



# ERAS protocol in Breast Reconstruction

## DIEP microvascular reconstructions

**Counties Manukau Health :**

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## Key Problem

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- *No protocol currently in place to ensure consistency*
- *Suspect that this may increase LOS*
- *Suspect that this may delay early mobilisation*
- *Suspect that this may increase post op complications*

## Aim of this Innovation

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- What were you aiming to achieve? What was the improvement you were seeking?

To establish an Enhanced Recovery After Surgery protocol for microvascular breast reconstruction patients to improve consistency of the patient's pathway

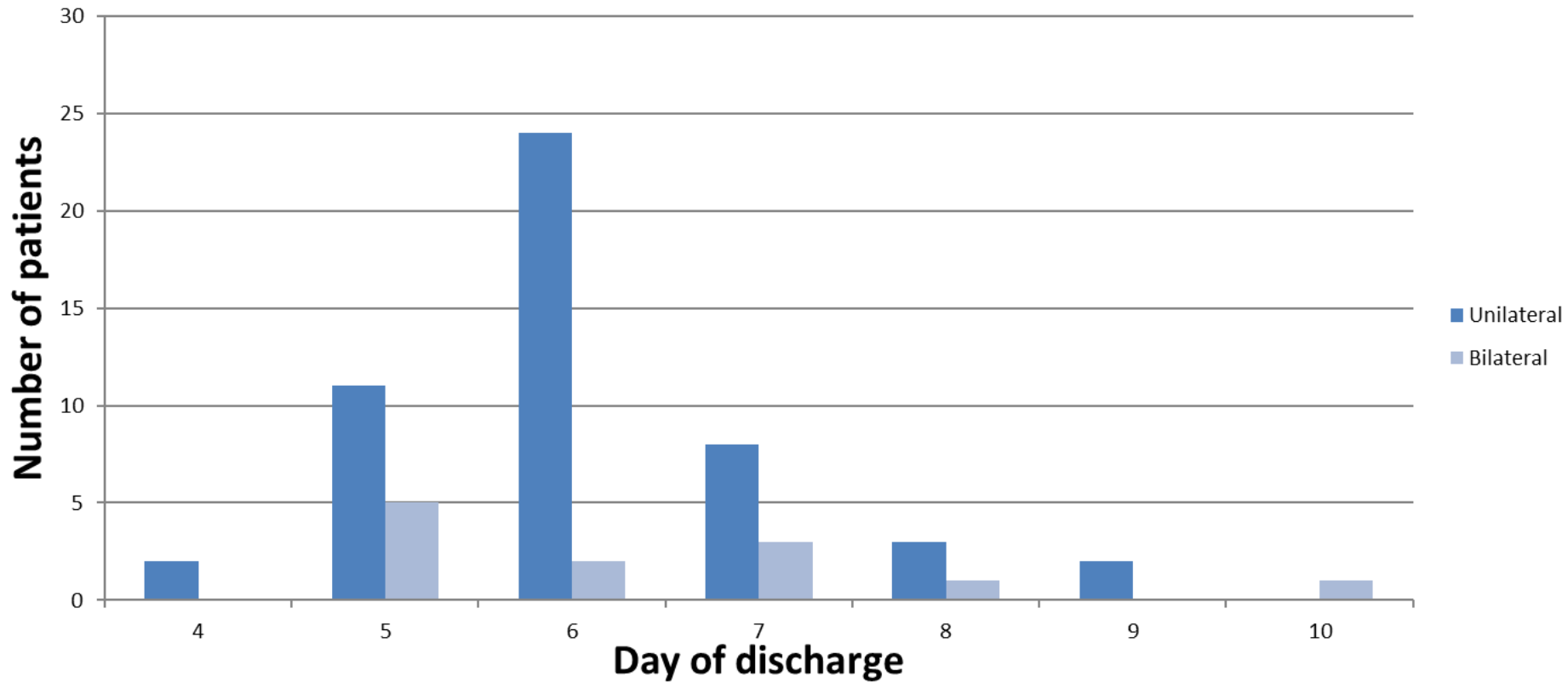
1. Retrospective review of the current practice of peri/post-operative care in microvascular breast reconstruction patients (62 patients / 74 breasts)
2. Development of an ERAS protocol
3. Prospective review of peri/post-operative care after implementing an ERAS protocol

# Baseline Data / Current Situation

## Patients reviewed

	(n=62)	Range/Percentage
<b>Age (y)</b>	48.4	35-64
<b>Ethnicity</b>		
<b>NZ European</b>	44	71%
<b>NZ Maori</b>	5	8%
<b>Pacific Islander</b>	5	8%
<b>Other</b>	8	13%
<b>Height (cm)</b>	1.65	1.53-1.78
<b>Weight (kg)</b>	78.0	57-102
<b>BMI (kg/m<sup>2</sup>)</b>	28.5	20-39
<b>Comorbidities</b>		
<b>Hypertension</b>	16	26%
<b>Cardiovascular disease</b>	1	1.6%
<b>Diabetes mellitis</b>	0	
<b>Medications</b>		
<b>Antihypertensives</b>	12	19%
<b>Regular analgesia</b>	4	6.5%
<b>Anticoagulants</b>	3	4.8%

# Length of stay





# Post-operative day 1 pain score

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	Mean	95% CI	p
<b>At rest</b>			
Pain pump	1.7	.67-2.7	
No pain pump	1.8	1.1-2.5	NS
<b>With movement</b>			
Pain pump	2.1	.90-3.2	
No pain pump	3.7	2.8-4.5	0.02

## Key findings to be considered for protocol development

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- Significant variability in post-operative analgesia regimes
- Improved day one pain score in patients with a pain infusion pump
- Positive correlation between length of stay and total oral equivalent morphine dose

### Outcomes so far

- Aim to standardise analgesia
- Improve early pain scores
- Reduce opiate use
- Shorten length of stay



# Lessons Learnt

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- Surgical counselling good
- Anaesthetic counselling variable (CNS)
- Process/ expectations (CNS)
- Preoperative fasting should be minimised – recognised but not always practised
- Preoperative carbohydrate loading – not standard practice
- Venous thromboembolism prophylaxis – standard practise postop, variable preop
- Antibiotics pre KTS universal
- Skin prep either Chlorhexidine/Alcohol or Aqueous Betadine
  - Needs standardisation
- Patients receive intraop and postop antiemetic
- Preop antiemetic uncommon
- Variable anaesthetic practice currently
- TIVA recommended but variable practice by Anaesthetists – (nausea)
- We do well with preventing intraoperative hypothermia
- Perioperative intravenous fluid management – important >60, difficult to get correct most variance wit patients after analgesia
- Postoperative analgesia – most variation in current practice, high use opioids, low use of longer acting local anaesthesia (Liposomal Bupivacaine not available, one surgeon uses Painbuster LA pump)

# Learnings - continue

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- Early feeding already standardized
- Post operative flap monitoring – standardized
- Post op wound management standardized, but can still standardize sutures
- Early mobilization – standardized, however can be stronger emphasized
- Post discharge home support & physio -exercise programme to be provided (Unsupervised, Telephone support by CNS)

# IMPROVEMENTS REQUIRED

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- Consistent preop access to CNS time for preop education
- Consistent preop medication for analgesia and antiemetics
- Consistent anaesthesia (preferably TIVA)
- Consistent intraop and post op analgesic regime
- Consistent intraop and post op antiemetic regime
- Standardise skin prep
- Consistent postop painbuster LA infiltration

## Additions required

- Preop Carbohydrate loading
- Preop hydration with clear fluids
- Post of exercise regime
  
- .....Prospective review to measure outcomes

