MUM, WHY CAN’T WE SIT IN THE WAITING ROOM?

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CROSS INFECTION BETWEEN CF PATIENTS AND CHALLENGES FOR HEALTHCARE PROVIDERS

Both debilitating and isolating, the susceptibility of cystic fibrosis (CF) patients to infection, and in particular to infection from other CF patients, presents unique challenges for healthcare providers.

In recent years, many hospitals in Australia and abroad have developed comprehensive policies and procedures to reduce the risk of cross infection between CF patients in a hospital setting. However, smaller clinics and medical practices are often left to their own devices in responding to this risk.

This article looks at some of the challenges faced by healthcare providers and the onerous infection control processes already adopted by many. With growing concerns about the rise of antibiotic resistant bacteria, and the associated risks of transmission within healthcare settings, it seems that there is potential for some of these processes to have broader application in the years to come.

WHAT IS CF?

Cystic Fibrosis (CF) is a genetic condition which primarily affects the lungs and digestive system. People with CF develop an abnormal amount of excessively thick and sticky mucus. This mucus impairs digestive functions and blocks airways, trapping bacteria in the lungs. As a result CF patients suffer recurrent and chronic respiratory infections which lead to irreversible lung damage.

There are currently around 3,000 people in Australia with CF. Average life expectancy figures vary between 35 and 40 years old in Western countries. The major cause of death is lung failure. There is currently no cure for CF.
Treatment involves intensive daily physiotherapy to clear the lungs (sometimes up to several hours per day) as well as using nebulisers and taking enzyme replacement capsules with food to aid digestion. Patients also take salt replacement tablets and often require supplemental feeds. Antibiotic therapy is intense and frequent, and most CF patients are regular visitors to hospitals. In addition to inpatient admissions for acute respiratory infections and pulmonary optimisation admissions, they will generally attend outpatient clinics at least every three months.

In the CF population, even more so than the rest of the population, antibiotic resistance is a real and potentially devastating threat. CF patients need antibiotics that work, in order to treat the respiratory infections that progressively cause permanent damage to their lungs.

**CROSS INFECTION**

A key to maximising quality of life and life expectancy for a CF patient is minimising the number and severity of infections impacting the lungs. This is particularly the case in children.

The past three decades have seen an increasing awareness of the issue of cross infection – the transmission of certain pathogens between CF patients, who generally have a lot more bacteria in their lungs than the general population.

Until the early 2000s, holiday camps were held for CF sufferers in many countries, with a view to providing respite and support for patients and their families struggling with the condition. These have all but disappeared following separate studies on holiday camps in countries including North America and Europe which indicated significant risks of cross infection between children attending these camps.

Closer to home, teens and young adults with CF can recall a time where they were able to socialise with other CF patients – this is now strongly discouraged. Hospitals used to have CF wards, where CF patients would get to know each other and develop their own support networks. Now CF inpatients are usually allocated their own separate rooms, to which they are largely confined during their admission.

In 2014, Cystic Fibrosis NSW sought legal advice regarding whether they could continue to hold their annual lay conference for CF sufferers. The advice was that they could – but all attendees would first need to sign a waiver.

Even sibling groups, which were a source of support for siblings of CF children, have disappeared due to the risk that siblings may carry the bacteria to their vulnerable brothers or sisters.

The psychosocial aspects of this relatively recent isolation present real challenges for social workers, mental health professionals and other members of the multidisciplinary teams in hospitals and clinics supporting CF patients.

Also, hospital and clinic staff often find themselves assisting patients and their families with the practical challenges. In major centres, the support teams have seen their role expand at times to keeping an eye on what’s happening in the community. If more than one child with CF is enrolled in the same school, the team may notify the school and request segregation of the students (perhaps staggering their recess times, or restricting them to certain areas of the school). Sometimes nursing staff may attend schools to provide education to the teachers and other students.
These developments raise interesting questions about the scope of the duty of care owed by hospitals or healthcare providers in these instances. However, the clearest duty and most direct potential source of harm relates to infection control within inpatient facilities and outpatient clinics where multiple CF patients attend each day, each carrying their own population of bacteria.

PRECAUTIONS TAKEN BY HOSPITALS

Over the past 10 to 15 years many hospitals and clinics in Australia and abroad have implemented strict infection control guidelines to address the risk of cross infection between CF patients. These include:

- Separate rooms for inpatients with CF, which are some distance from other inpatients with CF. Contact precautions (such as gown and gloves) are implemented for all staff, and strict hand washing processes are reinforced. In some hospitals CF patients are required to wear masks at all times.
- Restricted access for CF patients to inpatient services such as the hospital school and the gym. Sadly they may also be prevented from attending special events such as children’s concerts or parties at the hospital.
- Regular sputum testing for outpatients to cohort the children carrying similar organisms into different groups.
- Outpatient clinic appointments are then arranged according to the cohort group. Appointment times must be strictly adhered to, which can lead to rushed appointments and suboptimal access to allied health team members such as dieticians, social workers and occupational therapists.
- The consultation rooms are terminally cleaned between the appointments, and usually required to sit vacant for a period of time to address airborne pathogens.
- No sitting in the waiting room. When CF patients attend outpatient clinics, they are moved straight into an empty consultation room.
- Toys are often removed from outpatient consultation rooms prior to seeing children with CF.
- Emergency department staff should identify patients with CF and ideally ensure that they are segregated from other CF patients.

WHAT LIES AHEAD?

The predicted rise in antibiotic resistant superbugs raises issues for healthcare providers in relation to protecting immunocompromised patient populations attending their facilities. The processes adopted in the area of CF cross infection are comprehensive, and certain elements may be seen as setting the standard for future infection control measures for other patient groups.

However, these processes are resource intensive, and manageable only because numbers are relatively low. Physically separating a number of inpatients requires many rooms. The testing, cohorting and appointment management all takes time. Appointment times in clinics are limited by cleaning and vacancy requirements, so there can usually only be a handful of patients seen each day. Processes for flagging CF patients in other settings, such as the emergency department, would require more sophisticated processes if more patients were involved.
Healthcare providers may face significant challenges in these areas in the years to come.

As for CF patients, life expectancies remain on the increase and researchers are working hard in several countries to understand the condition and develop a cure. Meanwhile, developments in technology are going some way to address the isolation, with online forums, chat rooms and skype providing new ways for CF patients and their families to connect, both with each other and with health and community support services.

Further reading


[1] Such as pseudomonas aeruginosa, b. cepacia, non tuberculosis Mycobacteria.

AUTHORS