



# Ensuring Correct Medication Dosage and Schedule for Patients on IVF Program

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## Background of the problem

The Centre of Assisted Reproduction (CARE) is an outpatient fertility clinic, involving doctors, nurses, sonographers, pharmacists and embryologists to facilitate IVF treatment for patients.

The IVF treatment cycle requires accurate communication between staff at various stages to ensure patients consume the correct medication dosages according to planned schedule. During each visit, patients receive multiple forms and instructions from CARE nurses to guide them during medication taking. Patients then follow these instructions and consume medication accordingly at home. However due to information overload and communication breakdown between staff, patients might not take in the right medication dosages at the right timing, which could affect their treatment progress.

## Mission Statement

To achieve 100% correct medication dosage and schedule for CARE patients on IVF program within 6 months.

## Analysis of problem

The flowchart (Diagram 1) was used to map out the IVF treatment process and identified the point of services causing communication breakdown between staff and patients. These are highlighted in red.

Fishbone diagram (Diagram 2) was used to brainstorm for the root causes leading to patients consuming the wrong medication dosage at the wrong timing. The top 5 root causes identified by group voting are highlighted in red.

Diagram 1: Workflow of IVF treatment cycle

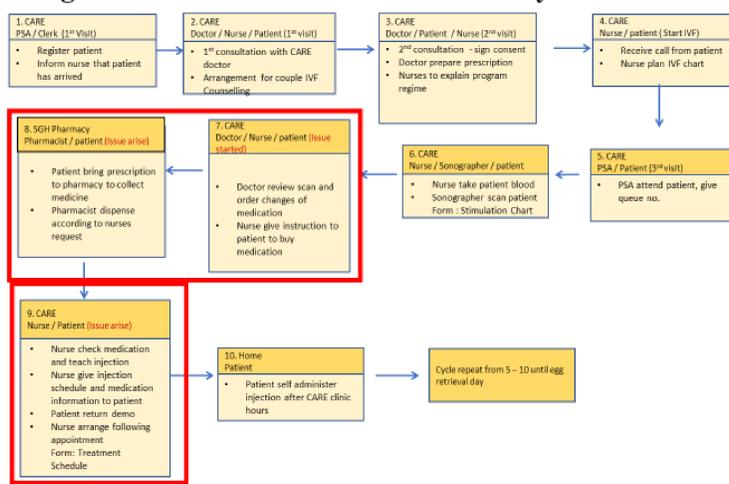
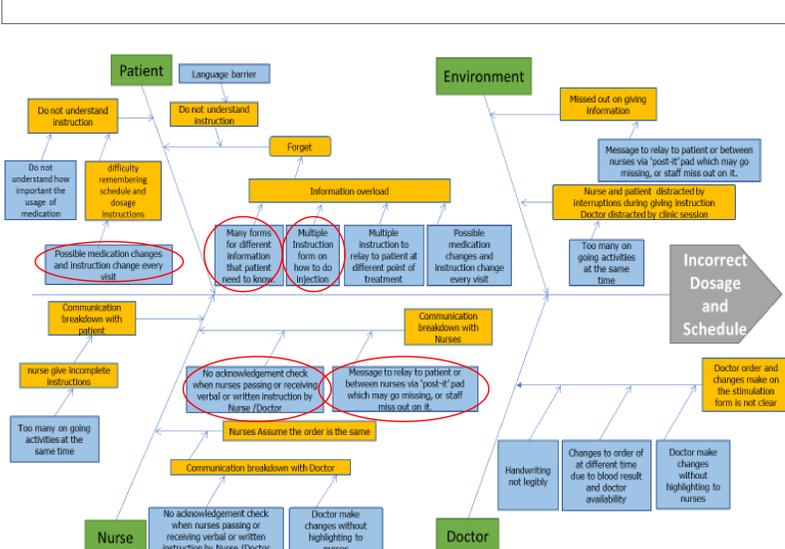


Diagram 2: root causes for wrong medication dosage consumed by patients at the wrong timing.



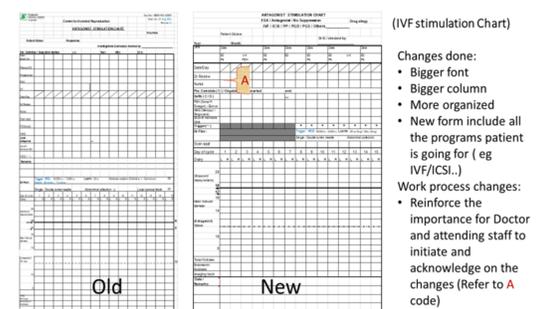
## Interventions / Initiatives

To tackle the main root causes identified, interventions were made in 2 PDSA cycles as seen in Diagram 3 & 4.

Diagram 3: 1<sup>st</sup> PDSA cycle

Changes we have done:

**1. IVF Stimulation Chart** - Form is changed to ensure that messages and medication orders made by doctors are clear to follow. It is also easier for doctors' and staffs' to acknowledge the changes at all point of service.



**2. Treatment schedule** - Patients' are now actively involved during their program. They are now required to track and update their injection dosage and schedule. All information are compiled into one instruction list instead of separate forms.

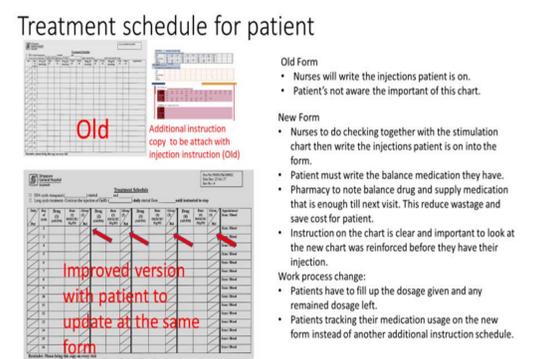
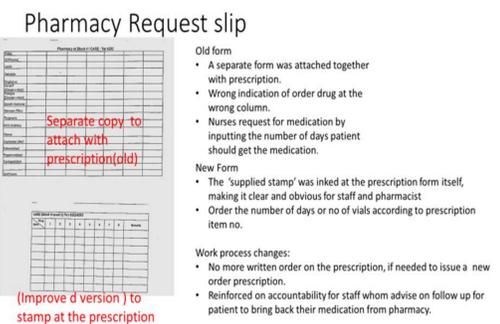


Diagram 4: 2<sup>nd</sup> PDSA cycle

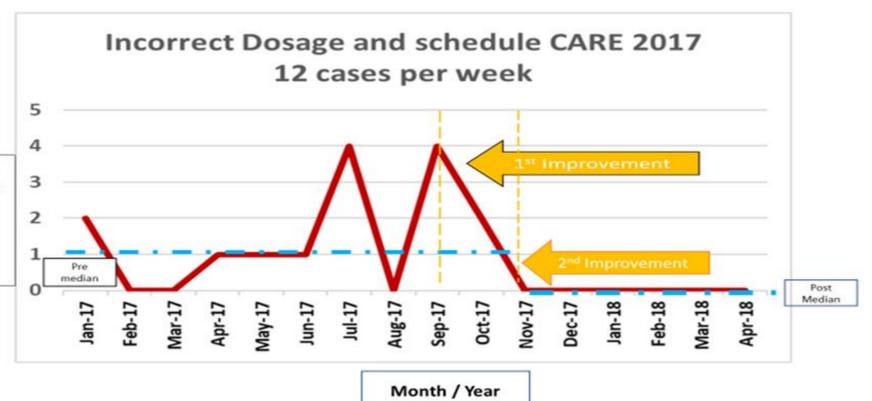
Changes we have done:

**1. Pharmacy request slip** - The new process make it easy and clear for nurses to follow medication order made by doctors.



## Results

We have achieved to close the gaps by 100% correct dosage and medication schedule for CARE patients on IVF program within 6 months



## Sustainability Plans

- Weekly meeting with CARE staff to ensure consistency in workflow
- Monthly feedback from patients on the use of treatment schedule and pharmacy request slip
- 6 monthly review with doctor and staff to identify improvements required for the patient program sheet, in order to ensure that 100% correct dosage and medication schedule to CARE patients will continue to be met.