



## Seminars article

# Designing a theory-based intervention to improve the guideline-concordant use of imaging to stage incident prostate cancer

Shannon Ciprut, M.H.S.<sup>a,b,c</sup>, Erica Sedlander, M.P.H.<sup>d</sup>, Kara L. Watts, M.D.<sup>e</sup>,  
Richard S. Matulewicz, M.D., M.S.<sup>f</sup>, Kurt C. Stange, M.D., Ph.D.<sup>g</sup>,  
Scott E. Sherman, M.D., M.P.H.<sup>a,c,h</sup>, Danil V. Makarov, M.D., M.H.S.<sup>a,b,c,h,i,\*</sup>

<sup>a</sup> VA New York Harbor Healthcare System, New York University, New York, NY

<sup>b</sup> Department of Urology, New York University, New York, NY

<sup>c</sup> Department of Population Health, New York University, New York, NY

<sup>d</sup> Department of Prevention and Community Health, George Washington University, Milken Institute School of Public Health, Washington, D.C

<sup>e</sup> Department of Urology, Montefiore Medical Center, Bronx, NY

<sup>f</sup> Department of Urology, Northwestern University, Chicago IL

<sup>g</sup> Department of Family Medicine and Community Health, Case Western Reserve University, Cleveland, OH

<sup>h</sup> New York University Cancer Institute, New York University, New York, NY

<sup>i</sup> Robert F. Wagner Graduate School of Public Service, New York University, New York, NY

Received 14 September 2017; received in revised form 11 December 2017; accepted 24 December 2017

## Abstract

Among US men, most new prostate cancer cases are clinically localized and do not require imaging as part of staging workup according to guidelines. Two leading specialty societies promote stewardship of health resources by encouraging guideline-concordant care, thereby limiting inappropriate and obsolete imaging. However, imaging to stage low-risk prostate cancer remains high, as almost half of men with localized prostate cancer undergo wasteful imaging following diagnosis. We employed a theory-based approach, based on current evidence and data on existing practice patterns revealing that providers are the drivers to imaging decisions, to design an intervention to improve guideline-concordant prostate cancer staging imaging across populations. We conceptualized preliminary results using the theoretical domains framework and the behavior change wheel, frameworks used concurrently to investigate physicians' behaviors and intervention design in various clinical settings. Through these 2 frameworks, we designed a theory-based, physician-focused intervention to efficiently encourage guideline-concordant prostate cancer imaging, prostate cancer imaging stewardship (PCIS). Prostate cancer imaging stewardship consists of interventions (clinical order check, academic detailing, and audit and feedback) implemented at the individual, facility, and system level to enact provider behavior change by enabling facilitators and appealing to physician motivation. Published by Elsevier Inc.

**Keywords:** prostate cancer; imaging; implementation; guidelines; Theoretical Domains Framework; Behavior Change Wheel

**Funding:** Funding for this study was provided by the United States Department of Veterans Affairs, Veterans Health Administration, Health Services Research, and Development Service. Dr. Makarov is a VA HSR&D Career Development Awardee at the Manhattan VHA (grant numbers CDA11-257 & CDP 11-254). The Edward Blank and Sharon Cosloy-Blank Family Foundation, The Gertrude and Louis Feil Family Charitable Lead Trust, the New York State Prostate Cancer Research Grant, and The NCI Cancer Center Support Grant P30CA016087 also contributed to the funding of this study.

The views expressed in this article are those of the author(s) and do not necessarily represent the views of the Department of Veterans Affairs.

\* Corresponding author. Tel.: +1-212-263-4961; fax: +1-212-263-4983.

E-mail address: danil.makarov@nyumc.org (D.V. Makarov).

## Introduction

Nearly half of men with low-volume, low-stage, prostate cancer (the most common noncutaneous malignancy among US men) undergo inappropriate, wasteful imaging as part of their staging workup [1]. Guideline-discordant prostate cancer imaging varies among different settings, but is rampant across health care systems [1–4]. Before widespread prostate-specific antigen screening, most incident cases were diagnosed at an advanced stage, requiring radiographic staging before treatment. For 2 decades following the advent of prostate-specific antigen screening,

most new prostate cancer cases have been diagnosed at a clinically localized stage. There is near unanimous agreement that routine radiographic staging is obsolete [5] because of its lack of utility and its potential harm. In spite of efforts to curb this practice, the routine use of imaging to stage low-risk prostate cancer remains high. The American Urological Association (AUA) and the American Society of Clinical Oncology (ASCO) continue to promote stewardship of health care resources and have made persistent attempts to reduce inappropriate prostate cancer imaging through campaigns such as “Choosing Wisely” [6,7].

Prior quality improvement efforts seeking to limit rates of inappropriate imaging utilized in prostate cancer staging have been based on common sense strategies aimed at behavioral modifications, rather than theory-based behavioral psychology [8,9]. Many tools in common use are not evidence-based and have demonstrated mixed results: that is, successfully decreasing inappropriate imaging but simultaneously and unintentionally decreasing appropriate imaging [9]. Moreover, those previous efforts were only partially effective in decreasing inappropriate imaging for low-risk patients. Therefore, based on current evidence and data on existing practice patterns, we employed a theory-based approach to design an intervention to improve guideline-concordant prostate cancer staging imaging across populations. Our goal was to develop a widely transportable method to inform clinicians, policymakers, and patients interested in selectively using imaging to guide initial treatment decisions for men with newly diagnosed low-risk prostate cancer.

### Approach to intervention design

We used the Veterans Health Administration Quality Enhancement Research Initiative (VA QUERI) [10] process to

guide data collection and subsequent intervention design. QUERI is a program that promotes the systematic translation of research data to intervention implementation with the goal to improve health care practices and outcomes.

To begin the QUERI process, we initially identified a high-volume problem: the inappropriate overuse of imaging among men with low-risk prostate cancer. Next, we identified best practices through a synthesis of recommendations pertaining to imaging use for the specific patient population from various professional societies [11,12], including the National Comprehensive Cancer Network (NCCN) and AUA [5]. We then defined existing practice patterns and their deviation from best practices by performing a quantitative documentation of the prevalence and correlates of guideline-discordant prostate cancer imaging rates across VHA [4]. While these quantitative data provided the foundation for describing the scope of the problem and to generate hypotheses regarding its causes, they were unable to definitively explain this behavior; a type of insight than only quantitative data could offer. We sought to evaluate the motivations behind the behaviors of physicians and patients as well as to a framework to translate those insights into concrete, feasible behavior change interventions to promote best practices.

Results were conceptualized using the relevant domains of the theoretical domains framework (TDF) [13] and the behavior change wheel (BCW) [14]. The research team that developed the TDF report that evidence-based guidelines tend to fail to be applied because of poor understanding of the processes involved in physician behavior change (Fig. 1) [13,15]. They describe a consensus theoretical framework for use in developing strategies for implementation research including 14 domains to explain behavior: (1) knowledge, (2) skills, (3) social/professional role and identity, (4) beliefs about capabilities, (5) optimism, (6) intentions, (7) memory, attention and decision processes, (8) reinforcement, (9) goals, (10) beliefs about consequences, (11) emotion, (12) social influences, (13) environmental context and resources, (14) behavioral regulation.

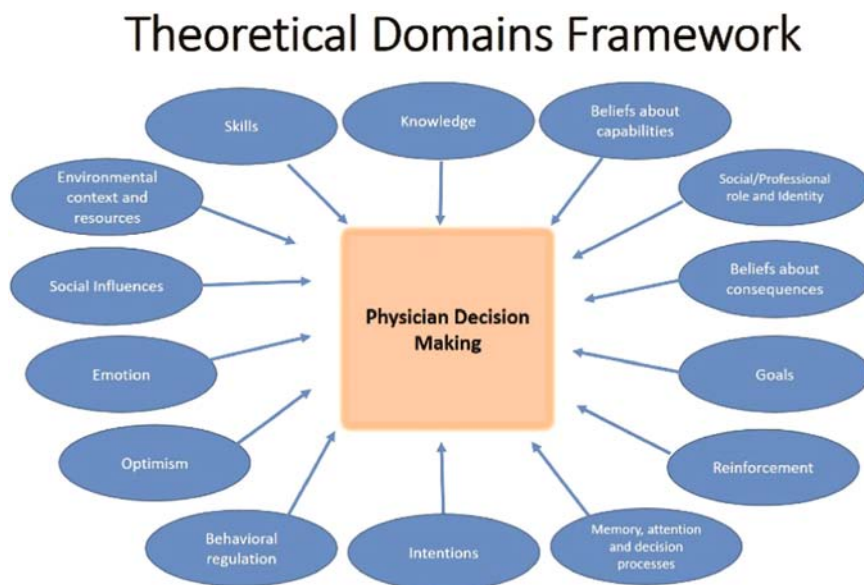


Fig. 1. The theoretical domains framework [13]. (Color version of the figure available online.)

Download English Version:

<https://daneshyari.com/en/article/8790054>

Download Persian Version:

<https://daneshyari.com/article/8790054>

[Daneshyari.com](https://daneshyari.com)