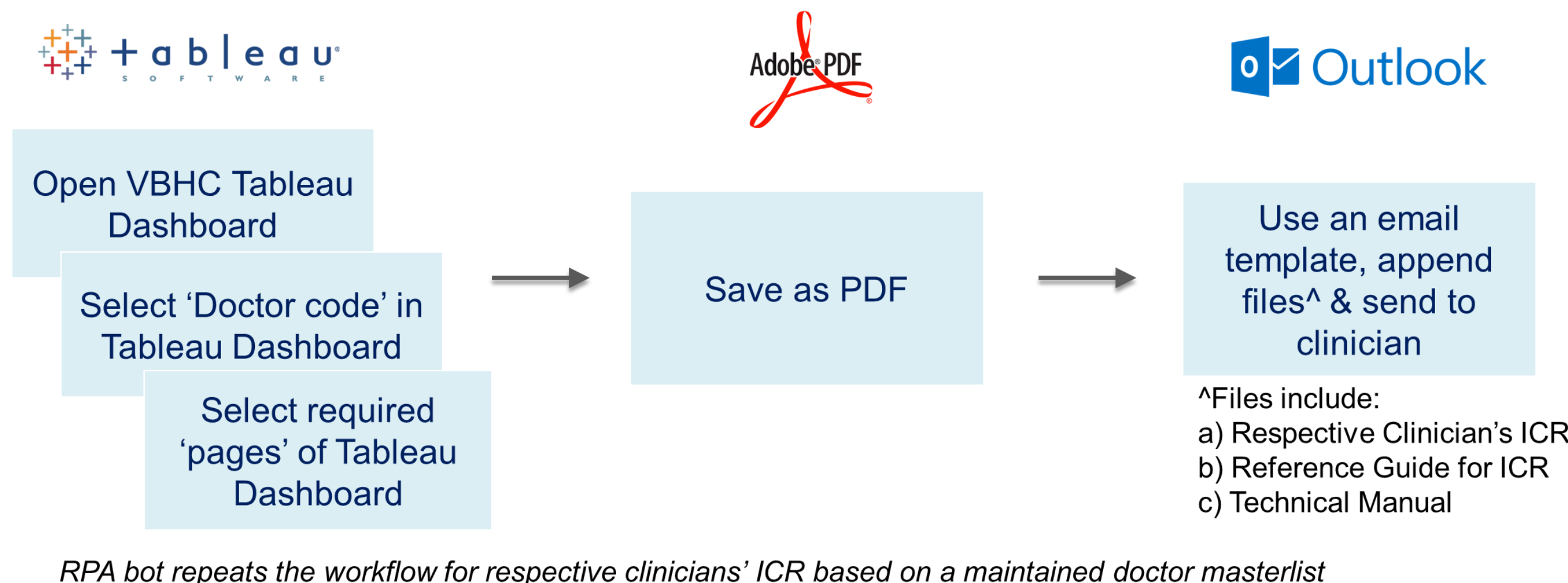
## Methodology

### Steps taken in implementing the ICR

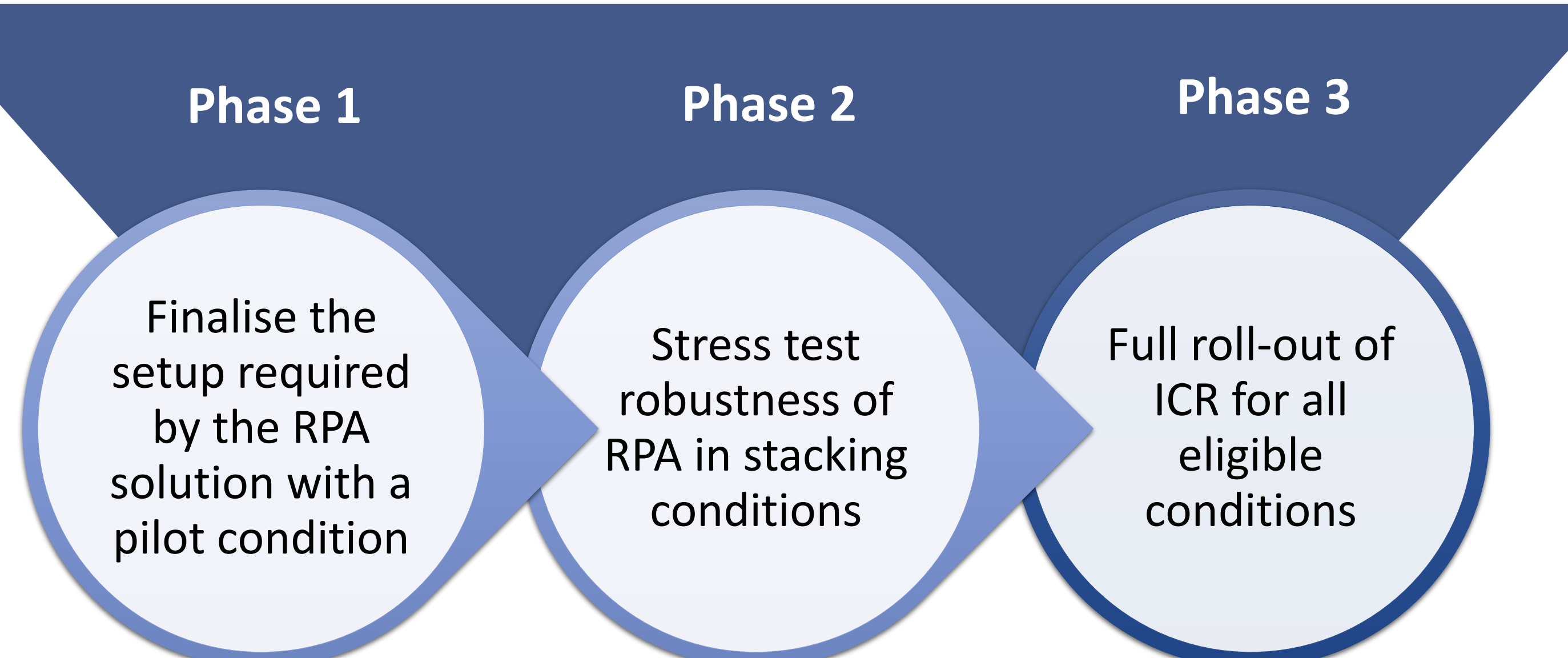
1. **Communication:** Obtain buy-in from clinician leads and HODs by emphasising the intent of ICR:
  - Drive improvements at individual level
  - Promote alignment across the clinical team to reduce practice variability
  - Reports are not used for appraisal which leadership is cognizant of
2. **Curated & Concise Report:** summary of performance, trends and benchmarking to peers.



3. **Automation:** Use of RPA **UiPath**™ to automate the end-to-end report generation and dissemination

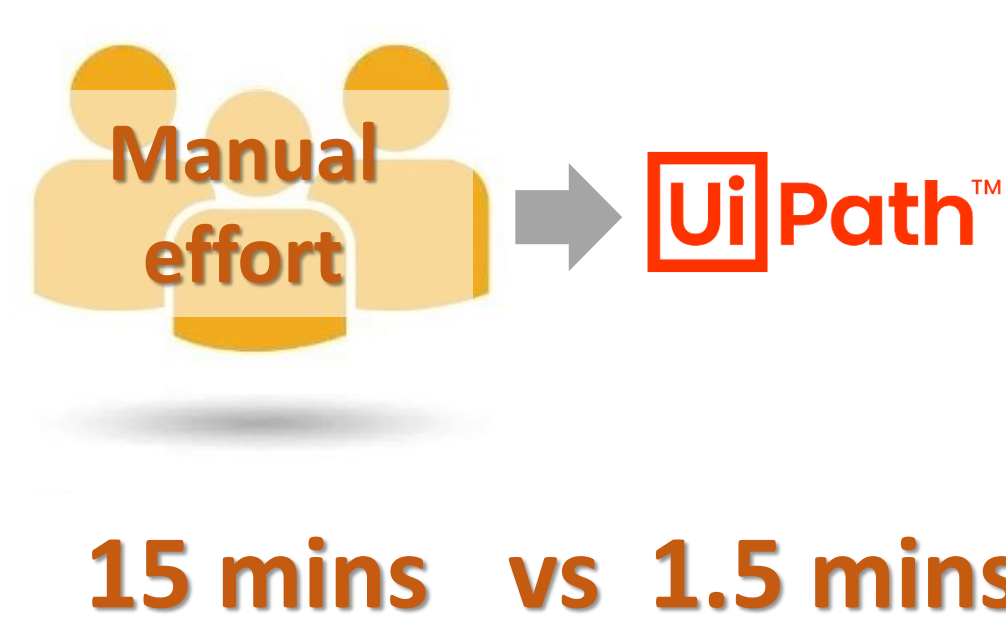


### Feasibility testing of RPA **UiPath**™ solution performed over 3 phases

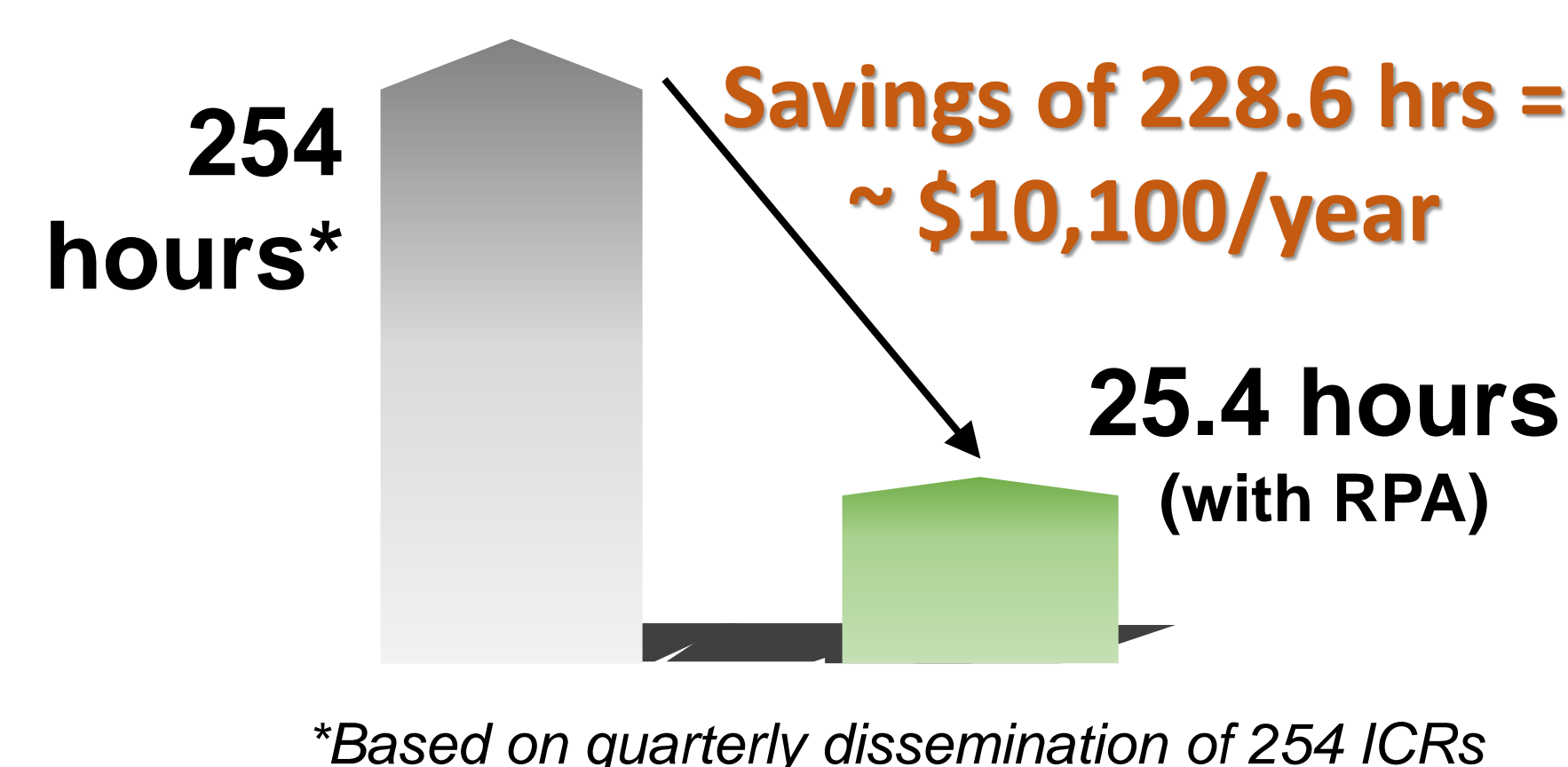


## Results

10x time savings with use of RPA for *one* ICR



Translates to ~\$10,100 Cost Savings in manhours per year



### Sustainability of RPA Solution for ICR

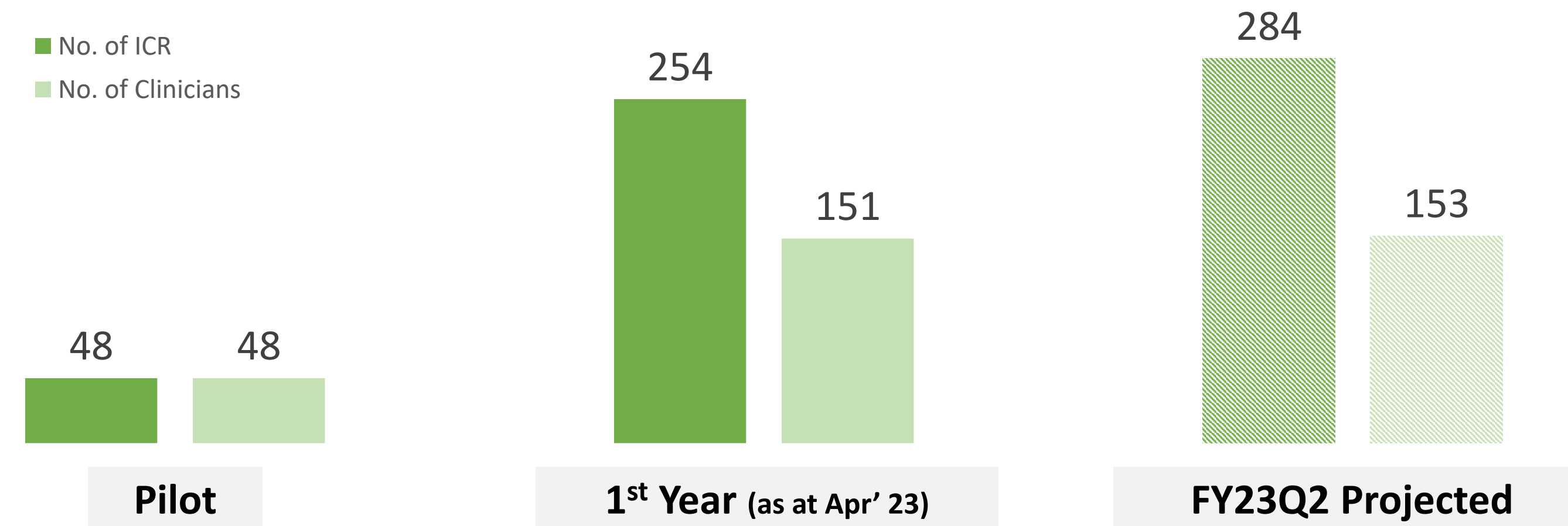
Within the first year ...

Automated dissemination of **254 ICRs** for **151 clinicians** across 11 Tableau-ready conditions following the pilot



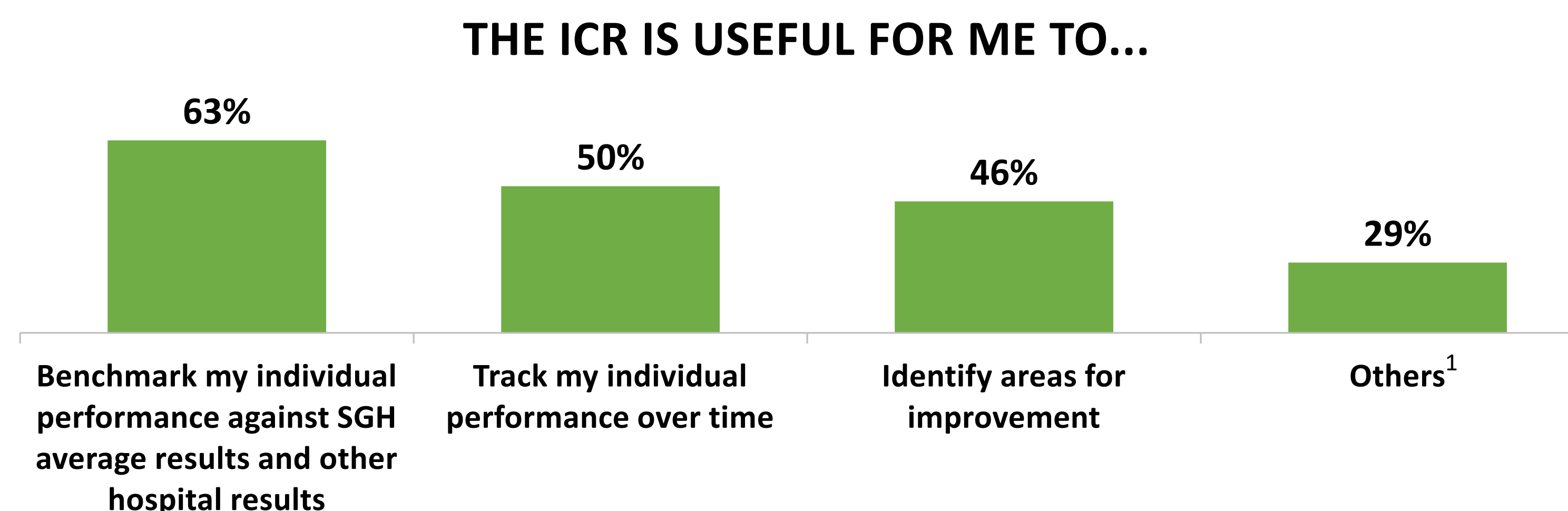
... By FY2023 Q2

Projected to roll-out 284 ICR, with the addition of 3 new conditions



### Feedback on the ICR

To assess the effectiveness of ICR, a feedback survey was conducted with 63% out of 24 respondents sharing that the ICR was useful for the benchmarking purposes.



<sup>1</sup> Open ended responses were grouped under Others. Responses includes comments (5 comments) such as "out of curiosity but does not affect clinical decisions" and "ICR not easily interpreted".

## Future Plans

Clinical departments are showing growing interest in setting up more VBHC conditions annually and ICR will continue to be an instrument to inform on personal performance for alignment of goals and drive improvement. To manage the dissemination of growing volume of ICR effectively as more VBHC conditions are added, RPA solution has proved to be a suitable solution and will continue to be part of our team's workflow.