



Self-management through self-monitoring

Keeping people with LTCs
well at home.

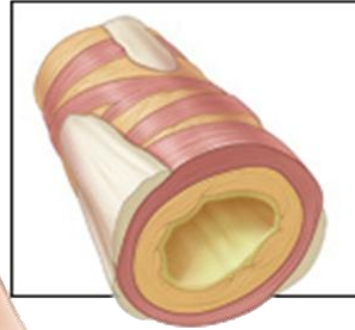
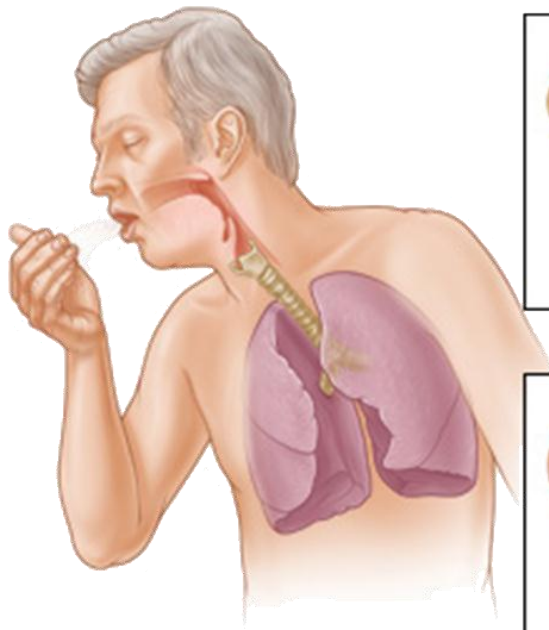
Respiratory disease 2nd
biggest killer in EU.



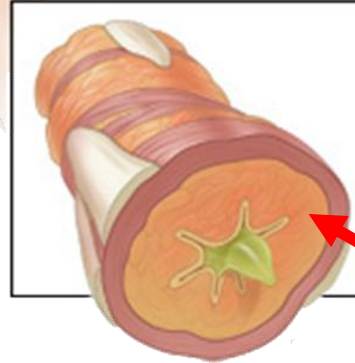
**Aseptika Ltd
(Activ8rlives)**

Kevin A Auton Ph.D

Chronic, life-limiting and high economic burden EU: €102 billion



Normal
Bronchial
tube



Inflamed
Bronchial
tube

Pseudomonas aeruginosa
Staphylococcus aureus
Haemophilus influenza
+ 7 others

- Build-up of mucus in lungs
- Repeated cycles of infection – tissue loss
- Bacterial colonisation

Chronic, life-limiting and high economic burden EU: €102 billion

65 million

Chronic Obstructive Pulmonary Disease (COPD)

70,000

Cystic Fibrosis (USA, EU, Australia)

20-40 million?

Non-CF Bronchiectasis (NCFB)

235 million

Asthma

5% of all deaths

90% deaths in growing economies
e.g. India, China, S Korea

30% ↑ by 2030

3 contracts SBRI

Home and bedside test.

Presence & quantify virulence *P. aeruginosa*
(Patent Granted GB 2013. Internationalisation in progress).

Home vital sign monitoring: co-morbidities.

2x Clinical Trials Cystic Fibrosis (Papworth NHS, Cambs)
1x Clinical Trial COPD, NCFB, Asthma (Portsmouth NHS)

Hospital at home: Self-care plans

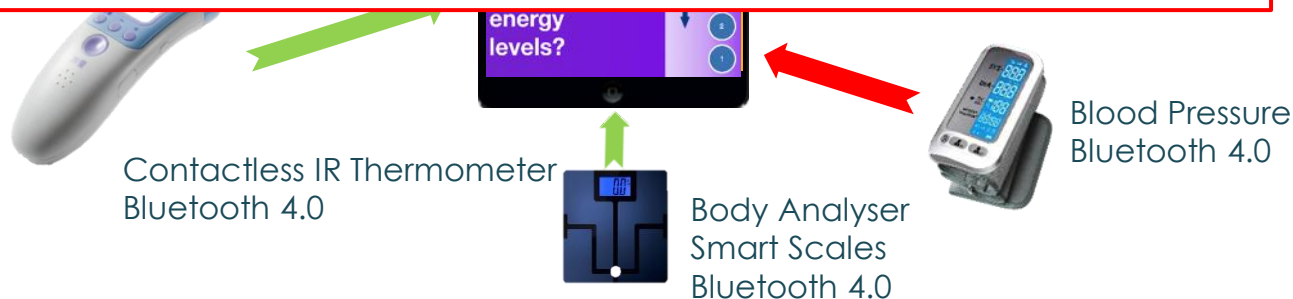
Self-management, not telemedicine or remote monitoring because of cost.

Two objectives:

5-15 days warning of exacerbation at home
= treat at home, avoid unscheduled admission.

Monitor control of exacerbation if admitted
= release to home care & prevent readmissions.

2 million potential EU patients with pathogen #1.



4 month
observational study
(SBRI phase 3 –
Sputum biomarkers –
42 parameters)

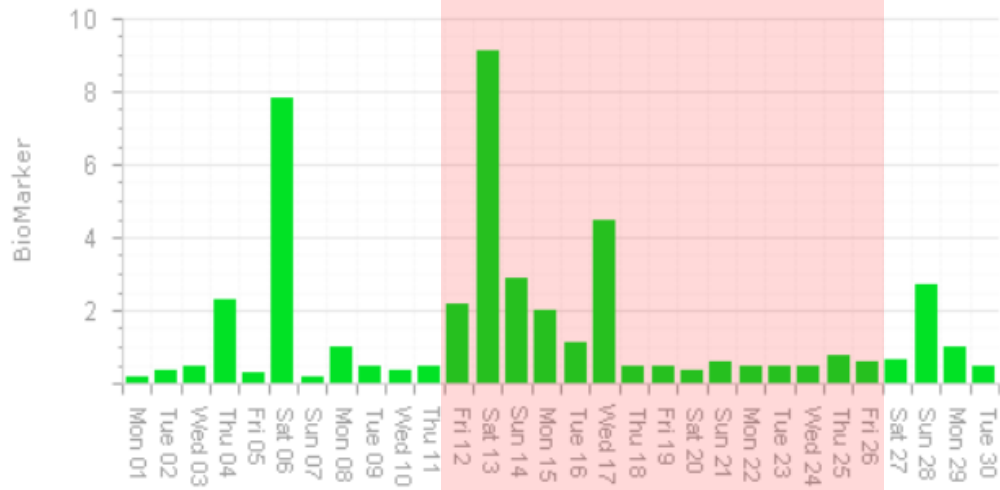
30 volunteers

Age: 40-80

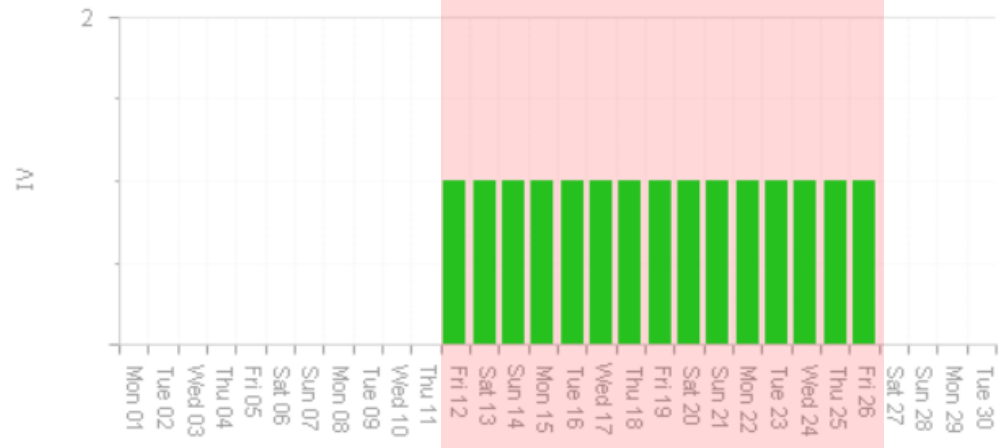
Respiratory
conditions.

PA or HI +ve.

CF Biomarker 1



CF IV



Toggle data view

☒ BioMarker

Overlay options

Select from the list below to overlay other forms of data

No overlay ▼



Toggle data view

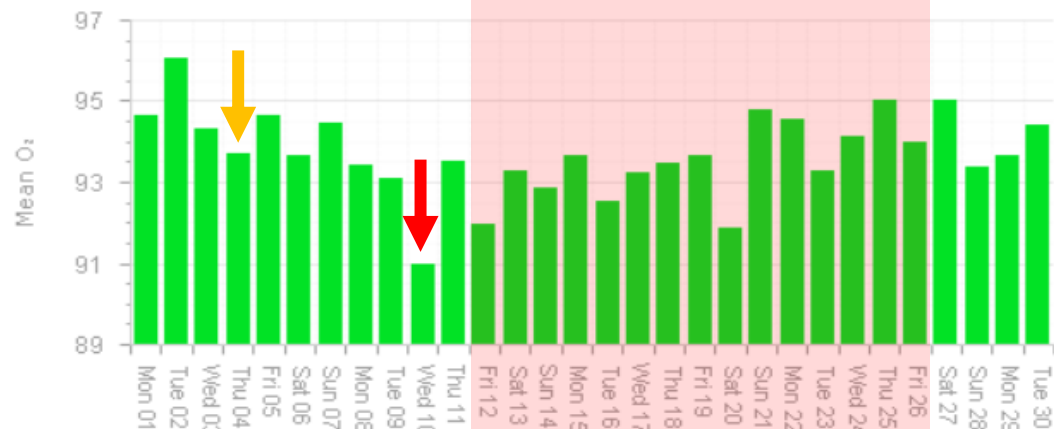
☒ IV

Overlay options

Select from the list below to overlay other forms of data

No overlay ▼

Cardiovascular – oxygen saturation and heart rate



Toggle data view

- ☒ Mean O₂
- ☐ Mean Pulse (bpm)

Overlay options

Select from the list below to overlay other forms of data

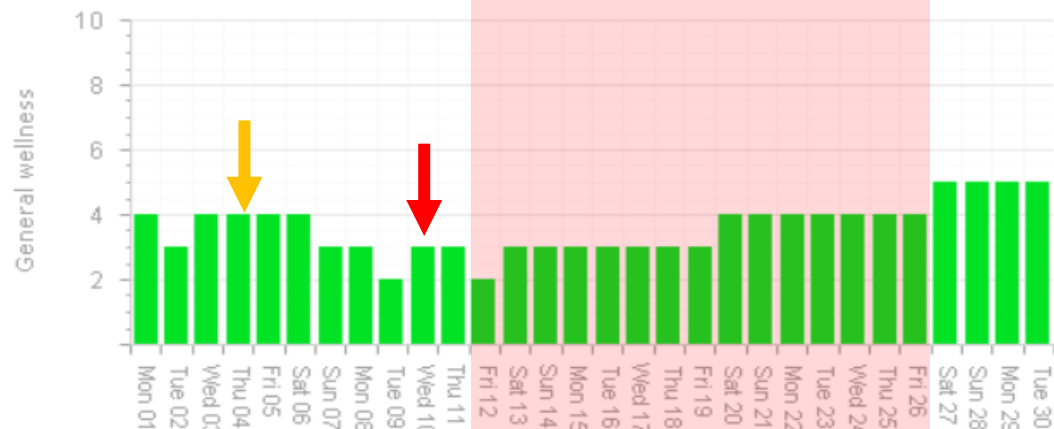
No overlay

Pulse Oximeter

The Activ8rives Pulse oximeter is a simple electronic device which allows you to monitor aspects of your cardiovascular function



Wellness



Toggle data view

- ☒ General wellness
- ☐ Cough

Add data

[Add wellness](#)

[Add cough](#)

Overlay options

Select from the list below to overlay other forms of data

Weekly

Monthly

Yearly

All data

<

April 2013

>

Activity

[Click here to switch between Metric and Imperial units](#)

12,000

10,000

8,000

6,000

4,000

2,000

Steps

Mon 01

Tue 02

Wed 03

Thu 04

Fri 05

Sat 06

Sun 07

Mon 08

Tue 09

Wed 10

Thu 11

Fri 12

Sat 13

Sun 14

Mon 15

Tue 16

Wed 17

Thu 18

Fri 19

Sat 20

Sun 21

Mon 22

Tue 23

Wed 24

Thu 25

Fri 26

Sat 27

Sun 28

Mon 29

Tue 30

Body composition

54

52

Weight (kgs)

Mon 01

Tue 02

Wed 03

Thu 04

Fri 05

Sat 06

Sun 07

Mon 08

Tue 09

Wed 10

Thu 11

Fri 12

Sat 13

Sun 14

Mon 15

Tue 16

Wed 17

Thu 18

Fri 19

Sat 20

Sun 21

Mon 22

Tue 23

Wed 24

Thu 25

Fri 26

Sat 27

Sun 28

Mon 29

Tue 30

Toggle data view

- ☒ Steps
- ☐ Active minutes
- ☐ Kilometers walked

Add data

[Add steps manually](#)

Overlay options

Select from the list below to overlay other forms of data

No overlay

Toggle data view

- ☒ Weight (kgs)
- ☐ Body fat %
- ☐ Visceral fat
- ☐ Muscle mass
- ☐ Bone mass

Data summary

Total steps

128,086

Average steps

4,269

Targets reached

1 out of 30

Distance walked

76.85 kms

Calories burned

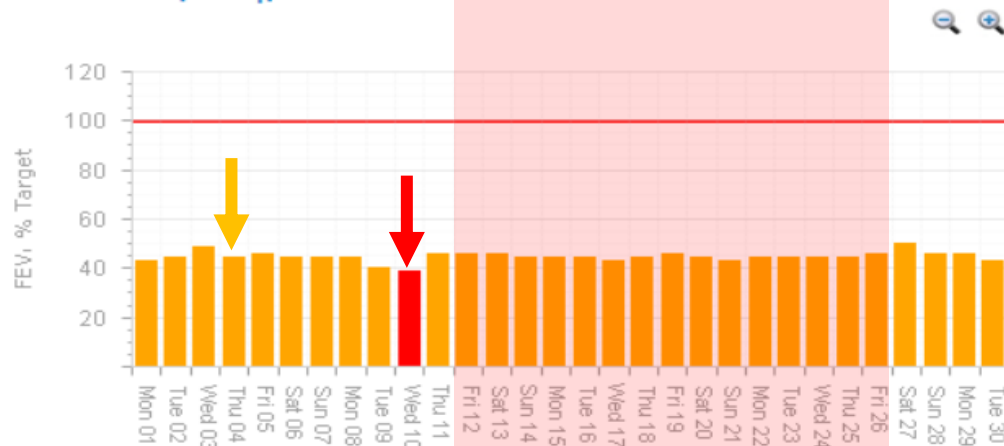
3,440

BuddyBand step counter

The Activ8rives BuddyBand step counter is a simple electronic device which allows you to monitor your steps



Lung function – Peak Expiratory Flow (PEF) & Forced Expiratory Volume in 1 second (FEV₁)




Toggle data view

- ☐ PEF (L/min)
- ☐ FEV₁ (L)
- ☐ PEF % Target
- ☒ FEV₁ % Target

Overlay options

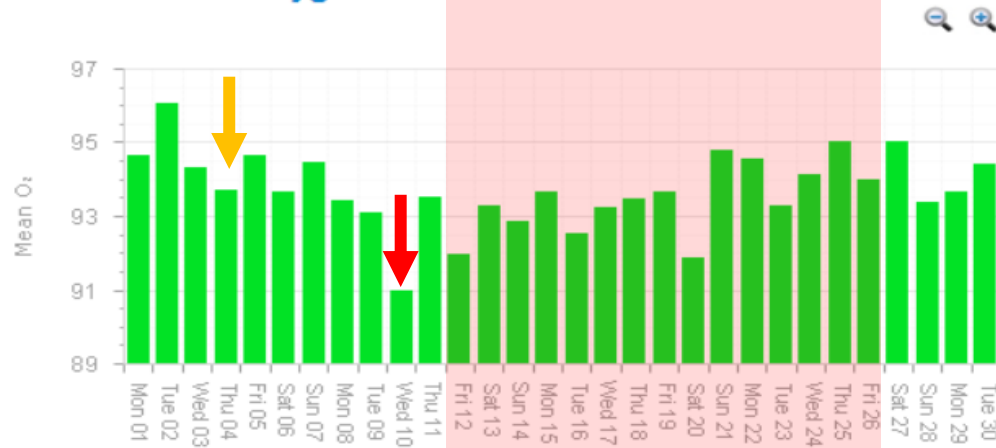
Select from the list below to overlay other forms of data

No overlay 

Peak Flow meter



Cardiovascular – oxygen saturation and heart rate




Toggle data view

- ☒ Mean O₂
- ☐ Mean Pulse (bpm)

Overlay options

Select from the list below to overlay other forms of data

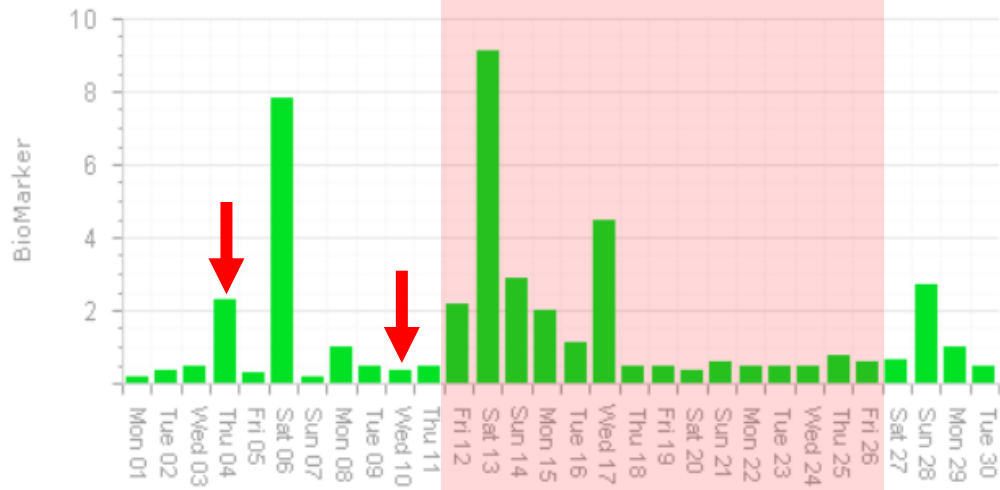
No overlay 

Pulse Oximeter

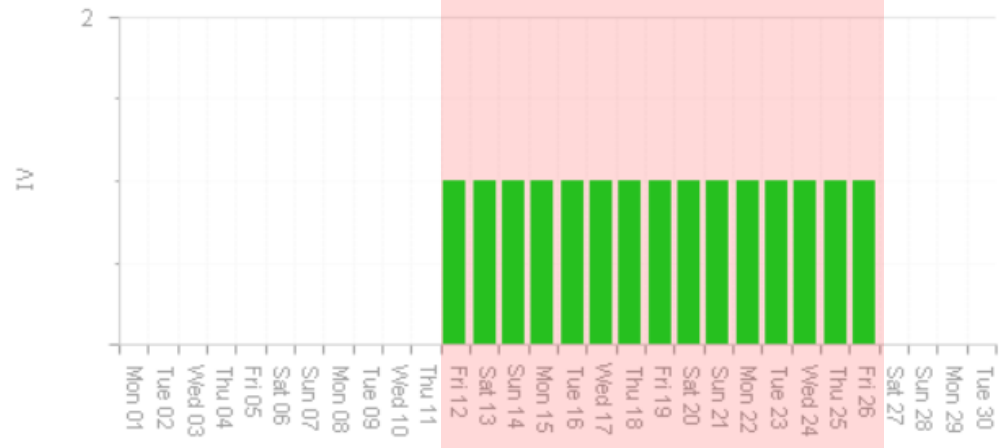
The Activ8rives Pulse oximeter is a simple electronic device which allows you to monitor aspects of your cardiovascular function



CF Biomarker 1



CF IV



Toggle data view

☒ BioMarker

Overlay options

Select from the list below to overlay other forms of data

No overlay ▼



Toggle data view

☒ IV

Overlay options

Select from the list below to overlay other forms of data

No overlay ▼

Time period

Display by

Custom



Day

Week

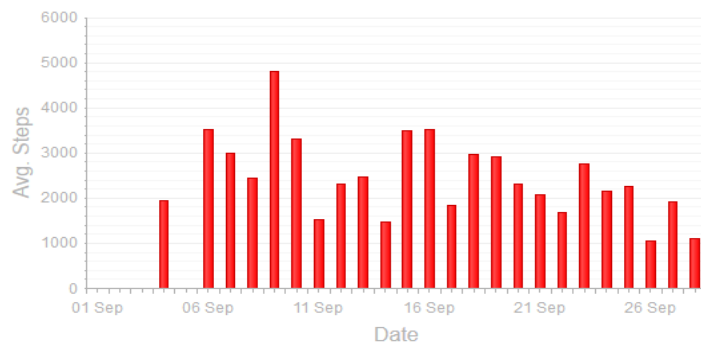
Month

Year

Data period: 01 Sep 14 - 28 Sep 14

[Click here to switch between Metric and Imperial units](#)

Activity



Toggle data view

- ☒ Steps
- ☐ Active minutes
- ☐ Kilometers walked

Options

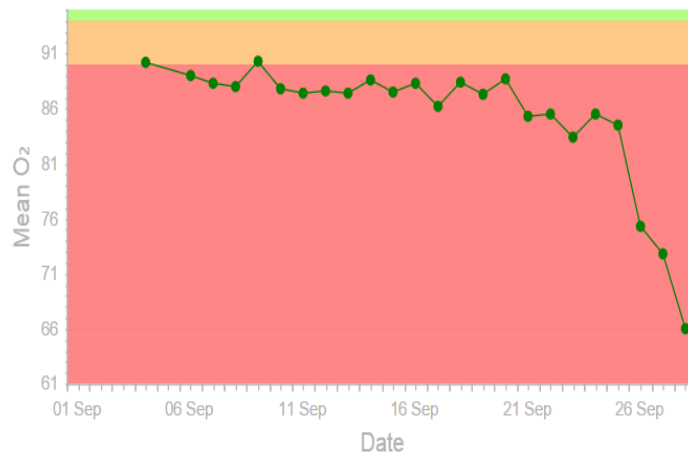
- Show daily averages? ☒
- Show as line graph? ☐
- Zoom in? ☐

[Click to change targets](#)

Add data

[Add steps manually](#)

Cardiovascular – oxygen saturation and heart rate



Toggle data view

- ☒ Mean O₂
- ☐ Mean Pulse (bpm)

Options

- Show as line graph? ☒
- Zoom in? ☒

Add data

[Add O₂ manually](#)
[Add Pulse manually](#)

Data summary

Total steps

58,856

Average steps

2,452

Targets reached

0 out of 24

Distance walked

38.26 kms

Calories burned

2,061

Body Analyser

The Activ8rlives BluetoothBody Analyser determines your weight and body fat and muscle composition. It also measures your visceral fat index.





Hospital at home
Self-care plans



Hospital Clinicians
Nurse Practitioners
GPs
Dieticians
Psychologists
Social workers
Teachers
Community leaders
Families
Parents
Young carers

Self-monitoring
Self-management
Self-reliance
Independence
Empowerment
Ownership
Responsibility



Alert

80% chance of
exacerbation in 8 days.
Contact your support
team now.
Ensure you have a
rescue pack available.



Self-monitoring better self-management

SBRI made all of this possible.

“Respiratory disease is the poor relation of the big three.”

- Inspiration to solve clearly defined problem.
- Invested in early-stage solutions.
- Credibility within NHS. Open doors.
- Supported development and clinical trials costs.
- Funded IP protection and Internationalisation of IP.
- Foundation for Horizon 2020 funding to get to market.
- Support, encouragement, advocacy & promotion.

