Advancements in Digital Health Interventions in Urology: A Comprehensive Review of the Indian Landscape

(Abstract #362)

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INTRODUCTION

The prevalence of urological conditions such as kidney stones, urinary tract infections, benign prostatic hyperplasia (BPH), and urological cancers in the country puts a strain on healthcare systems [1]. Digital health solutions play a role in addressing the challenges faced in urological care delivery in India.

AIM

The study aims to investigate the potential of Digital health in addressing urological disorders, notably benign prostatic hyperplasia (BPH) and urinary incontinence (UI), within the Indian healthcare context. Ultimately it aims to guide policymakers, healthcare providers, and researchers, on maximizing the benefits of technologies for enhancing care across India.

METHOD

A systematic review was conducted to assess the landscape of digital health interventions in urology within India. Relevant literature was identified through searches of electronic databases including PubMed, Google Scholar, and key urology and digital health journals. Search terms included "digital health," "urology," "telemedicine," "mobile health apps," "artificial intelligence," and "remote monitoring systems."

Inclusion criteria comprised studies published in English, focusing on digital health interventions targeting urological disorders in the Indian population. Data extraction involved cataloging intervention modalities, outcomes, challenges, and future prospects.

RESULTS

Digital Health

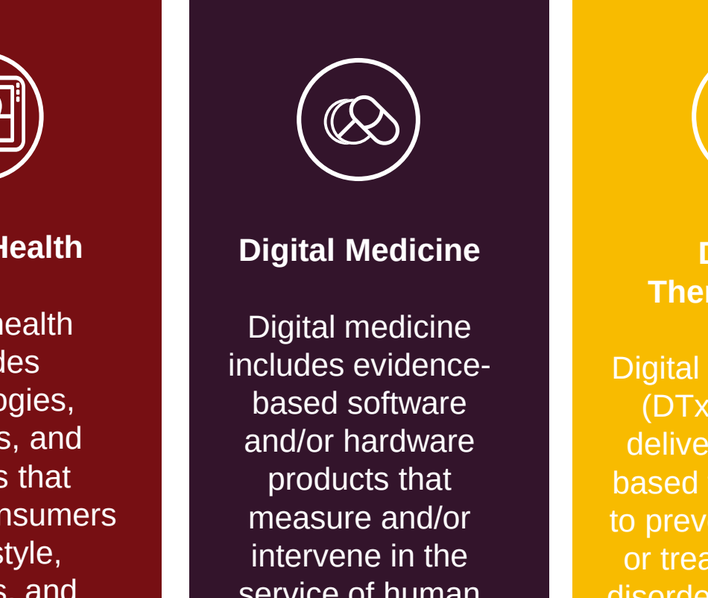
Digital health includes technologies, platforms, and systems that engage consumers for lifestyle, wellness, and health-related purposes; capture, store, or transmit health data; and/or support life sciences & clinical operations.

Digital Medicine

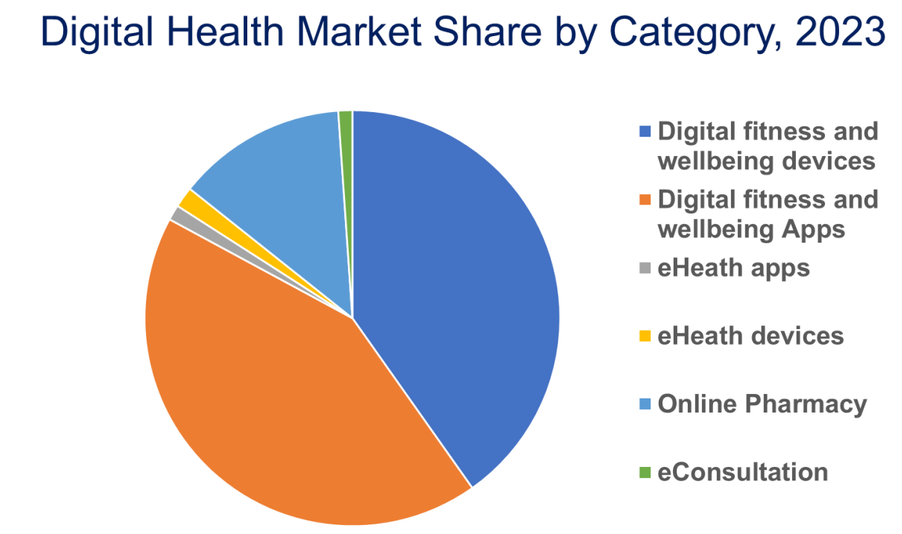
Digital medicine includes evidence-based software and/or hardware products that measure and/or intervene in the service of human health.

Digital Therapeutics

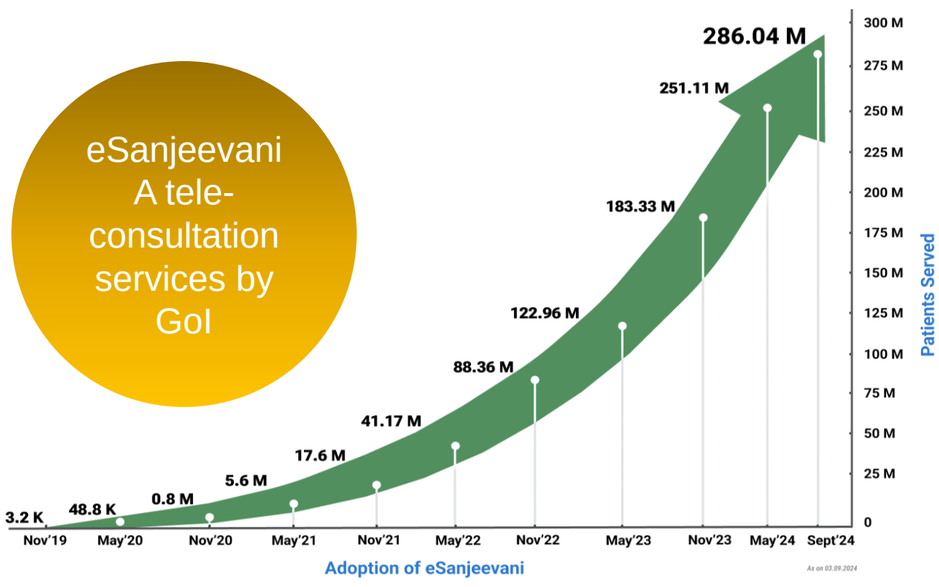
Digital therapeutics (DTx) products deliver evidence-based therapeutics to prevent, manage or treat a medical disorder or disease.



India, including paid applications, has recorded the second-highest usage of health apps globally, following China. The Indian digital health market is currently valued at approximately $15 billion and is projected to reach $26 billion by 2027, with a compound annual growth rate (CAGR) of 20%.



India invests significantly in digital fitness devices and health apps, which facilitate the development of digital tools for managing conditions such as incontinence. These tools include bladder diaries and pelvic floor exercise applications.



Data from eSanjeevani teleconsultation services provided by the Government of India indicate a consistent increase in the number of patients served, including those in Urology outpatient departments. This trend reflects a growing adoption of teleconsultation services and highlights the expanding scope of digital health in Urology in India.

Digital Health Interventions in Urology

Several mHealth applications are enhancing the management of urological conditions through personalized support and education:

- Healthify and Curefit offer tailored diet and exercise plans, aiding patients in the effective management of urological conditions.
- Stent Tracker and Urostenz assist healthcare professionals in minimizing complications related to forgotten stents, improving post-surgery patient management.
- Patient education platforms such as whatarelief.in and agewithgrace.in provide valuable information to patients and caregivers, fostering a better understanding of various urological conditions and promoting improved care.

CONCLUSIONS

In conclusion, this study emphasizes the imperative of leveraging digital health interventions to mitigate the escalating burden of urological disorders in India. By addressing regulatory and ethical considerations, alongside ensuring equitable access, policymakers, healthcare providers, and researchers can harness the full potential of digital technologies to advance urological care delivery and outcomes in the country.

REFERENCES

[1] Sharma, G., & Sharma, A. (2017). Urological disorders in India: A literature review. Indian Journal of Urology, 33(3), 190–195.

ACKNOWLEDGMENTS

Not Applicable

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