Gynae-Oncology Enhanced Recovery After Surgery (ERAS)

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WHAT IS ERAS?

- **ERAS** = Enhanced Recovery After Surgery
- **Background**
  Concept first mooted by Danish surgeon Henri Kehlet in 1990’s
  - Patients presenting on DOS - anxious
    - ill-informed
    - dehydrated/starving
  - LOS 8-14 days post-op
  - Readmissions with complications not uncommon
  - Initially developed for use in Colorectal, now used in other disciplines e.g. orthopedics, vascular, thoracic, etc.
Why adopt ERAS?

Research shows adoption of ERAS leads to:

- Improved outcomes
- Significant improvement in patient satisfaction
- Faster recovery, shorter LOS, significantly lower complications
- Reduction in cost of care, positive return on investments

PRINCIPLES OF ERAS

- MDT working together around the patient

- Multi-modal approach to resolving issues that delay recovery and cause complications

- Scientific evidence-based approach to care protocols

- Change in management using interactive and continuous audit
# ERAS Components

<table>
<thead>
<tr>
<th>Pre-assessment</th>
<th>Intra-op</th>
<th>Post-op</th>
</tr>
</thead>
<tbody>
<tr>
<td>• PA counselling</td>
<td>• Active warming</td>
<td>• Early feeding</td>
</tr>
<tr>
<td>• Anesthetic review</td>
<td>• GA +/- intrathecal morphine +/- rectus sheath</td>
<td>• Early removal IDC</td>
</tr>
<tr>
<td>• Patient education-ERAS patient booklet</td>
<td>• LA +/- PCA</td>
<td>• Early mobilization, physio</td>
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<tr>
<td>• Early D/C planning-referral</td>
<td>• Appropriate surgical techniques</td>
<td>• Non-opioid oral analgesia</td>
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<tr>
<td>• Carb. Loading</td>
<td>• Avoidance of routine NGT and drains</td>
<td>• Thrombo-prophylaxis</td>
</tr>
<tr>
<td>• No/selective bowel prep (phosphate enema)</td>
<td>• Peri-op IVF management</td>
<td>• Patient education-Clexane, post-op cares</td>
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<tr>
<td>• Reduced fasting time</td>
<td>• Prevention of PONV</td>
<td>• Audit of compliance/outcomes</td>
</tr>
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</table>
Developing Gynae-Oncology ERAS pathway

- **ERAS elements already in place**
  - Pre-op counselling
  - Pre-op carb loading
  - No/selective bowel prep
  - Inpatient stay 1-3/7
  - Early D/C planning, referrals
  - VTE prophylaxis - Lexane

- **Consultation meetings**
  - Monthly meetings
  - GO team
  - Anaesthetist
  - CNMs Gynaec ward/ OP clinic
  - Dietician, physio

- **PA to Discharge**
  - Purple folder
  - Trial for 3/12
  - Feedback, audit

- **Given at PA**
  - Pre-op, post-op info
  - Feedback

- **ERAS pathway patient booklet**
  - Streamline delivery of care

- **Consensus on evolution of CCDHB ERAS pathway**

- **ERAS pathway MDT documents**
GYNAECOLOGY ONCOLOGY

ENHANCED RECOVERY AFTER SURGERY (ERAS)

PATIENT BOOKLET
<table>
<thead>
<tr>
<th>Contents</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Getting ready for surgery</strong></td>
<td>4</td>
</tr>
<tr>
<td>● Pre - assessment clinic</td>
<td>4</td>
</tr>
<tr>
<td>● Nutrition</td>
<td>5</td>
</tr>
<tr>
<td>● Exercise and keeping active</td>
<td>7</td>
</tr>
<tr>
<td>● Smoking cessation</td>
<td>8</td>
</tr>
<tr>
<td>● Bowel preparation (Cleanout)</td>
<td>8</td>
</tr>
<tr>
<td>● Day of surgery</td>
<td>9</td>
</tr>
<tr>
<td><strong>Recovering after surgery</strong></td>
<td>9</td>
</tr>
<tr>
<td>● Pain management</td>
<td>9</td>
</tr>
<tr>
<td>● Nutrition – following surgery</td>
<td>10</td>
</tr>
<tr>
<td>● Early mobilization</td>
<td>15</td>
</tr>
<tr>
<td>● Exercise and rest</td>
<td>16</td>
</tr>
<tr>
<td>● Returning to normal activities</td>
<td>17</td>
</tr>
<tr>
<td>● Enoxaparin (Clexane) education</td>
<td>18</td>
</tr>
<tr>
<td>● Referrals</td>
<td>19</td>
</tr>
<tr>
<td>● Discharge and follow-up</td>
<td>19</td>
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<tr>
<td>● Contact details</td>
<td>20</td>
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<tr>
<td>● Post-operative diary</td>
<td>23</td>
</tr>
<tr>
<td>● References</td>
<td>30</td>
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</tbody>
</table>
ERAS Gynae-Oncology Folders
ERAS Folder Index

1. PRE & STICKIES

2. PAIN ADSMISION ASSESSMENT LIASON
   FALLS RISK ASSESSMENT TOOLS & BRAIN SCALE
   NUTRITION SCREENING
   PREPARATION ASSESSMENT

3. PAIN SHEET (OUTPATIENT CLINIC CASE SHEET)
   PREPARE (GASTRO) GYNOLOGY ONCOLOGY MULTIDISCIPLINARY MEETING

4. PRE-ANESTHETIC ASSESSMENT CONSENT (ANESTHETIC)

5. PRE-OP CHECKLIST
   OPERATION RECORD

6. PAINFALLS RISK ASSESSMENT TOOL & BRAIN SCALE
   NUTRITION SCREENING
   PREPARATION ASSESSMENT

7. NURSING CARE PLAN
   DAY 0 / DAY 1 / DISCHARGE CHECKLIST
   DISCHARGE CHECKLIST

8. LABORATORY REPORTS
   RADIOLOGY REPORTS

9. REFERRALS
   CONSULTATION FORMS

10. CHAMPS: e.g., Medicine, Observations
ERAS Inclusion/Exclusion Criteria

- Developed as a result of feedback from gynaecology ward nurses
- Resource
Gynae-Oncology ERAS Yellow Divider

- Identify patients on ERAS pathway - for audit
Pre-op drink PIB

Gynaec-Oncology Pre-operative Carbohydrate Loading
Information for patients
Women’s Health Service, Wellington Regional Hospital

Pre-Op is a carbohydrate drink for dietary management of patients before surgery. It is safe to drink Pre-Op up to 2 hours before surgery. Pre-Op contains 100kcal in every 200mL.

Advantages of Pre-Op:
There are many advantages of drinking Pre-Op before surgery, such as:
- Decreased feeling of hunger, thirst, anxiety or nausea before surgery
- A reduced physiological stress response within the body
- Decreased risk of post-operative infections
- Reduced occurrence of nausea and vomiting after surgery
- Pre-Op helps to reduce insulin resistance after surgery

Directions for taking Pre-Op:
Pre-Op is a clear lemon flavoured drink and tastes best when chilled. Shake well before drinking.

If you are booked for morning surgery:
- You may eat and drink anything until midnight.
- You may drink water only until 6am on the day of your surgery.
- At 7am on the day of your surgery drink 2 bottles of 200mL Pre-Op.
- Do not eat or drink anything after 6am, this includes chewing gum, boiled sweets or smoking cigarettes.

If you are booked for afternoon surgery:
- You may eat or drink anything until 6am.
- You may drink water only until 10am.
- At 10am please drink 2 bottles of 200mL Pre-Op.
- Do not eat or drink anything after 10am (this includes chewing gum, boiled sweets or smoking cigarettes).

If you have any questions or concerns please contact Ward 4 North (04) 806 3881.
Bowel Prep PIB

Bowel Preparation

Gynae-Oncology Outpatient Pre-Surgery Bowel Preparation

Patient Information

Your doctor has requested bowel preparation prior to your gynaecology surgery. Please read this brochure for more information.

What is bowel preparation?
Bowel preparation is needed:
1. when there is a possibility the bowel may be operated on during surgery
2. to increase the safety of this surgery particularly in women who are overweight.

Bowel preparation involves emptying the lower section of bowel.
You will be advised by your doctor and/or nurse at the time of your appointment if you require bowel preparation.

How is bowel preparation done?
Bowel preparation occurs the evening before surgery and on the morning before your surgery to empty the lower bowel.
You will be given two fleet enemas to take home when you attend the gynaecology pre-

Nil by mouth instructions
It is very common to be ‘nil by mouth’ before surgery. This means you must not eat, drink or smoke for a period of time before surgery. For your nil by mouth start time, you will be contacted by Surgical Admissions Unit (SAU) between 2-4pm on the last working day before your surgery. If you have not received a call by 4pm, please contact SAU on 04-8060962.
Please avoid alcohol the day or evening before your surgery.

Questions or concerns
If you have any concerns or questions about your bowel preparation please contact Ward 4 North Gynaecology: 04-806 0981.
<table>
<thead>
<tr>
<th>Day</th>
<th>Activity</th>
<th>AM</th>
<th>PM</th>
<th>NIGHT</th>
<th>COMMENTS</th>
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<td>5:30</td>
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<td>7:30</td>
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<td>Dinner</td>
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<td>10:30</td>
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<td>Dinner</td>
<td>6:00</td>
<td>6:30</td>
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Gynae-Oncology Enhanced Recovery After Surgery (ERAS) Nursing Care Plan
Discharge checklist

![Discharge Checklist Image]
What happens if pt. removed from ERAS pathway?
Progress so far........

- **ERAS patient booklet**
  - rolled out August 2017
  - patient/staff feedback on-going
  - changes/update as required

- **ERAS pathway nursing care plan**
  - rolled out June 2018
  - staff satisfaction survey (gynaecology ward nurses)

- **ERAS pathway audit**
Feedback since August 2017

Feedback form: Demographics - Age
  : 9 questions
  : Given to patient post-op

Very positive feedback

Excel spreadsheet - manual data entry
Feedback

Q1 What did you think about the booklet?
Very informative. Like the day by day coverage and what to expect and to know what is happening.
Excellent preparation on what to expect post-op. Plenty of good advice on diet, mobilisation. Easy, "plain" English too.
It answered all my doubts about what to expect before and after surgery.

Q2 Was there anything that was difficult to understand?
No, was well written and clear.
No-everything was explained in easy to understand language.
All suggestions seemed to maximise recovery and give reasons for a thorough recovery rather than a speedy recovery.

Q3 Is there any other information that you think would be useful to be included in the booklet?
Only to include any new info as it comes along.
It is good to include some contact details of accommodation for patients coming from out of Wellington.
In my point of view, it was perfect.
Q4 Did this booklet provide useful and helpful information?
Yes-good preparation and after care expectations.
It was straightforward and was clear to understand even if you don't have a medical background.
Yes, actually I brought it with me and followed it during my time in the hospital.

Q5 Did receiving the booklet before surgery help you to be better prepared for surgery?
Yes-hugely. It's about what one can expect and this was well explained.
Yes, prepared you for what was going to happen and what to expect.
Yes, it gave me a good sense of what to expect and I used it as a checklist to make sure I did the right things to prepare.

Q6 Has reading the booklet made you more or less anxious (or made no difference)?
Much less anxious. I like details on what is happening and why. Enabled me to ask questions if I didn't know something.
Less anxious. It normalises things and you can check back if you're not sure about something.
Helped to understand how the hospital operates. Made me less anxious. Excellent for people travelling from other areas to Wellington for surgery.
Q7 Do you have any questions that have not been answered by the booklet?
The information was of the right length. You get lots of information prior to surgery and
this pulled a lot of it together in one booklet.
All good.
No, all that could be answered was answered.

Q8 Do you have any comments on the layout of the booklet?
It was clear and informative and my husband found it helpful and answered some of his
queries and questions.
Well set out-easy to read
Clear from the beginning of visit, then what to expect Day 1, 2,3.

Q9 Do you think it is a good idea to be given this booklet?
Definitely. Thank you.
Absolutely- “Knowledge is power”
Yes indeed. The better patients are prepared for what will happen, the less frightening
an ordeal it is likely to be.
Gynae-Oncology ERAS Staff Satisfaction Survey Results (October 2018)
How would you describe your experience using the Gynaecology Oncology ERAS nursing care plan?

Answered: 9  Skipped: 0

less time consuming
10/6/2018 10:33 PM

GOOD
10/5/2018 12:46 PM

I know people don’t like change, but once you get the hang of it... it's easier and more efficient 😊
10/4/2018 8:03 PM

It is good. Reduces time.
10/4/2018 6:30 AM

easy to use, very comprehensive
Do you think the Gynae-Oncology ERAS nursing care plan addresses all areas of patient care from admission to discharge and streamlines delivery of post-op care for Gynae-Oncology patients?

Answered: 9  Skipped: 0

- yes
  10/20/2018 4:10 AM

I agree that it does - I like that it ensures that patient care is consistent for all gynae-onc patients on the pathway and the plan of care each day is straightforward and clearly documented for both nursing and medical staff and the patients/families.
  10/8/2018 8:28 PM

- Yes
  10/7/2018 9:26 PM

- yes. would be ideal if we could add notes eg assessment of wound/ pvb
  10/7/2018 11:49 AM
Q3

Do you find the Gynae-Oncology ERAS nursing care plan easy to use?

Answered: 9    Skipped: 0

<table>
<thead>
<tr>
<th>ANSWER CHOICES</th>
<th>RESPONSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very easy</td>
<td>44.44%</td>
</tr>
<tr>
<td>Easy</td>
<td>55.56%</td>
</tr>
<tr>
<td>Neither easy nor difficult</td>
<td>0.00%</td>
</tr>
<tr>
<td>Difficult</td>
<td>0.00%</td>
</tr>
<tr>
<td>Very difficult</td>
<td>0.00%</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>9</strong></td>
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</table>
Q4

Would you be happy to continue using the Gynae-Oncology ERAS nursing care plan?

Answered: 9  Skipped: 0

<table>
<thead>
<tr>
<th>ANSWER CHOICES</th>
<th>RESPONSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>88.89%</td>
</tr>
<tr>
<td>No</td>
<td>0.00%</td>
</tr>
<tr>
<td>Uncertain</td>
<td>11.11%</td>
</tr>
<tr>
<td>TOTAL</td>
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Comments (1)

Very easy to use and thorough

10/3/2018 10:27 PM
Q5

Are there any suggestions that you would like to make to improve the Gynae-Oncology ERAS nursing care plan?

Answered: 8   Skipped: 1

10/7/2018 9:26 PM

I think clexane education is written twice on day 1. Just being nit picky =)

10/7/2018 11:49 AM

space to write any changes from a shift

10/6/2018 10:33 PM

NO

10/5/2018 12:46 PM

Predicting that they would stay longer than expected is sometimes hard, since we have to change them to the red-orange folder and add a bit more paperwork. Some gentle reminders like what you’re doing Path is well appreciated 😊😊😊
Gynae-Oncology
ERAS Pathway
Compliance Audit
Included in ERAS pathway

July-September 2018

- Laparoscopy: 3 (10%)
- Laparotomy: 27 (90%)

October-December 2018

- Laparoscopy: 19 (49%)
- Laparotomy: 20 (51%)

January-March 2019

- Laparoscopy: 13 (39%)
- Laparotomy: 20 (61%)

Compliant

July-Sept. 2018

Laparoscopy 3, 15%
Laparotomy 17, 85%

Oct-Dec. 2018

Laparoscopy 18, 67%
Laparotomy 9, 33%

Jan-March 2019

Laparoscopy 10, 42%
Laparotomy 14, 58%
Non-Compliant

July-Sept 2018

- Laparoscopy, 0, 0%
- Laparotomy, 10, 100%

Oct-Dec. 2018

- Laparoscopy, 2, 17%
- Laparotomy, 10, 83%

Jan-March 2019

- Laparoscopy, 3, 23%
- Laparotomy, 10, 77%
Laparoscopy Non-Compliance Factors

July-Sept. 2018

- Only 3 Laparoscopic cases included and all compliant so no data for comparison.

Oct-Dec. 2018

- 1, 50% Post-op AKI
- 1, 50% Wound complications

Jan-March 2019

- 1, 25% Post-op ileus
- 1, 25% Bowel oversewing
- 1, 25% Conversion laparotomy
- 1, 25% ICU admission
Laparotomy Non-compliance Factor

- **July-Sept. 2018**
  - Bladder injury: 3, 23%
  - Post-op N+V: 2, 15%
  - Blood transfusion: 1, 8%
  - Cardiac monitoring: 2, 15%
  - Wound complications: 1, 8%
  - Pain issues: 1, 8%
  - C. Diff infection: 1, 8%
  - Documentation: 1, 8%

- **Oct-Dec. 2018**
  - Spinal headache: 1, 10%
  - Post-op ileus: 1, 10%
  - Bowel oversewing: 1, 10%
  - Documentation: 1, 10%
  - Blood transfusion: 1, 10%
  - Post-op AKI: 1, 10%
  - Febrile post-op: 1, 10%
  - Others: 3, 30%

- **Jan-March 2019**
  - Stoma: 1, 12%
  - Post-op ileus: 1, 13%
  - Bowel oversewing: 1, 13%
  - Wound complications: 2, 25%
  - Fluid overloading: 1, 13%
  - Social issues: 1, 12%
  - Others: 2, 25%
Readmission (All DHBs)

Laparoscopy
- July-Sept. 2018: 0% (0/3)
- Oct-Dec. 2018: 0% (0/19)
- Jan-Mar. 2019: 0.1% (1/10)
  - x 1 MCDHB (necrotic bowel)

Laparotomy
- July-Sept. 2018: 0.1% (2/17)
  - x 1 CCDHB
  - x 1 MCDHB (wound infection, dehiscence)
- Oct-Dec. 2018: 0.1% (1/9)
  - x 1 Wairarapa DHB (UTI-ESBL E.coli)
- Jan-Mar. 2019: no readmissions
**MEAN AVERAGE LOS (DAYS)**

<table>
<thead>
<tr>
<th>Period</th>
<th>ERAS Laparotomy</th>
<th>All Laparotomy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar-June 2018 (pre-ERAS)</td>
<td>4.1 (n=36)</td>
<td>4.1 (n=24)</td>
</tr>
<tr>
<td>Jul-Sept 2018</td>
<td>2.8 (n=17)</td>
<td>3.9 (n=39)</td>
</tr>
<tr>
<td>Oct-Dec 2018</td>
<td>2.8 (n=9)</td>
<td>3.6 (n=25)</td>
</tr>
<tr>
<td>Jan-Mar 2019</td>
<td>2.8 (n=20)</td>
<td>4.1 (n=24)</td>
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</table>
Outcomes

- Streamlined delivery of care
- Patient oriented care-MDT approach
- Cost-effective -patient and organization
- Optimal care within appropriate timeframe
- Equality of care within the region
Moving forward....... 

- 3 monthly audit-ongoing 
- Patient feedback-ongoing 
- Staff satisfaction survey end 2019 
- Regional Gynae-Oncology service logo 
- Finalise ERAS documentation 
- Interest from General Gynae
My experience……

- Huge learning curve
- Great support
- Networking
- GO team-Amanda Tristram (Consultant), Patrick Keating (Consultant), Howard Clentworth (Consultant), Donna Frewin (Gynae-Oncology Clinic Nurse Co-ordinator)
- ALL Gynaecology ward nurses+ admin. staff
- Denise Braid (CNM Women’s OP clinic) and Sue Hazelwood (CNM Gynae ward)
- Aruntha Moorthy (Consultant Anesthesia)
- Jo Stewart (Dietitian)
- Chris Nash (Physiotherapist)
- Gordon Allen (Gynae-Oncology Data Manager)
- John Hornblow (RMO admin. Co-ordinator)
- Andrea Collins (Print room supervisor)
- Aimee Busse (Admin. Quality and Patient Safety)
- Heather Aldridge  (Booking Clerk Gynaecology) + And Many others
Any Questions?