

## Knowledge Transfer and Guidelines Implementation in Genitourinary Cancers

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In some European settings today, up to 4 out of 5 patients do not receive evidence-based care despite availability of international high quality guideline recommendations addressing the relevant diseases and their management. This is unacceptable in 2018 because it risks translating into poorer patient outcomes and higher cost of healthcare provision.

Clinical practice guidelines (CPGs) transparently link systematic reviews of the evidence to strong and weak recommendations for or against practice that should theoretically assist physicians in all aspects of their everyday clinical activities. Nonetheless, adherence to clinical guidelines by healthcare professionals is still suboptimal or variable across European countries. A low and variable adherence to evidence-based recommendations might translate into suboptimal disease management and lead to poor patient outcomes. This, in turn, would translate into increased expenditures and costs for healthcare systems across the entire continent. Recognition of this problem is gaining traction in uro-oncology, with recent examples highlighting the overuse of androgen deprivation therapy (ADT) and overuse of imaging for localised prostate cancer (PCa); [1] the underreporting of complications in robot-assisted radical prostatectomy in PCa patients, resulting in under-diagnosis and management of treatment-related side-effects; [2] and the underuse of radiation therapy with ADT for high-risk and locally advanced PCa. [3]

Non-adherence to recommendations is particularly worrying where there is very robust, high level of evidence underpinning strong recommendations. For example, systematic reviews and individual participant data meta-analyses demonstrated that a single immediate post-operative instillation of chemotherapy is well tolerated and clinically effective in reducing recurrences in patients with low risk non muscle-invasive bladder cancer (NMIBC). [4] As such, the European Association of Urology (EAU) [5]

and the National Institute for Clinical and Healthcare Excellence (NICE) [6] recommend its use in eligible patients. In addition, this approach is considered cost effective for the UK's NHS. [6] Despite this, adherence is generally low, at around 61% in the UK as a whole [7] and ranges from 15% to 100% across Scotland. [8-10]. This variability indicates suboptimal care across the UK. Small observational studies, using historical controls in single centres have demonstrated strategies to increase the use of immediate post-operative instillation of chemotherapy in line with CPGs recommendations, [11, 12] but these isolated examples are lacking in internal and external validity. There are no RCTs comparing implementation interventions with concurrent controls to assess which implementation interventions are effective, in which situations, and why.

The reasons for suboptimal adherence to evidence-based recommendations are multifactorial and might also reside in the lack of effective measures to improve guidelines diffusion and implementation. Moreover, adherence to CPGs might be influenced by professional role, keeping up-to-date with current evidence/CPGs, and available local facilities. This has been shown in a recent cross-sectional survey of Italian urologists, which found that adherence rates to strong EAU guideline recommendations on oncologic diseases varied between 55% and 97% and was influenced by the working environment. [13] In particular, urologists working in university hospitals were more likely to adopt CPGs as compared to their counterparts practicing in non-academic centers. However, a finer grained resolution is required to truly understand the determinants of practice, and how to improve it.

Fortunately, there is a strong tradition of theoretical and empirical work from other specialities outlining strategies to increase guideline adherence. Assimilating and extending such work presents an opportunity to test what strategies might improve

CPG adherence in uro-oncology. The first step in addressing a knowledge-to-practice gap is to understand the barriers and facilitators to best practice. Given that there are complex social, cultural and economic factors which influence practice, the most appropriate research methods for this are qualitative in nature, using ethnography, observations, interviews or focus groups, for instance. The findings of such studies enable the identified barriers and facilitators to be mapped to organisational and individual theories of behaviour, such as the theoretical domains framework (TDF). [14] Additional strategies, such as content analysis of local protocols, can provide context as to how international and national CPGs are interpreted and applied at the local level.

Once the context and theoretical determinants of behaviour are understood then potential behaviour change interventions, such as those outlined in the behaviour change taxonomy, [15] may be selected to target organisational and behavioural change. Examples from other disciplines include audit and feedback to tackle overprescribing of antibiotics in dentistry [16], where an increase in the adherence to guidelines was observed among dentists after the implementation of measures that included the delivery of a written behaviour change message. Conversely, a cluster randomized trial of a theory-based multiple behaviour change intervention that included outreach visits and education materials in primary care failed to improve care for type 2 diabetes patients [17].

Now that implementation problems are being recognised within uro-oncology, there is scope to learn from other specialties, and to design ambitious and robust research to understand why implementation problems exist in uro-oncology and how they might be overcome. We owe this to urological cancer patients and their families and also to

healthcare funders that have to bear the cost of inappropriate non-adherence to guideline recommendations underpinned by high quality evidence.

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