

Value-based health care in oncology: what is being done, how it is impacting the system, and which successful strategies are recommended?

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Introduction

With increased patient access to innovative oncology therapies and aging societies, the economic burden of cancer is expected to reach \$458 billion by 2030. Missing opportunities in disease prevention, detection and earlier treatment significantly contribute to this burden. Healthcare leaders and policymakers have agreed that the path to redefine the health care system and make it more sustainable involves driving its processes by value and centered on real patient needs. Although there is a general knowledge that value-based strategies are being implemented in the oncology care pathways, there is scarce consolidated evidence of these models.

Objective

Report the results from a systematic review focused on identifying applied value-based healthcare initiatives in oncological care pathways, and in introducing strategies to implement value in this field supported by specialists’ experience.

Methods

- Systematic review of the literature that searched the Pubmed Journal New England Journal of Medicine (NEJM) Catalyst.

- Search period: January 2012 - December 2022.
- Inclusion criteria reports on the use of value-based-health care concepts in any oncology care; and studies that used the Time-driven activity-based costing method to assess costs and identify opportunities to reduce waste. Cost-effectiveness analyses and studies that only assessed costs or the burden of hospital bills or secondary databases were excluded.
- Studies were classified as applied or conceptual, data were extracted on the oncological care pathway, whether the analysis was hospital-based or at health system level, and if the intervention had an impact on costs, outcomes, or both.
- In addition, following this systematic review of the literature a semi-structured qualitative questionnaire was administered to 5 experts in VBHC from public and private market active in Brazil. The document was validated by two specialists, who considered the interviewee's history of initiatives; their perceptions; the main challenges and priority actions as guiding criteria.
- Most frequent premises found in the studies and common and divergent opinions among the interviewees were described as strategies to be followed on the journey to implement value programs in the oncology field.

Results

- 40 articles were identified (37 from Pubmed; 3 from NEJM Catalyst).
- Most of the papers were conceptual in general and published as editorials or perspective papers (54%).
- In the total sample, 50% of the studies were applied case studies.
- Breast, lung, and prostate cancer account together for 43% of all articles.
- 13 studies resulted in clinical outcomes improvement, 12 in cost-savings and 5 explored both value domains.
- Introduction of the theoretical framework to redesign reimbursement strategies and discuss health policies were the most frequent argumentation.

Item	Strategy	Period (Years)	Level of recommendation
A	Defining the implementation of VBHC as organizational strategic objective, involving managers and medical leaders, aiming to provide better health outcomes with resources available	1	Required
B	Establishment of a multidisciplinary team and nurse to support the treatment process	1	Required
C	Care pathways design considering the evidence of technologies available, and adoption of digital solutions integrated into the EHR	1	Required
D	Definition and measurement of health outcomes – traditional indicators and PROMs	1	Required
E	Definition and measurement of costs -preferably using the methods of micro costing, for example using the TDABC	2	Required
F	Adoption of digital instruments for data collection data that also includes case variables	2	Recommended
G	Implementation of IPU within the scope of the regional health systems, including primary and all trajectory of care (not necessarily centralized)	2	Required
H	Adoption of dashboard and metrics for data governance	3	Recommended
I	Establishment of incentive models and results-based compensation	3	Required
J	Change of institutional mindset, with implementation and dissemination of results-based policy; valuing innovation and ability to adopt new technologies	4	Recommended
K	Expansion to healthcare system and benchmarking	5	Recommended

Conclusions

Findings from this systematic review and expert interviews indicate that the expectation of achieving success is recurrent among institutions that are exploring the adoption of health value concepts in oncology. The contribution of this research is the introduction of the **first framework of strategies to guide the implementation of VBHC Programs in oncology**, which impacts the system’s capabilities to increase equity, financial sustainability and population health.

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