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Home in 16 Hours

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“Home in 16 hours” The Use of Enhanced Recovery After Surgery (ERAS)

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Purpose

Optimization of preoperative and perioperative care using Enhanced Recovery After Surgery (ERAS) on patients undergoing total hip and total knee arthroplasty. To use the best evidence advances in the care provision for arthroplasty patients, in the application of Enhanced Recovery After Surgery (ERAS) concepts, and in the provision of patient-centered care.

The goals of the program include:

- Providing a more comprehensive approach to the episode of care
- Minimizing surgical and metabolic stress
- Improving the recovery and convalescence processes for the patient
- Involvement of the patient and caregiver as active participants in the care processes
- Providing a same day of surgery discharge option for eligible patients
- Decrease overall length of stay for total joint arthroplasty patients

Background

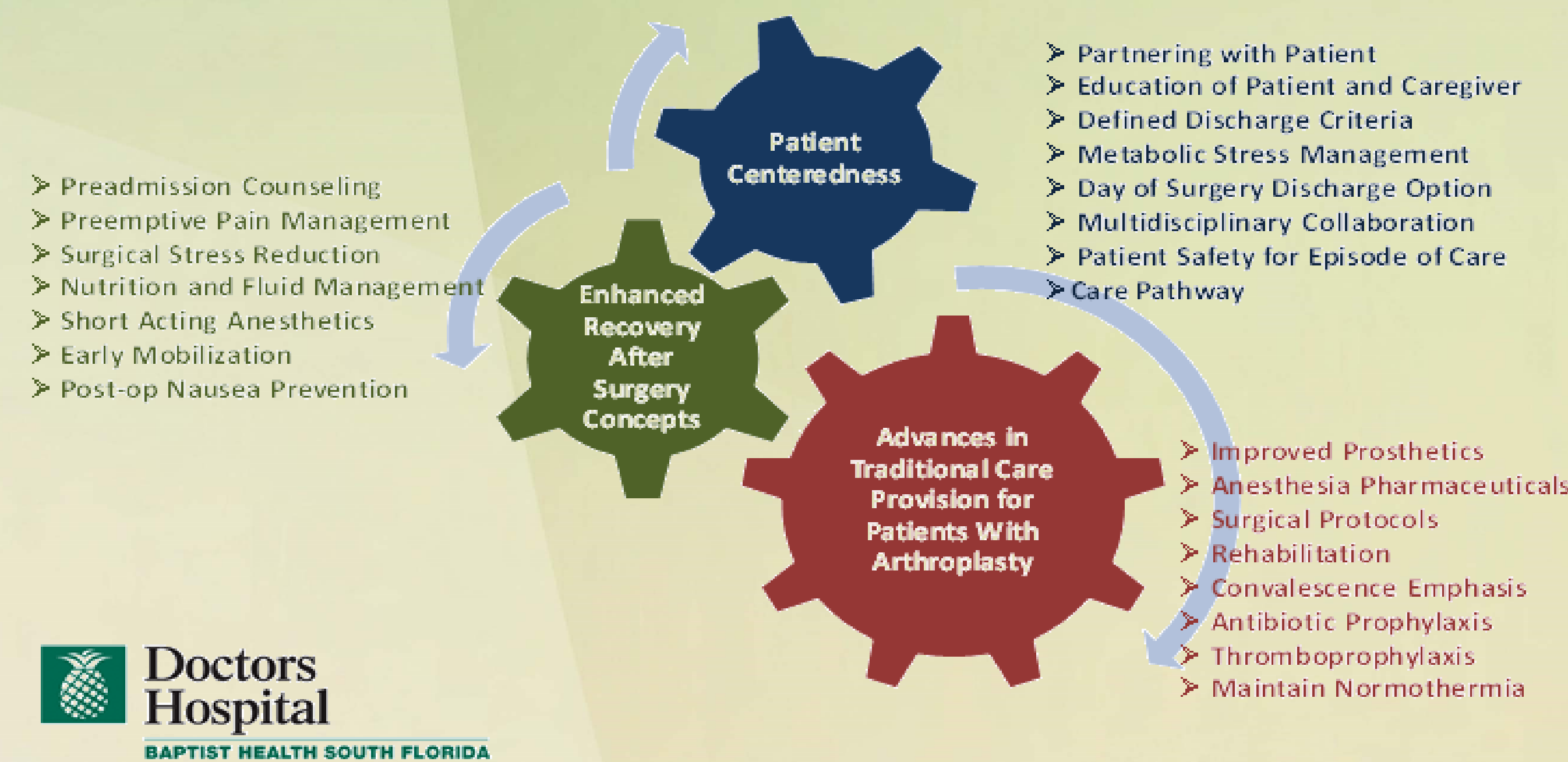
The demand for total joint arthroplasty (TJA) is expected to grow 44% by 2020. (Sher, Keswani, Yao, Anderson, Koenig & Moucha, 2017). As demands for these surgeries increase, hospitals must position themselves to provide efficient, cost-effective, and safe TJA Utilizing the Institute of Health Care Improvement Triple Aim Approach to improve the patient experience, reduce costs, and improve the health of the patient population can assist hospitals in this endeavor (Institute for Healthcare Improvement, *n.d.*, para 1). The average length of stay after TJA has decreased from two weeks to four days, however, enhanced recovery protocols have created an emphasis on decreasing the length of stay (LOS) further (Lovald et al., 2014).

Enhanced Recovery After Surgery (ERAS) for total hip (THA) and total knee arthroplasty (TKA) has become well established as a multidisciplinary approach, lessening patients' LOS without increasing re-admission rates as well as other endpoints such as patient outcomes and functional rehabilitation (Khan et al, 2014).

Medical complications such as thromboembolism, ileus and pneumonia are found not to be frequent using ERAS. Studies have shown reduced early mortality on patients under a well adapted ERAS program

ERAS programs continue to be implemented in general surgery helping in optimizing preoperative, perioperative, and postoperative factors to reduce the physiological and psychological stress of surgery (Dwyer. et al, 2012)

Methods of Implementation



The ERAS “Home in 16 Hours” program:

- Starts with **preoperative** care and detailed patient education prior to admission to hospital, well defined discharge criteria, and a pre-arranged discharge plan
- **Postoperative** care includes early introduction of oral nutrition supplements, early mobilization, multimodal pain management, and restricted opiate use to minimize nausea and ileus (Dwyer et al, 2012).
- **Redesign** of the nursing process due to compression of LOS
 - Nurses ambulating patients POD #0 to increase mobility
 - Education provided throughout hospitalization
 - Frequent reassessments of patient needs
 - Patient and family as the unit of care
 - Interdisciplinary approach to patient teaching and caregiver education

Discharge Criteria Must be met prior to discharge:

- Toleration of oral fluids and solids
- Achievement and maintenance of pain control with oral meds
- Orthostatic tolerance
- Absence of unusual bleeding or swelling at surgical site
- Both patient and caregiver express comfort with discharge plan
- Voiding without urinary retention
- Physical Therapy Criteria
 - Gait distance – ambulate at least thirty (30) feet
 - Stairs/steps – independently negotiate six (6) inch step
 - Transfers – perform transfers to and from a chair and bed

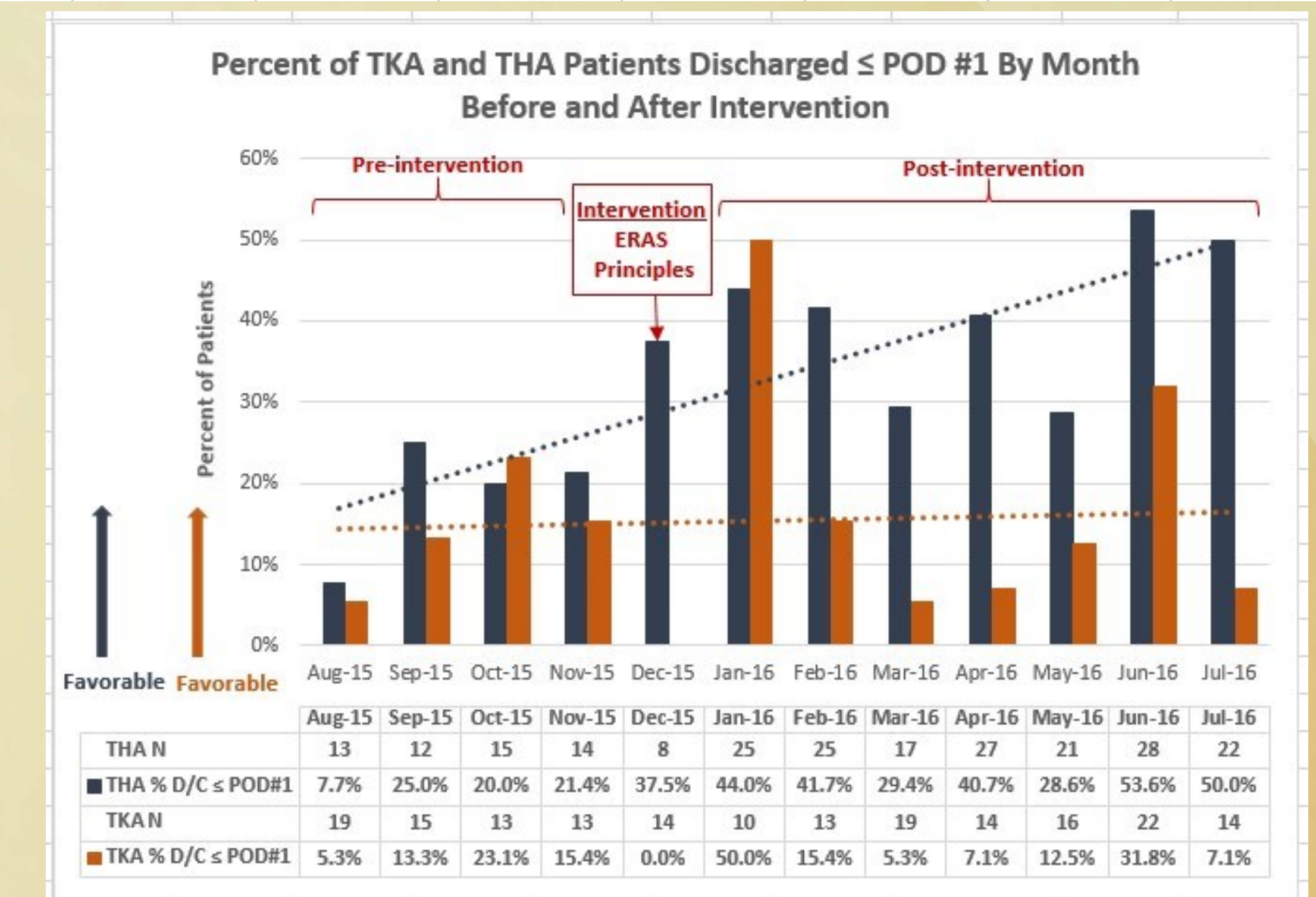
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Outcomes

10 patients “Same day discharged”
No readmissions or complications
Improved patient experience
Average LOS for all TJA patients decreased

Quarter	N	Mean Age	Age Range	% Female	% Home	Mean LOS	Median LOS	SD LOS
CY2015 Q1	34	69.24	56-88	52.9%	70.6%	2.35	2	0.92
CY2015 Q2	54	62.57	32-87	59.3%	68.5%	2.33	2	1.05
CY2015 Q3	35	62.66	39-91	48.6%	74.3%	2.06	2	0.8
CY2015 Q4	37	65.16	42-87	56.8%	78.4%	1.92	2	0.68
CY2016 Q1	63	63.89	38-91	60.3%	92.1%	1.73	2	0.92
CY2016 Q2	76	64.51	38-87	50.0%	84.2%	1.89	2	1.84
CY2016 Q3	59	62.58	45-86	61.0%	89.8%	1.61	1	0.72
CY2016 Q4	64	65.05	42-87	50.0%	95.3%	1.97	2	1.27



Nursing Implications

This multimodal rehabilitation program has enabled:

- Early restoration of gastrointestinal function
- Reduction of fatigue, and improved physical performance
- Reduced length of hospital stay (LOS)
- More comprehensive approach to the episode of care for this patient population
- Reduction of surgical and metabolic stress
- Improved recovery and convalescence processes for the patients
- Involvement of the patient and caregiver as active participants in the care processes
- Same day of surgery discharge option for eligible patients
- Increase in comfort by recovering in their own environment
- Increased privacy
- Less sleep interruptions and deprivation which aids in maintaining a healthy immune system, leading to a faster and safer healing process
- Nurses confident in ambulating post-operative patients leading to increased time out of bed and accelerated rehabilitation