

GSTFT Clinical Practice Guideline

**Guideline/Protocol for Incentive Spirometry
in Children with Sickle Cell Disease**

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Guideline/Protocol for Incentive Spirometry in Children with Sickle Cell Disease

(To be used in conjunction with Guidelines for Vaso-Occlusive Pain Crisis, Acute Chest Syndrome and Anaesthesia in SCD)

Acute Chest Syndrome is a common complication of Sickle Cell Disease usually requiring a blood transfusion, extensive hospitalisation and is one of the more frequent causes of mortality. Although the cause of ACS is usually unknown it is associated with thoracic bone infarction that then develops into pulmonary atelectasis or infiltrates.

Research has shown that the use of Incentive Spirometry will decrease the likelihood of pulmonary complications in children admitted with chest or upper back pain. It is thought that spirometry counteracts the effect of respiratory splinting when children with SCD are unable to take deep breaths because of chest pain.

It has also been found to prevent pulmonary complications in children with SCD post-operatively.

Respiratory Management of ALL Children > 6 years with Sickle Cell Disease Admitted with Chest or Upper Back Pain and Post-Operatively

Monitor and record respirations and oxygen saturation regularly.

Incentive Spirometry (10 breaths every 2 hours between 8am and 10pm, and when awake at night)

EACH SPIROMETER IS FOR INDIVIDUAL PATIENT USE AND IS AVAILABLE FROM PHYSIOTHERAPIST OF SICKLE CELL NURSE.

N.B. Younger children or those with severe pain may prefer to use a PEP device. Refer to physiotherapist as soon as possible.

Refs:

Bellett P.S. et al (1995) Incentive Spirometry to Prevent Acute Pulmonary Complications in Sickle Cell Diseases. *The New England Journal of Medicine* Vol. 333 No. 11

Lewis L. et al (2005) Positive Expiratory Pressure Device Acceptance by Hospitalised Children with Sickle Cell Disease is Comparable to Incentive Spirometry. *Respiratory Care* Vol.50 No. 5

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