

Health Outcomes Measurement: The Process of Implementing ICHOM Standard Set for Localized Prostate Cancer

Vera-Rivero M¹; Leiva-Muñoz P¹; Duhalde Saez K¹; Quirland C¹; Cardenas Ravena J¹; Altamirano J²; Bettoli P²; Marín L²

¹Arturo López Foundation, Department of Cancer Research, Santiago, Chile

Introduction

Arturo López Pérez Foundation (FALP) is a national reference center to treat prostate cancer (PCa), one of the most common malignant tumors among men. Accordingly, FALP aims to incorporate instruments to deliver value-based healthcare; however, the lack of standardized outcome measures poses a significant challenge. In 2021, FALP initiated a pilot programme to evaluate health outcomes in a PCa cohort, using the International Consortium for Health Outcomes Measurement (ICHOM) recommendations [1]. This project aims to design an outcome-measurement system using ICHOM's standard set for a specific group of patients and to evaluate the feasibility of its implementation.

Methods

Firstly, based on international guidelines for standardized outcome-assessment systems [1, 2, 3], we developed a clinical pathway (CP) for PCa to describe the local clinical management of the disease. The CP was structured in three main stages; (i) Constitution of a multidisciplinary team; (ii) CP structure and divisions' consensus and (iii) Clinical management for each cohort of patients and description of relevant interventions.

The clinical consensus expressed in the CP was assessed with three types of adherence indicators using 2021 local real-world data: diagnostic sequence, treatment interventions, and treatment evaluation by a multidisciplinary urology committee. Values over 80% were established as compliance thresholds.

To ensure compliance with ICHOM's standard set, the institutional community was made aware of the importance of implementing standardized health measures. In collaboration with the urology medical team, we reviewed the standard-set requirements and contrasted them with the local data-registration conduct, identify information gaps, and needs for data restructuring on the clinical-administrative database (CAD). We also evaluated ICHOM's recommended patient-reported outcome measures (PROMs) to capture patient-reported outcomes in the local context. Our collaboration also identified suitable platforms for collecting and analysing PROs and how to report this information to medical professionals and patients.

Finally, a patient cohort was selected as a pilot programme to commence implementation of ICHOM's standard set.

Conclusions

- The validation of a CP for prostate cancer identifies local medical management of cohorts of patients with different degrees of disease progression and facilitates the implementation of ICHOM's recommendations.
- The collaboration of the Institution's leaders allows us to understand characteristics from real-world data registries, their limitations, and the needs for computer-system improvement to measure outcomes that matter to patients.
- The work strategy found in this study allows for articulating the first steps in executing the complete project of outcomes measurement.

Results

The PCa-CP was designed, and it included the complete care cycle for the patient's condition, reflecting FALP's medical practice, identifying specific patient cohorts and integrating specific diagnostic and treatment interventions for each group of patients (**Figure 1**).

CP adherence measurements showed that (**Table 1**):

- 81.7% of patients received key diagnosis interventions
- 85.5% of patients were evaluated by the urology committee before treatment.
- 93% of patients received key treatment interventions

Clinical teams took responsibility for the CP implementation and adherence. Adherence indicators became an assessment tool for multidisciplinary teams and a facilitator to discuss and improve the local-data registration conduct.

As for the clinical-administrative data measures that must be collected under ICHOM's standard set, FALP CAD showed that:

- The complete set of case-mix and treatment variables was recorded in the CAD, where 62.5% and 10.7% of records, respectively, were unstructured data.
- About 25% of outcome measures were unstructured and non-standard, which included the measurement of complications with the CTCAE and Clavien-Dindo scales and patient cause-of-death information.

The overall analysis of unstructured data showed that 32.7% was recorded as narrative data in the local computer system (**Figure 2**).

Local translations and validation of EPIC-26 and EORTC-PR25 questionnaires were made, while patient use of sexual medications/devices was recorded as unstructured data in the CAD. Patients will receive PROMs via the RedCap platform and be supported by a case manager who will guide, teach, and engage them throughout the process. Finally, through proof cases, we adjusted the registry, analysis, and visualization method of PCa PROs.

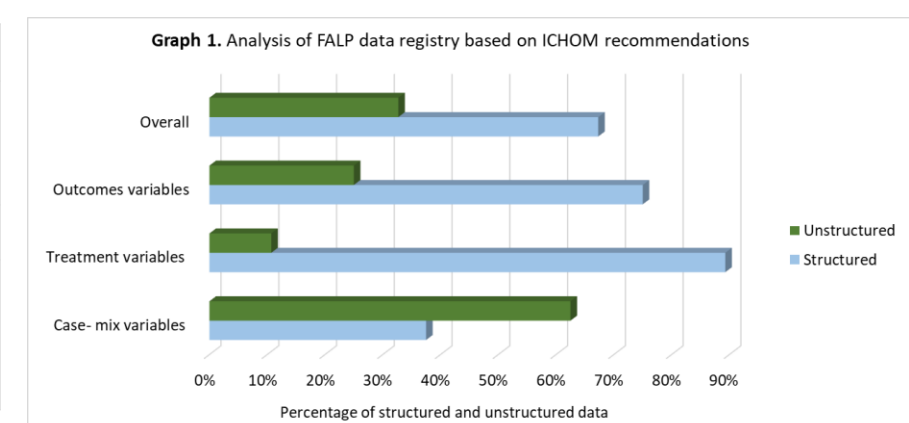
It was agreed with the medical team that patients diagnosed with favourable intermediate-risk PCa would be selected as a "pilot group" to begin implementing ICHOM's standard set.

Table 1. Adherence to Prostate Cancer Clinical Pathway

Adherence indicators	Segment/division	Key interventions	N° of patients evaluated*	% adherence (N° of patients)
Key interventions on the diagnosis segment	Diagnosis	Transrectal prostate biopsy, multiparametric magnetic resonance imaging (mpMRI)	82	81.7% (67)
Treatment evaluation by a multidisciplinary urology committee	Treatment	Multidisciplinary committee	200	85.5% (171)
Key interventions on the treatment segment		Radical prostatectomy, external beam radiotherapy, hormone therapy, Orchiectomy	200	93% (186)

*The selection of patients was defined by predefined inclusion and exclusion criteria

[view full-table 1](#)



[view full-figure 2](#)



Figure 1. Prostate Cancer Clinical Pathway

[view full-figure 1](#)

Contact

Macarena Vera Rivero
macarena.vera@falp.org

www.institutoncologicofalp.cl

References

- [1] Martin, N. E., Massey, L., Stowell, C., Bangma, C., Briganti, A., Bill-Axelsson, A., ... & Huland, H. (2015). Defining a standard set of patient-centered outcomes for men with localized prostate cancer. *European urology*, 67(3), 460-467.
- [2] Cancer Care Ontario. (2017, November 07). About Pathway Maps. Retrieved December 02, 2019, from <https://www.cancercareontario.ca/en/pathway-maps/about>.
- [3] Busse, R., Klazinga, N., Panteli, D., Quentin, W., & World Health Organization. (2019). Improving healthcare quality in Europe: characteristics, effectiveness and implementation of different strategies. Chapter 12: Clinical pathways as a quality strategy. World Health Organization. World Health Organization. Regional Office for Europe.