



Platinum Opinion

Evolving Changes in the Delivery of Health Services: A Place for Urological Homecare?

Khalid Al Rumaihi^{a,*}, Stephen A. Boorjian^b, Michael Jewett^c

^a Department of Urology, Hamad Medical Corporation, Doha, Qatar; ^b Department of Urology, Mayo Clinic, Rochester, MN, USA; ^c Department of Surgery (Urology), Princess Margaret Cancer Centre, University Health Network and the University of Toronto, Toronto, Canada

Healthcare delivery is rapidly changing to become less institution-based. The pressures of an aging population together with evolving technology and increased appreciation of the benefits of patient-centered care have provided clinicians and policy-makers with cost-effective opportunities for greater efficiency, quality, and patient satisfaction. Increasing the delivery of care to patients in their own homes is one such opportunity [1]. The potential benefits of increasing homecare delivery include reducing postoperative complications and subsequent hospital readmissions [2]. In the USA, costs of more than \$40 billion annually can be attributed to hospital readmissions, with nearly one-quarter of readmissions considered preventable [3]. The costs for postdischarge selfcare compared to those for delivered homecare appear to most benefit urology and nephrology health services, with departmental annual savings of as much as \$22 791 [4].

Long-distance travel and isolation from family social support can lead to psychological and social stress, negative financial consequences, and poor treatment compliance for patients experiencing increased centralization of care [5]. Alternative methods of follow-up assessment are being explored, including technologies for remote communication and monitoring for telehealth, teleconsultation, and other promising approaches that have been assessed in other specialties. For example, many follow-up visits can be replaced with brief video visits. This would allow greater convenience and flexibility for urologists to focus on more critical patients and new surgical consultations [6]. Urological telemedicine has promising potential to reduce costs and travel time for the patient, improve patient satisfaction, and facilitate quality patient care. This approach merits further investigation as for any innovative intervention [6]. Patient-reported factors that facilitate adoption of home

telehealth services include perceptions of greater access to health care providers and thus facilitation of rapid responses to health problems, better understanding of their medical condition, peace of mind, preference for in-person care, and having better physiological control [7,8]. Urology is well positioned to implement and increase the use of telemedicine for numerous reasons [6]. Many urological diagnoses can be established via evaluation of symptoms and imaging without a physical examination [6]. A randomized controlled trial revealed that postprostatectomy men using remote video visits experienced similar patient satisfaction and equal visit timing efficiency compared to traditional office visits but with significantly lower costs [9]. Other home health care programs including urethral catheter change have been evaluated as cost-effective and efficient urological care with no increase in risk to the patient [10–12]. These homecare services, in addition to other patient-centered quality procedures, are being offered in Qatar, such as intravenous antibiotic injections for patients with resistant urinary tract infections caused by organisms sensitive only to intravenous antibiotics to decrease the need for hospitalization in such cases [13].

For patients requiring comprehensive cancer care for certain genitourinary cancers [14,15], peripherally inserted central catheters are considered safe for venous access in the non-hospitalized, homecare cancer patient population [16]. Bisphosphonates can be administered in the homecare palliative management of prostate cancer patients presenting with skeletal-related events [17–19]. A nationwide study of home zoledronic acid therapy showed that 95.3% of patients were either very satisfied or satisfied because of reduced travel and in-hospital waiting while experiencing the comfort of a familiar environment and less disruption to

* Corresponding author. Urology Department, Hamad Medical Corporation, 3050, Doha, Qatar. Tel. +974 40263727. E-mail address: kalrumaihi@hamad.qa (K.A. Rumaihi).



their daily routine [20]. Patients overwhelmingly preferred receiving infusion treatment at home, which was demonstrated to be safe and effective care with lower costs [21]. Bacillus Calmette-Guérin intravesical therapy for bladder cancer can likewise be instilled at home [22], which is a promising novel service with savings largely attributable to shorter institutional length of stay, lower costs per treatment course, and dramatic reductions in hospital and skilled technician facility overhead costs. The State of Qatar is leading on that front and in facilitating home infusions for patients who need intravenous bisphosphonates to optimize treatment of castration-resistant prostate cancer [13]. Given the gravity of treatment and associated consequences of a urinary diversion on a patient's quality of life, person-centered supportive home care is provided for those living with or affected by non-muscle-invasive bladder cancer to address their informational, spiritual, emotional, social, and physical needs during the diagnosis, treatment, and follow-up phases of the disease trajectory, with issues such as health promotion and prevention, survivorship, palliation, and bereavement addressed [13].

It has been demonstrated that adaptation of anterior urethroplasty and laparoscopic cholecystectomy to same-day procedures is safe, effective, and feasible, so these procedures are rapidly gaining in popularity and acceptance with low rates of adverse events [23,24]. A total of 1038 transurethral resections of the prostate were performed in a single UK center from 2011 to 2016 [25]. Of the 1038 procedures, 692 (66%) were planned as day cases and 346 (34%) for hospital admission. Of the day cases, 177 (26%) required admission, while 58 planned admissions (17%) were sent home on the day of surgery [25]. Home-based uroflowmetry has been proposed as a useful and inexpensive screening tool for monitoring lower urinary tract symptoms for men in a patient-friendly setting [26].

A literature review of urological home care revealed the drivers for a range of care that is shifting towards clinically safe, higher-quality care and the medical technologies and the health policies that are accommodating these changes [27]. This value-based shift can be deployed in innovative ways on the basis of patient needs and preferences. An increase in home care will drive progress in urological health care delivery.

As pressures increase for time and cost savings, particularly at large medical centers, it will be imperative to develop patient care pathways to facilitate home delivery of urological care to maximize its potential and integrate it fully into the health care system. Such pathways should overcome the challenges and barriers to widespread implementation.

A more active role by patients in optimizing treatment processes can improve therapy compliance and thereby outcomes, particularly in the home setting [28,29]. We need more evidence of the benefits as well as examples of effective and safe alternatives to our traditional institutional approaches.

Urologists should embrace and exploit the opportunities presented by the trend towards home delivery because it

appears that patients and their families have reported that both outcomes and satisfaction can improve when their preferences are recognized [30].

Conflicts of interest: The authors have nothing to disclose.

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