
Responding to COVID-19—the experience of an adult cystic fibrosis centre

Initiative Type

Model of Care

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Deliver

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Summary

The Prince Charles Hospital (TPCH) reports the rapid and comprehensive transition to an almost completely 'Virtual adult cystic fibrosis centre (ACFC)' within a short period of time following the

emergence of COVID-19 infections in Australia and first cases identified in Queensland. This program highlights the multi-disciplinary innovations around outpatient care, management of pulmonary exacerbations, an on-line home exercise program through Facebook, medication provision, influenza vaccination, clinical trials and maintenance of the flow of information to the CF community.

It has also embedded COVID-19-driven innovations into clinical practice and these continue to evolve. Furthermore, the ACFC multidisciplinary team and the CF community have contributed substantially to the Queensland effort to contain COVID-19 by providing the ACFC ward with its state-of-the-art ventilation facilities for COVID-19 individuals and their families. Finally, the ACFC nursing staff with their intimate understanding of infection control practices have seamlessly taken on the running of the ACFC ward whilst seconded to COVID-19 in an exemplary fashion, under the leadership of a Clinical Nurse Consultant (CNC) and Coordinator of the CF service.

Key dates

Mar 2021

Implementation sites

Cairns Hospital and Townsville University Hospital

Partnerships

Metro North HHS, Cairns HHS, Townsville HHS

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Aim

To develop and report the considerations and strategies introduced to counter the threat of COVID-19 infection in a geographically dispersed CF population living in Queensland, Australia. Relatively few COVID-19 infections had been described globally in people with cystic fibrosis (CF) in the early months of the COVID-19 pandemic, but people with CF and especially those with severe disease were theoretically at high risk of death. The challenges faced included the geographically dispersed CF population with 60% of the ACFC patient population living >200 km distant from TPCH, the complexity of the disease itself combined with a substantial and understandable level of anxiety in the CF community around COVID-19.

Benefits

The ACFC has been able to introduce innovations that we have now embedded into routine clinical care. The substantial increase in capacity for telehealth consultations using new videoconferencing platforms and ability to home monitor critically important objective measures such as lung function has transformed the CF service.

An additional major benefit has been the opportunity to videoconference into the patient's home or workplace, which reduces the disruption to normal life and infinitely reduces the risks of cross-infection for CF patients who are high aerosol producers even with normal respiration.

Background

With potentially the most geographically dispersed cystic fibrosis population in the world, the Adult Cystic Fibrosis Centre (ACFC) at The Princes Charles Hospital cares for adult cystic fibrosis patients residing as far afield as the Northern Territory and Northern New South Wales. The ACFC had a limited telehealth program in place as the pandemic hit, and with the looming influenza season, the need to maintain clinical trials activity, the challenges of trans-state jurisdictions and keeping the CF population well-informed on rapidly changing clinical practices, the ACFC had to rapidly adapt.

Solutions Implemented

- a rapid move from face-to-face to telehealth with an increase in MDT telehealth consultations from 19% to 79% of all out-patient reviews conducted by telehealth within 2 weeks of COVID-19 cases being identified in QLD
- an increase in Multi-Disciplinary Team (MDT) consultations from 1,741 in 2019 to 1,973 in 2020 between March 2020 and December 2020, representing a GROWTH in clinical consultations
- increased availability of desktop computer mounted mobile video (Movi) devices and speakers to allow enhanced videoconferencing
- provision of 250 hand-held, web-enabled spirometers for home monitoring, funded by CF Queensland, and Queensland Health with on-line educational videos and coaching by ACFC physiotherapists
- a virtual exercise program was instituted weekly by the CF physiotherapists to encourage patients to exercise in their own homes delivered via Facebook (FB)
- a Drive-thru-Pharmacy service, which was highly successful and allowed the ACFC to efficiently coordinate prescribing and dispensing of medications in a manner that avoided the patient need to enter the hospital building with no reduction in number of medications dispensed
- a drive-thru-Influenza vaccination service at ACFC
- regular communiques to the CF community via CF Queensland, 65 Roses and ACFC Facebook page provided accurate and reliable information on the COVID-19 pandemic and changes to ACFC practices around clinics and admissions
- development of generic letters for employers to inform on the critical need for adequate 'shielding' of adults with CF in the workplace
- all clinical trials activity was moved to virtual, which allowed all enrolled patients to continue uninterrupted
- an on-line screening program (GAD and PHQ-9) was instituted by the social work team during 2020 to assess the impact of COVID-19 on mental health in the adult CF population

Evaluation and Results

The single most important outcome of the ACFC's innovative response to COVID-19 was the seamless transition to an almost completely virtual clinical service with enhanced home monitoring. We have conducted preliminary Patient Reported Experience Measures (PREMs) assessments in collaboration with Community and Consumer Engagement MNHS, which confirm general satisfaction with service delivery using telehealth and more recently, ACFC has used the new Telehealth Virtual Clinic platform, which will be assessed next with PREMs. The weekly Facebook group exercise program is one exemplar of the new ACFC model of care that has been highly successful with 112 patients (35% of the adult CF population) regularly participating at each live session and the recorded sessions being viewed on average 288 times with the highest number of views being 428. Exercise is extremely important for airway clearance and maintenance of peripheral muscle conditioning in CF and this level of engagement was/is extraordinary.

Lessons Learnt

The experience has equipped the ACFC to embed remote monitoring and videoconferencing into routine clinical care to a much greater extent than we had thought possible and we have become very much a hybrid virtual or physical CF centre as a consequence. Further innovations under study include the use of wearables to continuously monitor patient physiology and detect pulmonary exacerbations early (in collaboration with the QLD Digital Academy Research Group).

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