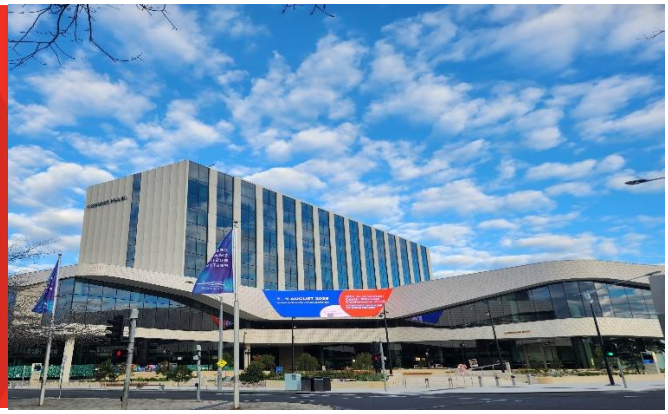
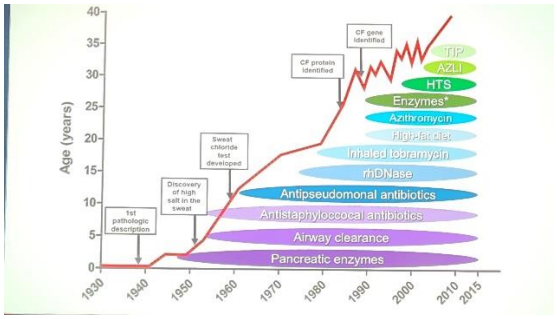


With the support from and many thanks to the Christchurch Hospital pharmacy and NZHPA, I was able to attend the 16th Australasian Cystic Fibrosis conference. This biennial conference focuses on all aspects of Cystic Fibrosis (CF) and has a cross section of attendance from prescribers, nurses, pharmacists, physiotherapists, social workers and dietitians. There is a community conference day on Day 3. It was a good opportunity to gather information around practice changes after CF transmembrance conductance regulator (CFTR) modulators have been introduced over the past few years.

The conference was opened with a heartfelt welcome from Ash Skinner, a proud Wadawurrung Traditional Owner.

Emerging models of care for Cystic Fibrosis was the theme many presenters took, starting with a quick overview of the progress over years (see slide)



CFRD challenges and opportunities was presented by Dr Melissa Putman who is an Adult and Paediatric endocrinologist at the Massachusetts General Hospital, as well as an Assoc Prof Harvard Medical school and Director MGH Diabetes Research Centre

She spoke about the etiology of CFRD being poorly understood and likely multifactorial.

Type 1 diabetes	**CFRD**	**Type 2 diabetes**
Abrupt onset	Progressive beta-cell dysfunction	Insulin resistance
Autoimmune	Delayed first-phase insulin secretion	Slow and subtle onset
Insulin deficiency	Frequent hypoglycaemia	Obesity
Insulin as treatment	Highly variable clinical course	Non-insulin therapies
	Infections and steroid treatment for lungs	
	Undernutrition	

The impact of CFRD on clinical outcomes includes insulin deficiency and hyperglycaemia affecting the glucose on airway surfaces causing an increased risk of infection and inflammation. This leads to

reduced pulmonary function and an increase in CF exacerbations, with compromised nutrition and a decline in BMI.

Challenges with screening

- OGTT is recommended annually in all people with CF over the age of 10 years
- The diagnosis of CFRD by OGTT has been correlated with clinical deterioration, including pulmonary and nutritional decline.
- Screening tests used for other forms of diabetes have limited sensitivity on CFRD
- HBA1c will show average glucose and correlates strongly with average glucose in people with CF as with other people (photo)

We need to think about new ways to assess and find out if we need intensive testing for people with CF.

The CF-IDEA study showed that using insulin had no impact on lung function

Insulin for early glycaemic abnormality in children with cystic fibrosis without cystic fibrosis-related diabetes (CF-IDEA): a randomised controlled trial - PubMed

The evidence base for CF therapies was all generated prior to CFTR-modulators being introduced. Discussion is now occurring around whether we still need:

- regular airway clearance from diagnosis?
- azithromycin?
    - We are seeing less azithromycin being used since modulators have started
- inhaled antibiotics?
- mucolytics?
    - The CFSTORM trial looked at withdrawing mucolytics in people taking modulators and results showed it was non-inferior to withdraw treatment over 12 months, in terms of FEV

Another presentation was around the use of modulators for pregnant women specifically for the baby's benefit, to prevent early organ disease. This is to try and improve pancreatic function, reduce meconium ileus and to help increase the birth weight. The PROTECT trial is underway in the USA based on PRenatal mOdulator treatment to PrEvent CF complicaTions (PROTECT) workshop report - PubMed

Over the two-day conference, there were many sessions to choose from. I focused mainly on paediatric workshops on Day 2.

A presentation by Dr Hiep Pham, Paediatric Respiratory Sleep Consultant, RCH focused on adolescent mental health. His main message was that mental health correlates with pulmonary outcomes. When there's a drop in mental health in adolescence = drop in pulmonary health

The AREST-CF study in VIC and WA 2020-2024 showed that:

- Sleep pathology in adolescents with CF – 82% difference to normal adolescents
- Mental health and sleep don't improve as FEV1s improve after starting modulators = no correlation

His message was that we need to ensure that
'The life we have helped extend is also psychologically healthy'.

A peer-support program for children 9-12 years living with cystic fibrosis was trialled over 6 weeks in the school holidays. This was for children across the Sydney Childrens Hospital Network. There were weekly zoom sessions with a facilitator. It aimed to create meaningful opportunities for connection, belonging and psychosocial wellbeing. They are hoping to publish the outcome of this trial soon.

Another interesting presentation was highlighted by Perth Childrens Hospital where they implemented a Frog programme. This programme had a consistent message from all MDT and a variety of incentives for the children to take ownership of their sputum samples! These included stickers, charts, donated prizes and the children really liked the ownership.
Year of the Frog | Cystic Fibrosis WA

Overall, this was a valuable conference to attend. I came away thinking that many studies are being carried out and, with therapies and testing still evolving in this new modulator era, we will continue to see changes to guidelines and need to keep up-to-date. I would encourage pharmacists to attend this conference. I again thank the NZHPA and Christchurch Hospital pharmacy for the support I received to attend this conference.