



Project Title: Antibiotic allergies resulting in sub-optimal care provided in hospital to children with infections		Code: CHW10
Host School / Institute: Children's Hospital at Westmead Clinical School		Address: Kids Research Institute, Hawkesbury Road, Westmead, NSW 2145
Certificates & Clearances required: Yes *Working with children clearance <i>Information on how to obtain certificates, where necessary, will be given to successful applicants.</i>		
Primary Supervisor: Dr Ameneh Khatami		
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Co-Supervisor/team: Mr Tony Lai (anti-microbial stewardship pharmacist)		
Project Type: Clinical; Data Analysis; Quality improvement		
Project Category: Paediatrics/Child Health; Immunology & Infection		
Skills / Attributes of a successful student: This project would suit a student who is organised, independent, and has a strong interest in clinical medicine, in particular in paediatrics. Attention to detail required as complex patient information will be extracted from electronic medical records. Experience with Microsoft Excel is essential.		
Project Keywords: Antibiotics; Allergy; Electronic prescribing; Decision support systems; Patient care		
<p>Project Description: Children who are admitted to the Children's Hospital at Westmead (CHW) currently have all prescriptions for medications charted electronically. Part of the electronic prescribing system (EPS) requires the prescriber (doctor) to complete a section regarding any medication allergies the child may have. However, the system does not prompt the prescriber to document anything beyond the name of the medication to which the child is allergic (eg the nature or severity of the reaction). We know that at times, parents report reactions to medications that are not true allergies, such as developing diarrhea when taking antibiotics. A rash can also be confused as a medication allergy if it co-incidentally occurs at the time of taking, for example, an antibiotic, but may be triggered by the underlying virus infection. Assessing if a reaction is a true allergy and whether there is ongoing risk to the child from that class of medication requires careful history taking (details of exactly when and how the reaction occurred). Penicillin "allergy" is often documented in children, but for many they do not have a true allergy. Because doctors are often worried about causing a severe reaction if they prescribe a penicillin or related antibiotic for a child with a documented penicillin allergy, they may choose an antibiotic from a different class. Since penicillin and its related agents are some of the safest and most effective antibiotics we have to treat most of the common infections that occur in children, it is possible that some children are treated with less effective or more toxic antibiotics, from fear of a penicillin allergy that does not actually exist.</p> <p>We would like to do an audit looking at all of the prescriptions over a 2-month period at CHW to gather information about how often a medication allergy is documented and how thoroughly details about the allergy have been entered into the EPS. For children admitted to hospital with an infection, who have a documented antibiotic allergy, we would like to check if the allergy resulted in changes to the treatment provided to the child, any sub-optimal treatment or any other adverse events, and in particular, if any of these negative outcomes were related to incomplete assessment of the allergy.</p> <p>The aim of the project is to determine whether it would be useful to implement changes to the EPS to force doctors to document more thorough details about medication allergies, or to prompt junior doctors to seek further specialist advice. While completing this project, the student will have the opportunity to join the weekly meetings and teaching sessions of the paediatric infectious diseases team and attend some ward rounds to see patients.</p>		