Project Fizzyo
Improving physiotherapy care for children with Cystic Fibrosis

Eleanor Main
70 years of Physiotherapy for CF
Airway clearance methods

- Autogenic Drainage
- ACBT
- Acapella
We still don’t know

• What’s the best airway clearance technique?
• How often do you need to do it, and for how long?
• What happens if you don’t do it
• What will make these treatments easier to do regularly?
Top 10 Research Priorities for CF 2017

• How best to simplify the treatment burden of people with CF?
• Which therapies delay or prevent progression of lung disease in early life in people with CF?
• How best to motivate, support and use technologies help people with CF improve and sustain adherence to treatment?
• Can exercise replace chest physiotherapy for people with CF?

https://youtu.be/0mFtdEOyWt4
Is big data the answer?

80% of healthcare data is unstructured

“Smart devices, mobile & big data will revolutionise healthcare”

Most data in healthcare is stored in printed form
Creative Collaboration
Enables students to enhance their training through real-world problem-solving projects as part of their degree.
Home use: 16 months

Remote Data

Clinical Data

Big Data Analysis?
- Breath
  - count
  - pressure
  - length
- Treatment
  - count
  - length
  - profile and time
• Heart Rate every 5 seconds
• Footsteps per minute
DRIVE
AnalytiXagility Digital Research Environment Workspaces

Data Wrangling
- Data Table Editor
- Harmonization

Analytical Tools
- ‘One-click’ Analytics
- R / SQL

Collaboration
- Commenting
- Messaging
- Notifications

Audit
- Access / usage
- Authentication

Apps/Outputs
- Results
- Interactive

Your Data
Local data files

Hospital Data
PIMS, OMNI, EPIC

Collaborative Workspace

Admin
Data Wrangling
Analytical Tools
Collaborative Services
Audit

Apps
Administrator
Researcher
Observer

Security and Identity Management (Role)

User Interface
Web Access
Lung function data
Trial design

Home use: 16 months

With or without:

Games

Feedback

Tablet, Fitbit and Fizzyo sensor with child
Fitbit App, Basic Fizzyo Hub
Airway clearance dashboard
Gaming
De-identified data collection from clinical records
Home use: 16 months

22 recruited so far

Big Data Analysis!
Thank You
Thank You

Microsoft

Cystic Fibrosis Trust

UCL Partners
Academic Health Science Partnership

The child first and always

Great Ormond Street Hospital for Children
NHS

ABILITYNET
TECH4GOOD
AWARDS

2017
Thank You

Emma Raywood
Kunal Kapoor
Helen Douglas
Lee Stott
Greg Saul
Haiyan Zhang
John Booth
Tim Kuzhagaliyev
Nils Correvon
Dean Mohamedally
Fraser Black
Dr Yun Fu
Simon Jackson
Steven Hailes
Diana Yazdanfar
Tiernan Watson
Neil Sebire
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Things to do next

• Session Feedback
  – Please rate this session in the Future Decoded app!

• Microsoft UK AI Research Report
  – Download the AI Report at http://aka.ms/UKAIreport

• Visit our Hands-on Labs on Level 3
  – Try technology out with on-demand labs and expert help

• Go deep with Documentation
  – http://docs.microsoft.com