Regional Cystic Fibrosis e-Health & Telemonitoring Program
BACKGROUND

• Currently about 330 adults with CF attending The Alfred with approximately 1200 outpatient appointments per year

• People from a large geographical area within Victoria as well as NSW (Deniliquin, Albury) and the ACT

• 40% live in areas classified as non-metropolitan
• Strain on resources led to finding an alternative way of “seeing” patients
• DOH funding for CF Statewide Telemedicine Programme received September 2011 (The Alfred, MMC, RCH)
• Over 30 people enrolled and attended video appointments at The Alfred during the 12 month study period
• Victorian Government Department of Business and Innovation funding for the Regional CF e-Health & Telemonitoring Program was received June 2013
AIMS of The Project:

- To evaluate 2 models of care: telemedicine videoconferencing (TVC) and telemedicine videoconferencing with home monitoring (TVC-HM) to determine which model results in general improved overall CF care.

- To evaluate TVC-HM as a tool for identifying triggers for early interventions to prevent CF exacerbations and hospitalisations.

- To integrate home monitoring results into the patient electronic health record to support patient self-care (in the home) and reduce hospitalisation.
• To provide a patient portal that supports patient participation in treatment programs, allowing access to the Alfred medical electronic record and home monitoring results.

• To minimise hospitalisation of people with CF by providing online consultation and electronic record sharing for GPs and other community based healthcare providers.

• To develop organisational arrangements to ensure that e-Health, telehealth and telemonitoring services become part of normal business.

• To provide a model for the support of other chronic disease groups in the community (eg diabetes, COPD, renal failure).
Methods

• We recruited 32 participants who have previously used telemedicine videoconferencing and randomised them to one of 2 groups:

  • - Group A – 13 weeks of TVC followed by 13 weeks of TVC-HM
  • - Group B – 13 weeks of TVC-HM followed by 13 weeks of TVC
Home Monitoring Equipment

- Interview Button
- Scroll Up
- Scroll Down
- Begin/OK/Yes Button
- Volume Up (+) and Down (-)
- Cancel/No Button
Home Monitoring Equipment
Methods continued

• Equipment installed by project manager, and education given on how everything works, troubleshooting etc

• Choose 2 days of the week to do the interview

• Also able to do unscheduled interviews

• Take measurements of: blood pressure, weight, oxygen saturation, pulse, lung function, temperature and blood sugar (if diabetic)

• Answer questions on health status since the last interview
Methods continued

• Data uploaded by mobile phone signal to a computer program monitored by project manager

• Any out of range results or ‘yes’ answers trigger a text message

• Video appointments with medical or nursing staff if required

• Also included: technology survey at the start of the project, evaluation of the equipment after 13 weeks use and satisfaction with video appointments at the end of the study period.
## Baseline Characteristics of Participants

<table>
<thead>
<tr>
<th></th>
<th>Group A</th>
<th>Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Age</td>
<td>34 (21-53)</td>
<td>38 (19-56)</td>
</tr>
<tr>
<td>Gender (% male)</td>
<td>69</td>
<td>56</td>
</tr>
<tr>
<td>BMI</td>
<td>22.6 (18.2-27.9)</td>
<td>20.9 (18.9-26.2)</td>
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<tr>
<td>FEV1 % Predicted (L)</td>
<td>53 (24-82)</td>
<td>51 (20-109)</td>
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<tr>
<td>Distance from Alfred (KMs)</td>
<td>207.8 (32.79-771)</td>
<td>180 (10.54-660)</td>
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</table>
Results

• Results will be based on analysis of data when all participants have completed the study, including:
  • lung function and BMI
  • Utilisation of healthcare including presentations to ED, hospital admissions, outpatient appointments (face to face and video)
  • Access to NBN
  • Participant satisfaction with telemedicine
  • Participant evaluation of home monitoring equipment
  • Participant use and evaluation of patient portal to access health record
Next Step:

• Development of a mobile app. for use on Android™ and Apple™ devices

WATCH THIS SPACE!

THANK YOU 😊

For further information go to: www.monashalliance.com