

Designing a Theory-Based Intervention to Improve the Guideline-Concordant Use of Imaging to Stage Incident Prostate Cancer

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Background: Nearly half of men with localized prostate cancer undergo inappropriate, wasteful imaging as part of their staging workup. The American Urological Association (AUA) and the American Society of Clinical Oncology (ASCO) promote stewardship of healthcare resources by encouraging guideline-concordant care through persistent attempts to reduce inappropriate prostate cancer imaging through campaigns such as "Choosing Wisely". Our goal was to develop a widely-translatable 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.

Methods: 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 (TDF) and the Behavior Change Wheel (BCW), frameworks used concurrently to investigate physicians' behaviors and intervention design in various clinical settings.

Results: Through these frameworks, we designed a theory-based, physician-focused intervention to efficiently encourage guideline-concordant prostate cancer imaging, Prostate Cancer Imaging Stewardship (PCIS). PCIS consists of intervention components (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.

Conclusions: A behavioral intervention is well-suited to optimize appropriate imaging, grounded in conceptual framework for intervention design. The combined understanding of our exploratory investigation through the TDF and BCW has allowed us to develop a comprehensive, theory-based intervention strategy to target behavior by enabling facilitators and mitigating barriers for behavior change specific to urologic providers.

Conflicts of Interest: The authors report no conflicts of interest.

Funding Acknowledgments: Dr. Makarov is a Prostate Cancer Foundation Young Investigator Award recipient. 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. 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.