

AGENDA

Quality, Patient Care and Patient Experience Committee Meeting of the El Camino Hospital Board

Monday, October 2nd, 2017, **5:30 p.m.**

El Camino Hospital | Conference Room A & B
2500 Grant Road, Mountain View, CA 94040

PURPOSE: To advise and assist the El Camino Hospital (ECH) Board of Directors (“Board”) in constantly enhancing and enabling a culture of quality and safety at ECH, and to ensure delivery of effective, evidence-based care for all patients. The Quality Committee helps to assure that excellent patient care and exceptional patient experience are attained through monitoring organizational quality and safety measures, leadership development in quality and safety methods and assuring appropriate resource allocation to achieve this purpose.

AGENDA ITEM	PRESENTED BY		ESTIMATED TIMES
1. CALL TO ORDER	Dave Reeder, Quality Committee Chair		5:30 – 5:31pm
2. ROLL CALL	Dave Reeder, Quality Committee Chair		5:31 – 5:32
3. POTENTIAL CONFLICT OF INTEREST DISCLOSURES	Dave Reeder, Quality Committee Chair		5:32 – 5:33
4. CONSENT CALENDAR ITEMS: <i>Any Committee Member or member of the public may pull an item for discussion before a motion is made.</i>	Dave Reeder, Quality Committee Chair	<i>public comment</i>	Motion Required 5:33 – 5:36
Approval a. Minutes of the Open Session of the Quality Committee Meeting (August 28, 2017)			
Information b. Research Article c. Patient Story d. FY18 Pacing Plan e. Progress Against FY18 Committee Goals			
5. REPORT ON BOARD ACTIONS ATTACHMENT 5	Dave Reeder, Quality Committee Chair		Discussion 5:36 – 5:39
6. QUALITY PROGRAM UPDATE: ROBOTICS ATTACHMENT 6	Albert Pisani, MD, Medical Director, GYN/Robotics Program		Discussion 5:39 – 5:59
7. COMMITTEE MEMBER RECRUITMENT	Dave Reeder, Quality Committee Chair		Discussion 5:59 – 6:04
8. FY18 QUALITY DASHBOARD ATTACHMENT 8	Catherine Carson, Sr. Director of Quality Improvement and Patient Safety		Discussion 6:04 – 6:14
9. UPDATE ON PATIENT AND FAMILY CENTERED CARE ATTACHMENT 9	Michelle Gabriel, Director of Performance Improvement		Discussion 6:14 – 6:24
10. FY17 ORGANIZATIONAL GOAL ACHIEVEMENT UPDATE ATTACHMENT 10	Mick Zdeblick, Chief Operating Officer		Discussion 6:24 – 6:34

A copy of the agenda for the Regular Committee Meeting will be posted and distributed at least seventy-two (72) hours prior to the meeting. In observance of the Americans with Disabilities Act, please notify us at (650) 988-7504 prior to the meeting so that we may provide the agenda in alternative formats or make disability-related modifications and accommodations.

AGENDA ITEM	PRESENTED BY	ESTIMATED TIMES
11. READMISSION DASHBOARD ATTACHMENT 11	Catherine Carson, Sr. Director of Quality Improvement and Patient Safety	Discussion 6:34 – 6:44
12. PSI-90 PATIENT SAFETY INDICATORS ATTACHMENT 12	Catherine Carson, Sr. Director of Quality Improvement and Patient Safety	Discussion 6:44 – 6:54
13. CULTURE OF SAFETY SURVEY RESULTS ATTACHMENT 13	William Faber, MD, Chief Medical Officer	Discussion 6:54 – 7:04
14. PUBLIC COMMUNICATION	Dave Reeder, Quality Committee Chair	Information 7:04 – 7:07
15. ADJOURN TO CLOSED SESSION	Dave Reeder, Quality Committee Chair	Motion Required 7:07 – 7:08
16. POTENTIAL CONFLICT OF INTEREST DISCLOSURES	Dave Reeder, Quality Committee Chair	7:08 – 7:09
17. CONSENT CALENDAR <i>Any Committee Member may pull an item for discussion before a motion is made.</i> Approval <i>Gov't Code Section 54957.2.</i> a. Minutes of the Closed Session of the Quality Committee Meeting (August 28, 2017) Information b. Quality Council Minutes (June 7, 2017)	Dave Reeder, Quality Committee Chair	Motion Required 7:09 – 7:12
18. Health and Safety Code Section 32155, report related to Medical Staff quality assurance matters: - Red/Orange Alert and RCA Updates	William Faber, MD, Chief Medical Officer	Discussion 7:12 – 7:22
19. Health and Safety Code Section 32155, report related to Medical Staff quality assurance matters: - CMO Report	William Faber, MD, Chief Medical Officer	Discussion 7:22 – 7:27
20. ADJOURN TO OPEN SESSION	Dave Reeder, Quality Committee Chair	Motion Required 7:27 – 7:28
21. RECONVENE OPEN SESSION/REPORT OUT To report any required disclosures regarding permissible actions taken during Closed Session.	Dave Reeder, Quality Committee Chair	7:28 – 7:29
22. ADJOURNMENT	Dave Reeder, Quality Committee Chair	Motion Required 7:29 – 7:30pm

Upcoming FY18 Meetings

- October 30, 2017
- December 4, 2017
- February 5, 2018
- March 5, 2018
- April 2, 2018
- April 30, 2018
- June 4, 2018

Upcoming Board & Educational Committee Gatherings

- October 25, 2017
- April 25, 2018

**Minutes of the Open Session of the
 Quality, Patient Care and Patient Experience Committee Meeting of the
 El Camino Hospital Board
 Monday, August 28, 2017
 El Camino Hospital, Conference Rooms A&B
 2500 Grant Road, Mountain View, California**

Members Present

Dave Reeder,
 Jeffrey Davis, MD; Peter Fung, MD;
 Katie Anderson, Ina Bauman,
 Nancy Carragee, Wendy Ron,
 and Melora Simon

Members Absent

Mikele Bunce

Members Excused

**Jeffrey Davis, MD joined the meeting via
 teleconference*

**Jeffrey Davis, MD left the meeting at 7:15pm*

A quorum was present at the El Camino Hospital Quality, Patient Care, and Patient Experience Committee on the 28th of August, 2017 meeting.

Agenda Item	Comments/Discussion	Approvals/Action
1. CALL TO ORDER	The meeting of the Quality, Patient Care, and Patient Experience Committee of El Camino Hospital (the “Committee”) was called to order by Chair Dave Reeder at 5:36 p.m.	<i>None</i>
2. ROLL CALL	<p>Chair Reeder asked Michele Lee to take a silent roll call. Dr. Jeffrey Davis joined the meeting via teleconference and Mikele Bunce was absent, but all other Committee Members were present.</p> <p>Chair Reeder welcomed new member Ina Bauman to the Committee and she provided a brief background about herself.</p>	<i>None</i>
3. POTENTIAL CONFLICT OF INTEREST DISCLOSURES	Chair Reeder asked if any Committee member may have a conflict of interest with any of the items on the agenda. No conflict of interest was reported.	<i>None</i>
4. CONSENT CALENDAR ITEMS	<p>Chair Reeder asked if any Committee member wished to remove any items from the consent calendar for discussion. No items were removed.</p> <p><u>Motion:</u> To approve the consent calendar: Minutes of the Open Session the Quality Committee Meeting (August 7, 2017)</p> <p><u>Movant:</u> Carragee</p> <p><u>Second:</u> Simon</p> <p><u>Ayes:</u> Anderson, Bauman, Carragee, Davis, Fung, Reeder,</p>	<i>The Open Session Minutes of the August 7, 2017 meeting were approved.</i>

Agenda Item	Comments/Discussion	Approvals/Action
	Ron, Simon <u>Noes:</u> None <u>Abstentions:</u> None <u>Absent:</u> Bunce <u>Excused:</u> None <u>Recused:</u> None	
5. REPORT ON BOARD ACTIONS	Chair Reeder briefly reviewed the Board Report as further detailed in the packet with the Committee and briefly highlighted the following: <ul style="list-style-type: none"> • All Board and Committee members are invited and encouraged to attend the Estes Park Institute Conference in San Francisco October 29 – November 1, 2017 • Neysa Fligor was appointed to serve as District Board Director until after the November 2018 District General Election • Dr. Robert Pinsker has resigned from the Quality Committee 	<p><i>Meeting on October 30th will be held as scheduled. Chair Dave Reeder will travel from Estes Park Institute Conference to Chair the meeting.</i></p> <p><i>The Committee will consider replacing Dr. Pinsker.</i></p>
6. QUALITY PROGRAM UPDATE: INFECTION CONTROL	<p>Carol Kemper, MD, Medical Director of Infection Prevention, updated the Committee on the infection control highlights of FY17: 6 enterprise hospital-onset cases of MRSA, 1 enterprise hospital-onset case of MDRO and the lowest rate ever of <2.0 of C. difficile. She further explained the use of tracers that is required by the Joint Commission. Dr. Kemper emphasized the ongoing efforts to monitor and prevent surgical site infections. She described a new policy and a more aggressive procedure resulted in a successful prevention of XDRO transmission in the hospital. Dr. Kemper identified gaps in care and processes for improvement such as Infection Control team reviewing Foley justification with floor managers every weekday and reviewing every aspect of any suspect case and communicating back to managers and the CAUTI Task Force. Also, she briefly discussed the CLABSI prevention strategies such as: Curox protectors for all Central lines on all units, any nurse accessing a PICC or CVC is trained, immediate retraining and annual competencies for nursing staff accessing lines, daily bathing of patients and sheet changes.</p> <p>Dr. Kemper asked for feedback and questions from the Committee and a brief discussion ensued.</p>	<p><i>None</i></p>
7. FY17 QUALITY DASHBOARD	Catherine Carson, RN, Sr. Director/Chief Quality Officer, reviewed the newly annotated FY17 Quality Dashboard with the Committee. Ms. Carson discussed the decreased number of falls in June which maybe attributable to increased	<p><i>None</i></p>

Agenda Item	Comments/Discussion	Approvals/Action
	<p>concurrent audit of fall risk, signage, arm bands, non-skid socks, and use of bed and chair alarms by a light duty nurse. She reported Pain Reassessment has a continuous improvement, reporting increased in June for errors that reach the patient and near miss, LOS has increased due to several long stay patients, and a significant improvement in ED physician ordering of fluid bolus within 2 hours of time of presentation.</p> <p><i>* The Committee suggested adding a footnote on the bottom of the Dashboard about deviation.</i></p>	
<p>8. PT. EXPERIENCE (HCAHPS)</p>	<p>Michelle Gabriel, Director of Performance Improvement, explained the HCAHPS data that was provided by Press Ganey. There is a sampling methodology in selecting patients for surveying to gather the data. The information was presented in quarterly format showing how ECH is progressing with 50% and 75% lines indicating certain domains for improvement. Our overall HCAHPS performance is just under target for FY2017 with quietness of the hospital being our lowest component score. She asked the Committee if the data being presented was in a format that was easily understood or if any changes were needed. No changes were requested.</p>	<p><i>None</i></p>
<p>9. ED PT. SATISFACTION (PRESS GANEY)</p>	<p>Michelle Gabriel, Director of Performance Improvement, shared for the first time the ED specific HCAHPS scores. Our ED performance is under the 50th percentile on all components with areas of opportunities for improvement. She indicated the Patient Experience team will put together a plan of action to address these findings.</p>	<p><i>None</i></p>
<p>10. ECH STRATEGIC FRAMEWORK</p>	<p>William Faber, MD, Chief Medical Officer, shared the refined ECH Mission, Vision and Values with the committee members. He explained how the vision requires ECH to look to a future as a health services provider caring for consumers, patients, and families across the care continuum. Therefore, linking ECH vision to the three strategic goals: High Performance Operating Model, Consumer, Payer & Employer Alignment, and Physician Integration. Dr. Faber further described how ECH's mission and values are the foundation, while the strategic goals are the building blocks which all are held underneath our vision to lead the transformation of healthcare delivery in Silicon Valley which creates the Strategic Framework.</p> <p><i>*The Committee's consensus was that quality and safety should be called out more in the final strategic plan.</i></p>	<p><i>None</i></p>

Agenda Item	Comments/Discussion	Approvals/Action
11. PUBLIC COMMUNICATION	None.	<i>None</i>
12. ADJOURN TO CLOSED SESSION	<p><u>Motion:</u> To adjourn to closed session at 7:03 p.m. <u>Movant:</u> Anderson <u>Second:</u> Simon <u>Ayes:</u> Anderson, Bauman, Carragee, Davis, Fung, Reeder, Ron, Simon <u>Noes:</u> None <u>Abstentions:</u> None <u>Absent:</u> Bunce <u>Excused:</u> None <u>Recused:</u> None</p>	<i>Adjourned to closed session at 7:03 p.m.</i>
13. AGENDA ITEM 18: RECONVENE OPEN SESSION/ REPORT OUT	Open Session was reconvened at 7:48 pm. <i>Agenda Items 13 – 16 were addressed in closed session.</i>	
14. AGENDA ITEM 19: ADJOURNMENT	<p>The meeting was adjourned at 7:48 pm. Jeffrey Davis, MD left the meeting at 7:15pm</p> <p><u>Motion:</u> To adjourn at 7:48 p.m. <u>Movant:</u> Ron <u>Second:</u> Carragee <u>Ayes:</u> Anderson, Bauman, Carragee, Fung, Reeder, Ron, Simon <u>Noes:</u> None <u>Abstentions:</u> None <u>Absent:</u> Bunce, Davis <u>Excused:</u> None <u>Recused:</u> None</p>	<i>Meeting adjourned at 7:48 pm</i>

Attest as to the approval of the foregoing minutes by the Quality Committee of El Camino Hospital:

 Dave Reeder
 Chair, ECH Quality, Patient Care and
 Patient Experience Committee

Enhanced Recovery in Gynecologic Surgery

Eleftheria Kalogera, MD, Jamie N. Bakkum-Gamez, MD, Christopher J. Jankowski, MD, Emanuel Trabuco, MD, Jenna K. Lovely, DrPH, Sarah Dhanorker, Pamela L. Grubbs, RN, CNS, Amy L. Weaver, Lindsey R. Haas, Bijan J. Borah, PhD, April A. Bursiek, RN, Michael T. Walsh, MD, William A. Cliby, MD, and Sean C. Dowdy, MD

OBJECTIVE: To investigate the effects of enhanced recovery (a multimodal perioperative care enhancement protocol) in patients undergoing gynecologic surgery.

METHODS: Consecutive patients managed under an enhanced recovery pathway and undergoing cytoreduction, surgical staging, or pelvic organ prolapse surgery between June 20, 2011, and December 20, 2011, were compared with consecutive historical controls (March to December 2010) matched by procedure. Wilcoxon rank-sum, χ^2 , and Fisher's exact tests were used for comparisons. Direct medical costs incurred in the first 30 days were obtained from the Olmsted County Healthcare Expenditure and Utilization Database and standardized to 2011 Medicare dollars.

RESULTS: A total of 241 enhanced recovery women in the case group (81 cytoreduction, 84 staging, and 76 vaginal surgery) were compared with women in the control groups. In the cytoreductive group, patient-controlled anesthesia use decreased from 98.7% to 33.3% and overall opioid use decreased by 80% in the first 48 hours with no change in pain scores. Enhanced

recovery resulted in a 4-day reduction in hospital stay with stable readmission rates (25.9% of women in the case group compared with 17.9% of women in the control group) and 30-day cost savings of more than \$7,600 per patient (18.8% reduction). No differences were observed in rate (63% compared with 71.8%) or severity of postoperative complications (grade 3 or more: 21% compared with 20.5%). Similar, albeit less dramatic, improvements were observed in the other two cohorts. Ninety-five percent of patients rated satisfaction with perioperative care as excellent or very good.

CONCLUSIONS: Implementation of enhanced recovery was associated with acceptable pain management with reduced opioids, reduced length of stay with stable readmission and morbidity rates, good patient satisfaction, and substantial cost reductions.

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LEVEL OF EVIDENCE: II

Over the previous decade, important progress has been achieved in both benign and oncologic gynecologic surgery, including further refinement of minimally invasive surgery, introduction of the sentinel lymph node concept, individualized lymphadenectomy for endometrial cancer, and adoption of optimal cytoreduction to no visible residual disease for patients with ovarian cancer.¹⁻³ These practice changes have reduced surgical morbidity, shortened recovery, and improved oncologic outcomes.¹⁻³ However, little attention has been given to the optimization of perioperative care. Few data exist to support traditional components of perioperative care including preoperative bowel preparation, prolonged fasting and use of nasogastric tubes, intraabdominal drains, bed rest, and gradual introduction of oral feeding. Longer length of hospital stay has been correlated with lower quality of life, and health care institutions are subject to increasing pressures to reduce costs.⁴

From the Division of Gynecologic Surgery, the Department of Anesthesiology, Hospital Pharmacy Services, the Department of Nursing, the Division of Biomedical Statistics and Informatics, and the Department of Health Sciences, Division of Health Care Policy and Research, Mayo Clinic, Rochester, Minnesota.

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The authors thank Drs. David Larson and Robert Cima from Colorectal Surgery who pioneered enhanced recovery at the Mayo Clinic, Rochester and served as important consultants throughout this project.

Presented at the 14th Biennial meeting of the International Gynecologic Cancer Society, October 13-16, 2012, Vancouver, Canada.

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Financial Disclosure

The authors did not report any potential conflicts of interest.

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A number of management pathways has been introduced primarily in colorectal surgery to hasten recovery and attenuate the stress response associated with surgery.^{5,6} Key elements common to all enhanced recovery pathways (a term coined by Dr. Kehlet^{5,6}) include: preoperative patient education, reduction of preoperative fasting, omission of bowel preparation, perioperative normovolemia, limited use of nasogastric tubes and drains, early removal of urinary catheters, aggressive multimodal analgesia to minimize opiate consumption, early postoperative mobilization, prokinetics to enhance gastrointestinal motility, and early enteral nutrition. A growing body of evidence outside of gynecology including randomized controlled trials⁷⁻¹⁰ has shown that enhanced recovery speeds convalescence and reduces morbidity and cost while maintaining patient satisfaction and quality of life.^{9,11-13}

Few groups have tested enhanced recovery in gynecologic surgery, and most cohorts were small and included only patients with benign disorders.¹⁴⁻²⁰ The purpose of this investigation was to examine the effect of our enhanced recovery pathway on hospital length of stay, morbidity, cost, and patient satisfaction for women undergoing major abdominal surgery for gynecologic malignancies and vaginal reconstructive procedures for pelvic organ prolapse.

METHODS

A multimodal enhanced recovery pathway was developed by a multidisciplinary team of anesthesiologists, gynecologic oncologists, urogynecologists, pharmacists, and nursing staff based on the most current recommendations from the literature but accounting for the unique issues presented by gynecologic surgical patients (Box 1). Enhanced recovery was instituted on June 20, 2011, as a quality improvement practice change and was used for all inpatients treated in the Division of Gynecologic Surgery, Mayo Clinic, Rochester, Minnesota, from that date forward. Three cohorts were analyzed: 1) staging laparotomy for gynecologic malignancies including hysterectomy, lymphadenectomy and omentectomy only; 2) complex cytoreductive surgery cases, which included patients described in cohort 2 in addition to bowel resection, splenectomy, diaphragmatic resection, extensive cytoreduction, or all of these; and 3) urogynecologic pelvic organ prolapse surgery including posthysterectomy pelvic floor repair or vaginal hysterectomy with concomitant repairs (isolated hysterectomies were not included); the latter group of procedures will be referred to in the article as vaginal surgery cases.

This was a retrospective cohort study. The power calculation was performed based on our main outcome, reduction in hospital length of stay. To achieve 80%

power to detect a statistically significant 2-day reduction in length of stay in the staging cohort as well as the complex cytoreductive cohort, a total of 39 patients were needed in each cohort; 15 patients were necessary in the pelvic organ prolapse cohort to detect a 1-day reduction in length of stay. Consecutive patients within these three cohorts were prospectively identified from June 20, 2011, to December 20, 2011, and followed for at least 30 days. Enhanced recovery patients were then compared with consecutive historic controls matched one to one by procedure type from March 1, 2010, to December 23, 2010, before enhanced recovery was implemented. The only exclusion criterion was lack of research authorization. Of note, no significant changes in technology, surgical techniques, or surgical teams took place between the study period and the period from which historic controls were drawn. Before enhanced recovery, postoperative management was not standardized among the seven gynecologic oncologists and four urogynecologists at our institution. However, bowel preparations, caloric restriction, intraoperative hypervolemia, use of patient-controlled analgesia, and the use of surgical drains and catheters were routine practices. Local wound infiltration, triple antiemetics, and prokinetics were generally not used in historical controls. An interim analysis was performed at 3 months to confirm that this practice change did not increase complication rates.

Relevant data were abstracted from our electronic medical records (including outside medical records when necessary). For hospital length of stay, the day of surgery was defined as postoperative day 0. Total length of stay was calculated by adding readmission length of stay (if readmission occurred) to primary hospitalization length of stay. Postoperative hypotension was defined as a 10% decrease from the preoperative mean arterial pressure. Opioid use was quantified using oral morphine equivalents.²¹ "Opioid tolerance" was defined as at least 60 mg oral morphine equivalents per day. The efficacy of pain control was assessed using pain scores on a scale of 1-10. The Accordion severity grading system was used to measure severity of postoperative complications; grade 3 and higher complications were considered severe.²² Return of gastrointestinal function was defined as positive flatus or bowel movement. Patients were discharged when all of the following criteria were met: pain controlled with oral medications alone, tolerating solid food without intravenous hydration, independently ambulatory, and no suspicion of a complication. Confidential patient satisfaction surveys were administered by nonstudy providers to all patients before dismissal as part of a continuous assessment of our surgical inpatient unit.



Box 1. Enhanced Recovery Pathway

I. Preoperative diet	<ul style="list-style-type: none">• Evening before surgery: carbohydrate loading drink; may eat until midnight• May ingest fluids up to 4 h before procedure• Eliminate use of mechanical bowel preparation; rectal enemas still performed
II. Intraoperative	
Analgesia before operative room entry	<ul style="list-style-type: none">• Celecoxib 400 mg orally once• Acetaminophen 1,000 mg orally once• Gabapentin 600 mg orally once
Postoperative nausea and vomiting prophylaxis	<ul style="list-style-type: none">• Before incision (± 30 min): dexamethasone 4 mg IV once plus droperidol 0.625 mg IV once• Before incision closure (± 30 min): granisetron 0.1 mg IV once
Fluid balance	<ul style="list-style-type: none">• Goal: maintain intraoperative euvoemia<ul style="list-style-type: none">◦ Decrease crystalloid administration◦ Increase colloid administration if needed
Analgesia	<ul style="list-style-type: none">• Opioids IV at discretion of anesthesiologist supplemented with ketamine, ketorolac, or both• After incision closure: injection of bupivacaine at incision site
Anesthesia in pelvic organ prolapse surgery	<ul style="list-style-type: none">• Subarachnoid block containing bupivacaine and hydromorphone (40–100 micrograms)• Sedation vs “light” general anesthetic at the discretion of the anesthesiologist• Ketorolac 15 mg IV at the end of the procedure for patients able to tolerate it• No wound infiltration with bupivacaine in this cohort
III. Postoperative	
Activity	<ul style="list-style-type: none">• Evening of surgery: out of bed greater than 2 h, including one or more walks and sitting in chair• Day after surgery and until discharge: out of bed greater than 8 h including four or more walks and sitting in chair• Patient up in chair for all meals
Diet	<ul style="list-style-type: none">• No nasogastric tube; if nasogastric tube used intraoperatively, remove at extubation• Patient encouraged to start low residual diet 4 h after procedure• Day of surgery: one box of liquid nutritional supplement; encourage oral intake of at least 800 mL of fluid, but no more than 2,000 mL by midnight• Day after surgery until discharge: two boxes of liquid nutritional supplement; encourage daily oral intake of 1,500–2,500 mL of fluids• Osmotic diarrhetics: senna and docusate sodium; magnesium oxide; magnesium hydroxide as needed
Analgesia	<ul style="list-style-type: none">• Goal: no IV patient-controlled analgesia• Oral opioids<ul style="list-style-type: none">◦ Oxycodone 5–10 mg orally every 4 h as needed for pain rated 4 or greater or greater than patient stated comfort goal (5 mg for pain rated 4–6 or 10 mg for pain rated 7–10); for patients who received intrathecal analgesia, start 24 h after intrathecal dose given• Scheduled acetaminophen*<ul style="list-style-type: none">◦ Acetaminophen 1,000 mg orally every 6 h for patients with no or mild hepatic disease; acetaminophen 1,000 mg orally twice daily for patients with moderate hepatic disease; maximum acetaminophen should not exceed 4,000 mg/24 h from all sources• Scheduled NSAIDs<ul style="list-style-type: none">◦ Ketorolac 15 mg IV every 6 h for four doses (start no sooner than 6 h after last intraoperative dose); then, ibuprofen 800 mg orally every 6 h (start 6 h after last ketorolac dose administered)• If patient unable to take NSAIDs<ul style="list-style-type: none">◦ Tramadol 100 mg orally 4 times a day (start at 6:00 AM day after surgery) for patients younger than 65 years of age and no history of renal impairment or hepatic disease; tramadol 100 mg orally twice daily (start at 6:00 AM day after surgery) for patients 65 years of age or older or creatinine clearance less than 30 mL/min or history of hepatic disease• Breakthrough pain (pain greater than 7 more than 1 h after receiving oxycodone)<ul style="list-style-type: none">◦ Hydromorphone 0.4 mg IV once if patient did not receive intrathecal medications; may repeat once after 20 min if first dose ineffective• IV patient-controlled analgesia<ul style="list-style-type: none">◦ Hydromorphone patient-controlled analgesia started only if continued pain despite 2 doses of IV hydromorphone
Fluid balance	<ul style="list-style-type: none">• Operating room fluids discontinued on arrival to floor• Fluids at 40 mL/h until 8:00 AM on day after surgery and then discontinued• Peripheral lock IV when patient had 600 mL orally intake or at 8:00 AM on day after surgery, whichever came first

IV, intravenous; NSAIDs, nonsteroidal anti-inflammatory drugs.

*Doses for patients greater than 80 kg and younger than 65 years of age; doses adjusted as appropriate for patients less than 80 kg or 65 years of age or older.



Table 1. Patient Baseline, Operative, and Postoperative Characteristics

Characteristic	Complex Cytoreductive Cohorts		P
	Enhanced Recovery (n=81)	Historic Controls (n=78)	
Age (y)	64.3 (57.5–70.4)	65.1 (61–71.3)	.15
ASA physical status 3 or more	30 (37)	32 (41)	.61
BMI (kg/m ²)	27.4 (23–30.6)	28 (24.1–33.4)	.066
Operative time (min)	227 (163–346)	278 (202–346)	.059
Estimated blood loss (mL)	700 (400–1,100)	800 (500–1,400)	.11
Intraoperative red blood cell transfusion	46 (56.8)	46 (59)	.78
Wound type			.031
I (clean)	18 (22.2)	6 (7.7)	
II (clean-contaminated)	59 (72.8)	69 (88.5)	
III (contaminated)	4 (4.9)	3 (3.8)	
Bowel resection	37 (45.7)	38 (48.7)	.70
Small bowel resection	14 (17.3)	10 (12.8)	.43
Large bowel resection	32 (39.5)	35 (44.9)	.49
Preoperative hemoglobin (g/dL)	12.1 (11.3–13.2)	12.8 (11.5–13.7)	.10
Postoperative day 1 hemoglobin (g/dL)	9.9 (9.1–10.8)	10.5 (9.7–11.2)	.018
Preoperative use of opioids	20 (24.7)	9 (11.5)	.032
Oral morphine equivalent (mg)	45 (45–96)	42.5 (25–52.5)	.086
Greater than 60 mg oral morphine equivalents	6 (7.4)	0 (0)	.029
Patient pain comfort goal*	4 (3–4)	4 (3–4)	.90
Early discharge plan score	6 (4–7)	6 (4–7)	.75

ASA, American Society of Anesthesiologists; BMI, body mass index.

Data are n (%) or median (interquartile range) unless otherwise specified.

* The level of pain in a scale from 1 to 10 below which the patient considers as tolerable. Patients were asked to report their personal pain comfort goal in the preoperative period.

Cost data for the study patients were captured from Olmsted County Healthcare Expenditure and Utilization Database, a research database jointly funded by Mayo Clinic's Division of Health Care Policy and Research and the National Institutes of Health-funded Rochester Epidemiology Project.²³ This unique database provides standardized inflation-adjusted estimate of costs in 2011 constant dollars (regardless of payer or plan) for every service and procedure received by patients seen at the Mayo Clinic. However, the costs of outpatient pharmacy services and nursing home care were not captured in the Olmsted County Healthcare Expenditure and Utilization Database.

This investigation was reviewed by the Mayo Foundation institutional review board and as a quality improvement project was considered exempt from institutional review board review for initial implementation (45 CFR 46.101, item 4); however, institutional review board approval was obtained retrospectively for publication of findings. In accordance with the Minnesota Statute for Use of Medical Information in Research, only those patients who consented to the use of their medical records were included in final analysis and publication.

Categorical variables were summarized using actual counts (%) and continuous variables using mean (standard deviation) or median (interquartile range) as appropriate. The χ^2 test or the Fisher's exact test, as appropriate when an expected cell count in a contingency table was less than five, were used to compare categorical variables and the Wilcoxon rank-sum test for continuous variables. Cost analysis included all-cause 30-day postsurgical costs. The difference in median cost between groups was tested using a Wilcoxon rank-sum test. $P < .05$ was considered statistically significant for all statistical comparisons. Statistical analyses were performed using the SAS 9.2 software package.

RESULTS

A total of 241 enhanced recovery cases (81 complex cytoreductive, 84 staging, and 76 vaginal surgery cases) and 235 historic controls (78 complex cytoreductive, 80 staging, and 77 vaginal cases) met criteria for inclusion in the study analyses (after 14 patients, four women in the case group and 10 women in the control group, were excluded as a result of lack of research consent).

In the complex cytoreductive cohort, patient baseline, operative, and postoperative characteristics



Staging Cohorts			Pelvic Organ Prolapse Cohorts		
Enhanced Recovery (n=84)	Historic Controls (n=80)	P	Enhance Recovery (n=76)	Historic Controls (n=77)	P
62.2 (50–70.9)	61.7 (53–71.7)	.96	66.2 (57.8–73.6)	66.6 (58–72.7)	.53
32 (38.1)	30 (37.5)	.94	12 (15.8)	14 (18.2)	.69
30.7 (26.1–36.7)	30.5 (26.1–37.1)	.67	27.2 (24.4–30.4)	26.1 (23.6–31.3)	.64
151 (114–211)	177 (140–220)	.042	125 (94–171)	125 (104–149)	.58
300 (200–525)	450 (300–625)	<.001	100 (50–200)	150 (100–250)	.019
14 (16.7)	13 (16.3)	.94	1 (1.3)	0 (0)	.50
		.073			.37
14 (16.7)	6 (7.5)		3 (3.9)	1 (1.3)	
70 (83.3)	74 (92.5)		73 (96.1)	76 (98.7)	
—	—	—	—	—	—
—	—	—	—	—	—
12.4 (11.4–13.7)	13.1 (12.5–13.9)	.015	13.6 (12.8–14.2)	13.3 (12.7–14.1)	.42
9.8 (9–11)	10.4 (9.7–11.1)	.17	11.4 (10.6–11.9)	11 (10.2–11.6)	.025
17 (20.2)	8 (10)	.068	12 (15.8)	8 (10.4)	.32
45 (30–75)	40 (10–90)	.86	30 (25–70)	45 (37.5–67.5)	.49
5 (6)	2 (2.5)	.44	2 (2.7)	1 (1.3)	.62
4 (2–4)	3 (3–4)	.78	3 (2–4)	4 (3–5)	.072
4 (4–7)	6 (4–8.5)	.042	6 (4–6)	6 (4–9)	.086

are shown in Table 1. Clinically significant differences between women in the case group and women in the control group were limited to a higher proportion of clean wounds and “opioid-tolerant” patients in the enhanced recovery cohort.

Compliance with enhanced recovery pathway is shown in Appendix 1 (available online at <http://links.lww.com/AOG/A405>). The lower than expected rate of preload carbohydrate drink administration was the result of a diminished supply of the product at our pharmacies (the use of this product has since been discontinued as a result of cost considerations). The rate of preoperative celecoxib and postoperative nonsteroidal anti-inflammatory drug administration is reflective of the fact that these medications were omitted in patients with contraindications. The expected shift from a single-drug to multimodal postoperative nausea and vomiting prophylaxis protocol was observed with almost all enhanced recovery patients receiving at least two antiemetic medications intraoperatively.

Control patients received on average 1,059 mL more crystalloid intraoperatively compared with enhanced recovery patients ($P<.001$). Despite administration of less crystalloid, there was no increase in the frequency or duration of hypotension intraoperatively ($P=.25$). Women in the case group received

significantly less opioids (80% reduction in first 48 hours after return to room) with an increase in the use of scheduled nonsteroidal anti-inflammatory drugs, acetaminophen, and tramadol (Appendix 2, available online at <http://links.lww.com/AOG/A406>). Patient-controlled analgesia was infrequently required in the women in the case group compared with the historic controls (women in the enhance recovery group: 27 [33%] compared with women in the historic control group: 77 [98.7%], $P<.001$) (Appendix 1, <http://links.lww.com/AOG/A405>). Despite a significant reduction in opioid and patient-controlled analgesia use, pain scores were unchanged in the women in the case group compared with women in the control group with the exception of an improvement at the time of return to room after postanesthesia care unit discharge (mean [standard deviation]: women in the case group 4.4 [2.3] compared with women in the control group 5.6 [2.6], $P=.003$) (Appendix 3, available online at <http://links.lww.com/AOG/A407>).

Although a more aggressive postoperative nausea and vomiting protocol was adopted intraoperatively, more nausea and vomiting was observed in the enhanced recovery group with a significant increase on postoperative day 2 (women in the case group compared with women in the control group: nausea



45 of 81 [55.6%] compared with 30 of 78 [38.5%], $P=.031$; vomiting 14 of 81 [17.3%] compared with two of 78 [2.6%], $P=.002$). Overall, the amount of antiemetic medication that was required to control patients' symptoms was not different between groups. Women in the case group had a 1-day earlier return of bowel function compared with the historic controls ($P<.001$). The rate of postoperative ileus was no different between groups.

Thirty-day rates of complications, readmission, mortality, and the severity of complications did not differ between groups. Introduction of enhanced recovery resulted in a 4-day reduction in the mean length of stay compared with historic controls ($P<.001$). One-third of patients in the complex cytoreductive enhanced recovery group were discharged within 4 days of surgery compared with only 6.4% of women in the control group ($P<.001$). The reduction in length of stay was accompanied by a 30-day total cost of care savings of more than \$7,600 per patient for this cohort, an 18.8% reduction (Table 2). Thus, more than \$500,000 in savings was achieved for just 81 patients ($P=.006$).

In the staging cohort, patient baseline, operative, and postoperative characteristics were comparable to historic controls in all categories except median operative time, which was shorter by 30 minutes in the enhanced recovery group (median [interquartile range] 151 minutes [114–211] compared with 177 minutes [140–220], respectively; $P=.042$) (Table 1).

Like in the complex cytoreductive cohort, adherence to the protocol was good with regard to preoperative management, postoperative nausea and vomiting prophylaxis, perioperative fluid management, and a reduction in opioid use (Appendix 1, available online at <http://links.lww.com/AOG/A405>). Patient-controlled analgesia was used 10 times less frequently in women in the case group compared with

women in the control group (seven of 84 [8.3%] compared with 78 of 80 [97.5%], respectively; $P<.001$, Appendix 1 [available online at <http://links.lww.com/AOG/A405>]); nevertheless, a significant improvement in mean pain scores at the time of return to room was noted in women in the case group (4.3 compared with 5.2, respectively; $P=.030$). Women in the case group experienced significantly more nausea on the day of surgery after return to the room (28 of 84 [33.3%] compared with 15 of 80 [18.8%]; $P=.034$). Similar to the complex cytoreductive group, 30-day outcomes remained unchanged after implementing enhanced recovery (Table 3).

Enhanced recovery resulted in a 2-day reduction in the mean length of stay for this cohort (Table 3). Length of stay was 3 days or less in 26.2% of women in the case group compared with 5% of historical controls ($P<.001$). Cost savings were more than \$3,000 per patient, although not statistically significant in this analysis (Table 2).

In the vaginal surgery cohort, there were no clinically significant differences between women in the case group and women in the control group with regard to patient baseline, operative, or postoperative characteristics (Table 1). Adherence to the protocol was very good with regard to preoperative management, nausea and vomiting prophylaxis, and postoperative pain management (Appendix 1, available online at <http://links.lww.com/AOG/A405>). In contrast to the laparotomy cases, the intraoperative fluid management did not differ between groups given that conservative volumes of intraoperative fluids were administered during these cases at baseline. However, a significant reduction in the volume of crystalloids administered on postoperative day 0 was observed in the women in the case group compared with the women in the control group (median [interquartile range] 176 mL [0–310] compared with 575 [350–1,000], respectively;

Table 2. Comparison of 30-Day Costs Between Enhanced Recovery Cases and Controls

	Enhanced Recovery	Historic Controls	<i>P</i>
Complex cytoreductive	(n=81)	(n=78)	.006
Mean	\$33,106.24	\$40,748.57	
Median	\$27,129.20	\$33,762.51	
Interquartile range	(22,950.24–39,188.39)	(26,845.57–42,257.90)	
Staging	(n=84)	(n=80)	.13
Mean	\$22,482.00	\$25,757.48	
Median	\$21,046.76	\$22,150.67	
Interquartile range	(16,544.71–26,542.04)	(18,541.56–26,594.77)	
Pelvic organ prolapse	(n=76)	(n=77)	.056
Mean	\$10,547.87	\$10,989.08	
Median	\$9,657.45	\$10,354.74	
Interquartile range	(7,938.1–11,541.22)	(8,495.37–11,470.75)	



$P < .001$). Intrathecal anesthesia was used more commonly in the enhanced recovery cohort (31 of 76 [40.8%]) compared with eight of 77 [10.4%]; $P < .001$). Similar to the previous two laparotomy cohorts, patient-controlled analgesia was used much less commonly in the enhanced recovery cohort (seven of 76 [9.2%]) compared with 61 of 77 [79.2%]; $P < .001$, Appendix 1 [available online at <http://links.lww.com/AOG/A405>].

A significant improvement in the mean pain score from admission to the postanesthesia care unit up until 4 hours after return to the room was observed in the women in the case group (postanesthesia care unit: 1.9 compared with 3.3, $P < .001$; return to room: 2.8 compared with 4.7, $P < .001$; 4 hours after return to room: 2.9 compared with 3.9, $P = .015$) reflective of the effect of intrathecal anesthesia or analgesia. More than 4 hours after return to the room, mean pain scores were comparable between groups. Again, vomiting was more frequently observed in the enhanced recovery group on postoperative day 0 (eight of 76 [10.5%]) compared with one of 77 [1.3%], respectively; $P = .015$). There were no differences in 30-day outcomes (Table 3). A significant reduction in mean length of stay was observed after implementing enhanced recovery; almost half (46.1%) of the women in the case group were discharged the day after surgery compared with only 6.5% of women in the control group ($P < .001$) (Table 3). Within the enhanced recovery cohort, patients who received intrathecal anesthesia had a significantly shorter length of stay than those who did not (median length of stay 2 days compared with 3 days; $P = .021$) with no difference in hospital costs (median hospital costs intrathecal \$9,381.41 compared with no intrathecal \$9,973.54; $P = .51$).

Patient satisfaction was high in all studied aspects of perioperative care including patient education, quality of care during hospitalization, the discharge process, and pain management with 90–99% rating satisfaction as excellent or very good (Appendix 4, available online at <http://links.lww.com/AOG/A408>). Satisfaction with control of postoperative nausea and vomiting was rated as excellent or very good in 87%. Patient satisfaction surveys were not available in historic controls.

DISCUSSION

Dogmatic interventions that adversely affect postoperative recovery include the use of bowel preparations, caloric restriction, intraoperative hypervolemia, excessive opioid use, prolonged immobilization, and the use of drains and catheters. Enhanced recovery challenges traditional perioperative paradigms and has been shown to hasten postoperative recovery in colorectal

surgery.^{7,8,12,13,24–26} Prior investigations of enhanced recovery have shown only preliminary evidence of benefit^{18,19} and data are very limited for patients with gynecologic malignancies.^{18,19} One investigation describes 19 cases over 8 years,¹⁸ whereas the other included 69 patients who underwent cytoreduction with a median operating time of only 2 hours.¹⁹ The current investigation provides data demonstrating that our enhanced recovery pathway is associated with more rapid recovery when implemented in patients undergoing major abdominal surgery for gynecologic malignancies or in patients undergoing pelvic organ prolapse surgery. Specifically, use of enhanced recovery resulted in earlier return of gastrointestinal function, stable pain scores despite significantly reduced opioid use, excellent patient satisfaction despite a 4-day reduction in length of hospital stay, 30-day cost savings of more than \$7,600 per patient (19% reduction), and stable complication and readmission rates. As suggested by Maessen et al,²⁷ continuous monitoring of adherence to the protocol elements will be necessary to ensure that the desired outcomes persist beyond the initial study period.

We consider all interventions (or lack thereof) outlined in Box 1 as critical to success, and clinicians should not expect similar benefits in their own patients by simply adopting early feeding alone. However, a few interventions deserve particular mention. We believe that euvolemia is paramount to the improved clinical appearance of patients the day after surgery and for the improved outcomes in this investigation.^{28,29} Partnering with anesthesiology to achieve this was critical. In our investigation, perioperative fluid restriction did not increase the duration or frequency of hypotension within the first 48 hours after surgery nor did it increase the incidence of acute renal failure. It is worth highlighting that transient oliguria (up to 24 hours after surgery) with urine output as low as 20 mL/h is a normal response to surgical stress and does not require intervention.^{30,31} On the other hand, avoidance of preoperative dehydration (eg, mechanical bowel preparation) and caloric restriction, the use of prokinetics, and initiation of early feeding all contributed to acceleration of gastrointestinal function.^{10,17,18,32} In our complex cytoreductive cohort, roughly 40% of women in the case group underwent large bowel resection with no measurable untoward effects relative to women in the control group with regard to anastomotic leaks and abscesses. Despite its merits, a recent review and meta-analysis concluded that early feeding is associated with increased postoperative nausea and vomiting³² and might explain the higher frequency of nausea and vomiting observed in



Table 3. Outcomes in Women in the Enhanced Recovery Group compared to Women in the Historic Control Group

	Complex Cytoreductive Cohorts		P
	Enhanced Recovery (n=81)	Historic Controls (n=78)	
Postoperative hypotension	49 (60.5)	59 (75.6)	.041
Nasogastric tube insertion	9 (11.1)	13 (16.7)	.31
Urinary catheter reinsertion	14 (17.5)	13 (16.7)	.89
Postoperative day of return of bowel function	3 (2–3)	4 (3–5)	<.001
Postoperative day of general diet	0 (0–1)	5 (3–7)	<.01
Length of stay (d)	6.5±3.5	10.7±11.4	<.001
	5 (4–7)	8 (6–11)	
30-d postoperative complications	51 (63)	56 (71.8)	.24
Accordion grade 3 or greater	17 (21)	16 (20.5)	.94
Postoperative ileus	19 (23.5)	16 (20.5)	.65
Anastomotic leak	4 (4.9)	3 (3.9)	.99
Bowel perforation	—	—	
Abscess	4 (4.9)	4 (5.1)	.99
30-d readmission	21 (25.9)	14 (17.9)	.22
Readmission length of stay (d)	5 (3–10)	6 (3–9)	.69
Postoperative day from discharge to readmission	7 (3.3–14)	9 (4.5–20)	.42
Total length of stay (d)	8.7±7.6	11.9±11.9	<.001
	6 (4–9)	8.5 (7–11)	
30-d mortality	1 (1.2)	1 (1.3)	.99

Data are n (%), mean±standard deviation, or median (interquartile range) unless otherwise specified.

our investigation despite aggressive multimodal postoperative nausea and vomiting prophylaxis. Despite this increase in nausea and vomiting, 87% rated their satisfaction with nausea and vomiting control as excellent or very good, suggesting that early feeding is overall well tolerated.

Epidural analgesia and patient-controlled analgesia have been used commonly in prior enhanced recovery trials.^{33,34} After significant debate, our investigative group elected to omit epidural analgesia in patients undergoing laparotomy given concerns about fluid shifts and hypotension in a patient population who commonly present with large cancer burdens, poor nutrition, and several liters of ascites, particularly when adopting a strategy of euvolemia intraoperatively. Excellent results were obtained even without the use of intrathecal analgesia. However, patients undergoing pelvic organ prolapse surgery appeared to derive significant benefit from intrathecal anesthesia, and in the future, an attempt will be made to increase use in our institution.

Weaknesses of this investigation include that it was not designed as a randomized clinical trial. Considering accumulating data on the success of enhanced recovery pathways in other surgical specialties, our group felt that this initiative was best

executed as a quality improvement study. However, we used historical controls 6 months before adoption of this pathway such that changes in practice patterns, techniques, and staffing were minimal between groups. Sample size was powered to detect differences in hospital length of stay. Thus, although we found no changes in morbidity, mortality, or readmission between groups, this study may be underpowered to detect such differences. Lastly, given the large number of changes contained within the management pathway, it is impossible to determine which intervention had the greatest effect on recovery. However, all of the elements of this pathway have merit with respect to various end points, including patient comfort and satisfaction, even if they potentially do not affect cost or length of stay. Furthermore, there are virtually no costs required to implement this pathway.

In summary, institution of an enhanced recovery pathway in gynecologic surgery resulted in significant improvement of postoperative outcomes including earlier return of gastrointestinal function, excellent pain management with significantly reduced opioid requirements, decreased length of hospital stay, excellent patient satisfaction combined with substantial cost reductions while maintaining stable complication and readmission rates. Women



Staging Cohorts			Pelvic Organ Prolapse Cohorts		
Enhanced Recovery (n=84)	Historic Controls (n=80)	P	Enhanced Recovery (n=76)	Historic Controls (n=77)	P
55 (65.5)	65 (81.3)	.023	61 (80.3)	61 (79.2)	.87
3 (3.6)	2 (2.5)	.99	0	0	
8 (9.8)	11 (15.5)	.28	2 (10)	0	.99
2 (1-3)	2 (2-3)	.010	1 (1-1.5)	1 (1-2)	.18
0 (0-1)	2.5 (2-3)	<.001	0 (0)	1 (1-2)	<.001
4.2±1.5	5.1±1.7	<.001	2.7±0.8	3.2±0.9	<.001
4 (3-4.5)	4 (4-6)		3 (2-3)	3 (3)	
41 (48.8)	32 (40)	.26	20 (26.3)	26 (33.8)	.32
11 (13.1)	7 (8.8)	.37	1 (1.3)	0 (0)	.50
6 (7.1)	7 (8.8)	.70	1 (1.3)	1 (1.3)	.99
—	—		—	—	
0	2 (2.5)	.24	—	—	
1 (1.2)	2 (2.5)	.61	—	—	
12 (14.3)	9 (11.3)	.56	2 (2.6)	4 (5.2)	.41
5.5 (3-8)	7.5 (6-16)	.09	8.5 (8-9)	4.5 (3-9.5)	.48
5.5 (2-20.3)	6.5 (1.8-13.3)	.76	19 (19-19)	4.5 (1.5-6.75)	.13
4.9±2.8	7.1±12.3	.002	2.9±1.6	3.6±2.3	<.001
4 (3.5-5)	4 (4-6)		3 (2-3)	3 (3-4)	
2 (2.4)	0 (0)	.50	0	0	

undergoing the most complex oncologic procedures appear to have the most to gain from this management strategy. At present all women undergoing inpatient gynecologic surgery at Mayo Clinic, regardless of diagnosis, are managed under the enhanced recovery pathway.

REFERENCES

- Dowdy SC, Borah BJ, Bakkum-Gamez JN, Weaver AL, McGree ME, Haas LR, et al. Prospective assessment of survival, morbidity, and cost associated with lymphadenectomy in low-risk endometrial cancer. *Gynecol Oncol* 2012;127:5-10.
- Bristow RE, Tomacruz RS, Armstrong DK, Trimble EL, Montz FJ. Survival effect of maximal cytoreductive surgery for advanced ovarian carcinoma during the platinum era: a meta-analysis. *J Clin Oncol* 2002;20:1248-59.
- Van der Zee AG, Oonk MH, De Hullu JA, Ansink AC, Vergote I, Verheijen RH, et al. Sentinel node dissection is safe in the treatment of early-stage vulvar cancer. *J Clin Oncol* 2008;26:884-9.
- Sharma A, Sharp DM, Walker LG, Monson JR. Predictors of early postoperative quality of life after elective resection for colorectal cancer. *Ann Surg Oncol* 2007;14:3435-42.
- Kehlet H. Multimodal approach to control postoperative pathophysiology and rehabilitation. *Br J Anaesth* 1997;78:606-17.
- Kehlet H, Wilmore DW. Multimodal strategies to improve surgical outcome. *Am J Surg* 2002;183:630-41.
- Anderson AD, McNaught CE, MacFie J, Tring I, Barker P, Mitchell CJ. Randomized clinical trial of multimodal optimization and standard perioperative surgical care. *Br J Surg* 2003;90:1497-504.
- Khoo CK, Vickery CJ, Forsyth N, Vinal NS, Eyre-Brook IA. A prospective randomized controlled trial of multimodal perioperative management protocol in patients undergoing elective colorectal resection for cancer. *Ann Surg* 2007;245:867-72.
- Adamina M, Kehlet H, Tomlinson GA, Senagore AJ, Delaney CP. Enhanced recovery pathways optimize health outcomes and resource utilization: a meta-analysis of randomized controlled trials in colorectal surgery. *Surgery* 2011;149:830-40.
- Spanjersberg WR, Reurings J, Keus F, van Laarhoven CJ. Fast track surgery versus conventional recovery strategies for colorectal surgery. *The Cochrane Database of Systematic Reviews* 2011, Issue 2. Art. No.: CD007635. DOI: 10.1002/14651858.CD007635.pub2.
- Khan S, Wilson T, Ahmed J, Owais A, MacFie J. Quality of life and patient satisfaction with enhanced recovery protocols. *Colorectal Dis* 2010;12:1175-82.
- Lovely JK, Maxson PM, Jacob AK, Cima RR, Horlocker TT, Hebl JR, et al. Case-matched series of enhanced versus standard recovery pathway in minimally invasive colorectal surgery. *Br J Surg* 2012;99:120-6.
- Sammour T, Zargar-Shoshtari K, Bhat A, Kahokehr A, Hill AG. A programme of Enhanced Recovery After Surgery (ERAS) is a cost-effective intervention in elective colonic surgery. *N Z Med J* 2010;123:61-70.
- Ottesen M, Sorensen M, Kehlet H, Ottesen B. Short convalescence after vaginal prolapse surgery. *Acta Obstet Gynecol Scand* 2003;82:359-66.
- Ottesen M, Sorensen M, Rasmussen Y, Smidt-Jensen S, Kehlet H, Ottesen B. Fast track vaginal surgery. *Acta Obstet Gynecol Scand* 2002;81:138-46.
- Sjetne IS, Krogstad U, Odegard S, Engh ME. Improving quality by introducing enhanced recovery after surgery in a gynaecologic



- cological department: consequences for ward nursing practice. *Qual Saf Health Care* 2009;18:236–40.
17. Eberhart LHJ, Koch T, Ploger B, Wagner U, Wulf H, Zwioerek L, et al. Enhanced recovery after major gynaecological surgery for ovarian cancer—an objective and patient-based assessment of a traditional versus a multimodal ‘fast track’ rehabilitation programme. *Anesthesiologie Und Intensivmedizin* 2008;49:180–94.
 18. Gerardi MA, Santillan A, Meisner B, Zahurak ML, Diaz Montes TP, Giuntoli RL II, et al. A clinical pathway for patients undergoing primary cytoreductive surgery with rectosigmoid colectomy for advanced ovarian and primary peritoneal cancers. *Gynecol Oncol* 2008;108:282–6.
 19. Marx C, Rasmussen T, Jakobsen DH, Ottosen C, Lundvall L, Ottesen B, et al. The effect of accelerated rehabilitation on recovery after surgery for ovarian malignancy. *Acta Obstet Gynecol Scand* 2006;85:488–92.
 20. Moller C, Kehlet H, Friland SG, Schouenborg LO, Lund C, Ottesen B. Fast track hysterectomy. *Eur J Obstet Gynecol Reprod Biol* 2001;98:18–22.
 21. American Pain Society. Principles of analgesic use in the treatment of acute pain and cancer pain. 6th ed. Glenview (IL): American Pain Society; 2008.
 22. Strasberg SM, Linehan DC, Hawkins WG. The accordion severity grading system of surgical complications. *Ann Surg* 2009;250:177–86.
 23. Melton LJ 3rd. History of the Rochester Epidemiology Project. *Mayo Clin Proc* 1996;71:266–74.
 24. Aarts MA, Okrainec A, Glicksman A, Pearsall E, Victor JC, McLeod RS. Adoption of enhanced recovery after surgery (ERAS) strategies for colorectal surgery at academic teaching hospitals and impact on total length of hospital stay. *Surg Endosc* 2012;26:442–50.
 25. Delaney CP, Zutshi M, Senagore AJ, Remzi FH, Hammel J, Fazio VW. Prospective, randomized, controlled trial between a pathway of controlled rehabilitation with early ambulation and diet and traditional postoperative care after laparotomy and intestinal resection. *Dis Colon Rectum* 2003;46:851–9.
 26. Kehlet H, Mogensen T. Hospital stay of 2 days after open sigmoidectomy with a multimodal rehabilitation programme. *Br J Surg* 1999;86:227–30.
 27. Maessen J, Dejong CH, Hausel J, Nygren J, Lassen K, Andersen J, et al. A protocol is not enough to implement an enhanced recovery programme for colorectal resection. *Br J Surg* 2007;94:224–31.
 28. Holte K, Sharrock NE, Kehlet H. Pathophysiology and clinical implications of perioperative fluid excess. *Br J Anaesth* 2002;89:622–32.
 29. Lobo DN, Bostock KA, Neal KR, Perkins AC, Rowlands BJ, Allison SP. Effect of salt and water balance on recovery of gastrointestinal function after elective colonic resection: a randomized controlled trial. *Lancet* 2002;359:1812–8.
 30. Dudley HF, Boling EA, Lequesne LP, Moore FD. Studies on antidiuresis in surgery: effects of anesthesia, surgery and posterior pituitary antidiuretic hormone on water metabolism in man. *Ann Surg* 1954;140:354–67.
 31. Srinivasa S, Hill AG. Perioperative fluid administration: historical highlights and implications for practice. *Ann Surg* 2012;256:1113–8.
 32. Charoenkwan K, Phillipson G, Vutyavanich T. Early versus delayed (traditional) oral fluids and food for reducing complications after major abdominal gynaecologic surgery. *The Cochrane Database of Systematic Reviews* 2007, Issue 4. Art. No.: CD004508. DOI: 10.1002/14651858.CD004508.pub3.
 33. Levy BF, Scott MJ, Fawcett W, Fry C, Rockall TA. Randomized clinical trial of epidural, spinal or patient-controlled analgesia for patients undergoing laparoscopic colorectal surgery. *Br J Surg* 2011;98:1068–78.
 34. Sprung J, Sanders MS, Warner ME, Gebhart JB, Stanhope CR, Jankowski CJ, et al. Pain relief and functional status after vaginal hysterectomy: intrathecal versus general anesthesia. *Can J Anaesth* 2006;53:690–700.



From: Grace Benlice
Sent: Friday, July 14, 2017 3:38 PM
To: Catherine Carson
Cc: Cheryl Reinking
Subject: Patient Story Facebook

Hi! Catherine,

We had a 74 year old patient in ICU at ECH LG, who came in for sepsis, necrotizing fasciitis from a cat scratch. She had a cardiac arrest during this admission, had really poor prognosis and was dying. Her phone was locked and spouse didn't know the code to open it. The daughter was travelling and couldn't be reached. They tried using her finger to unlock the phone to no avail. Our social worker asked the husband for permission to contact family thru Facebook. The grandson responded and notified everyone. The family received timely notification of her condition and was able to say goodbye. Real ingenuity and out of the box thinking saved the day.

Thanks!

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QUALITY, PATIENT CARE, AND PATIENT EXPERIENCE COMMITTEE
FY 18 Pacing Plan

FY2018 Q1		
JULY 2017	AUGUST 7, 2017	August 28, 2017 (for September's meeting)
<p>No Board or Committee Meetings</p> <p>Routine Consent Calendar Items:</p> <ul style="list-style-type: none"> ▪ Approval of Minutes ▪ Progress Against FY 2018 Committee Goals (Oct 30, March 5, June 4) ▪ FY18 Pacing Plan ▪ Med Staff Quality Council ▪ Patient Story ▪ Research Article 	<p>Standing Agenda Items:</p> <ol style="list-style-type: none"> 1. Board Actions 2. Consent Calendar 3. FY 17 Quality Dashboard 4. Clinical Program Update 5. Serious Safety/Red Alert Event as needed 6. CMO Report <p>Special Agenda Items</p> <ol style="list-style-type: none"> 1. Committee Recruitment 2. Update on Patient and Family Centered Care 3. FY17 Organizational Goal Achievement Update 4. Review proposed new format for Quarterly Quality and Safety Review 5. BPCI program 6. Appoint Committee Vice Chair 	<p>Standing Agenda Items:</p> <ol style="list-style-type: none"> 1. Board Actions 2. Consent Calendar 3. FY 17 Quality Dashboard 4. Clinical Program Update 5. Serious Safety/Red Alert Event as needed 6. CMO Report <p>Special Agenda items:</p> <ol style="list-style-type: none"> 1. Annual Patient Safety Report 2. Pt. Experience (HCAHPS) 3. ED Pt. Satisfaction (Press Ganey) 4. ECH Strategic Framework
FY2018 Q2		
OCTOBER 2, 2017	OCTOBER 30, 2017 (for November's meeting)	DECEMBER 4, 2017
<p>Standing Agenda Items:</p> <ol style="list-style-type: none"> 1. Board Actions 2. Consent Calendar 3. FY18 Quality Dashboard 4. Clinical Program Update 5. Serious Safety/Red Alert Event as needed 6. CMO Report <p>Special Agenda Items:</p> <ol style="list-style-type: none"> 1. Update on Patient and Family Centered Care 2. FY 17 Organizational Goal Achievement Update 3. Readmission Dashboard 4. PSI-90 Pt. Safety Indicators 5. Culture of Safety Survey Results 6. Committee member recruitment <p>(10/25 – Joint Board and Committee Session)</p>	<p>Standing Agenda Items:</p> <ol style="list-style-type: none"> 1. Board Actions 2. Consent Calendar 3. FY18 Quality Dashboard 4. Clinical Program Update 5. Serious Safety/Red Alert Event as needed 6. CMO Report <p>Special Agenda Items:</p> <ol style="list-style-type: none"> 1. Peer Review Process Changes Implementation Update 2. Safety Report for the Environment of Care 3. Quarterly Quality and Safety Review 4. CDI Dashboard 5. Core Measures 6. Update on Patient and Family Centered Care 7. Review Progress Against FY 2018 Committee Goals 	<p>Standing Agenda Items:</p> <ol style="list-style-type: none"> 1. Board Actions 2. Consent Calendar 3. FY18 Quality Dashboard 4. Clinical Program Update 5. Serious Safety/Red Alert Event as needed 6. CMO Report <p>Special Agenda Items:</p> <ol style="list-style-type: none"> 1. Update on Patient and Family Centered Care 2. Credentialing Process Report 3. Pt. Experience (HCAHPS) 4. ED Pt. Satisfaction (Press Ganey)

**QUALITY, PATIENT CARE, AND PATIENT EXPERIENCE COMMITTEE
FY 18 Pacing Plan**

FY2018 Q3		
JANUARY 2018	FEBRUARY 5, 2018	MARCH 5, 2018
No Meeting	<p>Standing Agenda Items:</p> <ol style="list-style-type: none"> Board Actions Consent Calendar FY18 Quality Dashboard Clinical Program Update Serious Safety/Red Alert Event as needed CMO Report <p>Special Agenda Items:</p> <ol style="list-style-type: none"> Update on Patient and Family Centered Care Quarterly Quality and Safety Review Readmission Dashboard PSI-90 Pt. Safety Indicators 	<p>Standing Agenda Items:</p> <ol style="list-style-type: none"> Board Actions Consent Calendar FY18 Quality Dashboard Clinical Program Update Serious Safety/Red Alert Event as needed CMO Report <p>Special Agenda Items:</p> <ol style="list-style-type: none"> iCare Update Proposed FY19 Organizational Goals CDI Dashboard Core Measures Update on Patient and Family Centered Care Review Progress Against FY 2018 Committee Goals
FY2018 Q4		
APRIL 2, 2018	APRIL 30, 2018 (for May's meeting)	JUNE 4, 2018
<p>Standing Agenda Items:</p> <ol style="list-style-type: none"> Board Actions Consent Calendar FY18 Quality Dashboard Clinical Program Update Serious Safety/Red Alert Event as needed CMO Report <p>Special Agenda Items:</p> <ol style="list-style-type: none"> Update on Patient and Family Centered Care Proposed FY 19 Committee Goals Proposed FY 19 Committee Meeting Dates Review Committee Charter Proposed FY 19 Organizational Goals Leapfrog Survey Results Value Base Purchasing Report <p>(4/25 – Joint Board and Committee Session)</p>	<p>Standing Agenda Items:</p> <ol style="list-style-type: none"> Board Actions Consent Calendar FY18 Quality Dashboard Clinical Program Update Serious Safety/Red Alert Event as needed CMO Report <p>Special Agenda Items:</p> <ol style="list-style-type: none"> Proposed FY 19 Committee Goals Proposed FY 19 Organizational Goals Review Biennial Committee Self-Assessment Results Quarterly Quality and Safety Review Pt. Experience (HCAHPS) ED Pt. Satisfaction (Press Ganey) Update on Patient and Family Centered Care 	<p>Standing Agenda Items:</p> <ol style="list-style-type: none"> Board Actions Consent Calendar FY18 Quality Dashboard Clinical Program Update Serious Safety/Red Alert Event as needed CMO Report <p>Special Agenda Items:</p> <ol style="list-style-type: none"> Update on Patient Centered Care Approve FY19 Pacing Plan Readmission Dashboard PSI-90 Pt. Safety Indicators Update on Patient and Family Centered Care Review Progress Against FY 2018 Committee Goals

FY18 COMMITTEE GOALS

Quality, Patient Care and Patient Experience Committee

PURPOSE

The purpose of the Quality, Patient Care and Patient Experience Committee (“Quality Committee”) is to advise and assist the El Camino Hospital (ECH) Board of Directors (“Board”) in constantly enhancing and enabling a culture of quality and safety at ECH, to ensure delivery of effective, evidence-based care for all patients, and to oversee quality outcomes of all services of ECH. The Quality Committee helps to assure that exceptional patient care and patient experiences are attained through monitoring organizational quality and safety measures, leadership development in quality and safety methods, and assuring appropriate resource allocation to achieve this purpose.

STAFF: William Faber, MD, Chief Medical Officer

The CMO shall serve as the primary staff to support the Committee and is responsible for drafting the Committee meeting agenda for the Committee Chair’s consideration. Additional clinical representatives may participate in the meetings upon the recommendation of the CMO and at the discretion of the CEO and the Committee Chair. These may include: the Chiefs/Vice Chiefs of the Medical Staff, physicians, nurse, and members from the community advisory councils or the community at-large. The CEO is an ex-officio member of this Committee.

GOALS	TIMELINE by Fiscal Year (Timeframe applies to when the Board approves the recommended action from the Committee, if applicable)	METRICS
1. Review the Hospital’s organizational goals and scorecard and ensure that those metrics and goals are consistent with the strategic plan and set at an appropriate level as they apply to the Quality, Patient Care and Patient Experience Committee.	<ul style="list-style-type: none"> Q1 FY18 – Goals Q3 FY18 - Metrics 	<ul style="list-style-type: none"> Review, complete, and provide feedback given to management, the Governance Committee, and the Board.
2. Alternatively (every other year) review peer review process and medical staff credentialing process. Monitor and follow through on the recommendations made through the Greeley peer review process.	<ul style="list-style-type: none"> Q2 FY18 	<ul style="list-style-type: none"> Receive update on implementation of peer review process changes Review Medical Staff credentialing process
3. Develop a plan to review the new Quality, Patient Care and Patient Experience Committee dashboard and ensure operational improvements are being made to respond to outliers.	<ul style="list-style-type: none"> Q1 – Q2 FY18 – Proposal Q2 FY18 – Implementation Month Q1 – Q4 FY18 	<ul style="list-style-type: none"> Receive a proposed format for quarterly Quality and Safety Review; make a recommendation to the Board and implement new format. Monthly review of FY18 Quality Dashboard
4. Oversee the development of a plan with specific tactics and monitor the HCAHPs scores for Patient and Family Centered Care.	<ul style="list-style-type: none"> Q2 FY18 	<ul style="list-style-type: none"> Review the plan and approve
5. Monitor the impact of interventions to reduce hospital-acquired infections.	<ul style="list-style-type: none"> Quarterly 	<ul style="list-style-type: none"> Review process toward meeting quality (infection control) organizational goal

SUBMITTED BY:

David Reeder

Chair, Quality Committee

William Faber, MD

Executive Sponsor, Quality Committee

Approved by the ECH Board of Directors on June 14, 2017

ECH BOARD COMMITTEE MEETING AGENDA ITEM COVER SHEET

Item:	Report on ECH and ECHD Board Actions Quality, Patient Care, and Patient Experience Committee October 2, 2017
Responsible party:	Cindy Murphy, Director of Governance Services
Action requested:	For Information
Background:	In FY16, we added this item to each Board Committee agenda to keep Committee members informed about Board actions via a verbal report by the Committee Chair. This written report is intended to supplement the Chair's verbal report.
Other Board Advisory Committees that reviewed the issue and recommendation, if any:	None.
Summary and session objectives :	To inform the Committee about recent Board actions.
Suggested discussion questions:	None.
Proposed Committee motion, if any:	None. This is an informational item.
LIST OF ATTACHMENTS:	<ol style="list-style-type: none"> 1. Report on ECH and ECHD August and September 2017 Board Actions

September 2017 ECH Board Actions*

1. September 13, 2017
 - a. Approved a revision to the Investment Committee's Goals
 - b. Approved additional funding over original approved budget for major construction projects at the Mountain View Campus: Behavioral Health Services Building (\$4.6 million) and Integrated Medical Office Building (\$27.1 Million).
 - c. Appointed new Board Member Neysa Fligor to the Executive Compensation Committee and the Corporate Compliance/Privacy and Internal Audit Committee.

August 2017 ECHD Board Actions*

1. August 23, 2017
 - a. Elected Neysa Fligor to the El Camino Hospital Board of Directors

*This list is not meant to be exhaustive, but includes agenda items the Board voted on that are most likely to be of interest to or pertinent to the work of El Camino Hospital's Board Advisory Committees.

Gynecologic Oncology / Robotics Report for the Quality Committee



El Camino Hospital

THE HOSPITAL OF SILICON VALLEY

October 2, 2017

Albert L. Pisani, MD, FACS, FACOG

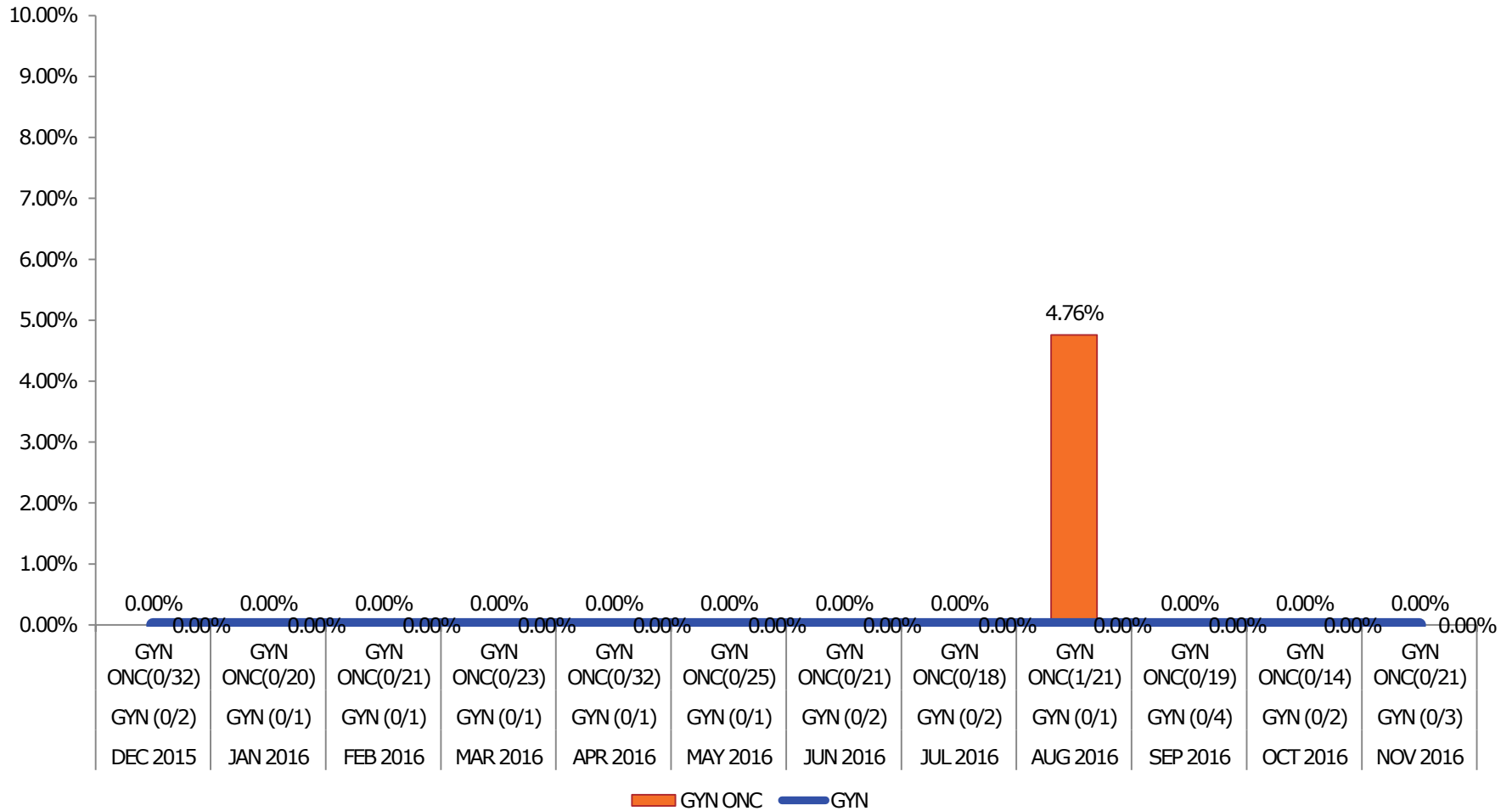
Co-Medical Director for Robotic Surgery

Athena Lendvay BSN, RN, OCN

Pelvic Health Program Coordinator

GYN Mortality (Inpatient)

Source: Premier



Infections

SSI Rate (Enterprise) [Hysterectomy- Abd and Vaginal]

Source: NHSN, Infection Control

FY17	Procedures	Infections
MV	135	1
LG	43	0

SSI Reported = Deep tissue, Organ space

Quality Measure: Catheter Associated UTI

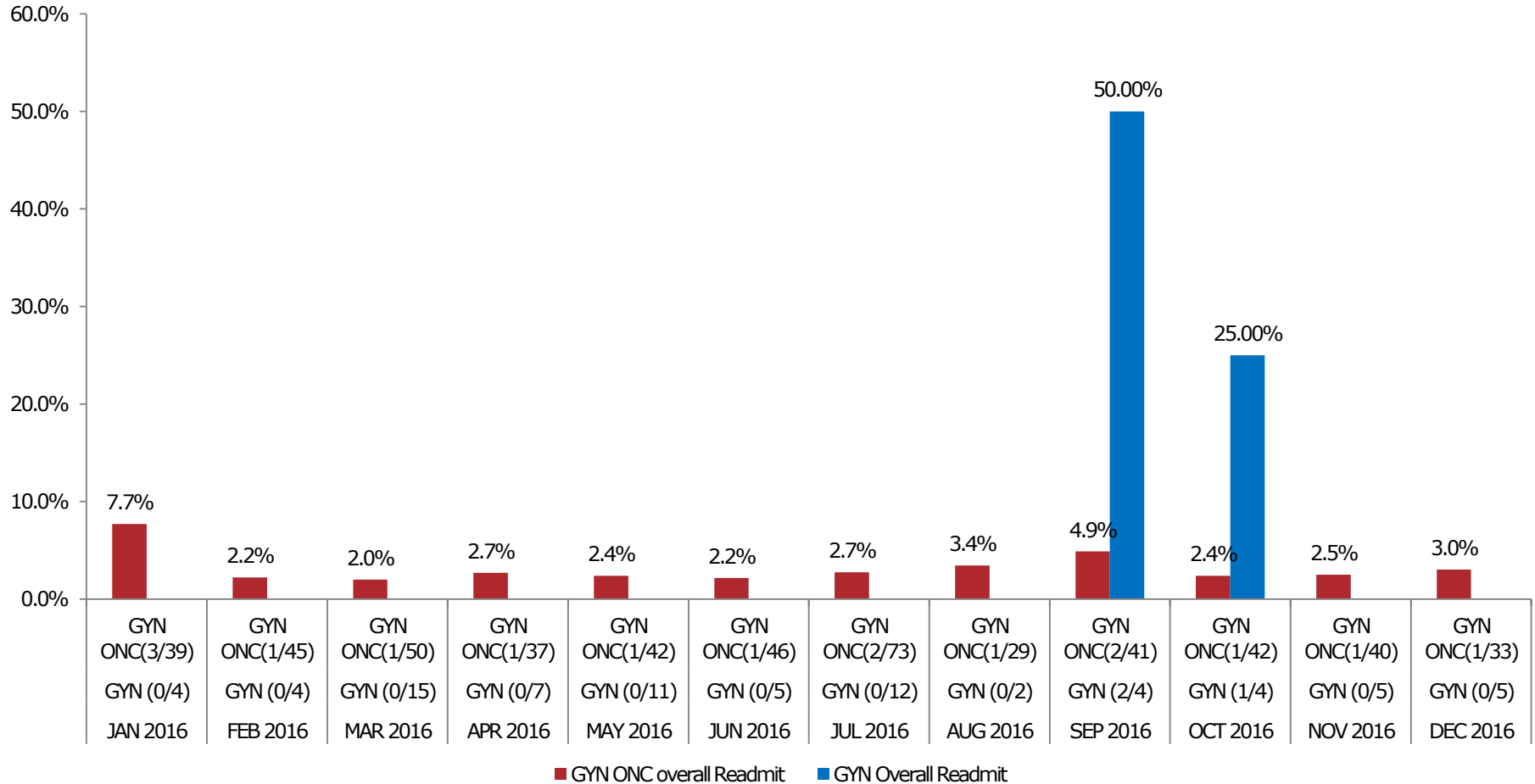
Source: NHSN, Infection Control

- From July 2016- Jan 2017 there were no CAUTIs identified by Infection Control that were related to GYN/GYN ONC patients.

GYN/GYN ONC 30 Day Procedure Related Inpatient to Inpatient/Outpatient Readmission

Source: EPSI, Chart Review

30 Day Readmission Inpatient and Outpatient GYN/GYN ONC



Robotic Surgery

Robotic Surgeries in Northern California

- Surgeons at El Camino Hospital perform the most robotic-assisted surgeries in Northern California — more than 6,500 procedures .
- ECH is one of only two hospitals from the Bay Area to the Monterey Peninsula to offer bariatric robotic surgery.

Robotic-Assisted Operative Laparoscopy



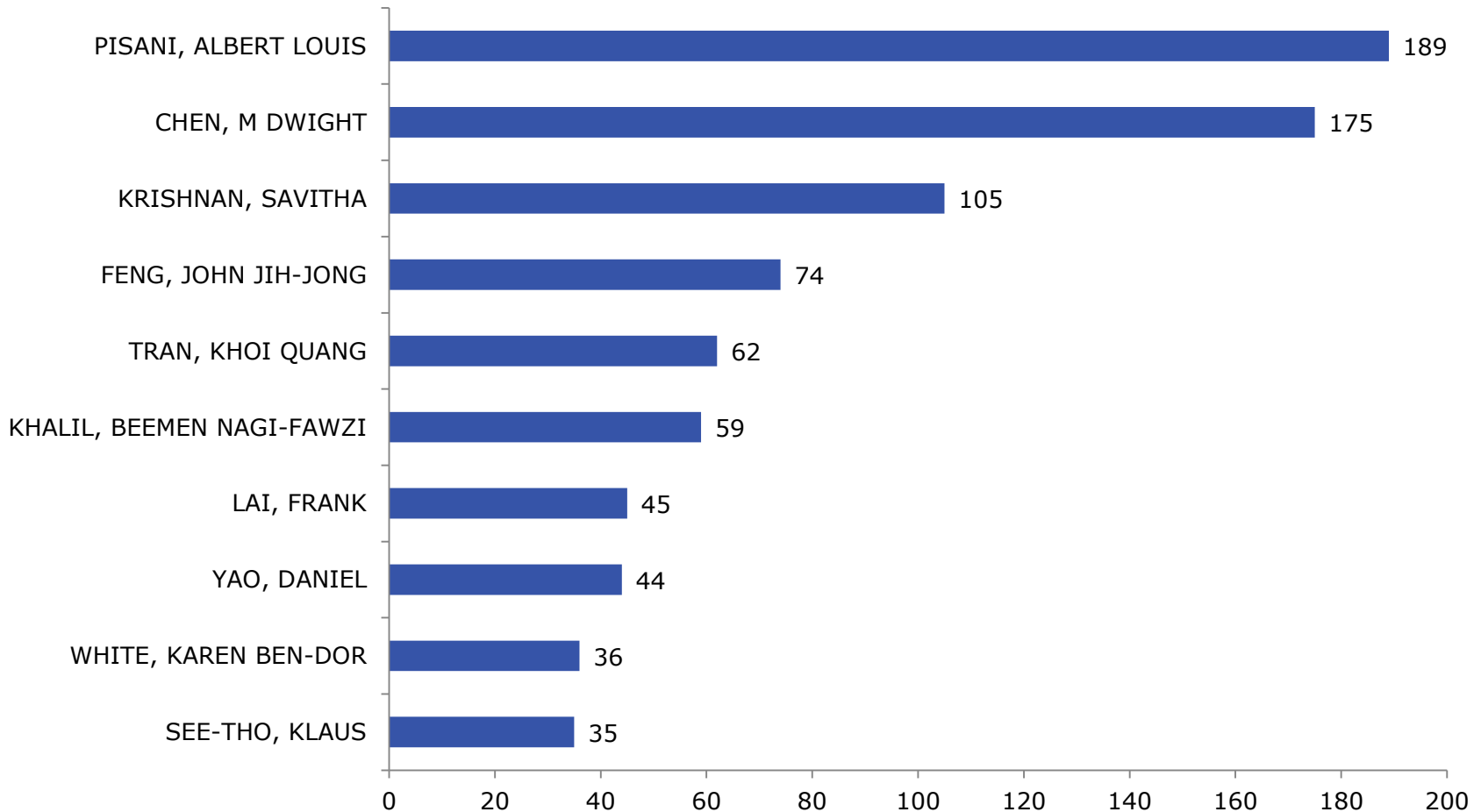
- **Better visualization**
- **Better Instrument control**
- **Enhanced dexterity**
- **Ergonomic**
- **Remote surgery collaboration**

Advantages in Gyn Onc

- ❖ **Facilitates surgery for the Obese patient (Endom CA)**
- ❖ **Less Invasive approach for Staging early cancers (Ov CA)**
- ❖ **Precise, comprehensive dissection (Cx CA)**

Quicker recovery shortens time from surgery to adjuvant therapy

ECH Top 10 Robotic Physician Case Volume Inpatient and Outpatient - FY17



Inpatient Robotic Complications & Readmissions

ECH patients who have robotic surgery are **33% less likely to get readmitted** within 30 days of discharge in comparison to patients who had a open procedure

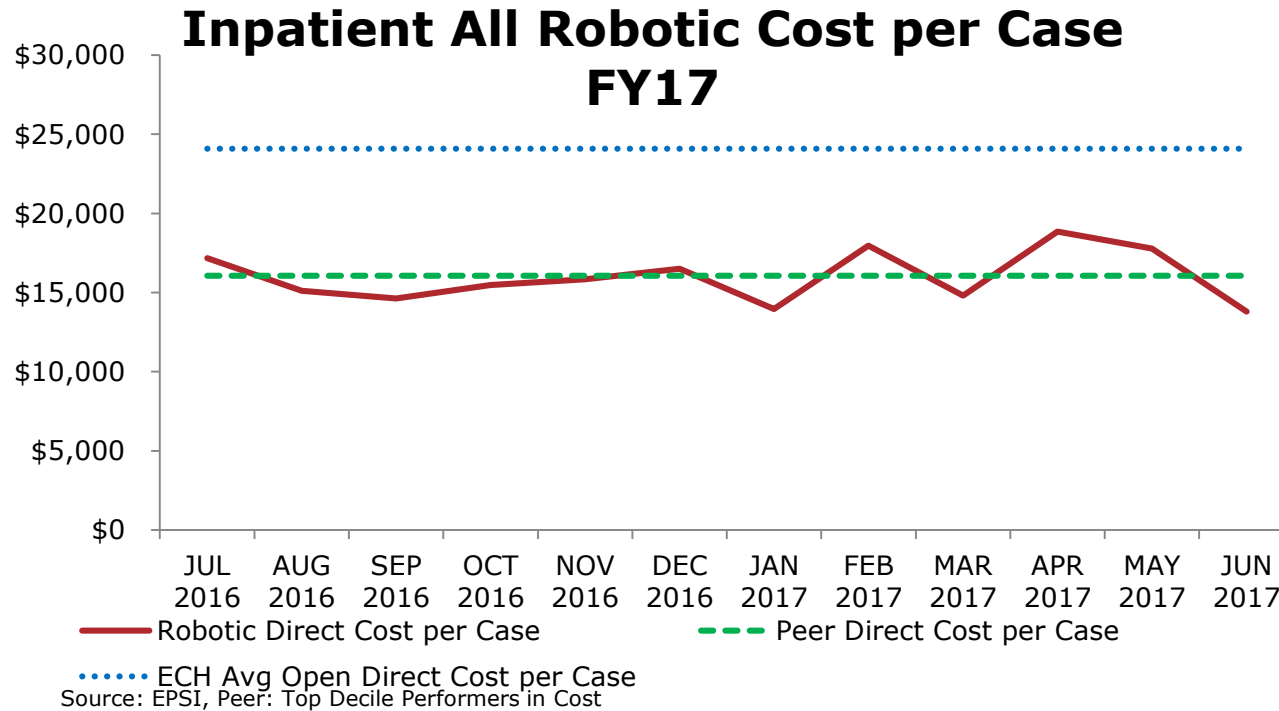
30 Day IP Readmission	MV	LG	Peer
IP Robotic	3.55%	0.00%	4.03%
O/E	0.75	0.00	0.98
IP Non-Robotic	6.08%	4.11%	7.40%
O/E	0.75	0.56	0.92

ECH patients who have robotic surgery are **64% less likely to have experienced a complication** in comparison to patients who had an open procedure

IP Complication	MV	LG	Peer
IP Robotic	8.21%	0.00%	15.36%
O/E	0.72	0	1.01
IP Non-Robotic	21.86%	24.00%	21.59%
O/E	1.03	1.07	0.94

Source: Premier Quality Advisor

Inpatient Robotics Cost Per Case



FY 2017 Goal- Decrease TPN Use

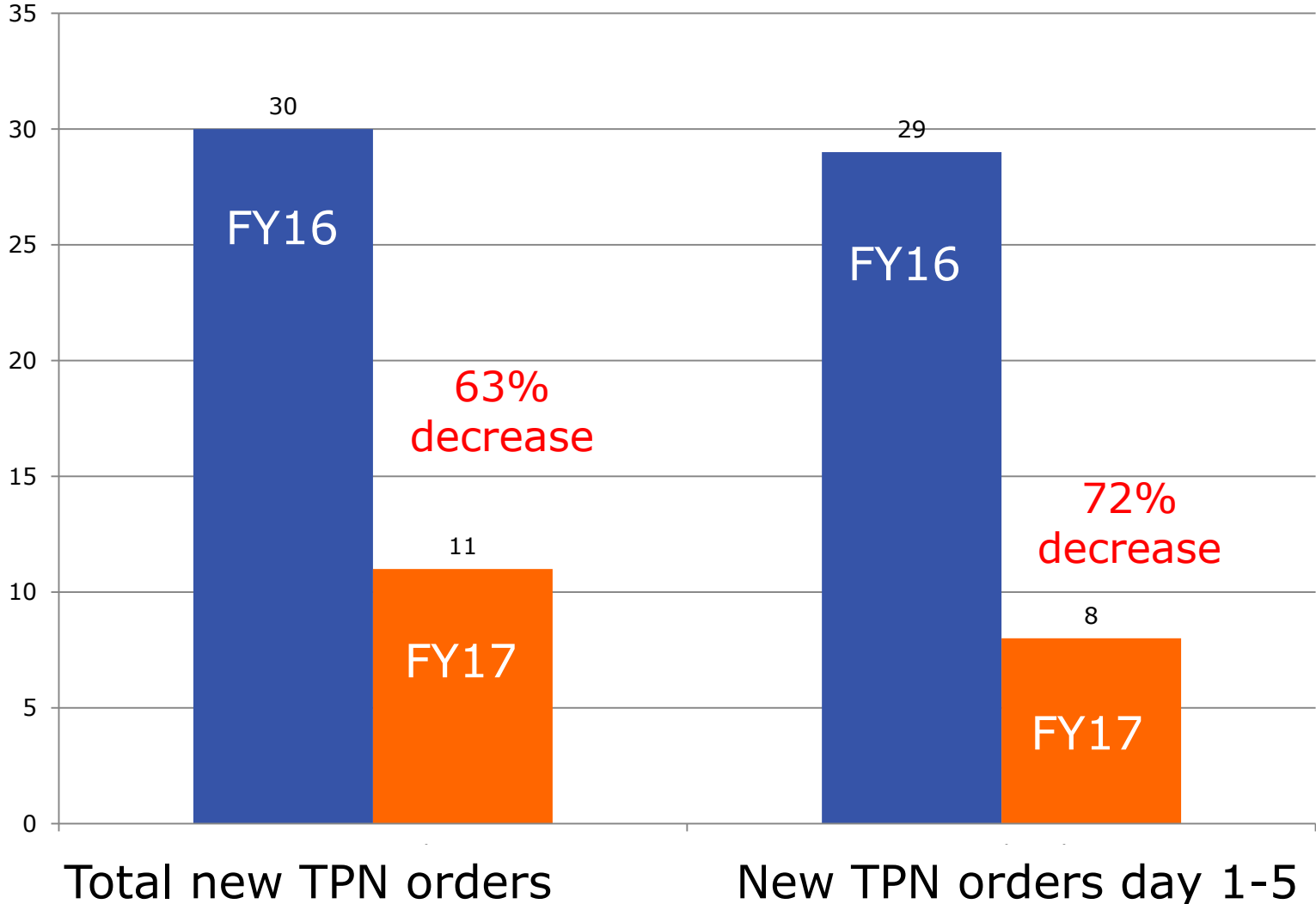
Total Parenteral Nutrition (TPN) Use

2016 American Society of Parenteral and Enteral Nutrition guidelines for appropriate TPN use:

- Patients at low nutrition risk, TPN should be withheld over the first 7 days, considered only if unable to meet energy requirements.
- TPN should be started only if therapy duration is expected to be 7 days or longer.

FY17 Gyn Onc Medical Director Goal aligned with nutrition services and pharmacy goals to decrease TPN ordering for patients who are NPO for less than 7 days

Gyn Onc Post-op TPN Use



TPN Cost Savings



- ECH 5 day TPN cost is \$1,377
 - Not including ancillary time and supplies
- Literature estimated cost is \$3,305
 - *Includes ancillary time and supplies: pharmacist, dietician, lab, RN*

Gyn Oncology FY17

TPN reduction cost savings =

\$41,860- \$502,360

FY 2018 Goals

Quality Goal #1: Decrease post-operative opioid use after ERAS (Enhanced Recovery After Surgery) protocol implementation for elective Gynecologic and/or Oncology surgeries by 15% or more..

ECH Baseline: Total Oral Morphine Equivalents for elective Gynecologic and/or Oncologic laparotomy and laparoscopic surgeries post-operative day zero through post-operative day three averages 283.3mg per patient.

Quality Goal #2: Implement ERAS protocol by utilizing the ERAS Gyn Onc order set in iCare for applicable planned gynecologic oncology surgical patients.

E.R.A.S. ***(Enhanced Recovery After Surgery)***

Recovery After Surgery...

What are we trying to achieve?

Get patients back to preoperative function sooner... normal GI function, pain control, mobility, no complications



How can we achieve this?

- The answer is **E**nhanced **R**ecovery **A**fter **S**urgery (ERAS)
- A package of evidence based guidelines in pre-op, intra-op, and post-op elements of care to reduce surgical stress and postoperative metabolic stress.

Hospitals that have implemented ERAS



University of California
San Francisco



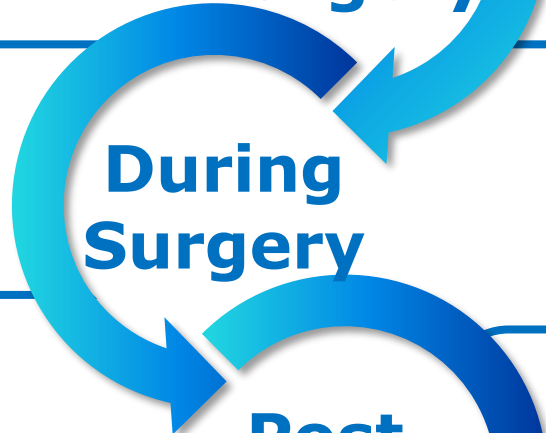
KAISER PERMANENTE.



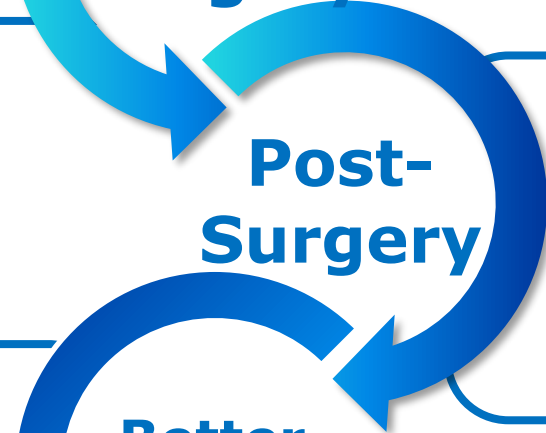
ERAS Key Elements



- Patient Education
- Carbohydrate drink
- Selective bowel prep, NG
- Clear liquids up to 3 hours before surgery



- Goal-directed fluid management
- Multimodal pain & nausea management



- Early mobilization
- Early feeding solid food post-op day 0
- Gum chewing
- Multimodal pain & nausea management



- Increased patient satisfaction
- Decreased complications
- Decreased hospital stay

Any
Questions

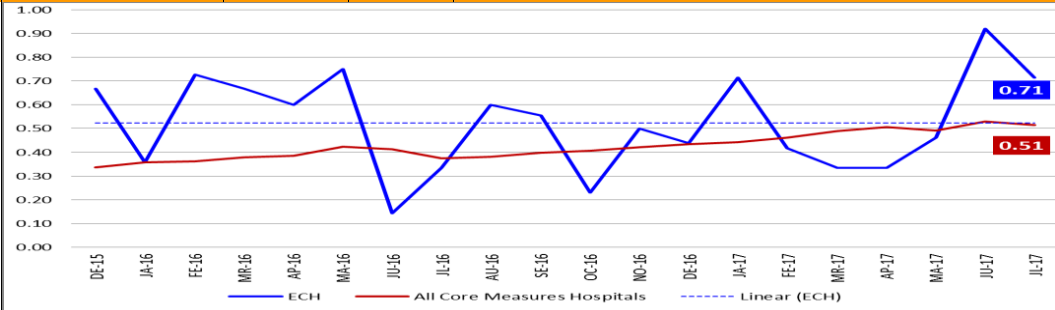
Quality and Safety Dashboard (Monthly)

Reports run: 9/20/17		Performance		Baseline	FY18 Goal	Trend	Comments
SAFETY EVENTS		Performance		FY2017	FY2018		
1	Patient Falls Med / Surg / CC Falls / 1,000 CALNOC Pt Days Date Period: July 2017	4/5101	0.78	1.49	1.39 (goal for FY 16)		These data will be shared with the Falls team, compared with CALNOC data to set another goal for FY2018. Trend of near or at goal since Jan. 2017.
2	*Organizational Goal Hospital Acquired Infection (Infection rate) Catheter Associated Urinary Tract Infection (CAUTI) per 1,000 urinary catheter days Date Period: July 2017	1/1414	0.71	1.09	MV = 10 LG=1		The Infection rate will be reported monthly for CAUTI, CLABSI, CDI and SIR (standardized infection ratio from NSHN) will be reported quarterly or q 6 months when released by NHSN. An A3 team has been initiated to address CAUTI, CDI, CLABSI infections in sub-teams meeting every other week and reporting monthly to a Steering Group. 1 CAUTI in July ICU LG.
3	Central Line Associated Blood Stream Infection (CLABSI) per 1,000 central line days Date Period: July 2017	0/1004	0.00	0.56	MV=4 LG=0		No CLABSI in July
4	Clostridium Difficile Infection (CDI) per 1,000 patient days Date Period: July 2017	1/8103	1.23	1.89	MV=22 LG=1		1 C.Diff Medical MV
Efficiency		Performance		FY17	FY 2018		
5	*Organizational Goal Arithmetic Observed LOS Average/Geometric LOS Expected for Medicare Population (ALOS/Expected GMLOS) (Medicare definition, MS-CC, Inpatient) Date Period: July 2017	4.66/ 4.16	1.11	1.16	1.11		New metric to anticipate Medicare LOS based on clinical documentation and working DRG to see expected GMLOS. Now part of daily enterprise Huddle Board.

Definitions and Additional Information

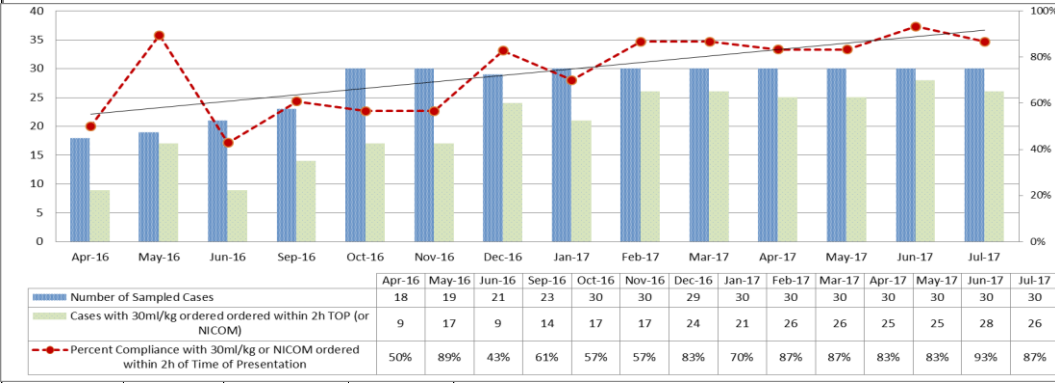
Measure Name	Definition Owner	Work Group	FY 2017 Definition	FY 2018 Definition	Source
Patient Falls	Sheetal Shah; Cheryl Reinking	Falls Committee	All Med/Surg/CC falls reported to CALNOC per 1,000 CALNOC (Med/Surg/CC) patient days CALNOC Fall Definition: The rate per 1,000 patient days at which patients experience an unplanned descent to the floor (or extension of the floor, e.g., trash can or other equipment, including bedside mat). All falls are reported and described by level of injury or no injury, and circumstances (observed, assisted, restrained at the time of the fall). Include Assisted Falls (when		QRR Reporting and Staff Validation
Hospital Acquired Infection (SIR Rate) CAUTI (Catheter-acquired Urinary Tract Infection)	Catherine Carso/Catherine Nalesnik		The standardized infection ratio (SIR) is a summary measure used to track HAIs over time at a national, state, local level. This is a summary statistic that compares the actual number of HAIs reported with the baseline US experience (NHSN aggregate data are used as the standard population), adjusting for several risk factors that are significantly associated with differences in infection incidence. An SIR greater than 1.0 indicates that more HAIs were observed than predicated, accounting for differences in types of patients followed, a SIR less than 1.0 indicates fewer HAIs were observed than predicated.		
Hospital Acquired Infection (SIR Rate) CLABSI (Central line associated blood stream infection)	Catherine Carso/Catherine Nalesnik				
Hospital Acquired Infection (SIR Rate) C. Diff (Clostridium Difficile Infection)	Catherine Carso/Catherine Nalesnik				
Arithmetic Observed LOS Average over Geometric LOS Expected.	Cheryl Reinking Catherine Carson (Jessica Hatala)		The Observed LOS over the Expected LOS Ratio is determined by calculatign the average length of stay of all Medicare financial class divided by the GMLOS (geomettric LOS associated with each patient's MD-DRG.		

6 Sepsis Core Measure
 SEP-1 100% or O%
 Date Period: July 2017



SEP-1 Early Management Bundle, Severe Sepsis/Septic Shock Consists of:
 1. Sepsis Tx 3-hr Window (initial lactate, antibiotic, blood cultures)
 2. Sepsis Tx 6-hr window (Repeat Lactate)
 3. Septic Shock Tx 3 Hr. Window (crystalloid fluids)
 4. Septic Shock TX 6 Hr. Window (Septic Shock assessments)

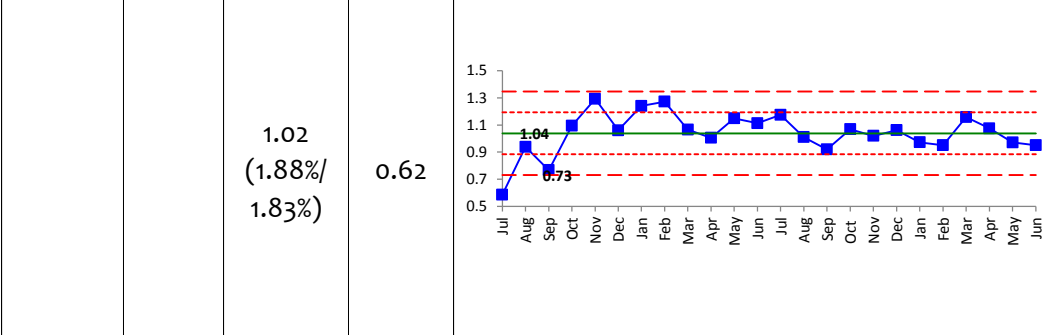
7 IVF Bolus Ordered within 2 Hours of TOP of Severe Sepsis or Septic Shock (Patients lacking initial hypotension or lactate <3 excluded)
 Date Period: July 2017



ED Physicians are more consistent in ordering fluid resuscitation for Sepsis patients.

Mortality Performance FY 2017 FY 2018

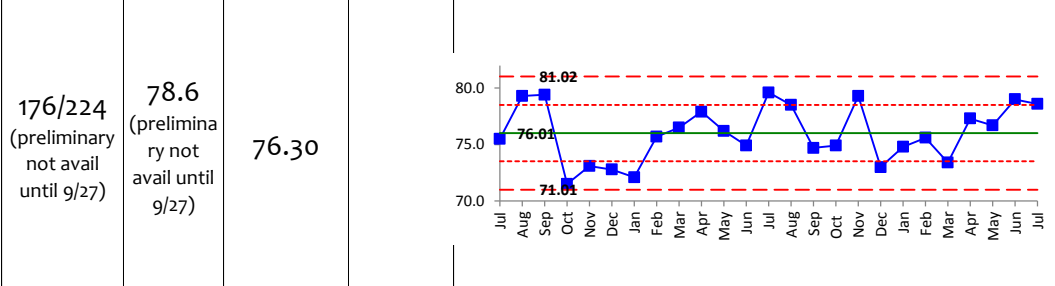
8 Mortality Rate
 Observed/Expected
 Date Period: June 2017



The FY18 Goal is based on the Jul2016-May2017 top decile performers for mortality- do not have peer comparison through the end of FY17 in Premier yet. This rate is risk-adjusted.

SERVICE Performance FY 2016 FY 2018

9 «Organizational Goal HCAHPS Rate Hospital 0-10 Top Box Rating 9 and 10
 Date Period: July 2017



176/224 (preliminary not avail until 9/27)
 78.6 (preliminary not avail until 9/27)

76.30

Measure Name	Definition Owner	Work Group	FY 2017 Definition	Source
Sepsis Core Measure- SEP-1: MONTHLY Compliance Rate ECH vs All Core Measure Hospitals	Catherine Carson/Kelly Nguyen	Sepsis Steering Committee	New Core Measure from Oct. 2015. Severe sepsis is defined as sepsis plus a lactate > 2 or evidence of organ dysfunction, Hospital must meet ALL 4 measures in order to be compliant with this core measure, Patients with septic shock require an assessment of volume status and tissue perfusion within 6 hours of presentation, Patients NOT included are those transferred from another facility or those placed on comfort cares.	EPIC Chart Review
IVF Bolus Ordered within 2 Hours of TOP of Severe Sepsis or Septic IVF Bolus Ordered within 2 Hours of TOP of Severe Sepsis or Septic Shock (Patients lacking initial hypotension or lactate <3 excluded)Shock	Catherine Carson		Percentage of Randomly Sampled ED Patients (LG & MV) who had IVF >=30 ml/kg ordered within 2 Hours of Time of Presentation of Severe Sepsis or Septic Shock (Patients Lacking Initial Hypotension or Lactate <3 Excluded)	EPIC Chart Review
Mortality Rate (Observed/Expected)	Catherine Carson			Premier Quality Advisor
HCAHPS Rate Hospital 0-10 Top Box Rating 9 and 10	Michelle Gabriel; Cheryl Reinking	Patient Experience Committee	“‘9’ or ‘10’ (high)” for the Overall Hospital Rating item	Press Ganey Tool



El Camino Hospital[®]

THE HOSPITAL OF SILICON VALLEY

Patient and Family Centered Care Update

Michelle Gabriel, Director of Performance
October, 2nd 2017

Patient Experience Manager Position

- 17 applicants to date (with 3 in the pipeline)
- 9 phone interviews
- 5 panel interviews

Patient Experience Governance Committee

- Review current data on patient experience
 - Piloting a patient experience dashboard
- Oversight for identifying opportunities and efforts to improve experience

Patient Experience Strategy

- Beginning the process of building out the initiative
- Anticipate this year as continuing the learning journey that had been started

FY17 Organizational Goals

Prepared: 8/24/2017

Organizational Goals FY17	Benchmark	2016 ECH Baseline	Minimum	Target	Maximum	Weight	Performance Timeframe	FY17 Final		
Threshold Goals										
Budgeted Operating Margin	90% threshold <i>[Recommended by Exec Comp Consultant (FY16)]</i>	105% of Budgeted	90% of Budgeted			Threshold	FY 17		Met	
Quality, Patient Safety & iCare										
Quality Pain Management	Pain Reassessment (% Pain Reassessment Documented within 60 min on RN Flowsheet)	Internal Improvement	56.3% <i>Nov 2015 (post iCare go-live) to Apr 2016 [6-month measurement]</i>	75%	80%	90%	34%	Q4 FY 2017		89%
	Pain Patient Satisfaction (CMS HCAPHS Pain Management % Scored Top Box- 2 month delay)	Internal Improvement	72.9% <i>FY 2016 Q1 - Q3 [9-month measurement]</i>	73%	74%	76%				76%
LOS & Readmission	Achieve Medicare Length of Stay Reduction while Maintaining Current Readmission Rates for Same Population (Readmission - 45 day delay)	Internal Improvement	FY16 Max Goal 4.86 LOS Readmission Target 12.39%	4.81 .05 Day Reduction from FY16 Max, Readmission at or below FY16 Target	4.76 .10 Day Reduction from FY16 Max, Readmission at or below FY16 Target	4.66 .20 Day Reduction from FY16 Max, Readmission at or below FY16 Target	33%	FY17		LOS: 4.57 Readmission: 11.02% (570/5173)
Smart Growth										
Achieve budgeted inpatient growth (surgical and procedural cases plus Deliveries and NICU), and budgeted outpatient growth (surgical and procedural cases plus infusion).	Internal Documentation	94.26% of FY17 Budget	95% of Budgeted Volume	100% of budgeted Volume	110% of Budgeted Volume	33%	FY 17		96.5% of Budgeted Volume	

FY 2018 30 Day All-Cause, Unplanned Readmission Dashboard

Premier Medicare Groupings, All Ages

	Baseline 7/1/2016-6/30/2017*			Qtr 1, FY 2018			Qtr 2, FY 2018			Qtr 3, FY 2018			Qtr 4, FY 2018		
	Observed Rate	Expected Rate	O/E Ratio	Observed Rate	Expected Rate	O/E Ratio	Observed Rate	Expected Rate	O/E Ratio	Observed Rate	Expected Rate	O/E Ratio	Observed Rate	Expected Rate	O/E Ratio
Overall	8.57%	8.85%	0.97												
Acute Myocardial Infarction (AMI)	10.57%	10.51%	1.01												
Chronic Obstructive Pulmonary Disease (COPD)	14.55%	14.52%	1.00												
Coronary Artery Bypass Graft (CABG)	12.24%	8.03%	1.52												
Heart Failure	16.12%	14.45%	1.12												
Pneumonia	10.40%	12.86%	0.81												
Stroke	5.67%	7.31%	0.78												
Total Hip Arthroplasty and/or Total Knee Arthroplasty	2.95%	2.68%	1.10												

* Source: Premier Quality Advisor- Standard CS 30 day Readmission methodology

See the information below on CMS Readmission penalties effective for Medicare Payments effective 10/1/2017. ECH penalty for this time period (7/2013-6/2016) is 0.15% which is better than last year's penalty (0.53% which covered 7/2012-6/2015). This reduction in penalty shows that efforts in 2016 to reduce readmissions in these diagnoses have been effective. Please also see the attached for strategies to improve readmissions.

Medicare under the Hospital Readmissions Reduction Program (HRRP) will reduce reimbursement for 2,573 hospitals for fiscal year (FY) 2018, according to CMS data. The latest penalties are based on readmissions between July 2013 and June 2016. The penalties will apply to Medicare payments that CMS makes to the affected hospitals between Oct. 1, 2017 and Sept. 30, 2018. Under HRRP, CMS withholds up to 3 percent of regular reimbursements for hospitals if they have a higher-than-expected number of readmissions within 30 days of discharge for six conditions:

- Chronic lung disease;
- Coronary artery bypass graft surgery;
- Heart attacks;
- Heart failure;
- Hip and knee replacements; and
- Pneumonia.

Penalties for FY 2018

According to a *Kaiser Health News* analysis of the data, about 80 percent of the 3,241 hospitals CMS evaluated this year will face penalties. The number of penalized hospitals in FY 2018—2,573—marks a slight decline from FY 2017, when Medicare reduced reimbursements for 2,597 hospitals. According to *KHN*, all but 174 of the hospitals that were docked for FY 2018 faced penalties in FY 2017 as well. The *KHN* analysis of the data also showed CMS under HRRP will withhold \$564 million in payments over the next year—up slightly from the \$528 million withheld for FY 2017. According to *KHN*, the average penalty in FY 2018 held steady at 0.73 percent. Forty-eight hospitals in FY 2018 will receive the maximum 3 percent penalty.

PSI - 90 Total Inpatient - Flex Timeframe

Report Filter:

AHRQ QI Version 5.0

Facility: El Camino Hospital Los Gatos (661972) (CA) (Facility:07-01-2012 to 05-31-2017) (Peer:07-01-2012 to 05-31-2017), El Camino Hospital Mountain View (635796) (CA) (Facility:07-01-2012 to 05-31-2017) (Peer:07-01-2012 to 05-31-2017)

Month: JULY 2016, AUGUST 2016, SEPTEMBER 2016, OCTOBER 2016, NOVEMBER 2016, DECEMBER 2016, JANUARY 2017, FEBRUARY 2017, MARCH 2017, APRIL 2017, MAY 2017

AHRQ QI Version:5.0

Population Size: 20,802

[Drill to Numerator Patients](#)

[Drill to Denominator Patients](#)

[Switch to Analytical View](#)

[Composite by Facility](#)

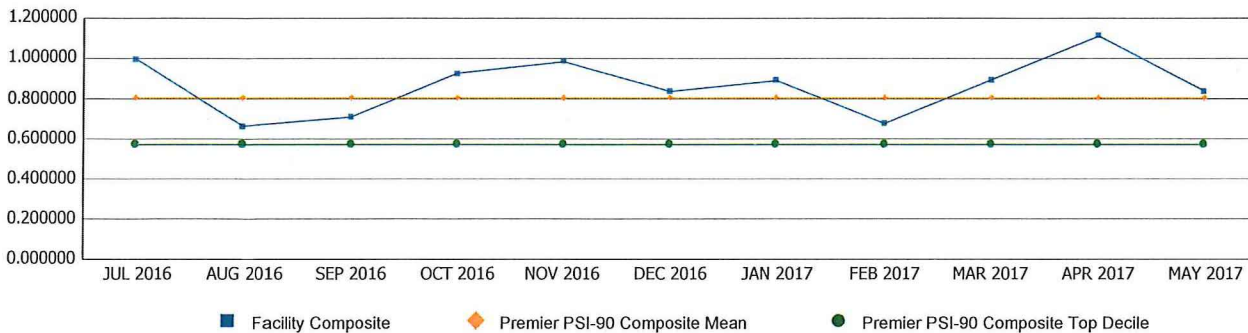
Patient Safety Indicator	Facility Composite Value
PSI-90 Composite	0.668412

Premier PSI-90 Composite Mean*	Premier PSI-90 Composite Top Decile*
0.80	0.57

Patient Safety Indicator	Numerator	Denominator	Observed Rate/1000	AHRQ Expected Rate	Premier Mean*	Premier Median*	Premier 25th Pctl*	Premier 10th Pctl*
PSI-03 Pressure Ulcer	2	3,752	0.53	0.53	0.47	0.00	0.00	0.00
PSI-06 Iatrogenic Pneumothorax	1	11,574	0.09	0.32	0.21	0.13	0.00	0.00
PSI-07 Central Venous Catheter-Related Blood Stream Infection	1	11,802	0.08	0.17	0.10	0.00	0.00	0.00
PSI-08 Postop Hip Fracture	0	2,371	0.00	0.04	0.05	0.00	0.00	0.00
PSI-12 Perioperative PE or DVT	8	4,361	1.83	5.31	3.71	3.08	1.24	0.00
PSI-13 Postop Sepsis	5	599	8.35	8.33	11.06	5.32	0.00	0.00
PSI-14 Postop Wound Dehiscence	0	706	0.00	1.80	0.09	0.00	0.00	0.00
PSI-15 Accidental Puncture or Laceration	22	12,032	1.83	2.43	0.99	0.76	0.26	0.00

* Premier Population Statistics (Rate/1000) (10-01-2015 to 09-30-2016)

PSI-90 Composite



The population for each month is only a fraction of the population for the entire time period of the report. The effect of smoothing is more pronounced for the individual monthly score. Smoothing pulls each monthly score towards 1.0, so this causes the average level of the line plotted on the composite score to be closer to 1.0.

	Press Ganey Culture of Safety Questions	Employee Score	Employee Score	Medical Staff Score	Medical Staff Score
		Score	National Average	Score	National Average
	Overall Score	3.83	-0.16	3.81	not available
1	Employees and management work together to ensure the safest possible working conditions.	3.8	-0.3	3.82	-0.27
2	When a mistake is reported, the focus is on solving the problem, not writing up the person.	3.6	-0.26	3.32	-0.51
3	There is effective teamwork between physicians and nurses at this hospital.	3.72	-0.24	not asked	not asked
4	My work unit works well together.	3.96	-0.23	3.87	-0.35
5	My work unit is adequately staffed.	3.03	-0.23	3.6	0.36
6	Senior management provides a work climate that promotes patient safety.	3.85	-0.23	3.9	-0.12
7	Communication between physicians, nurses, and other medical personnel is good in this organization.	3.59	-0.22	3.76	0
8	We are actively doing things to improve patient safety.	4.06	-0.19	4.07	-0.16
9	I feel free to raise workplace safety concerns.	4	-0.19	3.98	-0.25
10	I can report patient safety mistakes without fear of punishment.	4	-0.18	4.06	-0.18
11	Communication between work units is effective in this organization.	3.52	-0.16	3.59	-0.06
12	In my work unit, we discuss ways to prevent errors from happening again.	4.05	-0.15	3.99	-0.21
13	Mistakes have led to positive changes here.	3.84	-0.14	3.83	-0.16
14	Employees will freely speak up if they see something that may negatively affect patient care.	4	-0.13	3.94	-0.13
15	The amount of job stress I feel is reasonable.	3.38	-0.1	3.56	0.17
16	This organization makes every effort to deliver safe, error-free care to patients.	4.17	-0.1	not asked	not asked
17	Different work units work well together in this organization.	3.67	-0.06	not asked	not asked
18	This organization provides high-quality care and service.	4.2	-0.06	not asked	not asked
19	I would recommend this organization to family and friends who need care.	4.23	-0.03	not asked	not asked