



ALL.CAN AUSTRALIA

Cancer Care Navigator Analysis

FINAL REPORT

16 SEPTEMBER 2021





OUR VISION

To positively impact people's lives by helping create better health services

OUR MISSION

To use our management consulting skills to provide expert advice and support to health funders, service providers and users



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1 INTRODUCTION

1.1 PROJECT BACKGROUND

Research undertaken by All.Can Australia found that Australian cancer patients encounter significant confusion and distress when moving through the health system to receive treatment and support. An international survey of cancer patients undertaken by All.Can in 2018 found that patients with access to cancer specialist nurses were better able to overcome these barriers to care. However, existing Australian nursing and navigator models mainly target a small number of more common cancers (prostate, bowel, breast and lung).

All.Can Australia is seeking to:

'increase national access to Cancer Care Navigators [CCNs], which will relieve patients and their carers of the system-related stress and concern that they experience.'

All.Can Australia engaged Healthcare Management Advisors (HMA) to assess the *optimal [CCN] role for Australian cancer patients and their families*.

1.2 PROJECT OBJECTIVES AND METHODOLOGY

The broad objectives of the project undertaken by HMA were to:

- define the optimal role of a CCN regardless of cancer type
- conduct a health economic analysis of the proposed CCN function
- identify the messages and takeaways that will be most powerful in the context of patient impact, clinical need, return on investment, and the legislative and policy environment, and

- prepare an advocacy toolkit to present the key messages from the project findings.

To meet these objectives, the project was completed in five stages between July 2020 and April 2021:

- **Stage 1:** Project initiation to confirm scope and method for the project. (completed July 2020).
- **Stage 2:** Feasibility assessment (completed December 2020)
- **Stage 3:** Economic analysis of CCN models (completed April 2020)
- **Stage 4:** Preparation of a final report (completed May 2021)
- **Stage 5:** Development of an advocacy toolkit (completed May 2021)

This report is the main deliverable from Stage 4, the final report.

1.3 PROJECT DATA SOURCES

This project used data from several different sources. Stage 2 of the project, the Feasibility Assessment, included:

- a literature scan of both peer reviewed and grey literature on the role, scope and benefits (including health economic benefits) of a CCN role
- stakeholder consultations with members of the All.Can Australia Steering Committee, clinicians, peak body representatives, cancer support organisations and a small number of consumers; these consultations occurred between 7 September and 30 September 2020, and
- a workshop of the All.Can Steering Committee held on 8 October 2020 that reviewed the findings of the literature scan and report on stakeholder consultations and formulated design specifications for a proposed Australian CCN role.

1 INTRODUCTION

Stage 3 of the project, the Economic Analysis, was informed by:

- a literature scan of both peer reviewed and grey literature to examine the impact of a CCN role on the costs of cancer for the health system, workplace productivity, other financial costs and income security payments
- a 2005 economic study undertaken by Deloitte Access Economics titled 'Costs of Cancer in NSW' which informed modelling of the impact of CCNs on the cost of cancer in Australia, and
- operational and financial data provided by Rare Cancers Australia, the Queensland Nurse Navigation Service, and the McGrath Foundation, which enabled the cost of an All.Can CCN service to be determined.

1.4 STRUCTURE OF THIS REPORT AND SUPPORTING DOCUMENTATION

This report summarises project outcomes from Stage 2 of the project, the Feasibility Assessment, and Stage 3, the Economic Analysis (see section 1.2), and proposes an option to fund a national All.Can CCN service. The report begins by providing information on the project context (this chapter) with the remainder of the document comprising:

- **Chapter 2** – key findings from the Feasibility Assessment and Economic Analysis
- **Chapter 3** – a proposed approach to fund a national All.Can CCN service
- **Chapter 4** – conclusion on the viability of a CCN role in an Australian context, based on the project findings, and
- **Appendix A** – references

Detailed information that provides additional context on the findings presented in Chapter 2 of this report is presented in:

- **Technical paper 1** – the Feasibility Assessment, which includes:
 - a series of detailed design specifications that define the role and functions of an All.Can CCN service
 - a vision statement for a national All.Can CCN service, and
 - several use cases to illustrate how the CCN service would cater to patients with different care needs; and
- **Technical paper 2** – an economic model that gives detailed costs and savings generated by the proposed national All.Can CCN service.

2 CANCER CARE NAVIGATOR ANALYSIS: KEY FINDINGS

2.1 OVERVIEW

This chapter of the report summarises key findings from Stage 2 of the project, the Feasibility Assessment, and Stage 3 of the project, the Economic Analysis.

2.2 THE FEASIBILITY ASSESSMENT

2.2.1 Background

The Feasibility Assessment informed All.Can's examination of two main issues:

- how the role and functions of a CCN can be defined to provide greatest accessibility within the Australian health system, and
- whether CCN roles are likely to be cost saving, cost neutral or net cost incurring.

The analysis was informed by:

- a literature scan of both peer reviewed and grey literature on the role, scope and benefits (including health economic benefits) of a CCN role
- a round of stakeholder consultations in September 2020 that included members of the All.Can Australia Steering Committee, clinicians, peak body representatives in the area of cancer care, and a small number of consumers, and
- a workshop of the All.Can Steering Committee that reviewed the findings of the literature scan and report on stakeholder consultations and formulated design specifications for a proposed Australian CCN role.

2.2.2 Model of care design features

The main design features that were formulated in the Feasibility Assessment stage are listed below:

- (1) **Scope of services:**
 - (a) the focus of the proposed All.Can CCN role will be on appropriate and efficient navigation of patients through the care pathway. The delivery of clinical care will be limited but may include psychosocial support. Patients requiring medical or nursing clinical care will be referred to an appropriate provider; such clinical functions are outside the scope of the proposed All.Can CCN role.
 - (b) A core focus of an All.Can CCN will also be to provide information and education to patients, families and carers.
- (2) **Service commencement** – from diagnosis through to end-of-life care.
- (3) **Eligibility** – all cancer patients excluding those with access to existing comparable support services (e.g. specialist nurse services are available for patients with lung, bowel, breast and prostate cancer) (see section 3.1).
- (4) **Staffing** – oncology nurses (not tumour-specific specialist nurses) and oncology experienced allied health staff (mainly social workers and psychologists).
- (5) **Delivery method** – the predominant delivery method used by the All.Can CCN will be phone / video conference. For patients with high-level needs, limited provisions for in-person support will be made available.
- (6) **Referral relationships:**
 - (a) Where existing tumour-specific support services already exist, patients will be referred to those services.

2 CANCER CARE NAVIGATOR ANALYSIS: KEY FINDINGS

- (b) The holistic needs of patients will be met by connecting them with support services that are relevant to their individual needs.

Several additional model-of-care design features that relate to out-of-scope functions, the use of technology and the required knowledge for All.Can CCNs are detailed in Technical Paper 1.

2.2.3 Economic viability of a CCN model

The All.Can project brief required HMA to assess if an All.Can CCN service was likely to be cost saving, cost neutral or net cost incurring. A review of health economic literature found that:

- although there is a higher initial cost associated with a CCN, the rate at which health associated costs decrease is faster than for non-navigated patients [1]
- CCNs are a cost-effective intervention for improving screening rates and diagnostic resolution [2] [3] [4] [5]
- the time saving associated with other health professionals not having to perform patient navigation services offsets the cost of a navigation model by approximately 30% [6], and
- the use of CCNs as part of the end-of-life care phase may result in improved cost effectiveness by eliminating unnecessary and costly treatments [7].

However, these findings were based on results from studies which varied in methodological quality and are yet to be validated by further published studies. HMA's literature scan concluded that there was:

'a lack of Australian based research and a wide variety of model types reported in the international literature, [making] it difficult to conclusively determine the likely economic effects of a more widely available CCN role [when applied in an Australian context]'

To address this gap, the project team, in consultation with the All.Can Steering Committee, agreed that a high-level economic model would be built to demonstrate the economic viability of an All.Can CCN service.

2.3 ECONOMIC MODEL OF PROPOSED ALL.CAN SERVICE

2.3.1 Background

The project team identified a 2005 study by Deloitte Access Economics 'Cost of Cancer in NSW' which estimated the economic effects of cancer care in Australia. Adaptation of the economic model to the needs of this project was completed by:

- adjusting the pricing assumptions of the 2005 model to current (2019–20) prices, and
- incorporating specific assumptions about changes to the model-of-care costs for cancer patients when assisted by the proposed CCN function, based on assumptions derived from the literature scan.

The adapted model considered the cost of running an All.Can CCN intervention against the net financial impact derived from the CCN role from changes to costs for:

- cancer related medical care
- cancer support service costs, and
- workplace productivity.

The costs were considered from the perspectives of the patient, government and society.

Based on this adapted model the project was able to:

- (1) determine the projected economic impact of the proposed All.Can CCN role, and
- (2) undertake scenario modelling to identify sensitivity impacts when modifying key model assumptions.

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2.3.2 Cost of an All.Can CCN service: summary of model outputs

The direct input cost of a national All.Can CCN service was estimated at \$56 million per annum. This estimate was informed by data provided by Rare Cancers Australia, the Queensland Nurse Navigator Service and the McGrath Foundation, who deliver comparable support services.

Table 2.1 provides a profile of the costed model of care.

Table 2.1: Estimated cost of an All.Can CCN service (2019/20 prices)

COST DRIVER	CCN SERVICE COSTING ASSUMPTION
Service utilisation rate	20% of eligible cancer patients require the service
Patients supported per direct support staff member per annum	400
Estimated number of cancer patients receiving CCN services per annum	51,500
Staffing type	Clinical nurse and / or allied health clinician
Intervention mode	90% telehealth, 10% in-person services (average of two in-person contacts per eligible recipient)
Modelled annual cost	\$32 m

2.3.3 Efficiency gains generated by a national All.Can CCN service

Findings from the literature showed that CCNs reduce the economic cost of clinical care, workplace productivity losses and other financial expenses incurred due to cancer. Table 2.2 (see next column) summarises the modelled savings generated by an All.Can CCN service for each of these areas.

Table 2.2: Savings generated by an All.Can CCN service (2019/20 prices)

Cost domain	Model Assumption Derived from the Literature Research finding	Modelled change in cost (\$m)
Health system costs		
Inpatient care	Reduction in ED and inpatient costs by 20%	-67
Primary care	CCNs redirect care out of tertiary settings into the community (5% increase in primary care costs) [3]	+6
Prescription medicine	Increase in prescription medicine expenditure by 20% [4]	+19
Clinician time	Time saving for other clinicians not having to perform CCN functions [5]	-21
Efficiency of patient care	Increased efficiency of patients through the cancer treatment pathway [6]	-2
Patient appointment no-shows	Reduction in patient appointment no-shows [7]	-1
Workforce productivity		
Employee absenteeism	Reduction in employee absenteeism by 2 days per year	-5
Other financial costs		
Community-based palliative care	Increase in cancer patients attending community palliative care	+2
Patient transport costs	Decrease in patient transport costs	-7
Education expenses	Transfer of education expenses experienced by not-for-profit providers to the All.Can service	-3
Gross savings		-79

2 CANCER CARE NAVIGATOR ANALYSIS: KEY FINDINGS

Table 2.3 presents the net savings generated by an All.Can CCN model based on the cost of the service (Table 2.1) and the gross savings generated (Table 2.2). The modelling projects that an All.Can CCN service would lead to an **annualised saving of \$46 million in 2019/20 prices, or \$900 per recipient**. Given an overall service cost of \$32 million, this represents a **return on investment of 44%**¹.

Table 2.3: Net savings generated by an All.Can CCN service (2019/20 prices)

	CCN Model of care cost	Health system (\$m)	Workforce productivity (\$m)	Other financial costs (\$m)	Net savings (\$m) ²
Change in the economic cost of cancer (2019/20)	+32	-66	-5	-8	-46

¹ These are conservative estimates which have not considered a range of potential savings. More detail on the methodology used to design the model, including scenario analysis, is provided in Technical Paper 2, the Economic Analysis.

² Due to rounding the net savings shown is lower than the sum of the figures by \$1 m.

3 FUNDING AN ALL.CAN CCN MODEL: POSSIBLE APPROACH

3.1 OVERVIEW

Cancer navigation services in Australia are currently limited to specific tumour streams and / or jurisdictions. Examples include:

- The McGrath Foundation's Breast Care Nurses
- Prostate Cancer Specialist Nurses
- Rare Cancers Australia Patient Care Team
- Ovarian Cancer Australia Specialist Nurses
- Lung Foundation's Lung Cancer Nurses
- The Queensland Nurse Navigation Service

These programs have demonstrated the ability of specialist cancer nurses and navigators to improve the quality, efficiency and cost effectiveness of cancer care in Australia [6] [8]. However, they are not accessible to all cancer patients.

The economic modelling summarised in Chapter 2 found that a comprehensive, nationally available Australian CCN service could generate significant net economic savings. As shown in the previous chapter, these savings would accrue through efficiency gains to the health system (i.e. reductions to inpatient care, emergency department presentations and clinician time required per patient), workforce productivity gains and reductions in other financial costs, e.g. patient transport. Therefore, there would be significant benefit for a budget allocation that facilitates a trial of the proposed model to test the key assumptions and model-of-care characteristics. Assuming positive findings from a pilot, this would support the subsequent rollout of a national CCN program. The service would not seek to substitute existing navigation services; rather, it would target cancer patients who are not receiving services through current programs.

3.2 PILOT PROGRAM FEATURES

This analysis has found that an All.Can CCN model would have significant implications for health service delivery and productivity impacts elsewhere in health and the broader economy. We suggest that a pilot program is needed to test the proposed design principles and verify the level of potential savings suggested by the preliminary economic modelling. Design specifications to guide the pilot process are:

- (1) **Model of care** – in-scope services for the model will be guided by the design principles outlined in Technical Paper 1, the Feasibility Assessment.
- (2) **Location:**
 - (a) the pilot should be run in a single jurisdiction to limit costs and facilitate streamlined governance arrangements. Tasmania and South Australia both offer suitable locations for several reasons:
 - (i) their relatively small population sizes would limit the cost of the pilot program
 - (ii) their well-defined geographic areas facilitate service access
 - (iii) minimal patient leakage to other jurisdictions would occur, reducing the complexity associated with tracking changes to care costs generated by the CCN model.
 - (b) Suitable teaching hospitals in metropolitan areas should be used as the physical location for the service to ensure equitable access for the pilot target population.
- (3) **Population** – the eligible population should include all patients with a cancer diagnosis who are not eligible for an existing navigation service (as listed in section 3.1).

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- (4) **Timeline** – the pilot should run for three to five years to ensure reasonable capacity to measure the knock-on impacts (both financial and care-related) of pilot implementation. Evaluation of the pilot impacts will need to include tracking the nature of navigation support required by different patient types over the course of their disease progression.
- (5) **Evaluation** – formative and summative evaluation processes must be incorporated into the pilot's scope to establish evidence on the service's appropriateness, effectiveness and ability to improve care efficiency.
- (6) **Cost** – the cost of a pilot program is estimated to be \$5 million per annum if run in South Australia and \$2.6 million per annum if run in Tasmania, based on the service profile specified in section 2.3.2³.

3.3 FUNDING

We suggest funding for an All.Can pilot be supported by a Specific Purpose Payment from the Commonwealth to the relevant state, matched by a 1:1 state contribution.

³ A \$1.0 million provision for project management expenses and evaluation processes has been incorporated into these costs (calculated at a rate of 30% of the SA service cost).

4 CONCLUSION

This project has demonstrated that funding for a national CCN would address current inequities in access to cancer navigators that are affecting the quality and efficiency of cancer care in Australia.

An evidence-based model of care based on design features formulated by the project could guide the rollout of an All.Can CCN service across Australia.

Financial modelling undertaken by the project suggests that implementing the service would lead to net economic benefits for health services, workplaces, the Commonwealth and jurisdictions, non-government organisations and patients.

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