



5G SUCCEEDS

5G SUCCEEDS (Setting Up CCE home Delivery System) Pilot study of developing 5G connected CCE home delivery system

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Introduction

- Colorectal cancer is the third most common cancer but the second leading cause of mortality (1).
- The COVID-19 pandemic has impacted the delivery of endoscopy services, potentially leading to delayed colorectal cancer diagnoses (2).
- One alternative to traditional endoscopy is Colon Capsule Endoscopy (CCE) (3).
- Currently, CCE procedures require patients to visit the hospital, but a pilot study called 5G SUCCEEDS aims to implement a different mode of delivery.
- Digitally enabled care can improve the effectiveness and productivity of the CCE service.
- In collaboration with NHS Arden we are Implementing a CCE home delivery system which offers various sustainability benefits, such as reducing the hospital's footprint, decreasing local air pollution, and providing increased patient choice.
- This approach aligns with the NHS X digital strategy, placing patients at the centre of care delivery.

Aims and objectives

- The primary objective is to determine whether CCE service can be fully delivered at a patient's home, rather than them attending the hospital for their appointment.
- The second objective includes assessing the patient's acceptability of the CCE home delivery service, assessing the efficiency of the CCE in the detection of pathology when compared to colonoscopy, and finally, assessing the bowel preparation quality, alongside the excretion and completion rate.

Method

Pilot study conducted at University Hospital Coventry and Warwickshire.

- Collaboration includes WM5G, NHS Arden, and Corporate Health International UK Ltd.
- All referred patients undergo screening, and those with low or intermediate risk for colorectal cancer are invited to participate.
- A specially designed CCE smart box, is delivered to patients' homes for remote communication and procedure administration.
- The study's objective is to recruit a sample size of 25 patients, with 15 patients already enrolled.
- The implementation of faster connectivity enables the use of a virtual assistant, offering patient support and guidance.
- The utilization of this technology aims to increase patient satisfaction by providing efficient and personalized care.

Re: 5G SUCCEEDS (setting up CCE home delivery system)

patient satisfaction questionnaire post CCE

1. Overall how satisfied were you with remote CCE examination?

☐ Very satisfied
☐ Satisfied
☐ Neither satisfied nor dissatisfied
☐ Dissatisfied
☐ Very dissatisfied

2. Using any number from 0 to 5 where 5 is extremely difficult and 0 is extremely easy, what number would you use to rate how easy it was for you to use the smartbox?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 - Extremely difficult

3. How clear was the video instruction?

☐ Extremely clear
☐ Very clear
☐ Somewhat clear
☐ Not so clear
☐ Not at all clear

4. Using any number from 0 to 5 where 5 is extremely difficult and 0 is extremely easy, what number would you use to rate how easy it was for you to swallow the capsule?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 - Extremely difficult

5. Did you experience any challenges while using the smartbox?

☐ Yes
☐ No

If yes, please describe below

6. Did you require assistance from your family member or a nurse while doing the procedure?

☐ Yes
☐ No

If yes, who and why?

7. How likely are you to have the remote CCE again, if clinically indicated in future?

☐ Very likely
☐ Likely
☐ Neither likely nor unlikely
☐ Unlikely
☐ Very unlikely

8. Did you experience any pain or discomfort during the procedure from 0 to 5? Where 5 is extremely painful and 0 is no discomfort

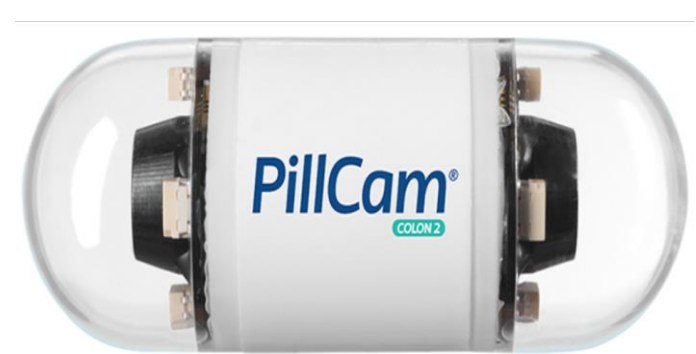
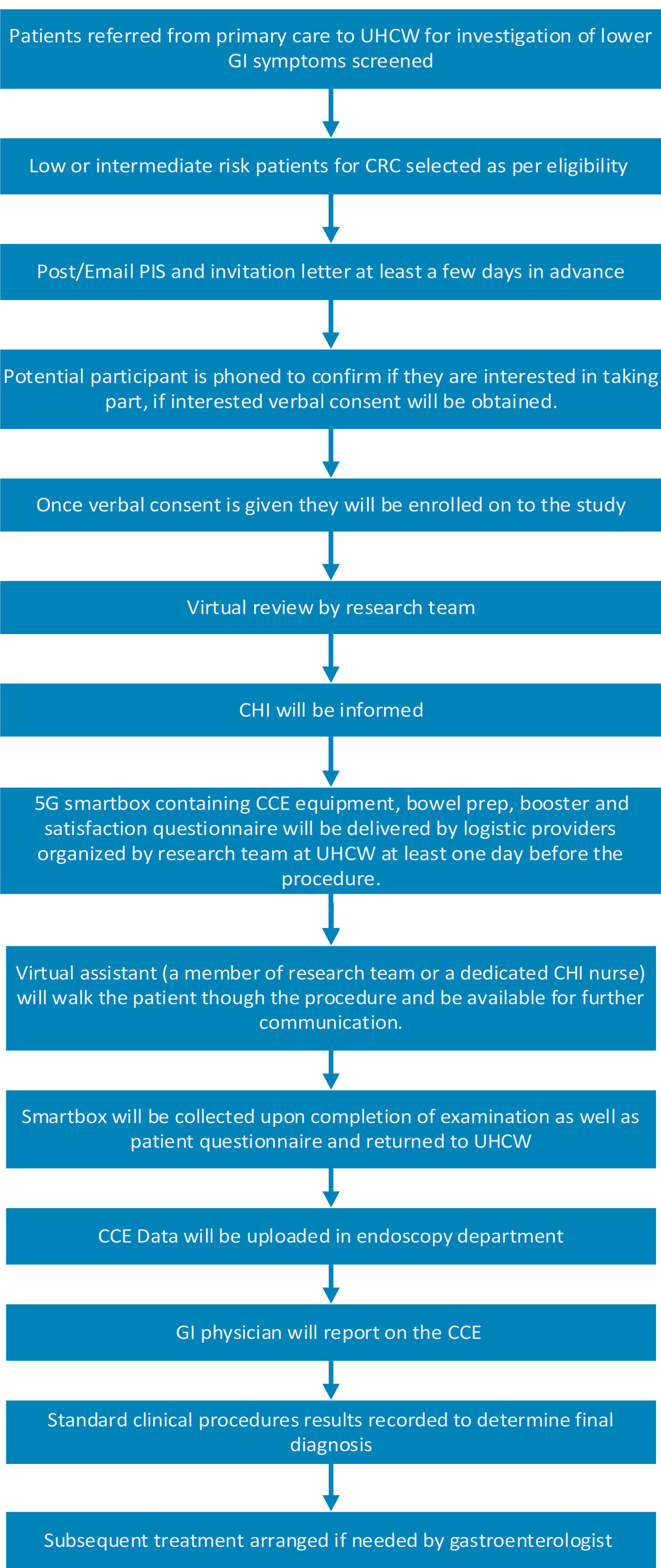
☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 - Extremely difficult

9. How easy was the use of bowel prep?

☐ Very easy
☐ Easy
☐ Neither easy nor difficult
☐ Difficult
☐ Very difficult

10. Did you manage to continue with your daily activity while having the capsule endoscopy?

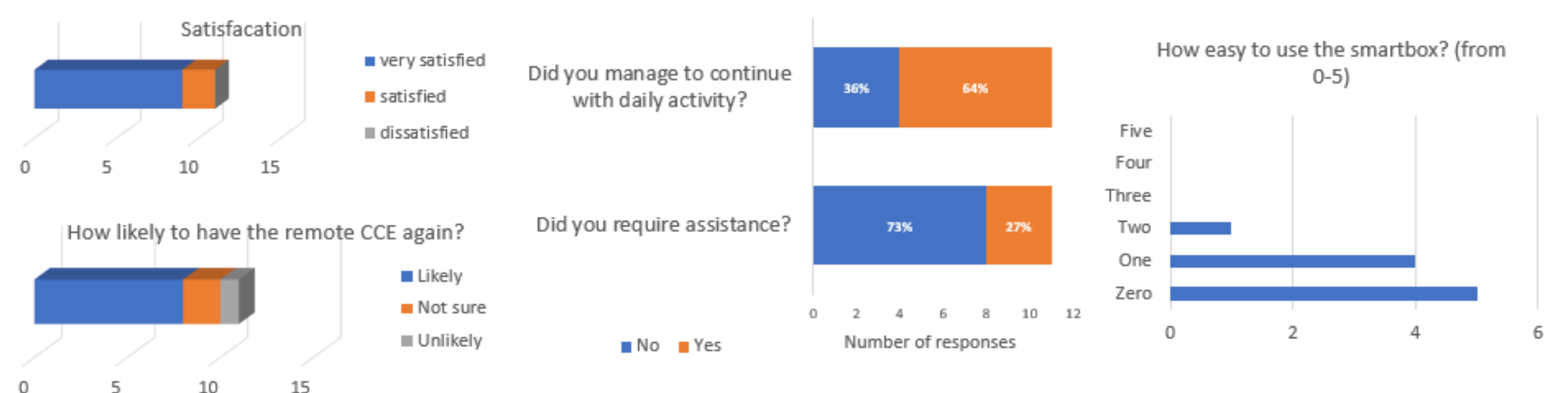
☐ Yes
☐ No



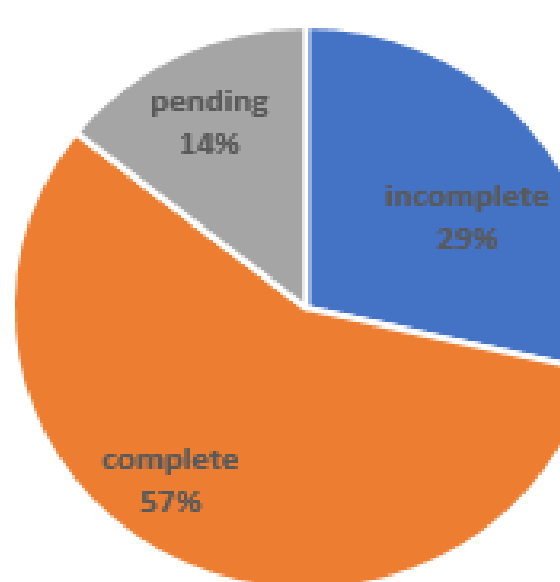
Preliminary results

The results section presents the findings from the pilot study. It includes the feasibility, efficiency, and patient acceptability of home delivery of CCE services.

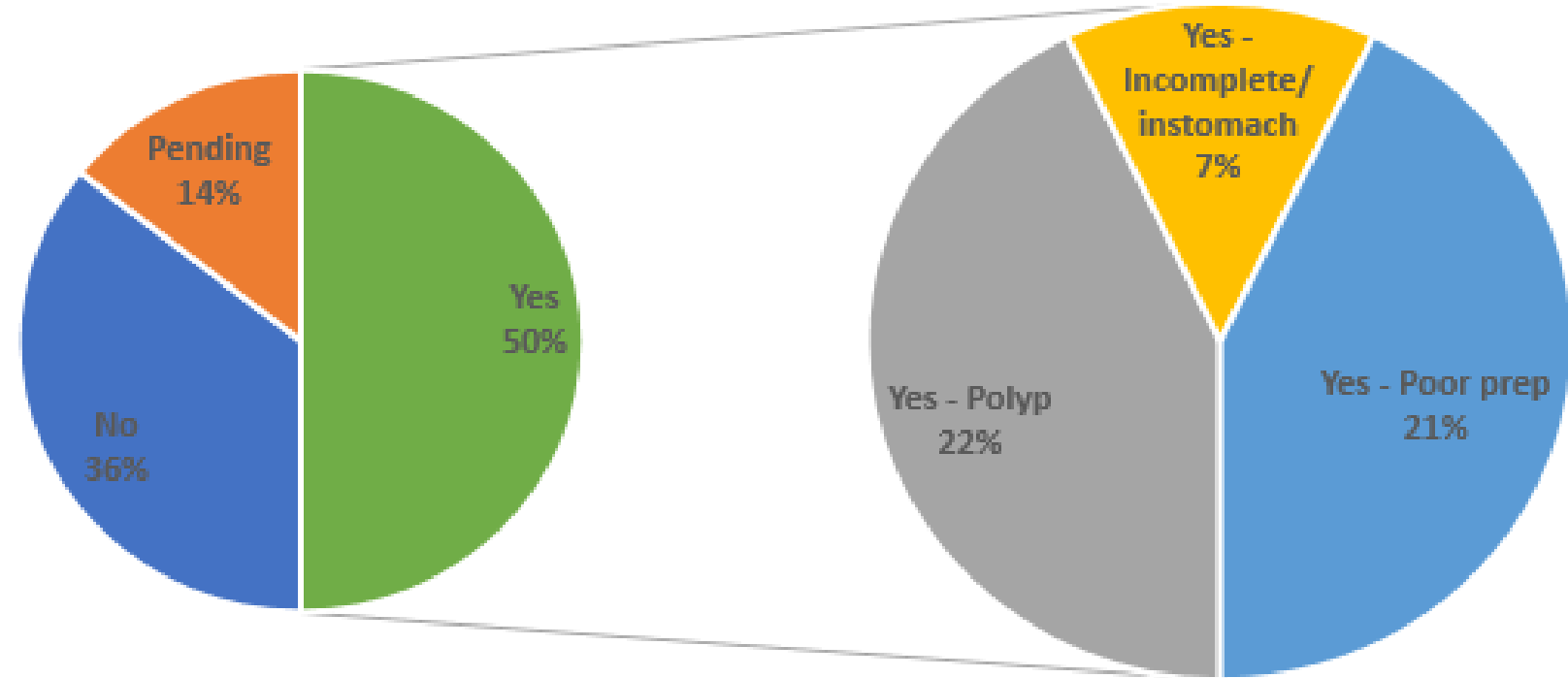
Satisfaction - Questionnaire results



Extent of examination



Subsequent endoscopy



Conclusion

This study demonstrates the advancement of integrated care systems and the adoption of innovative technologies in delivering CCE services. The study contributes to improving patient satisfaction through various parameters such as health service outcomes, cost savings, communication improvement, and reduced travel time.

Reference

- Colorectal Cancer Screening—Who, How, and When? (Bevan and Rutter, 2018)
- <https://www.england.nhs.uk/2021/03/nhs-rolls-out-capsule-cameras-to-test-for-cancer/>
- Impact of the COVID-19 pandemic on UK endoscopic activity and cancer detection: a National Endoscopy Database Analysis (Rutter et al., 2021)