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## INTRODUCTION

- Artificial intelligence (AI) is increasingly used in assisted reproductive technologies.
- Understanding fertility professionals' views on its clinical value, conditions for implementation, & ethical implications is key to supporting its effective adoption in IVF

## AIM

To explore Canadian clinician and embryologist perspectives on the integration of AI across the IVF process, including perceived benefits, limitations, and implementation priorities.

## METHOD

**DESIGN:** A qualitative study using semi-structured interviews

**Participants:** 11 clinicians + 12 embryologists recruited via professional networks and social media (23 participants)

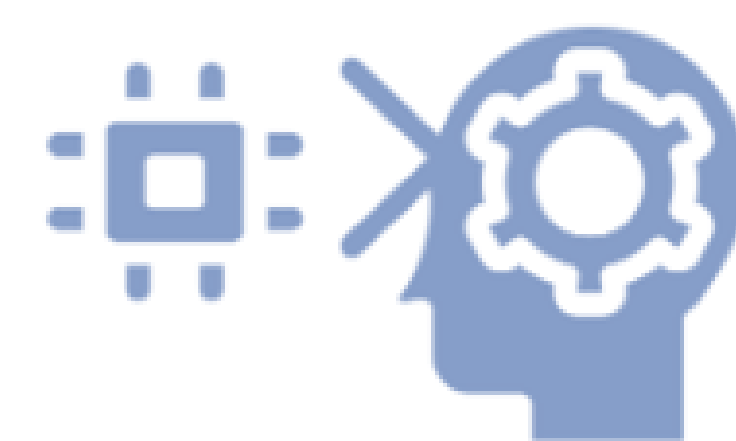
**Interviews:** One-on-one interviews were conducted via Microsoft Teams (duration ≤ 60 minutes). Interviews were video- and audio-recorded and transcribed verbatim

Pre-determined open-ended questions explored participants' understanding of AI, its potential applications across the IVF cycle, & integration considerations. Clinicians were also asked about communicating AI tools to patients and recommending their use

**Data analysis:** Thematic analysis followed Braun and Clarke's six-phase framework: data familiarization, initial coding, theme development, theme review, theme definition, & final reporting. Results adhere to the Consolidated Criteria for Reporting Qualitative Research (COREQ) guidelines

## RESULTS – 6 MAJOR THEMES EMERGED:

### PERCEPTIONS OF AI IN IVF



Participants were optimistic about AI's potential to improve consistency and decision-making, though experienced embryologists cautioned against over-reliance and clinicians highlighted the need for stronger scientific evidence.

### CLINICAL APPLICATIONS



Broad interest in AI was observed across stimulation dosing, follicle monitoring, trigger timing, gamete & embryo assessment, non-invasive euploid screening, endometrial evaluation, workflow management, and quality control.

### CONSIDERATIONS FOR AI IMPLEMENTATION



Participants emphasized workflow integration, usability, cost-efficiency, & scientific evidence as key factors for AI implementation. Clinicians highlighted ethical concerns (data privacy, legal risks) and need for patient-centered care, while embryologists emphasized phased roll-out, training, & ongoing support.

### RECOMMENDING AI TO PATIENTS



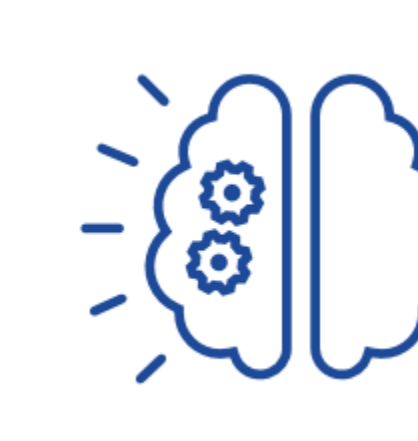
Clinicians underscored the need for transparent, evidence-based communication, especially when costs are involved.

### PATIENTS ACCESS TO AI OUTPUTS



Clinicians emphasized the need for guided interpretation to avoid misinterpretation and to recommend next steps in care.

### FUTURE OUTLOOK



Participants were enthusiastic about AI's potential to ease workload, boost efficiency, and improve care through automating documentation, standardizing labs procedures, & supporting clinical tasks such as scheduling, medication management, & remote monitoring.

## CONCLUSIONS

- Clinicians and embryologists see **promise in AI to improve IVF efficiency and personalization**, but **stress the need for clinical validation, transparency, and human oversight**
- Successful AI adoption in IVF requires workflows alignment, strong scientific evidence, and attention to ethical and operational factors**

## ACKNOWLEDGEMENTS

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## REFERENCES

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## HELP US SHAPE THE FUTURE OF AI IN FERTILITY CARE

- Share your views in our 15-min survey!

Phase 2 (survey) aims to better understand the themes highlighted in these Phase 1 interviews

