

**CANBERRA HOSPITAL
PRIVATE PRACTICE FUND
VACATION SCHOLARSHIPS
2010/2011
PROJECT SUMMARY**

Title: Does early surfactant replacement therapy make a difference in a selective surfactant administration paradigm?

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Outline of the project:

Respiratory distress syndrome (RDS) is the single most important cause of morbidity and mortality in preterm infants. Clinical trials and meta-analyses have shown that surfactant replacement therapy significantly improves survival and reduces the incidence of chronic lung disease, death and spontaneous air leak.

Using regional data from 10 Neonatal Intensive Care Units in New South Wales and Australian Capital Territory, we aim to:

- describe the median time to administration of surfactant in infants who were intubated at birth (in delivery room)
- compare neonatal mortality, major morbidity and neurodevelopmental outcome at 2-3 years of age, corrected for prematurity, in 2 subsets of infants:
 - “**Early**” surfactant group, defined as infants who received surfactant ≤ 2 hrs of birth
 - “**Late**” surfactant group, defined as infants who received surfactant > 2 hours of birth

The study hypothesis is that “early” surfactant administration is associated with improved outcome.

Preferred study discipline being undertaken by the student:

Neonatal Medicine

Potential benefits to the student and to the department:

To Student:

1. opportunity to experience clinical research based activities in Neonatal Medicine under the guidance of clinician and researcher in the field
2. opportunity to observe the daily work of NICU (student will be introduced to NICU to understand the study and its relevance to daily clinical practice)

To the Department:

1. audit of outcome of infants treated at NICUs in NSW and TCH
2. result of the study will be shared with other NICU's through publication in medical media

Department within Canberra Hospital where the student will be based:

Department of Neonatology, Centre of the Newborn