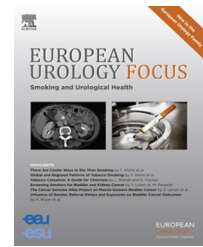


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Prostate Cancer

Development of Indicators to Assess Quality of Care for Prostate Cancer

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Article info

Article history:

Accepted January 25, 2016

Associate Editor:

James Catto

Keywords:

Prostate cancer
Quality indicators
Quality measures
Clinical registries
Population health

Abstract

Background: The development, monitoring, and reporting of indicator measures that describe standard of care provide the gold standard for assessing quality of care and patient outcomes. Although indicator measures have been reported, little evidence of their use in measuring and benchmarking performance is available. A standard set, defining numerator, denominator, and risk adjustments, will enable global benchmarking of quality of care.

Objective: To develop a set of indicators to enable assessment and reporting of quality of care for men with localised prostate cancer (PCa).

Design, setting, and participants: Candidate indicators were identified from the literature. An international panel was invited to participate in a modified Delphi process. Teleconferences were held before and after each voting round to provide instruction and to review results.

Outcome measurements and statistical analysis: Panellists were asked to rate each proposed indicator on a Likert scale of 1–9 in a two-round iterative process. Calculations required to report on the endorsed indicators were evaluated and modified to reflect the

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<http://dx.doi.org/10.1016/j.euf.2016.01.016>

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data capture of the Prostate Cancer Outcomes Registry–Australia and New Zealand (PCOR-ANZ).

Results and limitations: A total of 97 candidate indicators were identified, of which 12 were endorsed. The set includes indicators covering pre-, intra-, and post-treatment of PCa care, within the limits of the data captured by PCOR-ANZ.

Conclusions: The 12 endorsed quality measures enable international benchmarking on the quality of care of men with localised PCa. Reporting on these indicators enhances safety and efficacy of treatment, reduces variation in care, and can improve patient outcomes.

Patient summary: PCa has the highest incidence of all cancers in men. Early diagnosis and relatively high survival rates mean issues of quality of care and best possible health outcomes for patients are important. This paper identifies 12 important measurable quality indicators in PCa care.

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1. Introduction

Clinical registries are gaining favour as a means of building on incidence and mortality data from population registries to include indicators of quality of care [1]. Quality of care indicators are usually categorised according to whether they assess structure, process, or outcome of care [2]. *Structure* refers to physical and human resources needed to provide care, *process* refers to the way that care is delivered, and *outcome* refers to the consequences of the care that has been provided [3]. These domains may be further categorised into safe, effective, patient centred, timely, efficient, and equitable processes, as defined by the Institute of Medicine [4].

Prostate cancer (PCa) quality indicators have been described previously; however, little evidence shows that these indicators have been used to measure and benchmark performance. With international consensus data sets that have been developed for localised and advanced PCa [5,6] and with an increasing number of PCa clinical registries being established [7], it is timely to develop quality indicators that will foster international benchmarking of quality of care delivered to this group. Effective communication of information to care providers enhances safety and efficacy of treatment, reduces variation in care, and can improve patient outcomes [8].

Indicator reporting has proven valuable in revealing variations in care, level of compliance, and changes in practice over time [9–12]. A Canadian study of patients treated for PCa with external beam radiotherapy showed considerable variation among the 32 participating centres, with 100% compliance for only two indicators and <60% for three pretreatment indicators [10]. Indicator reporting for centre certification in Germany revealed compliance by 80% of sites for 12 of 15 representative indicators [9]. In Sweden, an online real-time reporting system revealed improvements in the national mean for performance on six of nine indicators over 3 yr [11]. In Australia, reporting in the state of Victoria revealed improved clinical practice over 5 yr [12].

Benchmarking and reporting provide an opportunity to modify clinical practice and national health care policies to ensure that patients are receiving high quality of care and treatment that is accessible and equitable. As a key process

of implementation of a transnational Prostate Cancer Outcomes Registry–Australia and New Zealand (PCOR-ANZ) [13], our objective was to identify a set of indicators to assess quality of care provided to men diagnosed with PCa at a population level, enabling benchmarking and reporting across Australia and New Zealand.

Although PCOR–Victoria has reported on indicators for PCa since its inception in 2009 [12], the PCOR-ANZ steering committee agreed that reevaluation of the Victorian indicators was required in the context of the PCOR-ANZ minimum data set [13], with the aim of enabling future global comparisons of PCa care using data from other registry data sets [6].

2. Methods

An extensive review of the literature led to a previous study from our group that identified 85 indicators reported to assess quality of care of men diagnosed with PCa [14]. These indicators were used in a modified Delphi process [15] to reach consensus on a reportable list. The process involved a panel to anonymously and blindly assess the validity and feasibility of each proposed indicator over iterative rounds of voting.

Twenty-six people were invited to participate, and 24 accepted the invitation. The panel included members of the PCOR-ANZ steering committee and Irish Prostate Cancer Outcomes Research and comprised a patient representative, a data custodian, a pathologist, a policy advisor, and a medical administrator; two medical oncologists; three epidemiologists; six radiation oncologists; and eight urologists.

Previously identified indicators used by our group [15] were stratified into structure, process and outcome domains [16] and further into safety, effectiveness, efficiency, equity, timeliness, and patient-centredness [4].

2.1. Round 1

An initial teleconference detailed the voting system and purpose of the exercise. Panellists were then e-mailed a spreadsheet listing the stratified 85 indicators (17 as structure, 43 as process, and 27 as outcome) (Supplementary Table 1), along with voting instructions, and were asked to rate each. Rating was for validity and feasibility on a Likert scale of 1–9, with 1 being not valid or feasible as a quality indicator and 9 being most valid or feasible. Based on the RAND criteria, indicators with median validity and feasibility scores of 7–9 and 4–9, respectively, were short-listed for round 2 [14]. An opportunity to comment and to suggest additional indicators was included.

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