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# Optimising peri-operative sugar control in gynaecological patients with Type 2 Diabetes Mellitus (T2DM) in KK Women's and Children's Hospital

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## INTRODUCTION

- Diabetes is very common
- It affects 1 in 9 Singapore residents aged 18 to 69 years old
- Peri-operative sugar management is important
- Diabetic patients undergoing surgery have greater complication rates such as postoperative infection, mortality rates and length of hospital stay
- Optimisation of glucose levels can minimize poor sequelae and promote better outcomes.
- Tight glycaemic control before, during and after surgery is an important perioperative goal.

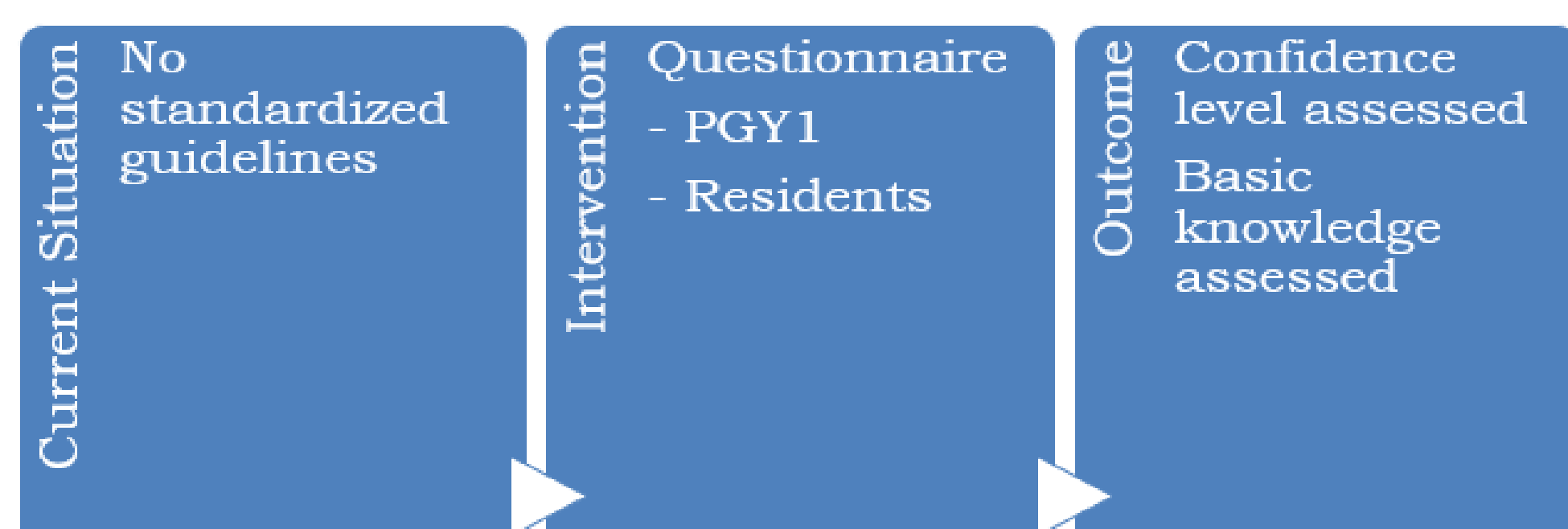
## AIMS

- To ensure appropriate management of diabetic gynaecological patients who are kept fasted for surgery
- To reduce cancellations of surgeries and improve surgical outcomes
- To assess and improve knowledge regarding management of T2DM in pre-operative patients

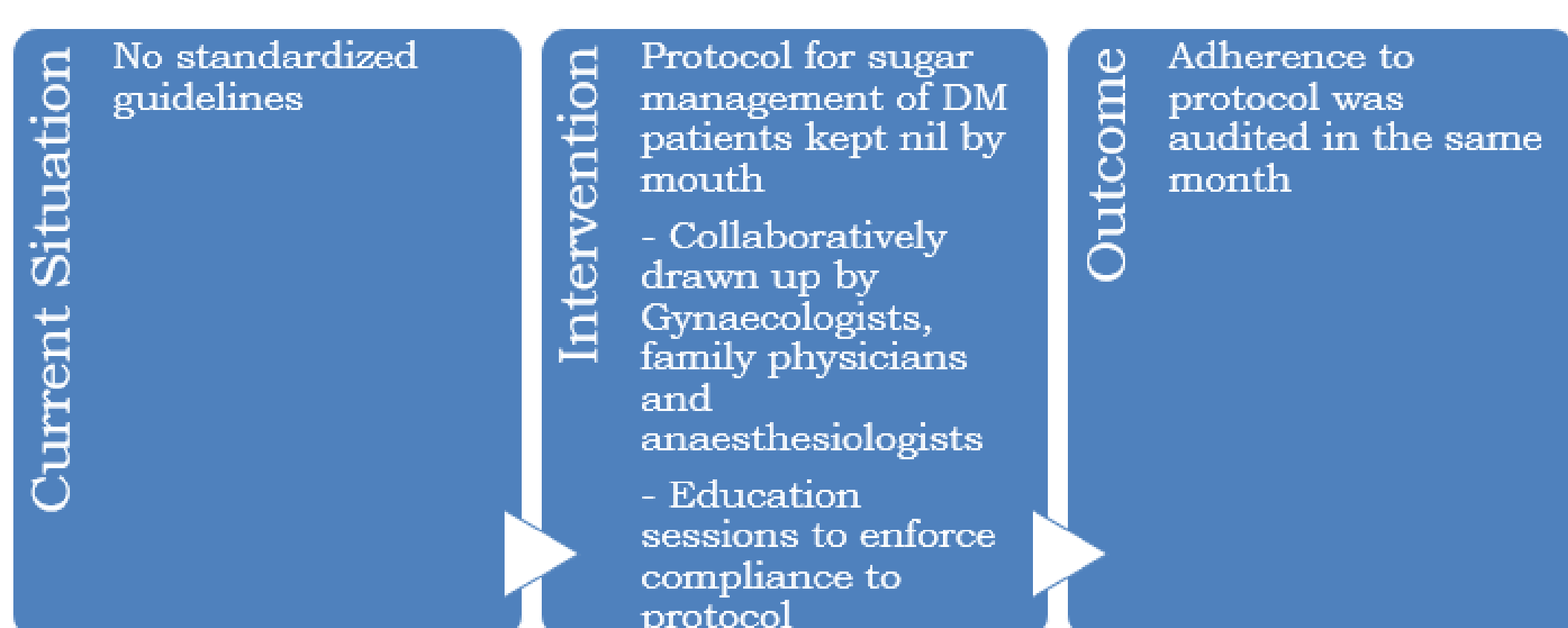
## METHODS

- The PDSA (Plan-Do-Study-Act) Cycle of improvement was employed

### PDSA Cycle 1



### PDSA Cycle 2

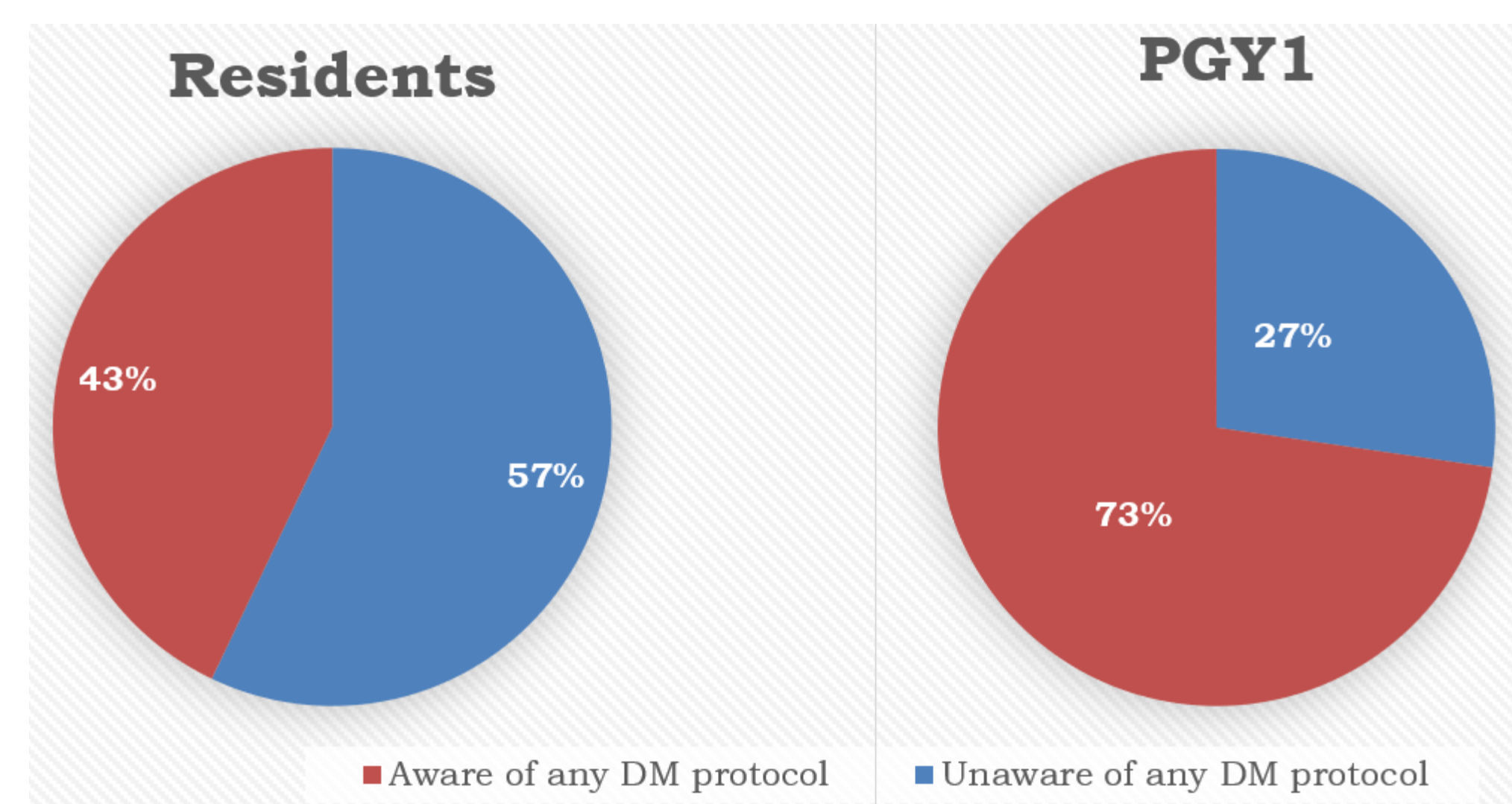
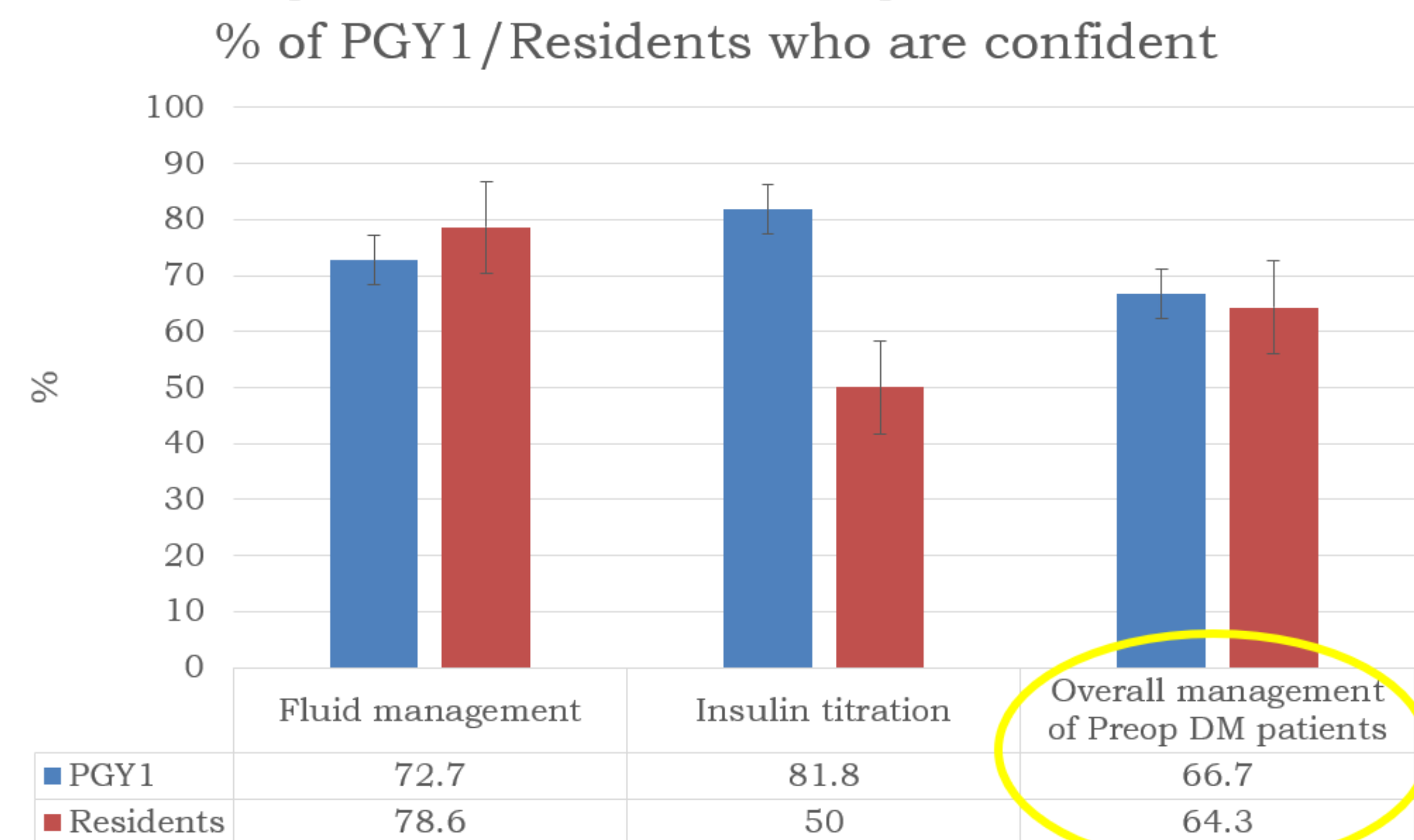


## PROTOCOL

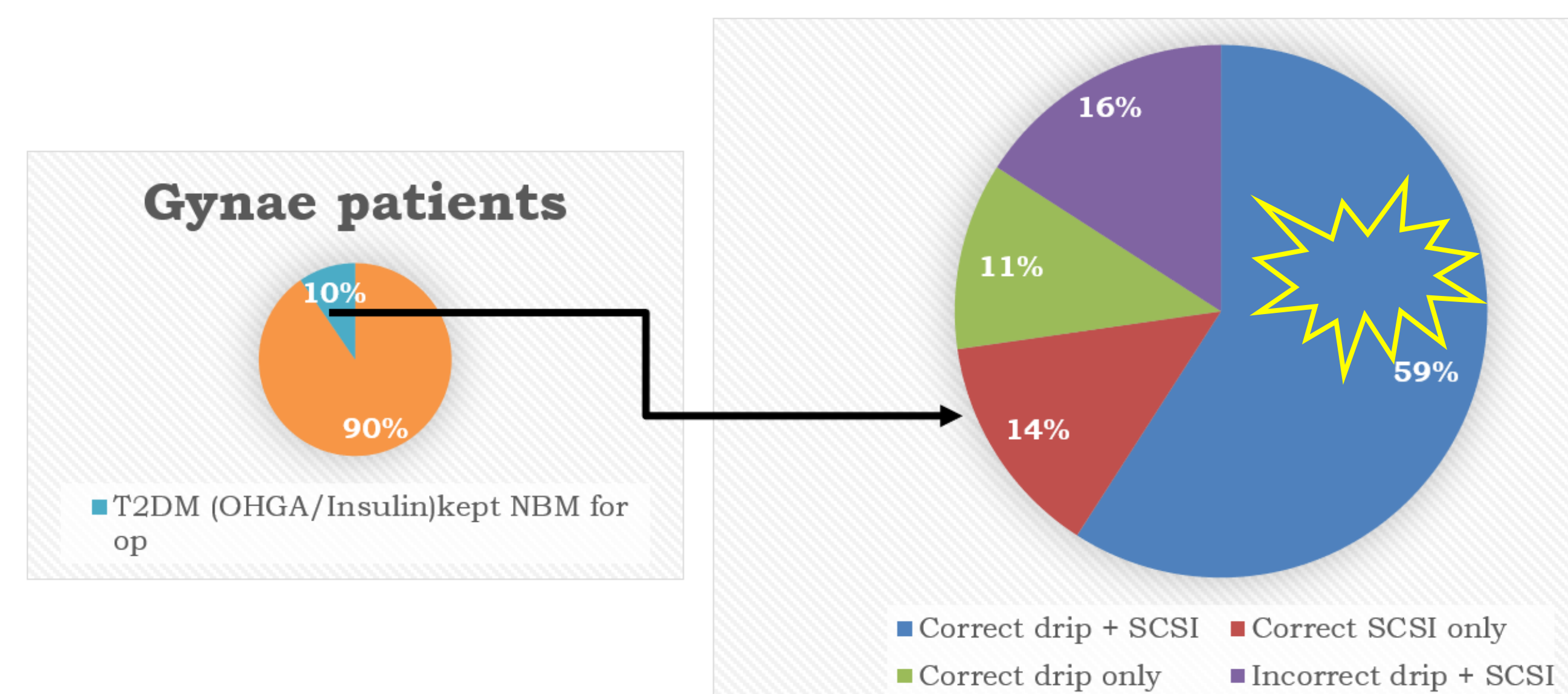
- A protocol was rolled out for all inpatients with type 2 diabetes admitted for elective gynaecological surgeries. This was jointly drawn up with our Family Medicine and Anaesthetic colleagues.
- Patients were divided according to their use of oral hypoglycaemic agents with or without insulin. For patients with prolonged fasting or use of insulin, basal insulin will be recommended when they are kept fasted.
- Glucose monitoring is done regularly at 4-6 hourly with a standardized insulin sliding scale for optimization of sugars.

## RESULTS

### Pre-implementation questionnaire



### Audit Results



- 66.7% of PGY1s and 64.3% of residents were confident in managing pre-operative DM patients
- Only 59% of the diabetic patients who were kept fasted had the correct drip and insulin sliding scale prescribed despite enforcing the protocols on the ward for easy reference and education sessions organised

## CONCLUSION

- A standardised guideline to optimise blood sugar control in pre-operative fasting diabetic patients is important.
- However, successful implementation is critical. Further PDSA cycles needs to be conducted to improve compliance to our protocol.