

A close-up photograph of a healthcare professional, likely a nurse or doctor, wearing a blue surgical cap and a white long-sleeved top. She is leaning over a patient, looking down at a medical scan or document held by the patient. The patient is a woman with dark hair, smiling and looking up at the professional. The background is softly blurred, showing a light-colored wall and a textured, light-colored blanket or bedsheet. The overall mood is professional and caring.

cemplicity°

USING REMOTE SYMPTOM MANAGEMENT TO

Improve outcomes for people with Advanced Breast Cancer

The case for change

Medical advances in recent years have led to growing numbers of people living with and beyond breast cancer. In the United Kingdom, for example, almost 8 in 10 (78%) people diagnosed with breast cancer survive for ten years or more¹.



However, for people with advanced breast cancer (ABC) there is no cure. Health services must focus on effective symptom management and optimising each person's quality of life.

Studies suggest ABC patients experience an average of 14 symptoms² and only a third of patients in a recent study report having good control over their symptoms³. This lack of symptom management is the most significant factor impacting their quality of life. This can lead to discontinuation of treatment and is potentially a factor in the threshold to treat. It can also lead to higher levels of unscheduled care incidents (ED visits, acute clinic visits etc), placing considerable burden and cost on healthcare providers.

Many healthcare systems are orientated around the cure; however this can leave ABC patients, with no chance of full recovery, feeling isolated and unsupported. Patients report feeling “abandoned” by the system and that their care is no longer a priority.

The situation is exacerbated by the severe shortage of specialist metastatic breast cancer nurses, a problem common to many countries around the world.

I'm still here

With a lack of reliable information, Breast Cancer Foundation NZ (BCFNZ) commissioned three studies on ABC care and outcomes, published in a comprehensive report in 2018. Called “I'm still here”, this project combined input from doctors and nurses, patients living with ABC, and analysis of data in the national register³.

As a result of the findings, BCFNZ has taken on the challenge of improving care for ABC patients, targeting more efficient use of healthcare resources and addressing the variation in care that is rife across regions and patient demographics.

“Our vision is a digitally-driven, best-practice, evidence-based symptom management for everyone with advanced breast cancer, leading to better quality of life and improved survival for patients, while reducing unscheduled care costs for hospitals.”

— Evangelia Henderson, Former CEO, Breast Cancer Foundation NZ

COVID-19

The COVID-19 pandemic has highlighted the critical need to continue to support cancer patients when they cannot attend clinics or meet health professionals face-to-face. Self-reporting symptom tracking systems are clearly going to have an important role in care models if patient needs are to be met.

The Basch Study⁴

Informing the BCFNZ plans is strong evidence. In this 2015 USA study of 766 advanced cancer patients, a real-time digital patient-reported outcome (ePRO) enabled patients to track and report their symptoms remotely, sending alerts to their nurse carer when symptoms were concerning.

Outcomes were compelling. Patients not only reported significant and clinically meaningful improvement in quality of life, there were fewer hospital admissions and increased treatment adherence. Median overall survival was 5 months longer in the ePRO group than in the usual care group, a stronger impact than many new cancer drugs achieve.

Patients who self-reported symptoms were less frequently admitted to the ER (34% v 41%) or hospitalised (45% v 49%), and they remained on chemotherapy longer (mean 8.2 v 6.3 months)⁵.

7%
less frequently
admitted to the ER

4%
less frequently
hospitalised

2
months longer sticking
with chemotherapy

The evidence showed that from both a clinical and a business case perspective, this remote symptom management using ePROs achieved better outcomes for patients, enabled better use of clinic time and reduced pressure on thinly-spread oncology nurses and busy clinics.

Revolutionising ABC Care

BCFNZ is committed to working with healthcare providers and patients to improve the treatment, survival and quality of life for all people with ABC.

The international ABC⁴ consensus guidelines state that every ABC patient should be treated by a specialised multidisciplinary team —

“including specialised side effects management and a nurse experienced in the treatment of ABC”⁶.

The publication of the Basch study and improved understanding of the value of remote symptom management suggests a significant opportunity to move to a new, more efficient and effective care model.

Integrating Clinical Decision Support with ePRO

Recognising that the shortage of experienced metastatic clinical nurse specialists left patients vulnerable to variations in care, BCFNZ saw a need to not only to adopt lessons from the Basch study but to go beyond, to integrate clinical decision support (CDS) with ePRO.

Not only does this enable customised best-practice care of patients in a resource-constrained system, it helps ensure consistent, bias-free, guideline-based response to symptoms, taking into account potentially complex comorbidities and reducing the risk of under- and over- treatment of some patients⁷.

CDS interventions are 75% more likely to succeed when decision support is provided to clinicians automatically, rather than requiring clinicians to seek out the advice of the decision support system.

With Cemplicity's technical input, BCFNZ developed and presented a proposal to New Zealand's Ministry of Health, who confirmed the project was of significant interest and that ePRO is a priority.

Waikato District Health Board joined the programme as the pilot site and a patient engagement strategy was developed.

The pilot includes:

- A new nurse specialist position in the public oncology service at Waikato.
- Using Cemplicity's specialised system to enable patients living with ABC to report their health state on a weekly basis, using an effective and digitally-enabled ePRO that provides real-time reporting to nurse specialists, including alerts when patients signal a change in their health state or need for support.
- Integrated within Cemplicity reporting, best-practice clinical decision support providing recommendations that consider the patient's clinical history and ePRO.

“The current COVID-19 circumstances have forced us to move to phone consults and to accelerate setting up of telehealth capability in this DHB. Oncology patients are a vulnerable group of patients as their underlying condition and immunosuppression increases their risk of a serious form of COVID-19 with potential life-threatening complications about five-fold.

Cemplicity's solution is exactly the kind of service that could help us deliver clinical care to breast cancer patients. With Cemplicity and Cambio, we'll be providing an alternative that will reduce the need for this highly immune-compromised group to come to hospital, and we expect to improve their quality of life while they're potentially “locked in” for a long time. We also expect to reduce the burden of unscheduled care for the DHB at a time when it can least afford to be giving it.”

— Dr Marion Kuper-Hommel, MD PhD FRACP
Clinical Director Medical Oncology, Dept of Oncology, Waikato DHB

The technical approach

In a unique approach, Cemplicity is working with Swedish Clinical Decision Support (CDS) experts, Cambio CDS⁸.

Under direction from BCFNZ and with the supervision of a clinical working group, Cambio has compiled comprehensive CDS guidelines for the management of the different symptoms experienced by ABC patients. These guidelines incorporate the eviQ cancer treatment protocols developed by multidisciplinary teams of cancer specialists for the Australian government⁹ along with other widely-used guidelines.

Using a secure, light-touch integration with each health provider's medical record system, Cemplicity sends patients an invitation to provide feedback by email or SMS. The survey asks each patient if they are experiencing symptoms. If so, it goes on to ask more detailed questions about the nature and severity of each of them. The ePRO programme includes validated survey tools, PRO-CTCAE, ESAS and FACIT-PAL-14, and has been reviewed and refined by consumers and cancer experts.



Real-time responses



Automatic alert



Aggregating information

As the patient responds, their ePRO is matched to the clinical data from their medical record in real-time. A specialist nurse receives a real-time alert if the patient's response meets or exceeds a pre-set alert threshold. These thresholds are based on either new symptoms appearing or a worsening in symptoms since the patient's last response.

Simultaneously, Cemplicity draws in CDS guidance from the Cambio system, which is tailored to the patient's ePRO response, comorbidities and medications.

All this information, the ePRO and the CDS guidance, is accessed by the specialist nurses, oncologists and support staff in the Cemplicity reporting portal.

The ambition

The pilot project will run through to 2021. Cancer services in New Zealand, Australia and wider afield are already expressing interest in participating or in following the pilot outcomes.

BCFNZ's ambition is that all people living with ABC will receive consistent advice and support, reflecting the latest evidence in effective breast cancer care. The 2018 report "I'm still here" sets valuable benchmarks against which the impact of this pilot can be assessed.

The ambition includes:

- 1. ABC patients will receive the same attention from health service as people with curable conditions.**
- 2. Symptom management will be significantly improved, improving the length and quality of life of patients.**
- 3. Care across the country will follow the latest evidence base and as a result, outcomes will be consistent for all people irrespective of their demographic group or healthcare provider.**
- 4. Use of resources will improve; specialist nurses will be able to efficiently support and triage patients, enabling oncologists to focus on patients who need their specialist care.**
- 5. Patient experience will improve. People will feel better supported and able to communicate their health condition, concerns and preferences. They will also feel connected to their health service without having to make unnecessary trips to the hospital or clinic.**
- 6. Cost of care will be reduced through the use of remote, digital monitoring and the introduction of specialist nurses to support oncologists**

Learning and the impact of this programme will be available to cancer services and interested parties.

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