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Title

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Permalink

<https://escholarship.org/uc/item/7dh859t4>

Journal

European Urology, 67(1)

ISSN

0302-2838

Author

Cooperberg, Matthew R

Publication Date

2015

DOI

10.1016/j.eururo.2014.09.008

Peer reviewed

Platinum Priority – Editorial

Referring to the article published on pp. 44–50 of this issue

Progress in Management of Low-risk Prostate Cancer: How Registries May Change the World

Matthew R. Cooperberg*

Departments of Urology and Epidemiology and Biostatistics, University of California, San Francisco, San Francisco, CA, USA

Age-standardized population mortality rates for prostate cancer have fallen nearly 50% since the early 1990s, a remarkable epidemiologic trend explicable in large part by early detection efforts together with improvements in treatments [1]. The cost of this gain, however, has been high. Early detection overdiagnoses many prostate cancers—perhaps the majority of those found—which are biologically indolent. Men with such low-risk tumors often do not benefit from treatment [2], yet traditionally the vast majority undergo surgery, radiation, hormonal therapy, and other interventions [3,4] that expose them to risks [5] and incur high costs [6].

Despite multiple endorsements of active surveillance as an alternative, until recently, this option has been very much underused in the United States outside of a few academic centers [3]. Reasons for this pattern include financial incentives favoring treatment, legal fears regarding potentially missing progression, and psychological pressures favoring aggressive treatment. Furthermore, most providers receive no regular feedback on their own practices or outcomes and have little or no knowledge of how they compare with their peers.

In a sharp departure from prior US reports, in this month's issue of *European Urology*, Womble et al. observe that across the state of Michigan, over 17 mo ending August 2013, fully 49% of men newly diagnosed with low-risk disease were managed initially with surveillance [7]. This remarkable figure is no fluke: As an outlier, it reflects the implementation of Michigan Urological Surgery Improvement Collaborative (MUSIC), a unique statewide registry. Funded richly by Blue Cross and Blue Shield of Michigan, the dominant insurer in the state, MUSIC provides for data

collection via detailed chart abstraction at >40 urologic practices including nearly 90% of the urologists in the state. A key aspect of the registry effort is that collected data—on practice patterns, process quality metrics, and outcomes—are shared directly with the practices, and each practice is shown its own performance benchmarked against those aggregated from the other practices. The urologists also meet periodically in person [8]. Although no pre-MUSIC data were reported for comparison, there is no reason to suspect that Michigan's surveillance rate has been higher historically than that of the rest of the country.

Precedents exist in urology for similar efforts. A national effort in Sweden focused on appropriateness of bone scans for low-risk disease drove down overuse from 45% to 3% over a decade, again, by feeding back quality performance data directly to providers [9]. MUSIC, although more focused geographically, is much more ambitious in terms of the depth and breadth of data collected.

The individual practices varied in their use of surveillance: One practice reached 80%, but even the lowest utilizing practices used surveillance 25–30% of the time. Surveillance was used relatively uncommonly for younger and healthier men, suggesting—even in MUSIC—a bias against surveillance for men who could have avoided treatment for years in many cases [10]. Womble et al. also provide an early look at surveillance quality. The overwhelming majority of men received a prostate-specific antigen test within the first year, but few underwent confirmatory biopsy, and less than half underwent any biopsy within 18 mo. About 15% underwent active treatment within that time frame [7]. Further follow-up of surveillance quality and outcomes will be essential.

DOI of original article: <http://dx.doi.org/10.1016/j.eururo.2014.08.024>.

* Departments of Urology and Epidemiology and Biostatistics, University of California, San Francisco, 1600 Divisadero St, Box 1695, San Francisco, CA 94143-1695, USA.

E-mail address: mcooperberg@urology.ucsf.edu.

<http://dx.doi.org/10.1016/j.eururo.2014.09.008>

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The authors suggest in their conclusion that their findings support “growing acceptance” of active surveillance [7]. However, absent any major changes in the evidence base or the regulatory environment in recent years, a slightly less sanguine interpretation may be that knowing that data are being collected and the fear of being an outlier—even an anonymous one—drives providers to pay greater attention to their practice patterns and to internalize quality improvement into daily clinical processes. To this end, the registry truly serves as the surging tide raising all boats. The beauty of this experience is that MUSIC’s success came without mandates, financial incentives, legal threats, regulations, or influence from any nonclinical party. The Michigan urologists agreed to set a goal of measuring surveillance rates, and internal reporting and data sharing were all the “teeth” required.

Rising rates of surveillance may also reflect a growing appreciation on the part of urologists that if we do not ameliorate the intractable problem of overtreatment, we have little hope of regaining the terms of the debate regarding early detection. Indeed, in many respects, a 49% initial surveillance rate is likely still too low.

Can this experience be broadened nationally or beyond? MUSIC’s data extraction process is very expensive, funded by the dominant payor in the state, which has a direct interest in improving quality of care and efficiency. It would stand to reason that in other states in which insurance oligopoly exists, the payors would have similar incentives to improve care, but so far—perhaps predictably—none of these generally for-profit entities has shown interest in supporting efforts that might be perceived as helping anyone else.

The American Urological Association recently commissioned a new national registry, dubbed *AQUA*, that will collect similar, detailed data through automated extraction from electronic medical record systems and give feedback to practices on their practice patterns, processes, and outcomes [11]. It remains to be seen whether *AQUA* and other ongoing efforts can replicate MUSIC’s experience. What is clear, however, is that our way forward as a

profession must be guided not by claims databases but rather by clinical data collected routinely at the point of care and used by urologists to lead a new era of clinical research and quality improvement.

Conflicts of interest: The author has nothing to disclose.

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