

Preliminary Results of the Effectiveness of a Clinical pathway for Adolescent Idiopathic Scoliosis at The Duchess of Kent Children's Hospital at Sandy Bay

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The Duchess of Kent Children's Hospital at Sandy Bay (DKCH)

- Implemented Adolescent Idiopathic Scoliosis (AIS) pathway since Feb 2016

Discipline	Pre-operative visit period	Pre-operative day	OT Day	Post -op D1	Post -op D 2	Post -opD3 to D6
Surgeon	Confirm OT day	- Sign consent - Prophylactic Antibiotic	- Close monitoring in HDU and detection complication	- Order check X -Ray - Drain management		
ANA	Explain PAPD	- Sign consent - Prescrip pre -med	- Keep hemodynamic normal - pain management	- Assess and Pain management - Order blood test		
Nurse	<u>Arrange following</u> 1. Blood test 2. ECG 3. X ray 4. Lung Function 5. PT 6. CP 7. Photo 8. MSW 9. Ward and HDU Orientation	<u>Obtain baseline:</u> - Vital sign - Neurological - Demonstrate PCA - Refer MSW	- Monitor vital sign, I/O - Assess neurological sign - Take care IV/CVP/ A-Line - Chart drain - Wound care - Foley care	- Care in general ward - Monitor vital sign - record I/O - chart drainage, - Foley care	- Assess vital sign & neurological sign - Pain management - Off drain - Off Foley - Assist sit out	- Assess vital sign & neurological sign - Pain management - Wound care - Review fall risk - Measure body height - Refer CP if needed
PT	- Chest physio - Teach incentive spirometry - Limb exercise - Explain Physio program	- Pre op Ax (chest and limb PT) - Triflo	- Post op Ax - Chest physio	Rehabilitation on physical functions and chest physiotherapy	- Help to gain physical functions and mobility - Assist and supervise sitting, changing position, posture, standing, walking - Ready to be discharged.	
OCC		- Neurological + sensory Ax - Pre-Op ADL Ax + SRS-22r	- Post op Ax	- Post -op Ax - ADL training	- Educate and train postural balance in exercise ADL and provide Ergonomic advice on school and work environment. - Start scar management after the wound healed	
CP	Assessment and support					Review patient when necessary
MSW	-Psychosocial Ax -Counselling -Social Support					Discharge plan a/v
Dietitian		Advise supplement Diet if needed				

- Objective:
 - (1) Minimize hospital length of stay (LOS)
 - (2) Reduce readmission rate
 - (3) Usage rate of this pathway
- Timeframe: February to December 2016
- Comparing prospective cohort of AIS patients (n=28)
VS
historical control without pathway(n=35)

Result

- LOS

Without pathway	With pathway
9.3 days	9.4 days

- Readmission rate

Without pathway	With pathway
2.8 %	7.1%

- Usage rate of pathway

Adherence and usage was low:

- “pre-operative day” and “day of surgery” :: only 50% of tick boxes were used

- D1, D2 to D6 :: none of the tick boxes were used

→ 27% missed post-operative height measurements

Pathway has been amended

1. An additional **pre-operative class**:
Introduce shorter LOS after surgery by encouraging earlier mobilization and discharge planning
2. **Encourage early mobilization and discharge**:
On D0 and D1, necessary action orders include **sit out and mobilization** and
drain and Foley removal on D1
3. Pathway format be **discussed by** surgeon, nursing and allied health staff
→ tick boxes can be easily visualized and missing orders can be avoided

The end