**Project Title:** Diagnosis and treatment of children with congenital hypothyroidism: an audit of medical records  
**Code:** NCS3

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<tr>
<th>Host School/ Institute</th>
<th>Address: Dept O&amp;G, Level 2, Building 52, Royal North Shore Hospital E25, St Leonards, NSW 2065</th>
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<td>Northern Clinical School</td>
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**Personal Supervisor:** Dr Samantha Lain  
**Phone:** 0418 212128  
**Email:** samantha.lain@sydney.edu.au

**Co-Supervisor:** Associate Professor Natasha Nassar

**Project Type:** Data Analysis, Clinical

**Project Category:** Endocrinology/Metabolism, Epidemiology, Public Health, Paediatrics/Child Health

**Project Keywords:**  
1. Medical record review  
2. Paediatric endocrinology  
3. Thyroid deficiency  
4. Newborn screening

**Project Description:**

Congenital hypothyroidism (CH – deficiency of thyroid hormone) is the most preventable cause of intellectual disability in children. Infants with CH are detected through newborn screening, where blood is taken via a heel-prick in the first few days of life. CH is easily treated with thyroid hormone supplementation if detected early. In Australia, there has been very little follow-up of children with CH, and there is very little published information about treatment commencement and compliance of infants with CH.

The study will involve an audit of medical records of all cases of CH referred to a paediatric endocrinologist in NSW from 2000-2008 among children aged 3-10 years. The student will audit records at the referral paediatric endocrinologists’ clinics collecting information including: thyroid function tests performed, number and length of clinical appointments, treatment commencement and compliance, CH diagnosis.

This project is a stand-alone study, but the data collected will also inform a cost-benefit analysis of changes to the guidelines of newborn screening of CH. The research will be undertaken at the Northern Clinical School on the Royal North Shore Hospital campus. This project will provide a student with experience and skills in medical record abstraction, data entry and (with supervision and assistance) analysing research data using frequency tabulations, contingency table analyses and chi square test. Students will also be given the opportunity and encouraged to write-up results for a peer-reviewed publication.

This project will suit a medical student with an interest in paediatrics and/or endocrinology, and developing research and basic statistical skills.