

A SYSTEMS-THINKING STUDY TO OPTIMISE DIETARY AND EXERCISE REFERRAL PRACTICES FOR CANCER SURVIVORS IN AUSTRALIA

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**on behalf of the Flinders Caring Futures Institute Cancer Survivorship Program*

BACKGROUND

Optimising dietary and exercise referral practices for cancer survivors requires a better understanding of complex factors that are part of an interconnected system that may facilitate or impede referral practices.

AIM

To identify system-level factors, their interconnectedness, and innovative strategies for optimising dietary and exercise referral practices.

METHODS

- Systems-thinking study based on the six WHO building blocks with six facilitated groups.
- Cognitive maps were used to explore the characteristics and interactions of the healthcare system that may impact dietary and exercise referral practices.
- A causal loop diagram was developed to enable visualisation of the factors that influence dietary and exercise referral practices.

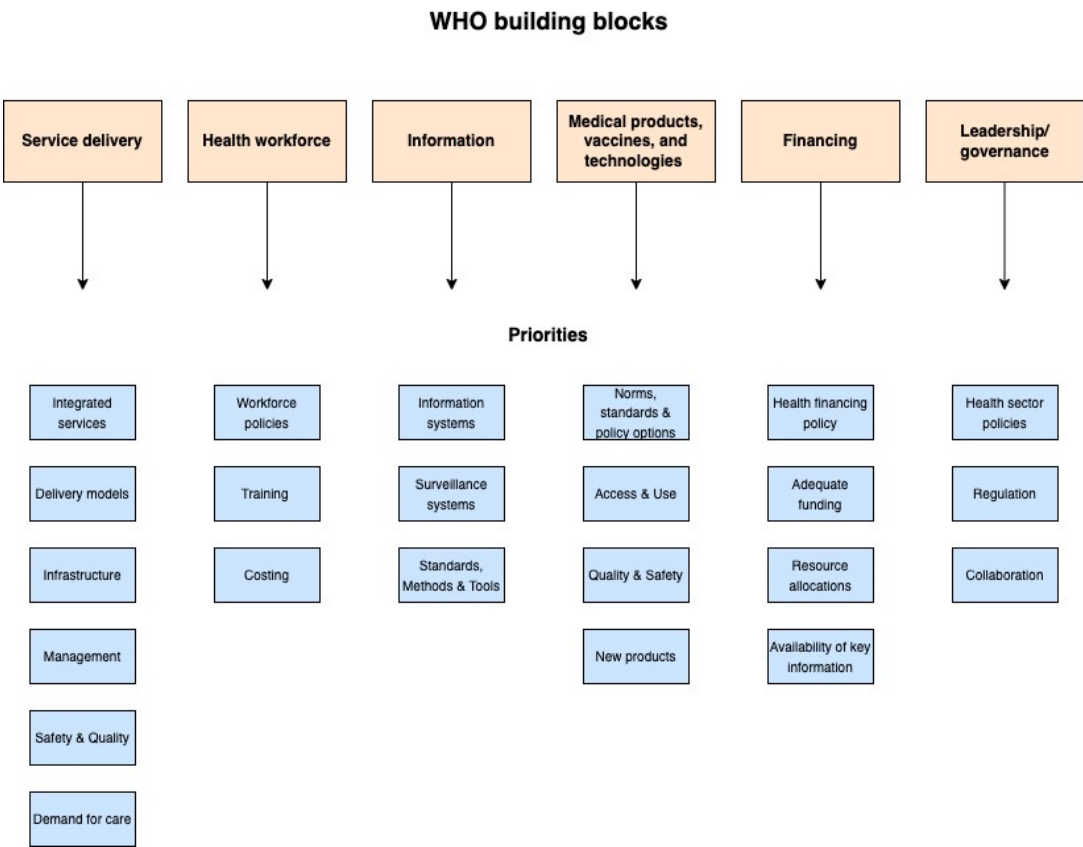


Figure 1. WHO building blocks and priorities

RESULTS

- 27 stakeholders participated in the workshop, including consumers, cancer medical specialists, researchers, and representatives of peak bodies, not-for-profit organisations, and government agencies.
- Six cognitive maps were developed by stakeholders and consolidated and developed into one causal loop diagram, to highlight the relationships between identified factors.
- Common system-level factors included funding, workforce capacity, knowledge and education, and infrastructure.
- Fifteen system-level strategies to improve referral practices were also identified.

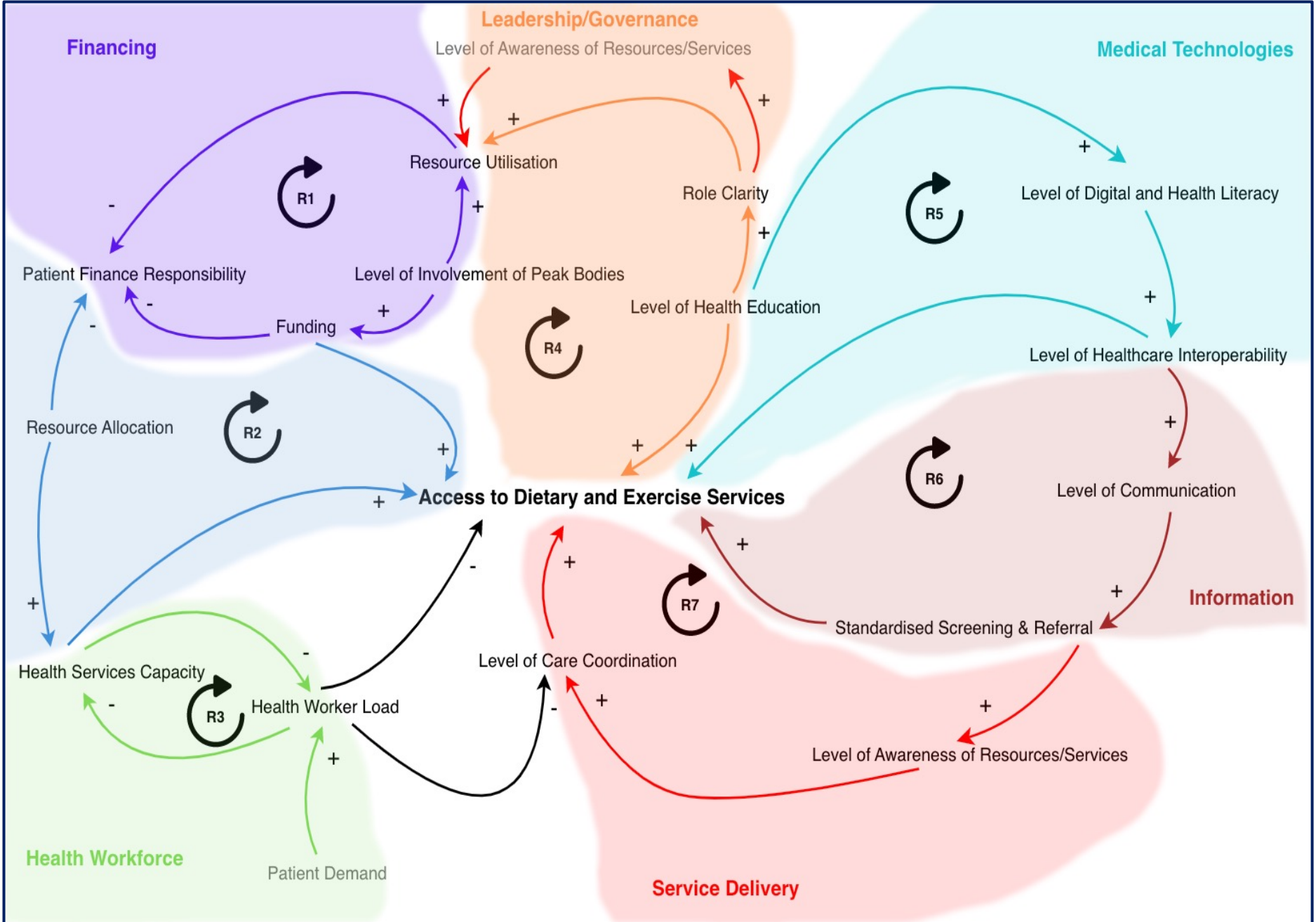
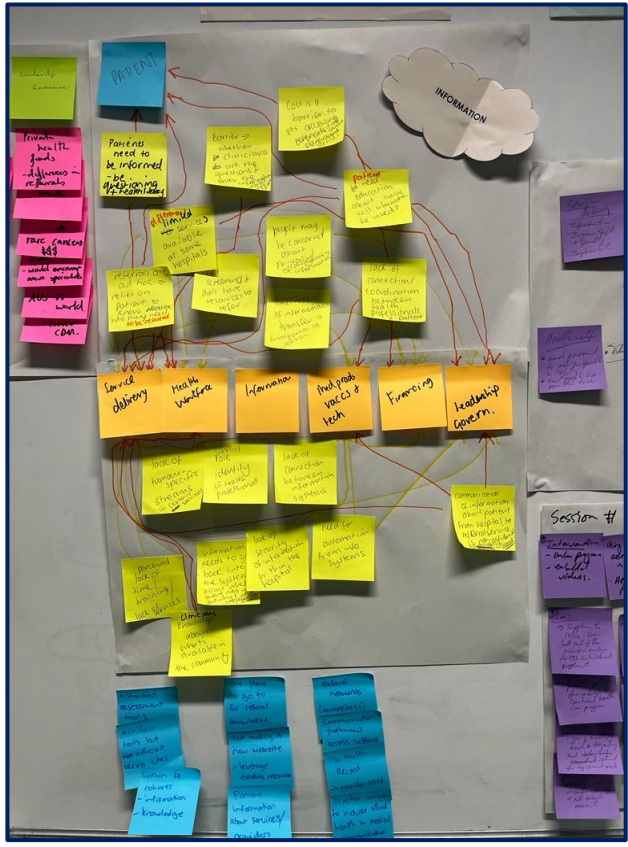


Figure 2. Causal loop diagram

Table 1. System-level strategies

WHO Building Block	Examples of System-Level Strategies
Financing	Evaluation of standardised pre and post-measures to define success, which are linked to funding outcomes across private and public settings.
Health Workforce	Collaborating with universities to recruit students from university placements to improve capacity numbers and future training workforce. Staff are provided with incentives to specialise, resulting in a more skilled workforce (e.g., increased pay rates, increased job opportunities, reimbursements on successful completion). Advocating for nurse practitioners to provide referrals to chronic disease management plans for cancer survivors instead of solely general practitioners, which provides flexibility for general practitioners.
Information & Medical Technologies	Acknowledging and leveraging on the role of "navigation" to enable integrated systems to facilitate optimal care for all cancer survivors. Cancer survivors should be provided with self-management and practical support to access care so that they know where to go and what they need, to empower them to act. Successful optimisation of dietary and exercise services requires information-giving and self-management education, referral for appropriate services, and direct care (from cancer professionals, and exercise and nutrition specialists). To facilitate further system optimisation, implementation of a stepped-care model including development of consensus competency frameworks with clear role delineation will be essential. Development of a competency framework which defines the essential components for role clarification among different health professionals, as well as providing training and resources in relation to this framework. Closing the loop between health professionals and cancer survivors by sharing medical information through existing digital platforms such as "My Health Record" to ensure clear, timely and effective bilateral communication processes are adopted.
Leadership/Governance	A centralised, coordinated repository of dietary and exercise services (Exercise & Sports Science Australia, Dietitians Australia, Australian Physiotherapy Association etc) in one place with one organisation responsible for collation and maintenance (e.g., Cancer Council, Cancer Australia, Clinical Oncology Society of Australia) is important to promote trustworthiness of information.
Service Delivery	Development of standard assessment tools that are cancer-specific to assess patient needs and preferences in relation to dietary and exercise support, and triage care accordingly. Implementation of these tools can facilitate referrals to dietitians, clinical exercise physiologists and physiotherapists across multiple settings. Implementation of standardized screening processes into referral processes (e.g., automated system to screen for care needs and referral pathways, use of electronic patient-reported outcome measures, artificial intelligence, and electronic medical records to flag things automatically). Successful embedment of nutrition and physical activity requires a system that incentivises or encourages general practitioners and hospital systems to assess cancer survivors' status of nutrition and physical activity. For example, such assessment information needs to be collected and reported and linked to activity-based funding (e.g., blood pressure checks, smoking cessation). There needs to be coordinated, advocacy efforts to lobby for an increased number of allied health sessions for cancer survivors. Technology and information platforms (including information about why cancer survivors should be referred for services, understanding connections between exercise/nutrition and their health outcomes-website, documents etc.) should be co-designed and implemented in partnership with consumers. There needs to be system-level and organisation-level efforts to integrate dietary and exercise referrals into existing models of care (i.e., chronic disease management plan, cardiac rehabilitation) as well as developing necessary models of care/funding mechanisms to enable care.



CONCLUSION

Use of a systems-thinking approach enabled identification of strategies for implementation at the system level.

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