

Paediatrics, Sydney Medical School, Sydney, Australia

My elective placement was in the paediatric department at Nepean Hospital. Nepean is a district general hospital on the outskirts of Sydney, in a town called Penrith. The immediate area around the hospital, Kingswood, is quite deprived. I spent most of my time during my elective either in the paediatric clinics (allergy, behavioural and developmental) or on the post-natal and paediatric wards. I also had formal teaching with the Nepean medical students.

What I learnt from my Elective Experience

Many of the clinics that I sat in during my elective revolved around allergy and atopy. As a developed country, Australia has relatively similar health problems to Britain. For the paediatric population, allergies and other features of atopy form a large part of secondary care.

One of the most important things that I have learnt that will influence my future practice as a doctor was that tests are not always helpful, and so they shouldn't be carried out unnecessarily. During one allergy clinic, a consultant paediatrician was explaining to a 9 year old girl's mother that although they could do a skin prick test to attempt to figure out exactly what was giving her a rash, but that it probably wasn't the best idea. The patient's mother had decided that the best way to avoid the rash was to test new products on the back of her hand first. The consultant explained that this is what they would recommend, and that a skin prick test was unlikely to change her management. Furthermore it would be a difficult test to carry out and horrible for the patient herself, and has the small risk of causing anaphylaxis. Therefore, in this case, the costs of the investigation would greatly outweigh benefits. This is something that can be applied to most areas of medicine, not just paediatrics.

During my time in the clinics, I was given time to see patients on my own, before presenting to the consultant and agreeing on a plan. Occasionally, I also typed up the letters from the clinic. This experience helped to build my communication skills, as well as being good practice for being a junior doctor. Furthermore, it enabled me to improve my ability to take a focused history and form differential diagnoses, as well as expanding my clinical knowledge of paediatrics. I particularly enjoyed the direct interaction with the patients and their families, as I was able to actually listen to their concerns myself and feel like I was doing something useful, rather than shadowing like we usually do in clinics at medical school. Whilst observing the ways in which other doctors practice is definitely a great way of learning, trying out those skills yourself in a real hospital setting really helps to build confidence, knowledge and communication skills.

Whilst on the wards I was able to take on the role of the junior doctor. Most of this involved perfecting baby checks and writing in the medical notes during paediatric ward rounds.

It was also interesting to see the differences between the healthcare systems and practices in Britain and Australia. While they were very similar in the public hospital that I was at, I was much more aware of the larger proportion of private healthcare in Australia, compared to that in the UK. A lot of patients got their radiological investigations done more quickly by having them privately, while only a small proportion of people do this in the UK.

Additionally, when patients came to clinic, they had to have their Medicare card with them, showing that they are entitled to treatment. Medicare helps all Australians to access healthcare, similarly to the UK. However, sometimes they will have to pay for certain services, and then they will be reimbursed partly (for subsidized treatments) or completely. Therefore, while Australia's healthcare system is similar to that of the UK, there is a greater proportion of private work, and they use Medicare to ensure that everyone has access to affordable healthcare, even if it is not always free.

The Impact of Allergies

One of the paediatric consultants that I worked with has a special interest in allergies. This encompasses all of the features of atopy, so he mostly saw children with allergies, asthma, hayfever and eczema in his clinic. Despite being aware of allergies and atopy before, it was in this clinic where I realised how big of an impact an allergy (and associated problems) can be on someone's life, and the variety of ways in which it can affect them.

Health Concerns

For most people, food allergies are a relatively minor concern. They might get a bit of a tummy ache or a rash when they ingest the allergen, but the reaction won't usually be severe, let alone life threatening. However, for some children, eating the wrong food can be disastrous, and this leads to knock-on effects on their health, psychology and even their education and future prospects.

The most pressing concern is anaphylaxis. Anaphylaxis still kills people, despite the increased awareness of allergies and the advent of medication that should save them. Children and adults alike do not always carry their EpiPens on them, and therefore, if they mistakenly eat something that they shouldn't and don't get to hospital in time, it becomes a fatal error. Deaths due to anaphylactic shock are, luckily, very rare in Australia (112 deaths from 1995-2007, (only 6% of which were due to food allergy^[1])).

However, anaphylaxis is not the only way in which allergies can affect a child's health. Babies who have allergies to, for example, cows milk protein, may develop chronic diarrhoea, anaemia, malabsorption and failure to thrive. This can impact their growth and development if it is not picked up and managed properly. Eczema can also cause failure to thrive when it leads to recurrent infections with bacteria and/or eczema herpeticum.

Financial Cost

There is also a financial cost to allergies. This became clear when I saw a patient suffering from eczema, thought in her case to be due to a house dust mite allergy. The first line treatment includes conservative measures, such as buying protective bedding, getting rid of carpets and vacuuming every day. However, this can be very expensive and time-consuming. The protective bedding alone costs at least AU\$300 (which needs to be repeatedly replaced), and if you don't happen to live somewhere with wooden or tiled floors, ripping out the carpets, changing from fabric to leather sofas and from curtains to blinds is not only expensive, but also a great deal of work. Furthermore, while this does help most people with a suspected house dust mite allergy, it doesn't always work. Most of the parents that I saw were happy to make these changes if it meant it would help with their child's asthma or eczema. However, there was one family who became very distressed, because they couldn't afford to buy the protective bedding (which did not seem to be covered by Medicare). They were also living in rented accommodation, and so they were unable to make all of the additional changes mentioned above. In the end, they agreed to move their child's bedroom from an upstairs carpeted room, to a tiled room on a lower floor, and to clean and vacuum regularly, to see if that made any difference. The doctor hoped that this alone would improve the toddler's symptoms.

Additionally, replacement foods and skin products are an extra cost. Milks, such as almond, rice and barley milk are much more expensive than regular cows milk. Formula milk for infants with a cow's milk protein intolerance is also incredibly expensive, and although subsidized by the pharmaceutical benefits scheme from Medicare, parents must pay some of the cost.

It can also be difficult to find soaps and shampoos that don't cause a reaction in a child with contact dermatitis. This may limit choice to more expensive brands, or buying multiple brands, before discovering one that can be tolerated by the child.

Therefore, allergies can become very expensive indeed. While it was manageable for the patients' families from other areas of Penrith, those from the more deprived area of Kingswood were clearly finding it much more difficult, resulting in their children suffering more severely than they otherwise might have.

Psychological Impact

Having an allergy, particularly one that has caused anaphylaxis in the past, can cause anxiety in children and their families. Going into anaphylactic shock is terrifying for both adults and children. Furthermore, they have to constantly be vigilant, checking food labels and carrying their EpiPens. This can also weigh heavily on parents and siblings, who also need to be trained in how to use the EpiPens.

The family as a whole is also affected when it comes to cooking and food shopping. Where a child is allergic to food groups (e.g. dairy) or common foods such as eggs, or even both, cooking family meals can become very stressful. This can be particularly difficult for families with multiple young children with different allergies and/or tastes. If parents have to make multiple dishes, or are very limited in what they can make for a child, meal times are very hard. This can then go on to cause further health problems due to malnutrition.

Social Issues

Lastly, allergies can have profound effects on a child's education. Studies have shown that children with allergic rhinitis have a poorer performance at school and in exams^[2]. This is believed to be due to both the disease itself affecting sleep quality, as well as the comorbidities associated with it and even some of the treatments. Whatever the reason, poorer school performance can impact greatly into later life, affecting future career paths and social class.

In conclusion, it is clear to see that an allergy is no small issue. The impact of allergies is not just a health concern, but can affect family life, the psychology of the child and even their future success.

[1] <http://www.allergy.org.au/health-professionals/hp-information/asthma-and-allergy/food-allergy-and-anaphylaxis-update-2014>

[\[2\] http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3345332/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3345332/)

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