

# A Clearer Picture: Defining Threshold Concepts for Resident Education in Obstetrics & Gynecology



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## Background

As the medical community reels from the impact of the COVID-19 global pandemic, medical educators must take stock of the systems in place that support frontline providers in their training and practice. This year has continued to highlight the increasing incidence of burnout among medical professionals,<sup>1,2</sup> and resident trainees are already known to experience heightened levels of stress at baseline.<sup>3</sup> As graduate medical educators begin to assess their own methods of evaluation and targeted support structures for resident learners, the understanding of what is *essential* for trainees to master in order to become (and remain) competent, motivated physicians must shift.

Current objectives in residency education established by the ACGME offer broad guidelines that designate competencies for all trainees, regardless of subspecialty, but these parameters are known to be difficult to translate into observable behaviors.<sup>4</sup> Studies have shown that the core ACGME competencies do not possess adequate validity, and instead physicians and educators often rely on their “gut feelings” to judge resident performance and progress.<sup>5</sup>

Though more difficult to measure, it may be beneficial at this juncture identify new or supplemental goals of residency education. *Threshold concepts* are defined as core ways of thinking and practicing that are required for true mastery of a subject.<sup>7,8</sup> While not native to medical education, these ideas capture the transformative way that learners should approach their own discipline—through a series of encounters that are troublesome, irreversible, and uniquely bound to the definition of mastery within a field.<sup>9</sup> Particularly in the field of obstetrics and gynecology, the identification of threshold concepts within residency training can help determine more holistic goals of graduate medical education.

## PURPOSE

Through a longitudinal qualitative study at academic medical training programs in a major U.S. city, this project seeks to identify threshold concepts for OBGYN residency, as determined by residency education leaders in the field.

*“[Medical educators] should be so much more explicit about acknowledging how much we will shape you. I think residency programs are much more focused on what they're going to teach you, but they're shaping someone even more than they're teaching them.”*  
Interviewee 427

## METHODS

- **Setting:** This study took place within OBGYN residency programs in the New York City area during the 2020-2021 academic year
- **Subjects:** Eleven members of OBGYN residency program education leadership teams at four major institutions (Columbia University Medical Center, NYU Langone Health, Icahn School of Medicine at Mount Sinai, and Einstein Healthcare Network) were interviewed.
- **Design:** A subjective, inductive approach was utilized to create a conceptual framework around the theory of threshold concepts in the OBGYN field. This was a qualitative study with a constructivist framework and based in grounded theory. Semi-structured interviews were audio-recorded, transcribed and de-identified before coding.
- **Instrument:** Based on material in the literature and discussion with experts—and validated through cognitive interviews prior to data collection—ten open-ended questions were designed to identify transformative moments in OBGYN residency training.
- **Analysis:** A 3-stage thematic coding process was completed by two independent reviewers. Member-checking, triangulation and solicited feedback were performed until theoretical saturation was reached.

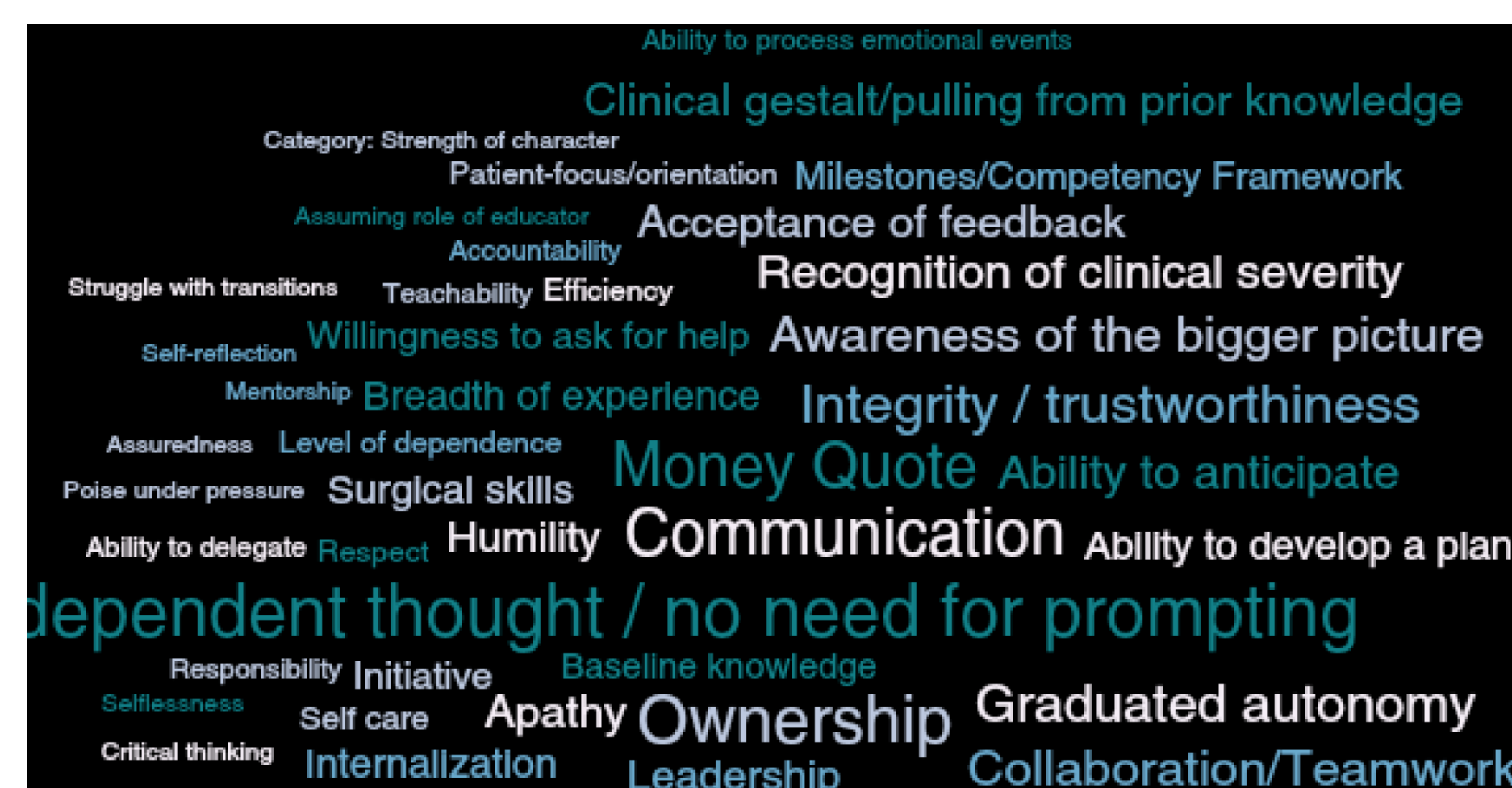


Figure 1 – Stage One: Thematic Coding

## RESULTS

### Threshold Concepts in Obstetrics & Gynecology Training

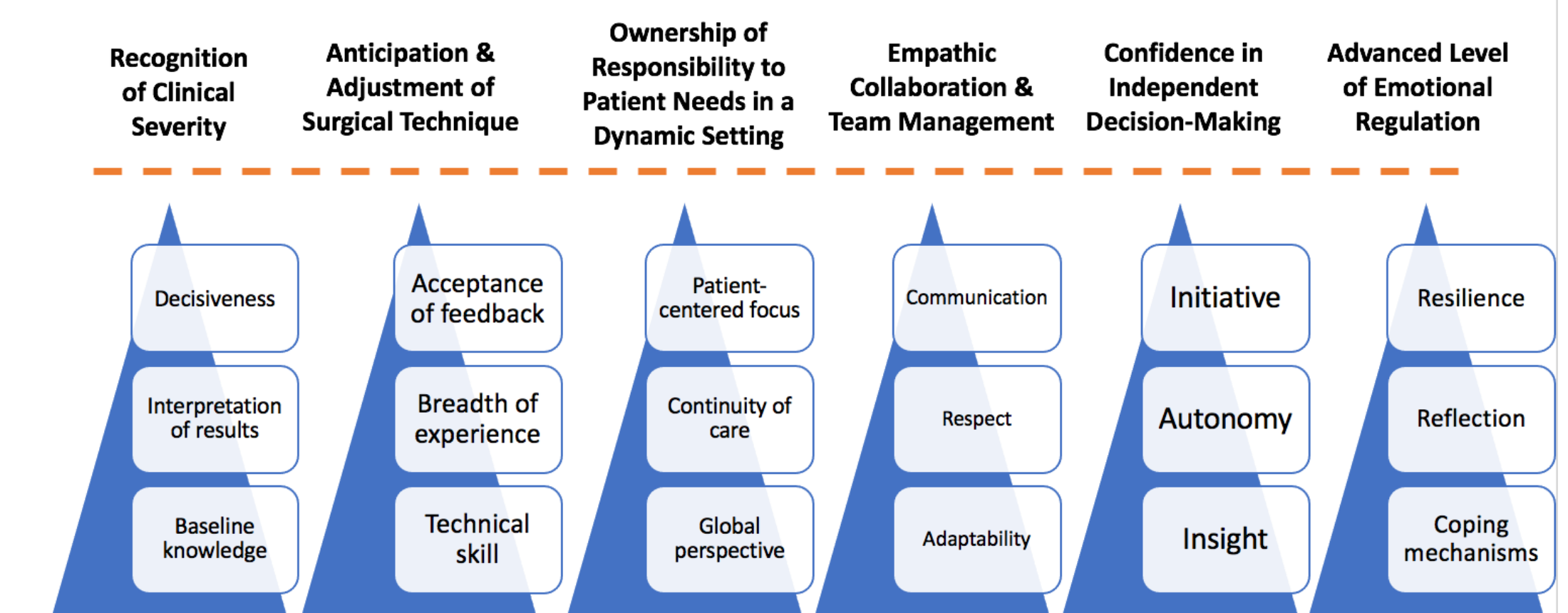


Figure 2 - A Conceptual Model: Reaching Threshold Concepts in OBGYN Residency

## CONCLUSIONS

Six threshold concepts specific to OBGYN residency training were identified: recognition of clinical severity, anticipation and adjustment of surgical technique, ownership of responsibility to patient needs in a dynamic setting, empathic collaboration and team management, confidence in independent decision-making, and advanced emotional regulation. The potential benefits of this study are to spur educators to reframe how we evaluate learners in graduate medical education. While limited to perspectives from academic leadership in a major US city, the identification of threshold concepts for OBGYN trainees has applicability and generalizability to other training programs that seek to provide better support and mentorship to residents in this specialty.

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