

# Proposal of assessment indicators for laser treatment for benign prostatic hyperplasia



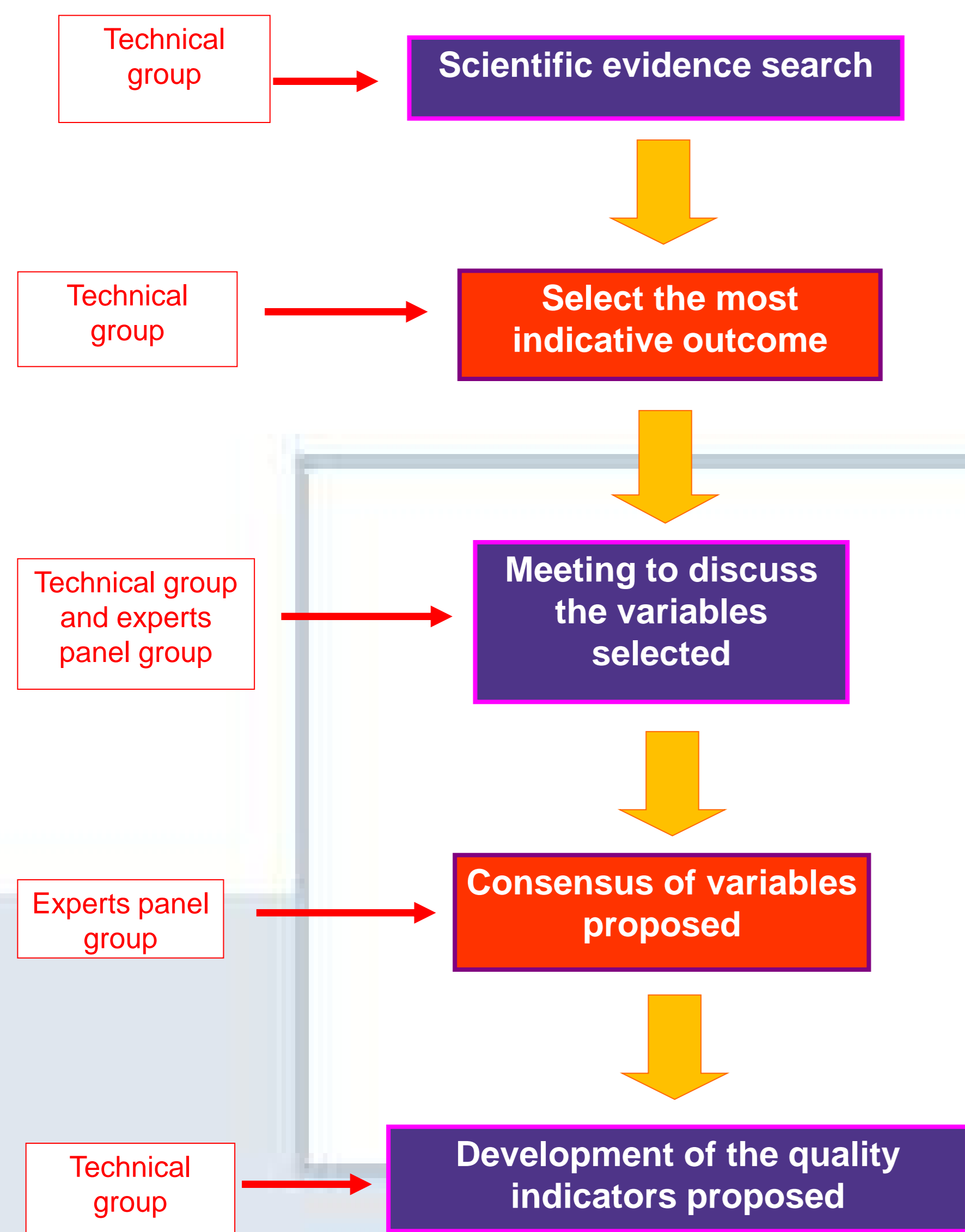
Paz- Valiñas L., Queiro Verdes T., López García ML. Galician Health Technology Assessment Agency (avalia-t). <http://avalia-t.sergas.es> e-mail contact: [lucinda.paz.valinas@sergas.es](mailto:lucinda.paz.valinas@sergas.es)

Benign prostatic hyperplasia (BPH) is one of the leading benign tumours among males over the age of 50. Surgical treatment aims to improve symptoms of urinary obstruction and patients' quality of life, with transurethral resection of the prostate (TURP) being the standard treatment. To reduce TURP-related complications, new alternative treatments have been developed in recent years, among them, various laser techniques. However, at present there is great uncertainty as to the risk-benefit of each of these techniques.

**Objective:** to develop a quality-indicator proposal to compare the result of the different techniques used in clinical practice for treatment of BPH.

## Method

Professional staff (technical group) of the Galician Health Technology Assessment Agency (avalia-t) examined the scientific evidence and selected the most indicative outcome variables in surgical treatment of BPH. These variables were consensuated with medical specialists in this field (experts panel group). After this, the technological group elaborated the final proposal of quality indicators.



**Indicator:** is a measurable item of care, which focuses upon some aspect of structure, process or outcome. The indicators help to understand, compare, predict, improve, and innovate.

## Results

Based on scientific evidence drawn from the avalia-t's systematic review on laser treatment for BPH, clinical practice guidelines and the consensus of expert health professionals, a proposal of 19 quality indicators was selected.

### The structure of a indicator

Indicator title	Indicator name
Rationale	Why is this indicator important?
Measurement	What we want to evaluate? i.e.: efficacy, safety, etc.
To calculate the indicator	Mathematical expression to calculate the indicator.
Terms definition	The explanation of all the terms used in the indicator that can result ambiguous.
Standard	The standards deemed acceptable or desirable for each outcome indicator.
Population	What is the patient group selected?
Quality indicator types	<p><b>Structure indicators:</b> provide quantitative information on the resources, financial or organizational needed to provide health care.</p> <p><b>Process indicators:</b> provide quantitative information about achievement of objectives. They evaluate how well a process is being carried out or whether it is effective.</p> <p><b>Outcomes indicators:</b> provide information on health outcomes (mortality, complications, quality of life, etc.).</p>
Data source	Where we can obtain all the necessary data to complete the indicator. (Patient records, etc.)
Comment	Additional information needed in order to clarify the indicator.

### Example of one quality indicator proposed

Indicator title	Post-operative maximum flow rate (Qmax)
Rationale	Benign prostate hyperplasia (BPH) produces neck bladder obstruction and reduces the patient urinary flow-rate (volume and flow rate). Maximum flow rate (Qmax) may predict the response to surgery. The treatment must reduce the benign prostatic hyperplasia obstruction and increase the Qmax (ml/sg) of the patients. Qmax value $\geq 15$ ml/sg means unobstructed.
Measurement	Effectiveness
To calculate the indicator	$\frac{\text{Number of patients BPH surgery treated with a Qmax value } \geq 15\text{ml/sg}}{\text{Total number of patients surgery treated}} \times 100$
Terms definition	<p><b>BPH:</b> increase of the glandular size and obstruction associated with lower urinary tract symptoms.</p> <p><b>Treated patients:</b> patients with benign prostate hyperplasia treated with the same surgery technique.</p> <p><b>Qmax:</b> maximum flow rate during the urination. Measurement in ml/sg. The measurements will be done periodically: after the surgery treatment, after the first, sixth and twelfth month.</p>
Standard	Proposed: $>90\%$ .
Population	Men treated with the same surgery intervention.
Quality indicator type	Outcome.
Data source	Patient record, Uroflowmetry record.
Comment	The indicator will be calculate for each surgery technique independently.

The indicators submitted amount to an initial proposal that envisages a wide range of indicators covering the whole health care process devoted to BPH pathology.

### Quality-indicators proposal

- Digital rectal examination before surgical intervention in patients with prostatic symptomatology
- Prostate-specific antigen measurement before surgical intervention in patients with prostatic symptomatology
- Prostatic biopsy before surgical intervention in patients with prostatic symptomatology
- Post-operative maximum flow (Qmáx) measurement
- Post-operative post-void residual volume (PVR) measurement
- Post-operative International Prostate Symptom Score (IPSS) measurement
- EuroQoL-5D measurement (standardised instrument for use as measure of health outcome)
- Perioperative blood transfusion
- Length of hospital stay
- Post-operation catheterisation time
- Surgical reoperation of the prostate
- Post-operative transurethral resection syndrome
- Sexual dysfunction measurement (International Index Erectile Function-5)
- Post-operative retrograde ejaculation
- Post-operative bladder perforation
- Post-operative bladder neck and urinary meato stenosis
- Post-operative urinary incontinence
- Post-operative urinary retention
- Post-operative adverse effects/complications

## Conclusions and recommendations

- A total of 19 quality indicators have been proposed.
- Quality indicators must now be prioritised, validated, and consensuated with expert health professionals in order to establish the definitive quality indicators and standards.
- Experts recommend that the number of final indicator proposal for assessing surgical treatment of BPH should be no more than 15.