Health Quality Ontario

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Robotic Surgical System for Radical Prostatectomy: OHTAC Recommendation

ONTARIO HEALTH TECHNOLOGY ADVISORY COMMITTEE RECOMMENDATION

- The Ontario Health Technology Advisory Committee recommends against publicly funding the robotic surgical system for radical prostatectomy

RATIONALE FOR THE RECOMMENDATION

The Ontario Health Technology Advisory Committee (OHTAC) reviewed and accepted the findings of the health technology assessment conducted by Health Quality Ontario.[1]

The committee's recommendations were based on several factors. First, there is no high-quality evidence that the robotic surgical system results in a higher cure rate when compared with open prostatectomy. There is also no high-quality evidence that the use of the robotic surgical system results in lower rates of urinary incontinence or erectile dysfunction. Although some studies did suggest improved outcomes with the use of the robotic surgical system, these studies had serious limitations. Second, based on the economic evaluation in the health technology assessment, the Ontario Health Technology Advisory Committee felt that the robotic surgical system does not provide good value for money.

The committee also discussed the diffusion of the technology in Ontario and other jurisdictions, the impact on education and training in urology, as well as other surgical specialties. The committee was also influenced by the fact that in many jurisdictions, including in Ontario, current funding for the radical prostatectomy procedure is the same irrespective of the surgical approach. The committee felt that this policy should continue, and therefore decided to recommend against publicly funding the robotic surgical system for radical prostatectomy.

Finally, the committee carefully considered the feedback that was received regarding the draft recommendation before making a final recommendation.

Public Comment: Held April 10 to May 1, 2017.

Ontario
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Decision Determinants for Robotic Surgical System for Radical Prostatectomy

Decision Criteria	Subcriteria	Decision Determinants Considerations
Overall clinical benefit How likely is the health technology/intervention to result in high, moderate, or low overall benefit?	**Effectiveness** How effective is the health technology/intervention likely to be (taking into account any variability)?	Robot-assisted versus open radical prostatectomy: • No differences in short-term urinary and erectile functions at 3 months (moderate quality) and inconclusive findings for long-term results (very low quality) • No differences in pain at 6 weeks postsurgery, health-related quality of life, or return to work or activity (low to moderate quality) • No difference in positive surgical margins (low quality) • Inconclusive results for biochemical recurrence (very low quality) • Reduced operative times favouring robot-assisted prostatectomy (moderate quality) • Reduced lengths of hospital stay and estimated blood loss favouring robot-assisted prostatectomy (moderate quality) • No differences in transfusion rates, indwelling catheterization duration, or hospital readmission rates (moderate quality)
	Safety How safe is the health technology/intervention likely to be?	Moderate quality of evidence suggests no difference in complications between robot-assisted and open radical prostatectomy (in the RCT); however, very low quality of evidence shows a reduction favouring the robot-assisted approach (in the nonrandomized studies).
	Burden of illness What is the likely size of the burden of illness pertaining to this health technology/ intervention?	Prostate cancer is the second most common type of cancer in men, with a 15.4% lifetime probability of developing the disease in Ontario.
	Need How large is the need for this health technology/ intervention?	In Ontario in 2015, about 2,400 radical prostatectomies were performed, with about 34% robot-assisted.
Consistency with expected societal and ethical values[a] How likely is adoption of the health technology/intervention to be congruent with societal and ethical values?	**Societal values** How likely is adoption of the health technology/ intervention to be congruent with expected societal values?	Likely to be congruent.
	Ethical values How likely is adoption of the health technology/ intervention to be congruent with expected ethical values?	Likely to be congruent.
Value for money How efficient is the health technology/ intervention likely to be?	**Economic evaluation** How efficient is the health technology/intervention likely to be?	The costs of using the robotic system are relatively large, while the health benefits appear to be relatively small. Our best estimate of the incremental cost-effectiveness ratio (ICER) is $5.2 million per quality-adjusted life year.

Decision Criteria	Subcriteria	Decision Determinants Considerations
Feasibility of adoption into health system How feasible is it to adopt the health technology/intervention into the Ontario health care system?	**Economic feasibility** How economically feasible is the health technology/intervention?	About 1 in 3 radical prostatectomies performed in Ontario are currently robot-assisted. If adoption were to increase to 60%, the estimated budget impact would be about $3.4 million per year.
	Organizational feasibility How organizationally feasible is it to implement the health technology/intervention?	The robotic surgical system is already currently available in several hospitals in Ontario (mainly urban academic teaching hospitals) and it would be feasible to increase its use.

[a]The anticipated or assumed common ethical and societal values held in regard to the target condition, target population, or treatment options. Unless there is evidence from scientific sources to corroborate the true nature of the ethical and societal values, the expected values are considered.

REFERENCES

(1) Health Quality Ontario. Robotic surgical system for radical prostatectomy: a health technology assessment. Ont Health Technol Assess Ser [Internet]. 2017 Jul;17(11):1-172. Available from: http://www.hqontario.ca/evidence-to-improve-care/journal-ontario-health-technology-assessment-series

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About OHTAC

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