INTRODUCTION

Nurse-led pre-operative clinics have been advocated as one of the effective health-care services to conduct the pre-operative assessment in order to prepare and optimize patients for surgery. It is defined as a clinic that provides a general assessment includes history taking, health assessment and physical examination. Such clinics are designed to optimize the medical condition of the patient before surgery and to reduce the rate of cancellations of surgery, thereby supporting the optimal utilization of resources and improving patient’s overall experience with the services provided by the PONLC (Pre-operative Nurse Led clinic). In the event of an extended delay between the decision to admit for surgery and the actual admission patients will need to be re-assessed to ensure their fitness for surgery, this will be an integrated team who will also be responsible for the coordination and management of the admission and surgical procedure.

LITERATURE REVIEW

Traditionally, pre-operative assessment is within the remit of the medical professional mainly conducted by the doctors or the anesthetist. Nowadays, some of the Pre-operative assessment clinics are operated and coordinated by the nurse practitioner. Nurse-led pre-operative assessment clinics have been introduced in different specialty areas and widely implemented in the health agency of different countries, to assess and prepare patients preoperatively in order to avoid last-minute surgery cancellations [1]. The NHS Institute for improvement and Innovation [2] notes that pre-operative assessment helps to ensure that patients understand their procedure and are well informed; in order to avoid last-minute surgery cancellations. Not all patients are referred to POACs before surgery, and the benefits of nurse-led clinics are not well documented in Hong Kong. The purpose of this systemic review was to identify the best available research evidence to inform current clinical practice, guide health care decision making and promote better care.

Key words: Nurse-led preoperative assessment; Clinical pathway

The multidisciplinary project team will focus on streamlining the existing steps that are involved with the perioperative (PO) patient care.

- How to better increase operating room ergonomics and organization.
- How to identify and to eliminate delays in the operating rooms as a whole.
- Whether shortening a given variable in the operating room could actually make a meaningful impact on increasing case volume.

PROJECT GOALS

- To achieve greater than 80% of the Operating Room Utilization by the end of the 4th quarter of 2019.
- To reduce OR Cancellation to less than 15% by the end of 4th quarter of 2019.
- To increase rate of Prevented OR Cancellation to greater than 10% by the end of 4th quarter of 2019.

METHODOLOGY OVERVIEW

Method: FOCUS-PDCA Methodology was used in this project.

Opportunity/process for improvement: The baseline data for OR cancellation rate in 2018 was > 20%, higher than the target which is <15%. The project team identified that currently in KFMC, there is no available pre-operative nurse led clinic service to ensure that the patients scheduled for planned elective surgery is optimized.

Organize a team to improve the process: The multidisciplinary project team will focus on streamlining the existing steps that are involved with the perioperative (PO) patient care (Figures 1-4)

Select the potential process improvements:

- To achieve greater than 80% of the Operating Room Utilization by the end of the 4th quarter of 2019.
- To reduce OR Cancellation to less than 15% by the end of 4th quarter of 2019.
- To increase rate of Prevented OR Cancellation to greater than 10% by the end of 4th quarter of 2019.

RESULTS AND DISCUSSION

Opened the first Pre-Operative Nurse Led Clinic at KFMC in November 2018.

Policy developed for PONLC, to be published as ORSA regulatory document.
Standardized pre-op checklist for in-patient, walk-in patients and bed management developed and implemented.

Scope of Services developed for PONLC which includes the followings:
- Calling of patients
- Visiting in-patients
- Communication with the Anesthesiology team
- Communication with the Surgical Team
- Received patient in PONLC as walk-in
Figure 3) Understanding the problems.

<table>
<thead>
<tr>
<th>Task</th>
<th>Responsible Person</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formation of project team</td>
<td>Ms. Louise Nortje</td>
<td>Completed</td>
</tr>
<tr>
<td>Pre- &amp; Post Data Collection</td>
<td>PONLC &amp; Project Team</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Development of Scope for PONLC</td>
<td>Ms. Louise Nortje, Ms. Consolacion, Rhea T. Obada</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Opening of PONLC</td>
<td>Dr. Ahmed Al Obada</td>
<td>Completed</td>
</tr>
<tr>
<td>Develop Checklist for Inpatient and Walk-in patients</td>
<td>Ms. Louise Nortje, Ms. Consolacion, Rhea T. Obada</td>
<td>Completed</td>
</tr>
<tr>
<td>Develop Bed Management Checklist for Elective Patient for Admission</td>
<td>Ms. Louise Nortje, Ms. Consolacion, Rhea T. Obada</td>
<td>Completed</td>
</tr>
<tr>
<td>Develop PONLC database</td>
<td>Ms. Louise Nortje, Ms. Consolacion, Rhea T. Obada</td>
<td>Completed</td>
</tr>
<tr>
<td>Meeting with DCU to improve optimization of patient for surgery</td>
<td>Dr. Arman bin Nasser, Ms. Louise Nortje, Ms. Consolacion, Rhea T. Obada</td>
<td>Completed</td>
</tr>
<tr>
<td>Meeting with wards to improve optimization of in-patient for surgery</td>
<td>Dr. Arman bin Nasser, Ms. Louise Nortje, Ms. Consolacion, Rhea T. Obada</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Develop Patient Satisfaction survey questionnaires</td>
<td>Ms. Louise Nortje, Ms. Consolacion, Rhea T. Obada</td>
<td>Completed</td>
</tr>
</tbody>
</table>

Figure 4) Plan the project, assign tasks.
Figure 5) KPI’s (or cancellation) result comparison.

OR Cancellation in the 2nd Quarter and 3rd Quarter of year 2019 has been reduced to 9%.

Figure 6) KPI’s (or utilization) result comparison.

OR Utilization has been achieved to greater than 80% from 1st Quarter & 3rd Quarter of year 2019.

Figure 7) KPI’s (prevented cancellation) result comparison.

The above graph shows a significant decrease in OR cancellation from 1st Quarter to 9th Quarter of 2019 through successful implementation of PONLC, an increase in prevented cancellation rate is seen.
Figure 8) Modified clinical pathway of surgical patient.

- Collaboration with:
  - the Anesthesia team for process improvement
  - the Day Care Unit to discuss optimization of patient pre-op
  - Central Control Office to receive initial operative list on daily basis
  - Surgical team to inform of any cancellations and for replacement
  - Bed management to ensure bed availability of booked surgical patient

- Developed database for PONLC
- Modified Clinical Pathway of Surgical Patient (Figures 5-8)

Act to maintain the changes

- First PONLC successfully implemented in KFMC.
- PONLC database created and ongoing KPI monitoring.
- PONLC policy and scope of services developed.
- PONLC developed and implemented a standardized checklist for in-patients, walk-in patients and Bed Management.
- Continuous collaboration with the multi-disciplinary team (Surgical, Anesthesia, Day Care Unit, Central Control Office and Bed Management).

CONCLUSION

We were successful in the implementation of the first Pre-Operative Nurse Led Clinic in KFMC and collaboration with multidisciplinary team has optimized the patient’s pre-operative journey, with a steady increase in the number of prevented cancellations. The impact thereof is evident through the increase of OR Utilization and decrease of OR cancellation on daily basis.

LESSONS LEARNT

Major lessons learned from our experience and through our project implementation include the following:

- Encouragement of patient adherence to comply with the scheduled surgery.
- Effective communication with the surgical and anesthesia team to improve patient satisfaction and promote good rapport within multidisciplinary team.
- Awareness of the staff experiences and skills to deal with challenges that optimized the efficiency and effectiveness of PONLC.
- Active engagement of the staff in the understanding of Clinical Pathway of a surgical patient journey to Operating Room.
- The nurse-led practice has led to optimization of patient’s condition before surgery through early communication with the respective...
surgical team and anesthesiology team and hence minimized elective surgery cancellations.

RECOMMENDATIONS AND SUSTAINABILITY PLAN
What is the main message based on the experience that you would like to convey to others?
There is huge significant impact of the importance of continuity collaboration and communication with the multi-disciplinary team to improve process in the clinical pathway of a surgical patient journey to the operating room hence improving overall patient experience in delivering high quality of care that increases OR Utilization thus decreasing OR Cancellation.

How do you sustain the improvement and ensure the continuity of this project in the future?
The sustainability of our achievements is ensured through the following initiatives:

- Designated Pre-Operative Nurse LED clinic with staffs.
- KPI Monitoring
- Database for PONLC
- Patient Satisfaction Survey
- PONLC Pre-operative checklist for In-patient, Walk-in patient and Bed Management.
- Calling of elective booked patient as per Operating Room official OR list.
- Campaign awareness in the Surgical Clinic, Anesthesia Clinic, Day Care Unit, Wards and Central Control Office.

- Modification of the current process of Patient Surgical Clinical Pathway.
- Mandatory Pre-Operative Assessment of all elective patient in PONLC.
- Standardization of Surgical Patient Flow for Elective Surgery.
- Implementation and Standardization of parameters in pre-operative assessment of Elective Patient.

To ensure multidisciplinary team the existence of the Pre-Operative Nurse Led Clinic in the journey of a surgical patient for elective surgery. Campaign Awareness has been initiated to multidisciplinary team members to deliver awareness and optimization of patient’s readiness. This project aimed to produce a more patient-centered service by increasing standard of work to increase efficiency of patient safety and effectiveness of the PONLC.

REFERENCES
2. ORSA Strategic Improvement Plan, 2019.