



Nottinghamshire Healthcare
NHS Foundation Trust

Use of 'Cowell' Technology to Enhance the Therapeutic Impact of Seclusion

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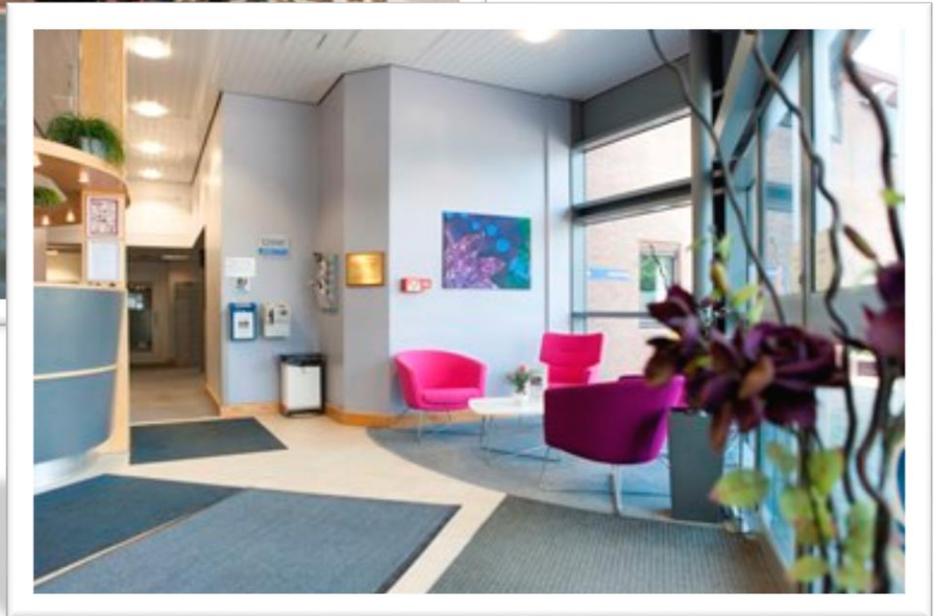
May 22nd 2018

MSU Annual Forum

Royal College of Psychiatrists, London



Arnold Lodge Medium Secure Unit, Leicester



Development of Arnold Lodge



Presentation

Technology use in mental health care

The Communication Wall ‘Cowall’

- Cowall applications
- Management and governance of Cowall

Clinical vignettes & patient feedback

Challenges and opportunities

Questions

Technology in Mental Health Care



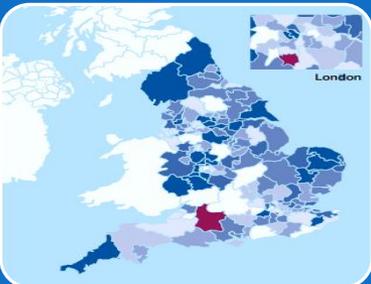
Grand challenges in Global mental health (Collins et al., 2011)

International panel; identified 25 grand challenges
Develop mobile and IT technologies to increase access to evidence-based care



ROAMER Project: Roadmap for Mental Health Research in Europe (6 research priorities) (Fiorillo et al., 2013)

Developing and implementing better interventions for mental health and well-being, using new scientific and technological advances



UK National Health Service: Five year forward view for mental health (Mental Health Taskforce, 2016)

Pivotal role for digital technology
NHS Choices, MH applications, voluntary sector & social media services
Nuanced digital delivery backed up with face-to-face interventions

Emerging literature base on the use of technology in mental health care

Sources

Systematic reviews

- * Kauppi et al. (2014). **Cochrane Review:** Information and communication technology based prompting for treatment compliance for people with serious mental illness
- * Naslund et al., (2015). Emerging mHealth and eHealth Interventions for Serious Mental Illness: A Review of the Literature

Official Guidance

- * **European Psychiatric Association (EPA) guidance** on the quality of eMental health interventions in the treatment of psychotic disorders (2016)

RCT Feasibility studies

- * Anguera et al., (2016): tested feasibility of RCT using assessments and treatments delivered entirely through mobile devices to depressed individuals

Conclusions

Strong evidence:

- web- and mobile-based interventions for people with schizophrenia and/or other psychotic disorders **are feasible and acceptable** both for patients and caregivers.

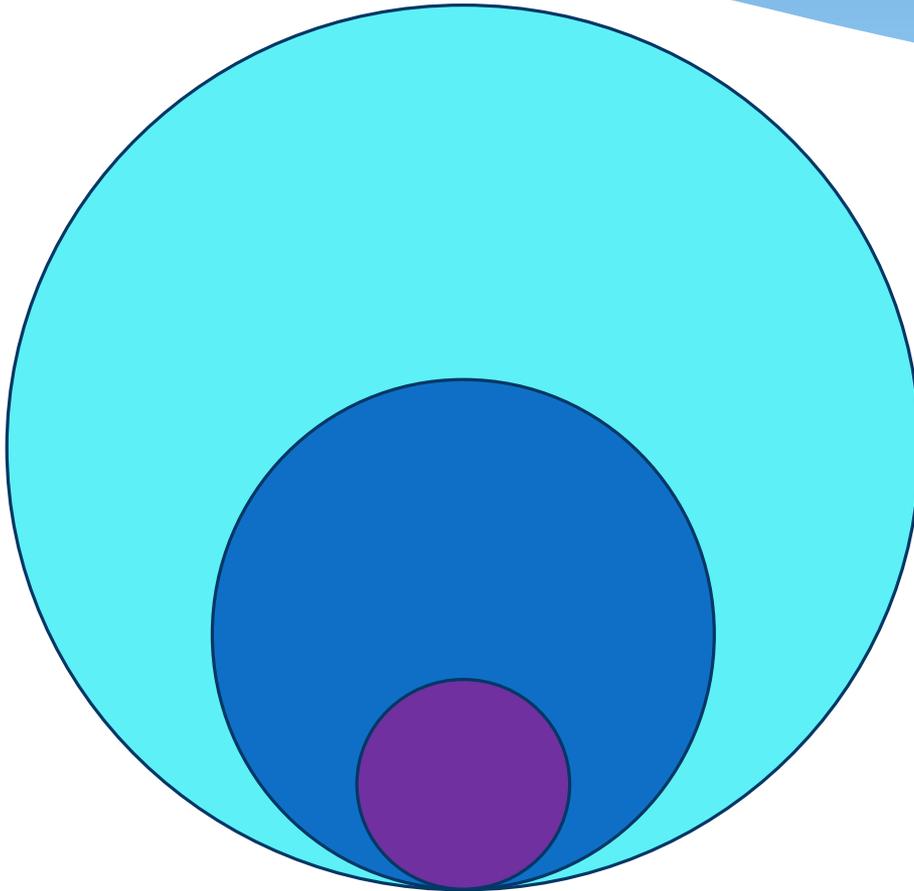
Moderate evidence:

- Technological interventions may improve
 - ✓ shared decision making
 - ✓ symptom monitoring
 - ✓ disease self-management / relapse prevention
 - ✓ information provision, psychoeducation, health promotion
 - ✓ patient empowerment

Preliminary evidence:

- technological interventions may improve outcomes by
 - ✓ fostering symptom reduction
 - ✓ encouraging treatment adherence

Target of tech interventions

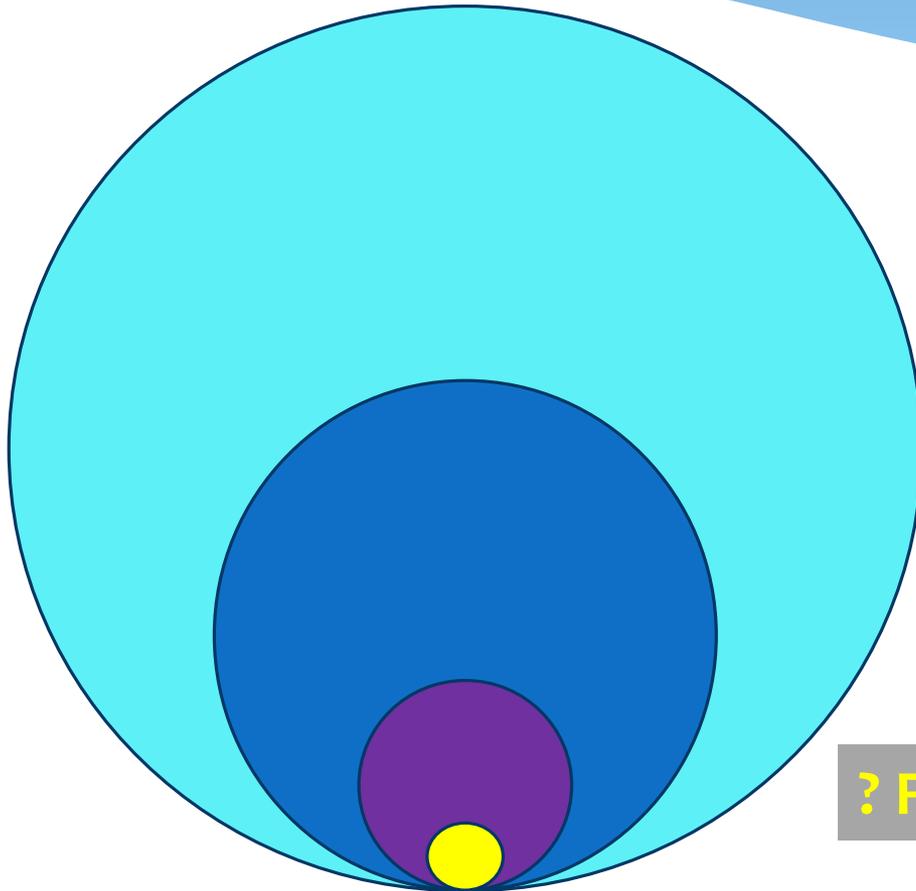


Community out-patients

Inpatient (general hospital)

Inpatient (psychiatric)

Target of tech interventions



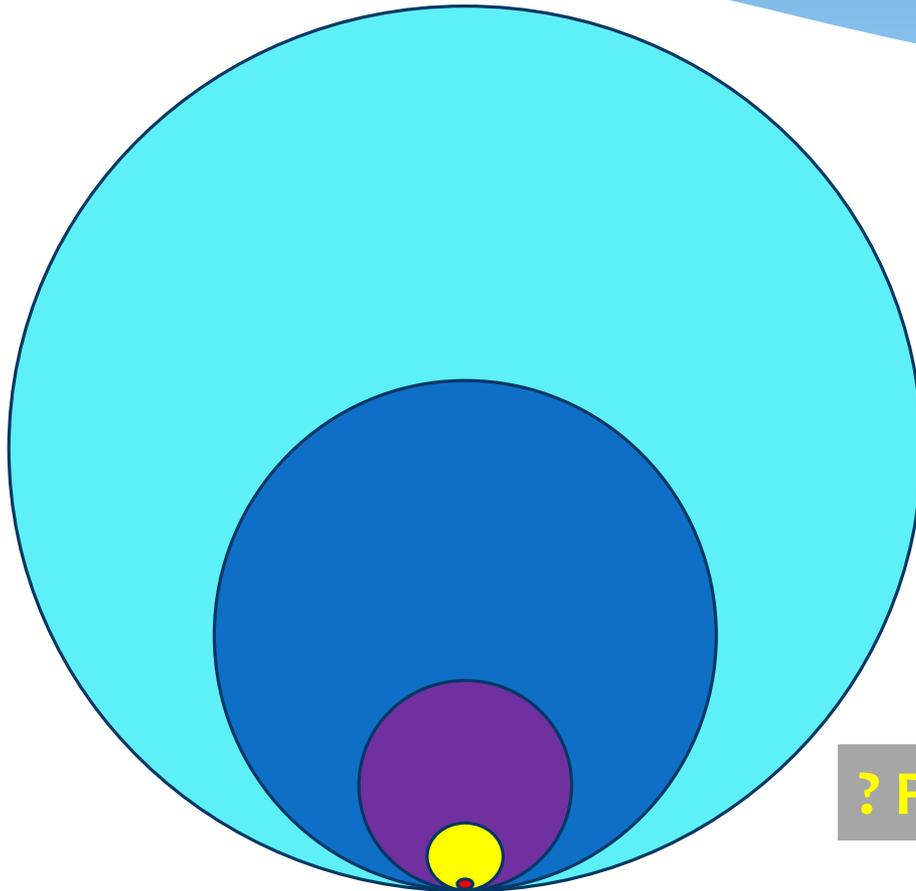
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? Forensic mental health (secure)

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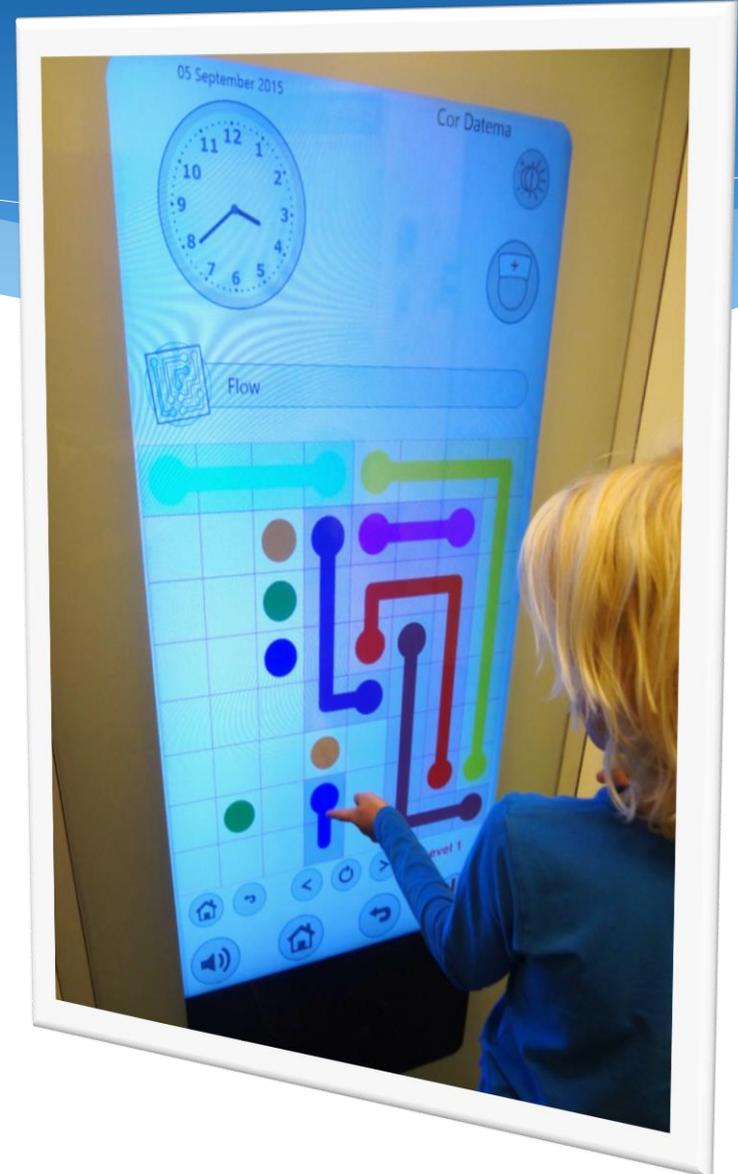
? Patients in seclusion

What is Cowall?

- * **Cowall is a door-sized, touch-screen device**
- * Developed in Netherlands by



- * **Cowall aims to help patients**
 - * to control aspects of their environment
 - * to re-engage and communicate with nursing staff and their multi-disciplinary clinical team





What does the Cowall provide?

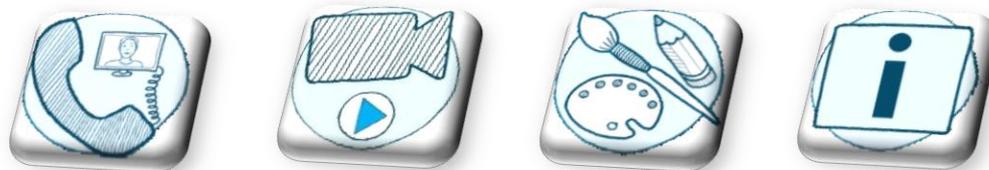
Patient perspective

Access to personalised, multi-media applications through an interactive screen

- * Easy navigation to 'apps' in 1-2 touch actions
- * Control of environmental stimuli (light, music, imagery, entertainment)



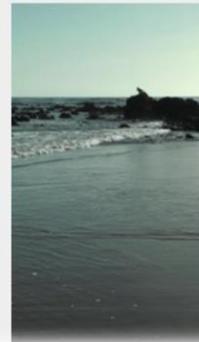
- * Access to communication tools



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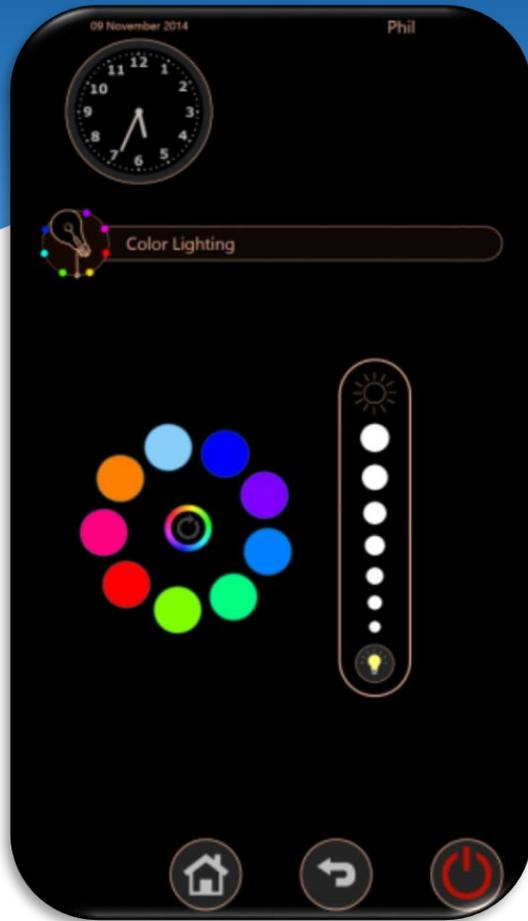
Visual imagery





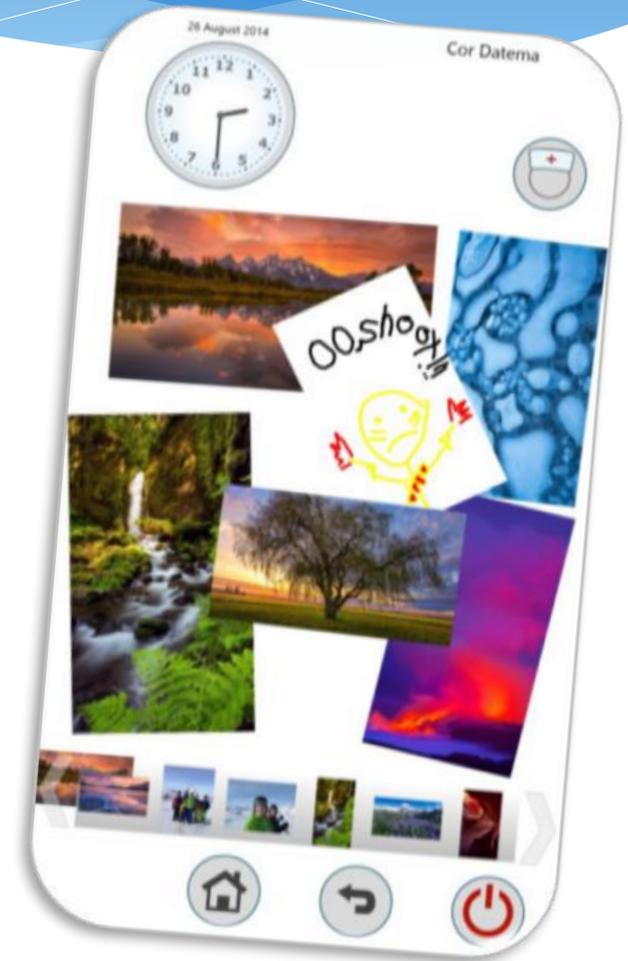
Glow wall

Adjustable colour lighting
Brightness and intensity of light can be varied





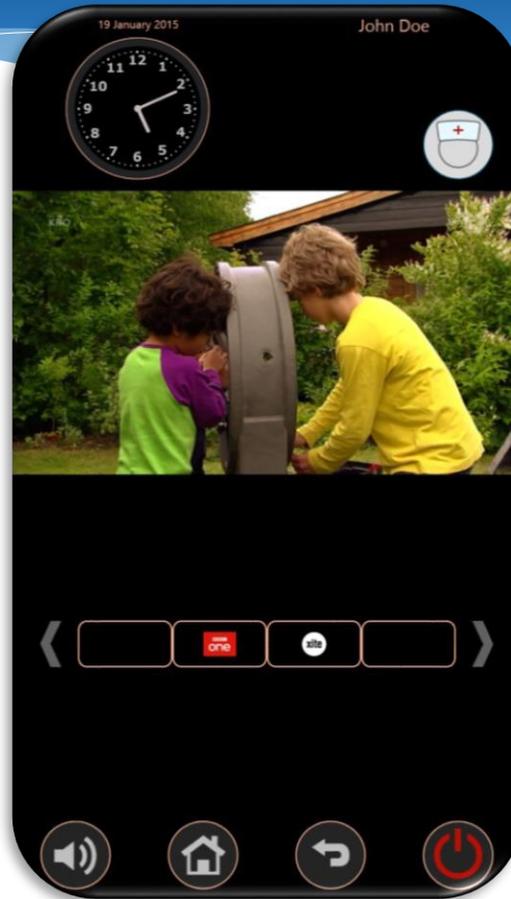
Artistic drawing and photo-collage 'apps'





Multi-level Puzzles & Games





Music player, Television & Radio

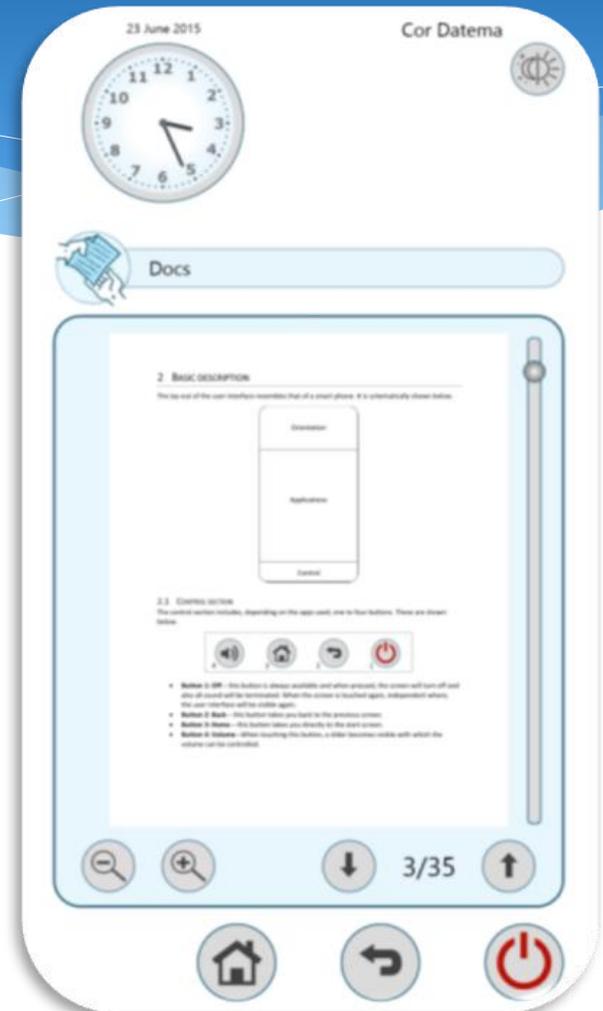
Communication apps



Telephone



Video phone



Document viewer

Patient profiles on Cowall

Individual patient profiles

Content easily adapted by staff

Responsive to patient needs:

- * social / emotional needs
- * capabilities (accessible apps)
- * clinical presentation

Personalised content:

- * photographs
- * music
- * documentation



Management of Cowall

- * **Multi-disciplinary steering group**

- * Consultant psychiatrists and medics from MMI service
- * Ward manager and senior nurses
- * Occupational therapists
- * Consultant clinical psychologist
- * Research fellow
- * I.T. Technical support officer and manager

- * **Local Procedure for Cowall use**

- * **Monthly meetings** - enables Cowall development to be responsive to patient and staff feedback
- * **Formal evaluation plan** - including case studies, staff and patient feedback, application use

Developing Cowall for patients

- * **Video clips**

- * demonstrating exercises and relaxation techniques appropriate to the setting
- * demonstrating review procedures (e.g. how staff will enter and exit the room)
- * TED talks

- * **Encyclopaedia**

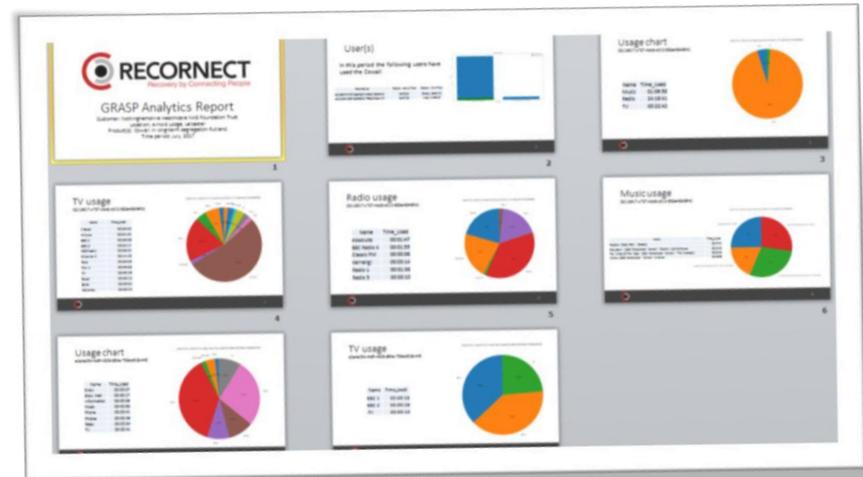
- * **Postcards** to myself (written by patient to themselves, to read in the event of entering seclusion)

- * **Menus and timetables** (provide choice/structure)



Evaluation plan

- * Series of Case studies (n=8 currently)
- * Monitor overall interaction with the Cowall
- * Assess use of specific applications
- * Patient feedback
 - * patients from MMI service
 - * patients nursed in the Cowall suite
- * Staff feedback
- * Timeline of patient use:
 - * link to Incident reports
 - * relationship to total time in seclusion



Initial feedback on Cowall

- * *‘Cowall is easy and fun to use’*
- * *‘It will give patients another way to communicate with staff’*
- * *‘Cowall will help patients manage their feelings’*
- * *‘Cowall will help patients communicate with their friends & family’*
- * *‘It may help patients move out of seclusion or long-term segregation more quickly’*

SJ – man in mid-30s, diagnosed with Schizophrenia 14 years ago

Longstanding inability to articulate his inner world

Highly concerning behavioural instability: disinhibited sexualised behaviour, threatens and undertakes interpersonal violence

Required seclusion for much of his current admission

In the Cowall suite he enjoyed the stimulating and relaxing use of music

Patient has made more specific use of the glow colour change function to aid relaxation

Staff are able to refer to his use of Cowall to enable less-problem focused discussion and as such, aid overall engagement

BA – 29 year-old man with Hebephrenic Schizophrenia and severe Borderline Personality Disorder

Multiple episodes of seclusion and long-term segregation

Secluded due to increasing risk to staff

For 4 weeks patient's usual behaviour in standard seclusion: sleeping all day, disengaged from nursing staff and MDT, ongoing hostility to staff

Moved to Cowall seclusion suite: patient remains hostile towards nursing staff, but more occupied / has better structure to the day (enjoying films on Film4 and music)

Patient is beginning to engage with MDT to discuss progression

JN- man with long-standing treatment-resistant schizophrenia

Multiple episodes of seclusion and long-term segregation

Patient declining structured day activities but will make use of Cowall functions

Self harm risk: patient has no access to pens and paper

Patient used the Cowall drawing app to write list of issues he wished to discuss with the multi-disciplinary review team

Aide memoire: patient able to view the Cowall during his seclusion review and cover all issues

Cowall increased patient's sense of control over review proceedings, and helped improve engagement with the multi-disciplinary team

Multi-disciplinary team perspective

Positive feedback:

- ✓ Easy to use and adapt for individual patients
- ✓ Offers additional environmental stimuli
- ✓ Offers patients in seclusion additional activities and opportunities to communicate and express themselves

Initial concerns:

Is Cowall safe for use by patients who are agitated or distressed
Is Cowall secure-can it be damaged?

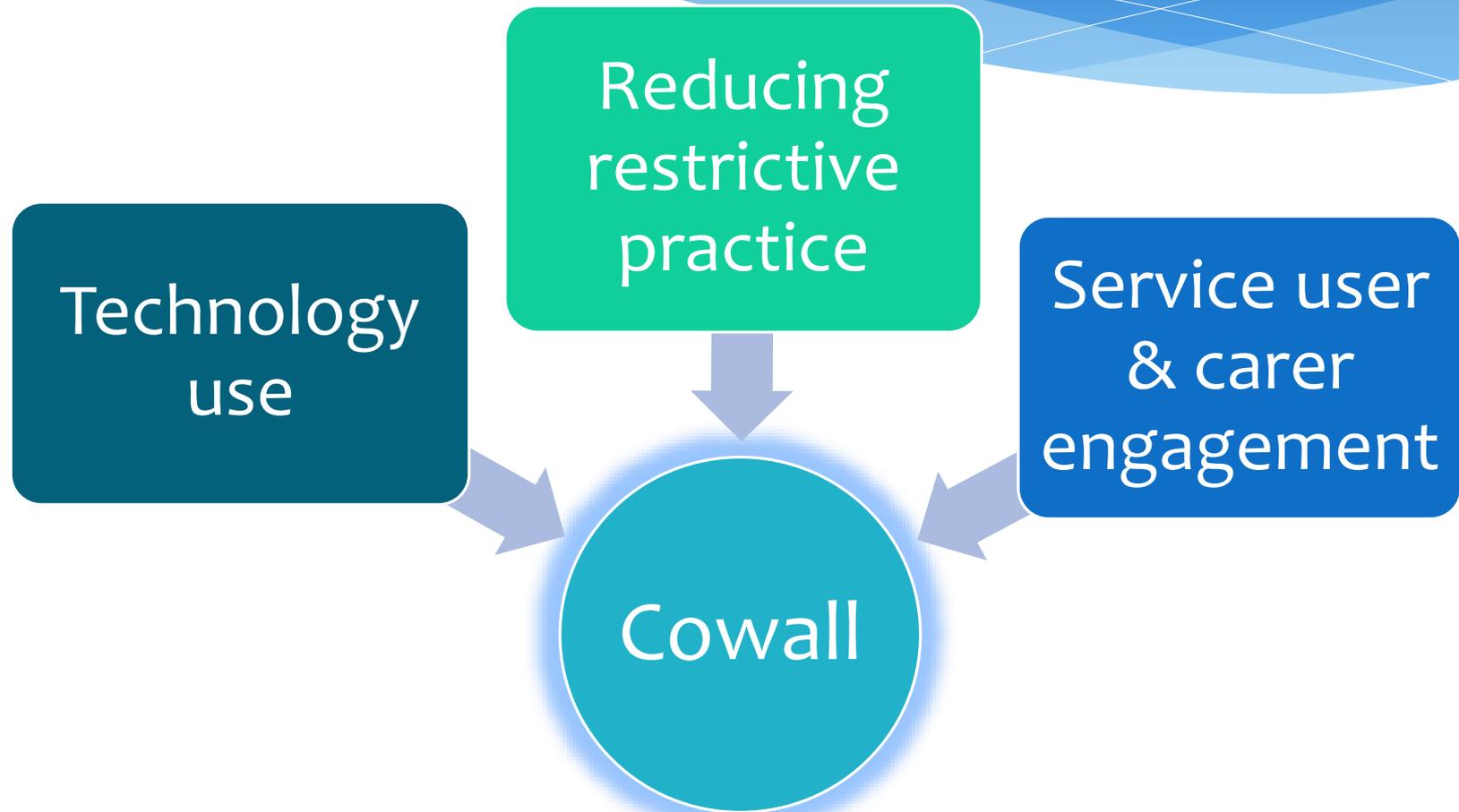
Competing clinical concerns



Competing clinical concerns



Alignment with priority areas of development in mental health care



Opportunities & challenges



Cyber security (NHS attack - May 2017)

Safe use of IT in forensic environment

Systems updates

Data analytics (interactive adaptable reports)

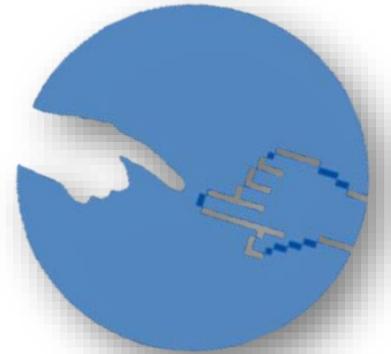
Future aspirations

Develop use of Cowall to support clinical care of the most vulnerable/challenging patients

Extend and develop innovative use of the technology

Publish results of our Cowall evaluation

Network opportunities-learning from others, support, ideas... **Who's in?**



Thank you for listening...
any questions?

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Cowall in action

- * This video shows how the communication wall can support the service user in re-gaining control and the start of the recovery process.
- * <https://www.youtube.com/watch?v=XpNfdzgmrX4>
- * This video demonstrates the security and resilience of Cowall
- * <https://www.youtube.com/watch?v=qEbkogGJwEg>

References

- * Collins PY, Patel V, Joestl SS, March D, Insel TR, Daar AS. Grand challenges in global mental health: A consortium of researchers, advocates and clinicians announces here research priorities for improving the lives of people with mental illness around the world, and calls for urgent action and investment. *Nature*. 2011;475(7354):27-30. doi:10.1038/475027a.
- * Andersson, G. et al., (2013) Randomised controlled non-inferiority trial with 3-year follow-up of internet-delivered versus face-to-face group cognitive behavioural therapy for depression. *J Affect Disord*. 2013 Dec;151(3):986-94. doi:10.1016/j.jad.2013.08.022.
- * Fiorillo A, Luciano M, Del Vecchio V, et al. Priorities for mental health research in Europe: A survey among national stakeholders' associations within the ROAMER project. *World Psychiatry*. 2013;12(2):165-170. doi:10.1002/wps.20052.
- * Kauppi K, Välimäki M, Hätönen HM, Kuosmanen LM, Warwick-Smith K, Adams CE. Information and communication technology based prompting for treatment compliance for people with serious mental illness. *Cochrane Database of Systematic Reviews* 2014, Issue 6. Art. No.: CD009960.
- * Eysenbach G. (2001) What is e-health? *J Med Internet Res* 2001;3(2):e20 <http://www.jmir.org/2001/2/e20> DOI:10.2196/jmir.3.2.e20
- * World Health Organisation (2011) WHO Library Cataloguing-in-Publication Data *mHealth: New horizons for health through mobile technologies: second global survey on eHealth*. 1.Cellular phone - utilization. 2.Computers, Handheld - utilization. 3.Telemedicine. 4.Medical informatics. 5.Technology transfer. 6.Data collection. I.WHO Global Observatory for eHealth. ISBN 978 92 4 156425 0 (NLM classification: W 26.5)
- * Anguera JA, Jordan JT, Castaneda D, et al Conducting a fully mobile and randomised clinical trial for depression: access, engagement and expense *BMJ Innovations* 2016;2:14-21.
- * Gaebel, W et al. (2016) *Eur Arch Psychiatry Clinical Neuroscience*, 266, 12-137.
- * Peters-Strickland T, Pestreich L, Hatch A, et al. Usability of a novel digital medicine system in adults with schizophrenia treated with sensor-embedded tablets of aripiprazole. *Neuropsychiatric Disease and Treatment*. 2016;12:2587-2594. doi:10.2147/NDT.S116029.
- * Vahia, I. V., et al. (2017). "Use of Tablet Devices in the Management of Agitation Among Inpatients with Dementia: An Open-Label Study." *The American Journal of Geriatric Psychiatry* 25(8): 860-864
- * Greysen SR, Khanna RR, Jacolbia R, Lee HM, Auerbach AD. Tablet Computers for Hospitalized Patients: A pilot study to improve inpatient engagement. *Journal of hospital medicine : an official publication of the Society of Hospital Medicine*. 2014;9(6):396-399. doi:10.1002/jhm.2169.
- * Naslund JA, Marsch LA, McHugo GJ, Bartels SJ. Emerging mHealth and eHealth Interventions for Serious Mental Illness: A Review of the Literature. *Journal of mental health (Abingdon, England)*. 2015;24(5):321-332. doi:10.3109/09638237.2015.1019054.
- * **Mental Health Taskforce for the NHS in England (Feb 2016) The Five Year Forward View for Mental Health** <https://www.england.nhs.uk/wp-content/uploads/2016/02/Mental-Health-Taskforce-FYFV-final.pdf>