Improving colorectal cancer outcomes through a digital solution: A case report from two Victorian hospitals in Australia

Pushkar Silwal[1*], Christine Georges[2*], Koray Atalag[1,3], Jack Leggat[1], Jiani Xu[1], Paul McMurrick[2]

1. The Clinician, Auckland 1010, New Zealand. 2 Cabrini Monash University Dept. of Surgery, Cabrini Health, Melbourne, Australia.
3. University of Auckland, Auckland Bioengineering Institute, Auckland 1010, New Zealand.

INTRODUCTION

Colorectal cancer is the third most common and the second most deadly cancer with approximately one million deaths globally [1].

More than 15,000 new cases were diagnosed and approx. 5,000 people died from colorectal cancer in 2021 alone in Australia [2]. For people with colorectal cancer, both the disease and its treatment can cause profound effects on quality of life, symptom burden, emotional wellbeing, and bowel/pelvic function. Understanding and delivering on what matters to patients effectively and efficiently requires seamless recording, reporting and analysis of patient reported outcome (PRO) data.

With the objective of delivering more patient-centred and personalized colorectal cancer care, two leading Australian hospitals, Cabrini Health, and The Alfred, partnered with digital health company, The Clinician, to implement a digital ePRO program that would follow the ICHOM Colorectal Cancer Set and integrate with the Colorectal Cancer registry in use.

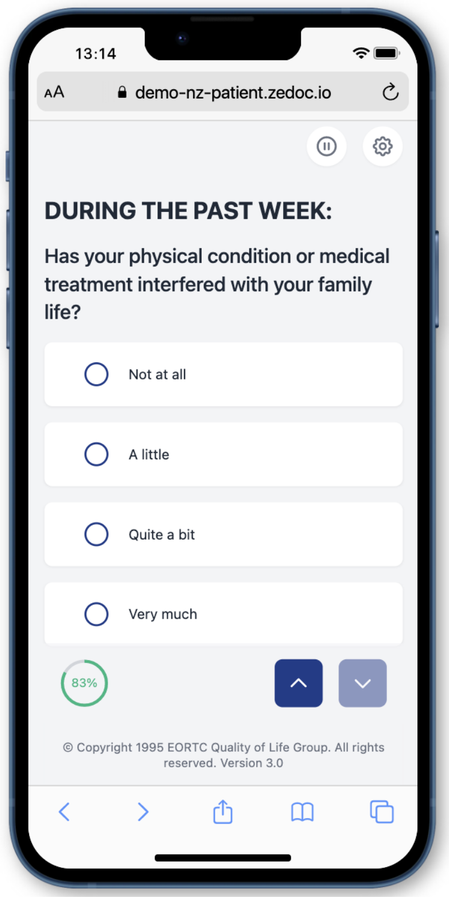
METHODS

The Clinician configured their digital health platform ZEDOC to automatically distribute and collect the PRO set out in the ICHOM Standard Set for Colorectal Cancer (e.g. EORTC QLQ-C30) from patients using their own devices in the comfort of their own homes.

Patient demographics and case mix variables are elicited through secure electronic data exchange from the CRC Audit Database, a clinical registry that collects an extended dataset defined by the Australia and New Zealand Binational Colorectal Cancer Audit registry. Any missing clinical and administrative data not collected by the registry can be entered using ZEDOC (e.g. mobile phone and/or email address).

The ICHOM Colorectal Cancer Set defined the PRO collection schedule (baseline, 6 months, 12 months, etc.), with patient outreach and data collection automated through ZEDOC at each digital touchpoint in the schedule. The Clinician also planned to embed the ZEDOC Provider Portal, a tool used by physicians and other users to view real-time results, into the registry user interface.

Through this integration, relevant PRO charts and reports will be visualized by users inside the Registry User Interface itself, with patient data available to the patient's care team and de-identified aggregate data available to other users.



RESULTS

- Implemented in two large hospitals in Victoria, Australia: Cabrini Health and The Alfred.
- >100 patients enrolled to date.
- >80% response rates from patients at home and in community.
- >70% patients reported their experience of answering PROs as positive.
- Positive feedback from healthcare teams, with surgeons using the PRO data collected during their patient consultations.

CONCLUSIONS

The project has implemented the full ICHOM Colorectal Patient-Centred Outcome Measures Set by automating the collection and analysis of PRO and other required clinical and administrative information not currently collected by the Registry. Analysis of preliminary data to determine the quantitative evidence on the impact on the health outcomes (e.g. improved survival) of the patients is underway.

[1] Xi, Y. and P. Xu, Global colorectal cancer burden in 2020 and projections to 2040. Translational Oncology, 2021. 14(10): p. 101174.
[2] Australian Institute of Health Welfare, Cancer in Australia 2021. 2021, AIHW: Canberra.

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CONTACTS

The Clinician
Jiani Xu: jiani@theclinician.com

Cabrini Health and The Alfred
Dr Christine Georges: cgeorges@cabrini.com.au