Adaptive Learning: Interactive Tools to Personalize and Enhance Continuing Professional Development

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Introduction/Background

- **Interactive Decision Support Tools (IDSTs)** enhance **continuing professional development (CPD)** through an adaptive, experience-based instructional model that simulates evidence-based clinical decision-making.[1]
- Given the complexity of prostate cancer management, **IDSTs deliver tailored education based on specific clinical scenarios**. Within CPD, these tools support reflective learning, comparison with expert recommendations, and application of evidence-based care in practice.[2]

Purpose

This project aims to evaluate **the impact of IDSTs** on **personalized CPD** by examining how **engagement with adaptive learning tools** influences **learning outcomes** and **clinical intentions** in prostate cancer care.

Methods

- Learners were grouped based on engagement time stamps with the IDST: within 3 months, 3-6 months, or no specified time frame after completing a preliminary text module.

Data Collection:

- A qualitative approach assessed the impact of the "Individualizing Treatment in Prostate Cancer and Addressing Health Disparities Through Education" program on clinical decision-making, confidence, and collaboration.
- **One text module activity** was used to assess learning via pretests/posttests and evaluation forms.
- IDST access occurred at 2 time points: **September 2023 and November 2023**

Statistical Analyses:

- Paired T test was used to compare pretest and posttest scores.

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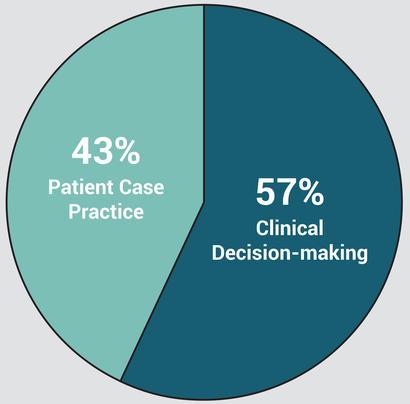
Scan to access the full IDST module and educational content

How HCPs Engage With IDST



Integrating an IDST tool into CPD enabled HCPs to reinforce learning and take evidence-based clinical action

"Very useful in navigating individualized treatment."
IDST Learner

IDST Metrics	
Total number of learners who entered cases within the IDST	305
Repeated use of IDST	59
Responded to behavioral questions	68

From Learning to Practice: An HCP Case Study on Text Module and IDST Exposure

References:
1. Cook DA, Erwin PJ, Triola MM. Computerized virtual patients in health professions education: a systematic review and meta-analysis. *Acad Med. 2010;85:1589-1602.*
2. Clinical Care Options. Prostate Cancer Interactive Decision Support Tool. 2025. https://clinicaloptions.com/activities/oncology/prostate-cancer-tool-1/25882

Overall Program Metrics

735 Total Learners

688 learners only accessed IDST	**31** learners completed the text module prior to accessing IDST	**6** learners completed the text module and evaluations prior to accessing IDST	**10** learners completed the text module only

Limitation

- The small sample size limited the ability to detect statistically significant differences in test score improvements between learning paths. The study may also have been underpowered to detect modest differences in average test scores.

Conclusion

- Both groups showed knowledge gains, with **no statistically significant difference in average score improvements** between the text module only and text module plus IDST groups (38% vs 36% improvement, respectively; $P = .231$)
- Pathway data show that structured engagement with adaptive tools can support **stepwise evaluation of clinical decisions** in prostate cancer care.
- These findings underscore the potential role of interactive digital tools in **supporting knowledge acquisition** within accredited CPD activities.
- **Future research** should explore how engagement patterns influence **clinical decision-making and sustained learning outcomes.**