SA experience: Hip fracture care

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Clinical lead and chair, Orthogeriatric service NALHN acute hip fracture operational committee

Government of South Australia

SA Health

Outline

- Background
- NALHN experience: How did we get to where we are?
- Developing a measurement mind-set using ANZHFR
  - Initiatives in Orthogeriatrics

Background

- Under SA health reform in 2016, all stakeholders were involved in developing our state acute hip fracture management model of care

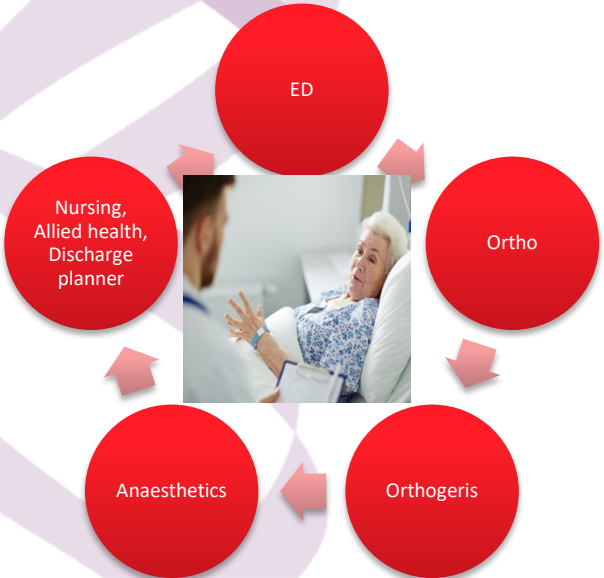
Background

- SA: 4 Orthogeriatric Fracture Centres
- CALHN: RAH, QEH
- NALHN: LMH
- SALHN: FMC
- Mt Gambier

- A Catalyst for NALHN to negotiate adequate funding to provide a 7-day orthogeriatrics service at LMH

NAHLN Orthogeriatric Service

- **First specialist Orthogeriatric Fracture centre** in SA to provide a 7 day orthogeriatric service since February 2017.
- **Model of care:**
- 7-day shared care model of care:
- Facilitated by daily consultant ward round and BPT



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How did we get to where we are?

- **Implementation strategies:**
  - NALHN hip fracture implementation/operational committee
  - Engage all stakeholders
  - Have clinical champion in each clinical discipline

Process-related:

- How we do things
- Developed hip fracture pathway (who to contact) PPG
- NOF admission pack: medical and nursing
- Discharge summary template

NOF admission pack:
Medical
Emergency Medicine
Orthopaedics
Orthogeriatrics

Nursing

NORTHERN ADELAIDE LOCAL HEALTH NETWORK

MR589.1

Please Circle Relevant Hospital

Lyell McEwin HOSPITAL Modbury HOSPITAL

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Suspected Hip Fracture Medical

Emergency Department Assessment

Do not handwrite these details, except when adhesive barcode labels are unavailable

UR No.: _____

Surname: _____

First Name: _____

D.O.B. _____ Sex: _____

HIP FRACTURE: TO BE USED FOR ALL SUSPECTED PROXIMAL FEMORAL FRACTURES

Date & Time	PRESENTATION			
	Completed by Name & Designation:		Date & Time:	
	EMERGENCY SCREENING			
	Does the patient demonstrate any life threatening symptoms that require review and/or treatment before addressing the suspected hip fracture? (Check box)			
		Yes, address as per local Emergency practice.		**No**, continue with Suspected Hip Fracture Emergency Assessment
	Initial Presentation:			
	Treatment to Date:			

SUSPECTE

SA Health

ED admission

	ANALGESIA		
	Initial Management Plan:		
	Analgesia Review:		
	New Analgesia Administered:		
	Paracetamol	Time:	Comments:
	Fascia Iliaca Nerve Block	Time:	Comments:
	Opioids	Time:	Comments:

Ortho admission

NORTHERN ADELAIDE LOCAL HEALTH NETWORK

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Neck of Femur Orthopaedic Admission Medical

UR No.: _____

Surname: _____

First Name: _____

D.O.B. _____ Sex: _____

COMPLETED BY: Name (block print): _____

Designation (block print): _____ Date: _____ Time: _____

Profile:	Presenting Complaint:		
Past Medical History:			
Physical Examination	BP:	HR:	SaO_2:
RR:	Temp:	BGL:	Pain:
Assessment:			
Plan:			

☐ Liaise with Anaesthetics
☐ Liaise with Orthogeriatrics

☐ Discuss 7-step pathway with patient and family

Outcome (circle):
Delay surgery / Proceed to theatre / Not for surgery

☐ Consent obtained with patient / substitute decision maker. Request interpreter if necessary

☐ Non-operable management: consider and discuss end of life pathway with orthogeriatrics

☐ Patient added to emergency theatre list. Advise theatres of the following:

- Name and URN - Surgeon - Procedure
- Location (Hip / Left or Right / Proximal or Distal)
- ORMIS Clinical Priority Code OR Expected Operation Date (if> 24/24)
- If company equipment required – If Yes, Loan or Consignment, Company name and if company rep required

MO Name: Signature: Designation:

March 2017 NALHN 1004629

Edits: add an extra blank page for plan

A Health

Impression and Plan (Record observations and plan as needed. Complete pre-operative ward checklist if not done already

Active Issues	Plan
#NOF secondary to fall	
Analgesia	
Cardiovascular	
Respiratory	**Sit patient up as tolerated** **Monitor for signs of HAP**
Renal	**Fluids**
Cognition: **Document history of MCI/neurodegenerative history/ delirium**	**4AT, SMMSE, Clock face** **Interventions to prevent and treat delirium:** • **For patients: given informant form and delirium info sheet** • **Regular orientation** • **Ensure patient has sensory aids** • **Medication review** • **Correction of dehydration, malnutrition and constipation** • **Avoid hypoxia** • **Pain assessment and management** • **Promote sleep and avoid sleep disturbance** • **Nursing: alert nursing staff regarding delirium management protocol** **If 4AT ≥4: require further medical assessment and exclude reversible causes of delirium**
Medication review	
Endocrine Is patient on oral hypoglycaemic/insulin? If yes, please refer to preoperative diabetes guidelines SSI01210 on NALHN PPG	

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Implementation strategies

Patterns

- Leadership
- Role modelling: Change culture (Proactive care)
- Team dynamics:
- Create positive work environment
- Working collaboratively with other team members

Education

- Regular orientation: orientation talk/manual/PPG
- Publicity: Grand round, SA hip fest

Accountability and sustainability

- Feedback loops: Mortality and morbidity, grand rounds, journal club, hip fracture registry, SA health dashboard (measure impact improvement)
- Celebrate achievement to drive performance

Developing a measurement mind-set

- Why is it important?
- Helps us to understand
  - How we are doing?
  - Identify gaps
  - Celebrate success: promote team morale
  - Facilitate change and sustainability

SA QIP Dashboard: June 2017-June 2018

KPI	LMH 2015-16	LMH	A	B	C
Activity (#NOFs)	99	243	364	253	143
Acute LOS	10.2days	**5.9 days**	10 days	9 days	11.1 days
Timely surgery	74.3%	91.8%	90.2%	89%	84.3%
30 days mortality		**6.6%**	8%	12.3%	12%
Timely physio ax	94%	**98%**	64%	92%	72.7%
D/C summary		87%	81.5%	98.5%	52.3%

ANZ hip fracture registry (12 months data from April 17 to March 2018)

- Australia: 41sites
- New Zealand: 15 sites

Domain	LMH	National
Pre-op cognitive assessment	**95%**	92%
Acute LOS	**5.8 days**	7 days
Nerve block	**68%**	80%
Surgery <48Hours	90%	78%
Median time to surgery	**21 hours**	27.5 hours
30 day mortality	**6.6%**	11%
Bone protection med on discharge	**95%**	68%

NB: Pre-op assessment: Anaesthetics and Orthogeris

Initiatives in Orthogeriatrics

- **4 Strategies to improve process**:
- 1: **Direct admission process** (End of Jan 2019)
- Daily early consultant ward round to reduce unnecessary surgery delay and proactively reduce risk of delirium
- 2. **Fasting Clock**: Tool for nursing staff to review fasting status of patients
- 3. **DOAC protocol**
- 4. **Orientation**

Direct admission process

- All Orthopaedics admissions
- Only for medically stable patients (vital signs within the white zone)
- **NOF**: ED staff to complete
  - MR589 admission note with 4 hour plan,
  - Pre-op check list,
  - Fasting plan (fasting clock: fast from 2 am)

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Hip Fracture Medical Pre-Op Checklist

Surname: _____

First Name: _____

D.O.B. _____ Sex: _____

TO BE COMPLETED BY ORTHOPAEDIC/ORTHOGERIATRIC RMO OR AFTER HOURS ADMITTING SURGICAL MEDICAL STAFF

COMPLETED BY: Name (block print): _____

Designation (block print): _____ Date: _____ Time: _____

PRE-OPERATIVE INVESTIGATIONS:

☐ ECG: _____	☐ CXR: _____	☐ X-Rays

BLOOD / FLUID / ELECTROLYTES CHECKED:

☐ Na: _____	☐ K: _____	☐ Urea: _____
☐ Hb: _____	☐ Platelets: _____	☐ Creatinine: _____
☐ Vitamin D + Calcium/Thyroid function test/LFTs Ordered		☐ Urinalysis checked
☐ Fluid balance reviewed and intravenous therapy prescribed		☐ Indwelling catheter
☐ Group and hold ordered		

REVIEW OF MEDICATIONS:

☐ Hold anti-hypertensives except beta-blocker

☐ Antiplatelet:	☐ Indication:
☐ Dual antiplatelet: _____ Consult Orthogeriatrican and cardiology	☐ Hold direct oral anticoagulant ☐ Apixaban /rivaroxaban drug level (include dose and time of last dose): Indication _____ Dabigatran: Indication _____ ☐ Thrombin clotting time

☐ Warfarin INR: _____ ☐ Indication: _____

- Hold warfarin
- Give IV Vitamin K 5mg, check INR @6hr
- If repeat INR >1.5, give IV Vitamin K 3 mg and repeat INR in 6 hours

Contact on call Geriatrician to discuss management of medically unstable patient. Liaise with medical sub-specialty registrar for medical review for medically unstable patient. Interim Plan:

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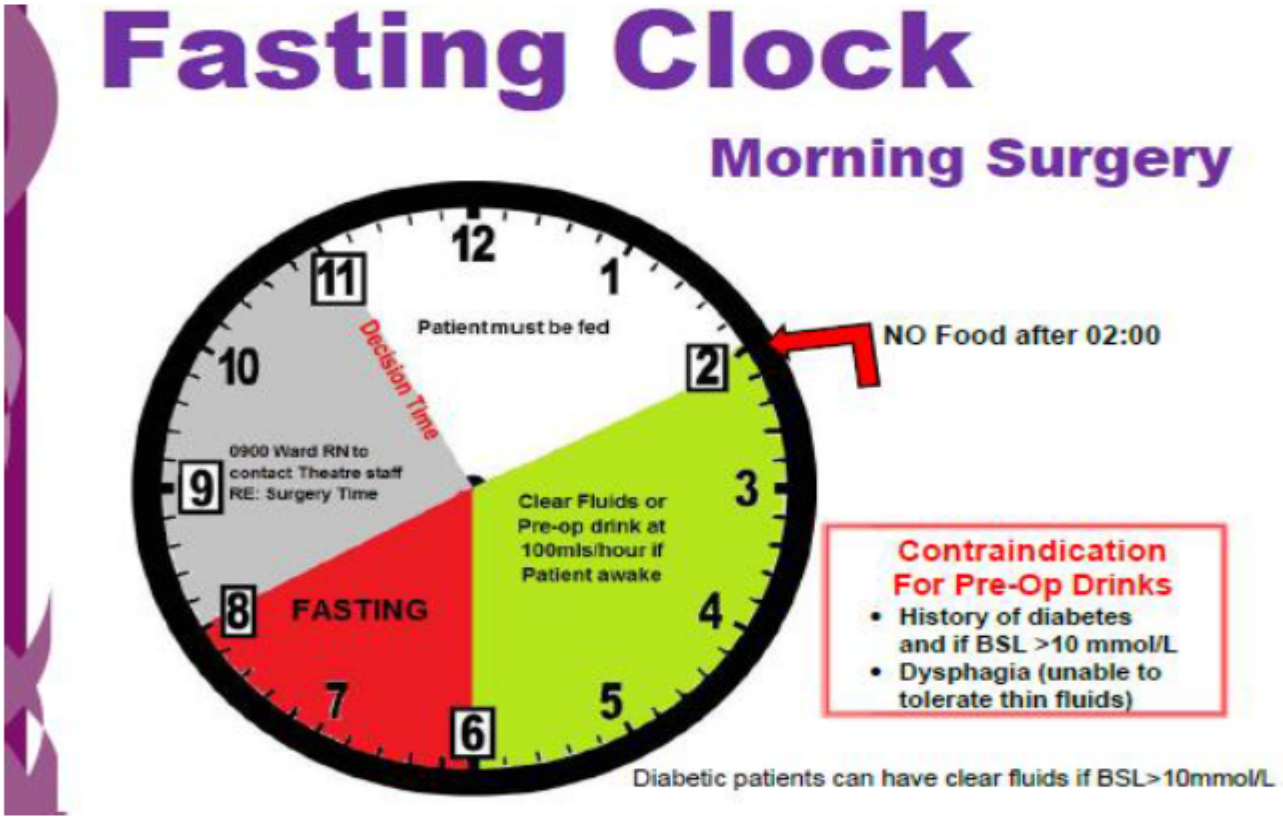
Fasting guidelines for emergency orthopaedic

General principle: **Minimum fasting for solids for 6 hours and fluids for 2 hours prior to surgery** recommended by the ANZCA and maximum of fasting period no longer than 12 hours.

On **admission**: Orthopaedics admitting staff will need to document a **fasting plan**. (**Fast from 2 am as per fasting clock** for nursing staff to follow protocol.)

- **Morning surgery**: **Fast from 2 am** for all orthopaedics patients including NOFs. NOF patients will have preoperative supplement and other planned orthopaedics surgery patients can have clear fluids up to 2 hours as per fasting clock.
- **Afternoon surgery**: Light breakfast and **fast for solid at 6 am** and can have clear fluids up to 2 hours prior to scheduled surgery.



Reduce variation in practice

DOAC protocol

Factor Xa inhibitors (Apixaban and rivaroxaban)

On admission, request **URGENT apixaban or rivaroxaban drug level** (include time of last dose and dosage) for **6 am** (Handover to surgical cover), COAGS, CBE, EUC and LFT to assist surgical planning. Aim < 50 µg/L.

Dabigatran:

On admission, request **urgent thrombin clotting time** at **6 am**, COAGS, CBE, EUC and LFT. Aim < 20 seconds.

Facilitate timely surgery

Does DOAC protocol work?

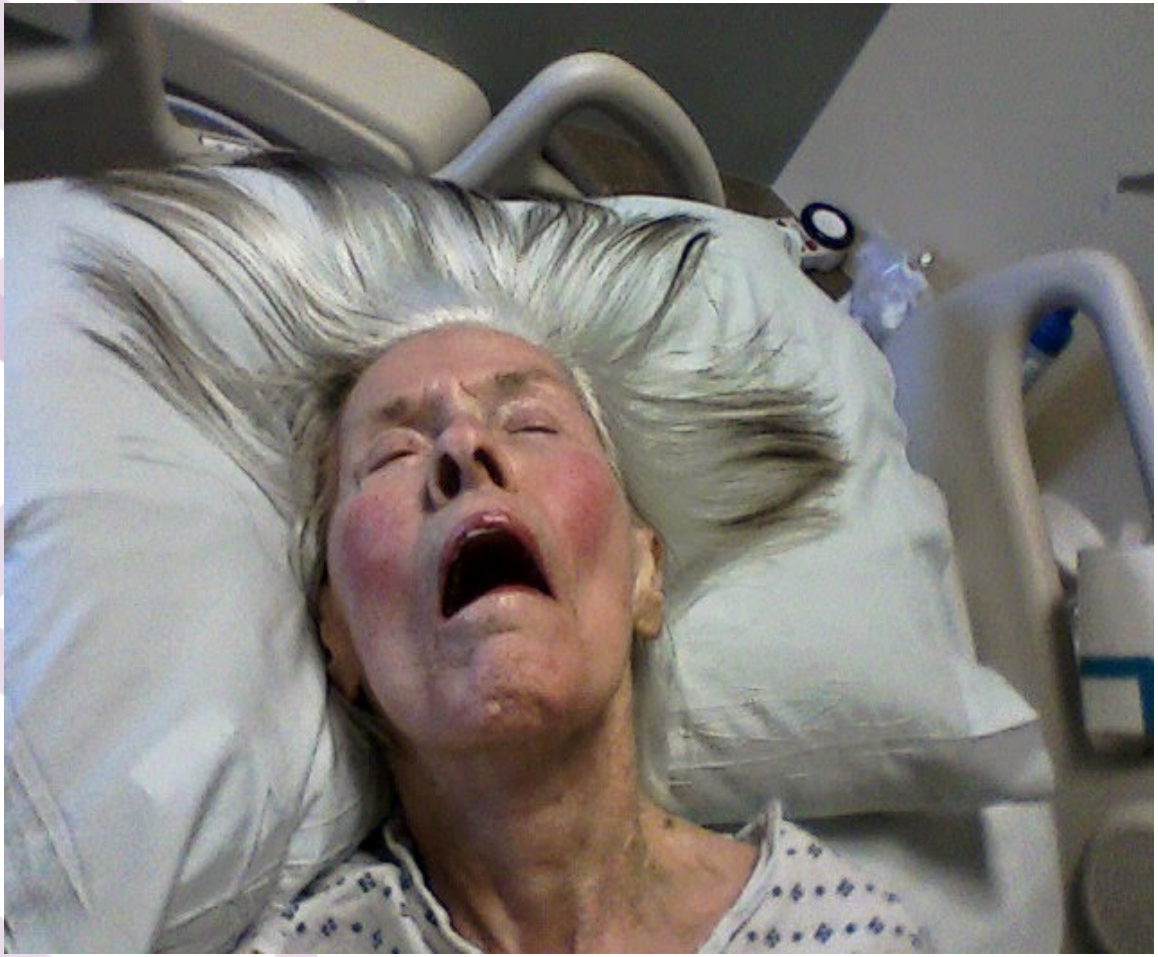
- 74 year old female from home admitted with left subcapital fracture NOF post fall on rivaroxaban with normal renal function
- Admitted on Sunday night
- Admission rivaroxaban at 6 am Monday: 56 microgm/L
- Repeat level at 12 pm Monday:36microgm/L

- **Surgery** on Monday at 3 pm (**<24 hours**)
- Otherwise, patient will be waiting for surgery at least 48 hours

Orientations

- Regular orientation to rotating staff (Orthopaedics, Orthogeriatrics)
- Informal and formal
- Enable and facilitate change: using patient story

Proactive care



- Timely review
- Early analgesia and surgery
- Reduce complications and physical disability
- Minimise delirium
- Value patient time

Conclusion

- **Proactive** Orthogeriatric service provides a **7 day shared care model**
- Key driver for efficient service:
  - **Teamwork** and **data** (ANZHFR) to drive performance
  - **Leadership**
  - **Clinical champions**

Acknowledgement

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