

OBGYN Modified Delphi Consensus Survey for Entrustable Professional Activities: Quantification of their Importance, Benchmark Levels, and Roles in Simulation-Based Training and Assessment

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INTRODUCTION

Competency-based medical education (CBME) is playing a central role in today's training of resident physicians. There is a need to develop adequate training and assessment tools, including simulation, to ultimately deliver competent physicians, capable of unsupervised practice.

OBJECTIVES

The aim of this Delphi survey is threefold:

1. Quantify the importance of each Entrustable Professional Activity (EPA) with respect to Obstetrics & Gynecology (OBGYN) residency training
2. Set benchmark levels for each EPA
3. Identify the importance of simulation-based training and assessment for each EPA.

METHODS

The individual items (EPAs) used in the survey were defined based on literature review of five OBGYN curricula worldwide.



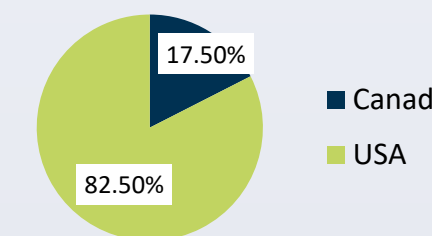
Two rounds of a modified Delphi method via online questionnaire through "Survey Monkey" were performed. Experts in the study were OBGYN residency program directors across Canada and United States. Experts rated the importance of each EPA for residency training, identified benchmark levels of competence for predefined stages of training, and roles of simulation-based training and assessment. A Likert scale was used (1 to 5); consensus was defined as $\geq 80\%$ agreement.

RESULTS

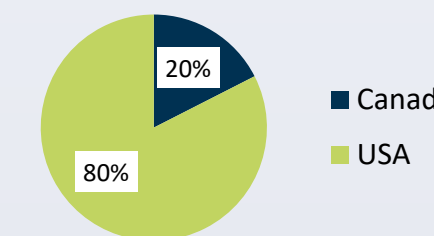
Item analysis yielded a list of 15 EPAs. Survey response rate was 17.47% (40 out of 229) for part 1 and 6.55% (15 out of 229) for part 2. All experts rated the importance of each EPA for residency training as "moderately important" (4) or "absolutely essential" (5). Only two of fifteen EPAs reached consensus of $\geq 80\%$ (rating 4 or 5) for simulation-based training and assessment: "Gynecological Technical Skills & Procedures" and "High Risk Childbirth".

Uncomplicated Antenatal & Prenatal Care	Pre-op care
Complicated Antenatal & Prenatal Care	Post-op care
Intrapartum Care	Mature Women's Health
Childbirth	Gyne-onc
High Risk Childbirth	UroGyn
Postpartum & newborn care	PAG
Benign Gyne	Sexual & Reproductive Health
Gyne Technical Skills & Procedures	

Part 1 - 40 responses



Part 2 - 15 responses



For benchmarking, experts agreed with a stepwise increase in level of competency, dependent on stage of residency.

Stages of residency:

- *Eraut's summary of Dreyfus and Dreyfus' model of skill acquisition*
- *USA "Milestone Project" levels of observed behavior*
- *Can correlate to 4 Royal College stages*

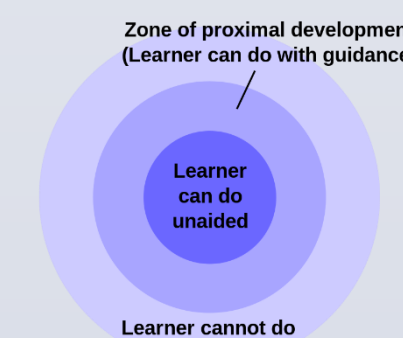
1. Novice
2. Advanced Beginner
3. Competent
4. Proficient



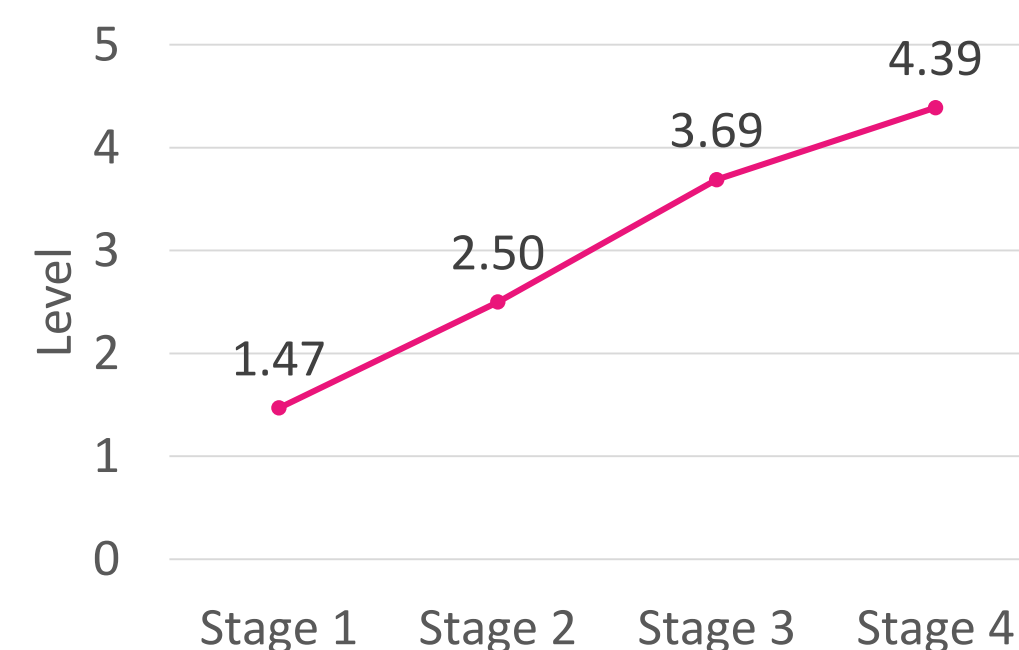
Competence Levels:

- *Dutch curriculum mapped to the Canadian Model*
- *Based on ZPD theory (EdPsych)*

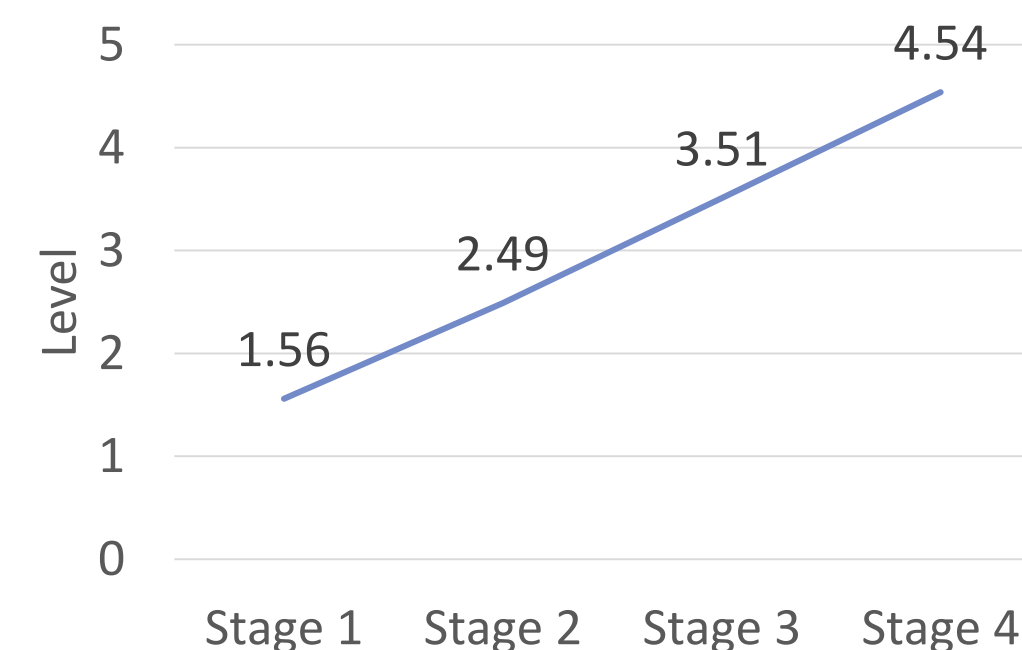
1. Modelling
2. Scaffolding
3. Fading
4. Entrustment
5. Can supervise/teach others



Benchmarks 1 (Sample Means)



Benchmarks 2 (Sample Means)



CONCLUSION

The emergence of CBME requires EPAs and benchmark levels for each stage of residency. Simulation will become a valuable tool for training and assessment in this model. However, experts remain neutral about its role, except for technical skills, despite evidence for use in team-based training, communication, and crisis-resource management. An OBGYN national curriculum based on predefined EPAs and benchmark levels, as well as adequate assessment tools, including simulation, needs to be further explored for CBME to be successful.

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