

# Med-Peds PROuD: A Pilot Study of Targeted Professional Development to Promote Well-Being Among Internal Medicine-Pediatrics Residents

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## ABSTRACT

**INTRODUCTION:** In physicians, burnout is highest during training, with 60.3% of residents reporting at least one symptom of burnout. The Accreditation Council for Graduate Medical Education Common Program Requirements establishes standards to promote well-being. We developed a professional development curriculum to target this requirement.

**METHODS:** 60-minute post-graduate year (PGY)-specific professional development workshops were offered to internal medicine-pediatrics (Med-Peds) PGY-1-PGY-4 residents at a large academic institution. We applied descriptive statistics for quantitative data using Likert-scale questions.

**RESULTS:** Eight Med-Peds professional development (PROuD) sessions occurred from July 2023–June 2024, with 44 residents participating in 1–2 sessions comprising 5–10 residents per session. The survey response rate was 53% (n=62), and 45% reported feeling ‘less stressed’ or ‘no stress at all’ after attending. 93% of participants viewed the workshop favorably and 96% expressed interest in future sessions.

**DISCUSSION:** This pilot study demonstrated that residents experienced decreased stress and increased interest in future sessions after attending targeted PGY professional development workshops

**KEYWORDS:** graduate medical education, well-being, professional development

## INTRODUCTION

The Accreditation Council for Graduate Medical Education (ACGME) establishes and monitors professional educational standards for all medical residency and fellowship programs in the United States.<sup>1</sup> Through the Common Program Requirements (CPR), ACGME ensures that all residencies and fellowships have a shared foundation of core competencies that are measured by corresponding milestones. Developed in 2019, the Clinical Environment Review (CLER) Program is comprised of five focus areas, one of which is well-being.<sup>2,3</sup> Implementation of these CPR competencies and CLER focus

areas can be challenging given the unique needs of training programs, but the impact on trainee success is clear.<sup>4</sup> One study showed an association between burnout, measured by Maslach Burnout Inventory scores, and decreased milestone performance for pediatric post-graduate year 1 (PGY-1) residents.<sup>5</sup> To assist programs in addressing these barriers to implementation, ACGME provides a collection of well-being resources to support sponsoring institutions, programs, and individuals within graduate medical education (GME) in learning about and improving various aspects of well-being. The guidance provided in these resources should be tailored to the unique needs of each residency program based on identified drivers of burnout, helping institutions and programs create ethical, humanistic educational environments that address local needs effectively.<sup>6</sup>

As a workplace phenomenon, burnout comprises depersonalization, emotional exhaustion and feelings of inefficacy.<sup>7</sup> During the physician life cycle, burnout is highest amongst residents and fellows at 60.3% compared to medical trainees (55.9%) and early career physicians (51.4%).<sup>8</sup> Extending beyond the trainee, burnout impacts every aspect of their professional identity: patient care, professionalism and even academic achievement.<sup>9-11</sup> Burnout isn’t stagnant either, and as residents matriculate through their training it worsens. One study noted 47% of PGY-2 residents experienced burnout compared to 37% of PGY-1 and 43% of PGY-3 residents.<sup>12</sup> The increase in supervision responsibility, larger patient load and teaching expectations that characterize the supervisor role likely contribute to these worsening numbers. Time spent engaging with electronic health records (EHRs) is also often directly correlated with burnout rates, and 37% of PGY-2s report completing work on EHRs at home in the previous month compared to 31% of PGY-1s.<sup>12</sup> Additional risk factors include imposter syndrome and challenges with residency program leadership, which could offer additional opportunities for intervention.<sup>13,14</sup> Navigating and mitigating burnout in residency can seem daunting; however, we propose an evidence-based approach centered around the Job Demand-Control (JDC) Theory to address this challenge.

The JDC theory is one of the most widely studied models of occupational stress. This framework predicts employee well-being based on the imbalance between job demands (workload) and job control (decision latitude).<sup>15</sup> Jobs with high

demand and low control, referred to as 'high strain' jobs, lead to increased stress, burnout, and negative health effects.<sup>16,17</sup> The increased workload (high demand) and decreased control over work-scheduling (low control) in residency are characteristic of a 'high strain' job. Employees in jobs with high demand and high control experience increased learning, motivation and development of skills.<sup>15</sup> However, employees in 'high strain' jobs can experience these same benefits by integrating resources and social support as described by the Job Demand-Control Support (JDACS) model.<sup>18-20</sup> Through resources, such as professional development and mentorship, residents can be better equipped to mitigate burnout and increase their decision latitude. These concepts, and the JDACS model served as the basis for the creation of an internal medicine-pediatrics professional development (Med-Peds PROuD) curriculum to improve resident well-being.

We aimed to demonstrate that physician well-being can be amplified and stress reduced by an intentional professional development curriculum designed for Med-Peds resident physicians at a large academic institution. The Med-Peds PROuD curriculum aligns with the CPR of professionalism and the CLER focus area of well-being to promote their implementation in a residency program. Designed to improve resident physicians' preparation for independent practice, this curriculum fosters individual resilience and supports residents in managing the unique demands of residency while improving well-being and job satisfaction.

## METHODS

### Setting and Population

Participants included were residents in the Med-Peds residency program at University of Tennessee Health Science Center (UTHSC), a large academic institution. The professional development sessions were voluntary and offered in the evening in the homes of the faculty members leading the sessions. The residents were divided into cohorts based on their PGY and each cohort was assigned a faculty mentor as the session facilitator. Since this was a pilot, there were only two sessions held for each cohort of residents. Each session included 5–10 resident participants and one faculty facilitator.

### Facilitators

The Program Director and/or an Associate Program Director of the UTHSC Med-Peds residency acted as facilitators for each session. Due to their unique role in providing mentorship, career advising, navigating post-residency opportunities, and successfully completing two board exams, members of program leadership were well equipped to provide this education.

**Table 1.** Professional Development Session Topics

	PGY-1	PGY-2	PGY-3	PGY-4
<b>Fall Session</b>	An Insider's Guide to Surviving the Switch	Resident Wellness	Dusting off Your CV Before Your Graduation Date	Navigating the Next Steps: Preparing for Life After Residency
<b>Spring Session</b>	Beyond Doubt: Navigating Imposter Syndrome	Get Scholarly – Med Ed Abstract Workshop	A Year from Now: Imaging Your Ideal Career	Life After Residency: Reconnecting to Your Why

### Intervention

**Schedule:** Each cohort had two sessions that were tailored to the unique needs of each PGY, resulting in a total of eight 60-minute sessions across the 2023–2024 academic year. Sessions were held in the evening to limit conflicts with existing mandatory didactics. Each PGY cohort had two sessions, one in the fall and one in the spring, that were tailored to the unique needs of their class. The time between the sessions ranged from 6–8 months. Polls were used to schedule the sessions to maximize attendance. Residents reported that they preferred well-being-related activities to be after hours in a faculty member's home based on an internal well-being needs assessment conducted in 2022.

**Session Structure:** The JDACS model highlights the ability of professional development and mentorship as resources that can decrease the strain experienced in high-stress and low-control occupations such as residency. Each session provided participants with group mentorship from program leaders, as well as specific professional development skills that were applied during the session. Each session's organization varied but generally comprised at least two components: brief didactics and facilitated large group discussions in a supportive environment. At least one session for each PGY cohort incorporated a hands-on activity that allowed participants to leave with a tangible item after the session (i.e., edited curriculum vitae, well-being toolkit). The session topics were chosen based on the ACGME CPR milestones for all trainees in ACGME-accredited programs. In addition, the results from the above-mentioned internal well-being needs assessment were also used to identify Med-Peds specific areas of interest for inclusion. There was no required pre-reading for the sessions. For the last five minutes of each session, time was allotted for participants to complete the optional survey. Session themes are outlined in **Table 1**.

### Data Acquisition and Analysis

At the end of each Med-Peds PROuD session, learners were provided with a QR code to an anonymous survey. Participants were allotted five minutes in person to complete the survey, which included three items assessing topic relevance, acquisition of new information and faculty content expertise scored in a 5-point Likert scale (1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree).

## RESULTS

Med-Peds PROuD sessions were available to all four years of Med-Peds residents at one academic institution (n=51) over one academic year (2023–2024). Participation was voluntary, and the sessions did not replace existing required didactics. The number of attendees for each class-specific session ranged from 5–10 residents, with an average attendance rate of 61% for the respective PGY cohort (each PGY cohort ranged from 12–14 residents). A total of 44 residents participated in 1–2 sessions during the year. The attendance rate was higher during the fall sessions, with an average attendance rate of 75%, compared to 47% in the spring. In total, eight sessions were conducted across all PGY levels with 32 survey responses (response rate 52%; see **Table 2**).

Overall, residents reported an impact on their stress levels after these sessions, with 45% of all respondents feeling ‘less stressed’ or ‘no stress at all’ after attending. While the perceived stress level of respondents after their respective session varied between classes, across all PGY levels, a smaller percentage of respondents reported feeling ‘very stressed’ or ‘stressed’ following the spring sessions compared to the fall sessions (see **Table 3**).

### Quantitative Data

On average, responses to all Likert-scale questions were rated as positive (mean >3/5), as opposed to neutral (3/5) or negative (<3/5) (see **Table 2**). Over 96% of responses ranked 4–5/5 for the topic being pertinent to stressors specific to their PGY level (n=60) and the acquisition of new information during the session (n=60). Facilitators were rated as being knowledgeable regarding the workshop topics (mean 4.9/5). 93% of participants viewed the workshop format favorably, and 96% were interested in attending future sessions.

### Qualitative Data

In this pilot study, the qualitative questions were limited to recommended changes to the sessions and solicitation of topics for future sessions. There were conflicting responses about the timing of the sessions, with one participant responding, ‘would prefer to have over lunch,’ compared to another participant who commented, ‘loved the format at an attendings house!’ Multiple residents requested earlier start times and suggested topics (i.e., curriculum vitae, cover letters, job opportunities) to be covered in other sessions. For the Resident Wellness session, participants indicated that PowerPoint was not the best format for discussing this topic and that they would prefer to spend more time discussing communication skills such as debriefing.

## DISCUSSION

Overall, this pilot study of a professional development intervention based on the JDCA theory to address ACGME CPR professional development competency was well received and decreased stress across all PGY classes. Med-Peds PROuD was favorably received by residents who found the selected

**Table 2.** Professional Development Session Attendance and Survey Responses

Class	Attendance Percentage (N)	Survey Response (%)	Topic was Pertinent	Faculty was Knowledgeable
<b>Fall Sessions</b>				
PGY-1	0.67 (12)	0.38	4.67	5
PGY-2	0.71 (14)	0.3	4.67	5
PGY-3	0.83 (12)	0.4	4.25	4.75
PGY-4	0.77 (13)	0.8	4.25	4.75
<b>Spring Sessions</b>				
PGY-1	0.54 (12)	0.6	4.67	5
PGY-2	0.43 (14)	0.5	4.67	5
PGY-3	0.50 (12)	0.83	4.2	4.4
PGY-4	0.54 (13)	0.43	4.67	5

**Table 3.** Resident Survey Results of Perceived Stress Level Post-Session (Percentage of Respondents)

Class	Residents Responded as either ‘Less Stressed’ or ‘No Stress At All’	Residents Responding with ‘No Change’ in Stress	Residents Responding with ‘Very Stressed’ or ‘Stressed’
<b>Fall Sessions</b>			
PGY-1	0.33	0	0.67
PGY-2	0.33	0.33	0.33
PGY-3	0.5	0.25	0.25
PGY-4	0	0.375	0.625
<b>Spring Sessions</b>			
PGY-1	0.67	0.33	0
PGY-2	1	0	0
PGY-3	0.4	0.6	0
PGY-4	0.33	0.33	0.33

topics relevant and content applicable to their specific PGY. Faculty were viewed as knowledgeable facilitators, reflecting their leadership roles within the program. Notably, survey response rates increased from fall to spring sessions across PGY levels, except for PGY-4 residents, likely due to reduced engagement and investment in program changes as they prepared for graduation.

Of note, PGY-1 and PGY-4 residents reported heightened stress following the first session, both of which focused on transitions – switching categorical programs for PGY-1s and pursuing job opportunities for PGY-4s. These sessions may have increased awareness of challenges associated with these transitions, intensifying perceived stress related to upcoming changes. Conversely, PGY-1 residents reported reduced

stress after the spring session on imposter syndrome, even as they approached supervisory roles. This session intentionally did not emphasize supervisory responsibilities, given an existing required Supervisor's Curriculum provided to all rising PGY-2 Med-Peds and Internal Medicine residents, which provided skills to prepare them for this new role.

Despite residents consistently agreeing that chosen topics were pertinent and expressing interest in attending future sessions, there was a decrease in spring session attendance compared to fall attendance across all PGY cohorts. Data collected from each cohort following their respective fall sessions indicated that residents found the sessions useful and expressed interest in future attendance. We therefore hypothesize that the decline in attendance across all PGYs was not due to a lack of interest in the curriculum but to external factors beyond the curriculum designers' control.

Looking more specifically at each PGY class, spring session attendance dropped by 13% for PGY-1 residents likely due to the overwhelming demands of their intern year, and anxiety related to their impending supervisor role. This was evident during the spring session discussion where PGY-1 participants expressed feelings of exhaustion and burnout. The most significant decline affected the PGY-2 residents with a 28% decrease in attendance (fall attendance 43%). This decline can be attributed to several factors, most notably conflicting with the last journal club of the year, which residents are required to attend twice a year. Moreover, the Med-Peds PGY-2 schedule is intentionally designed to maximize exposure to essential categorical rotations, such as inpatient wards and intensive care units, resulting in a challenging schedule that augments burnout. As a result, some residents may have been experiencing burnout or prioritized required didactics over the optional Med-Peds PROuD session, even if they had a stronger interest in the latter. The PGY-4 class experienced a 23% decrease in attendance in the spring compared to the fall session. This decline was likely due to impending graduation and prioritizing tasks related to transitioning from residency (onboarding, licensure, or moving arrangements).

### Limitations

While the results of this pilot study are promising, several limitations should be considered. A key limitation to our findings is the single-year duration and single-institution setting, which restricts generalizability. Though done within a large-sized Med-Peds program (PGY cohort range 12–14 residents), the sample size is small, which limits the power of any statistical findings. We also did not conduct pre/post-test assessments to measure burnout besides stress after the session. Moreover, additional questions that could have provided a deeper understanding of the reasons behind the changes in stress levels or the decline in attendance were not explored.

### Future Considerations

To enhance the impact of Med-Peds PROuD, future considerations include expanding the range of topics to address transitions in residency and incorporating hybrid sessions by integrating them into the pre-existing protected Med-Peds noon conference curriculum alongside after-hours sessions. In response to observed declines in resident attendance and unanticipated barriers to participation – primarily the overwhelming demands tied to specific PGY-level responsibilities – we advocated for future sessions to be included in program-sponsored mandatory didactics to provide protected time for participation. Additionally, during the second year of the curriculum (2024–2025 academic year), we adjusted the format to include two additional sessions per PGY level to take place during the workday, complementing the two sessions held at a faculty member's home. By doubling the frequency of Med-Peds PROuD sessions to quarterly, these changes aim to better meet residents' needs, enhance engagement, and cover a broader range of professional development topics. The JCDS model predicts that the provision of increased professional development resources and engagement in group and peer mentoring will allow residents to gain skills that will help them decrease the burnout they experience as trainees. More sessions will provide more opportunities for data collection to better assess the efficacy of these resources – including pre/post surveys, and a measure of burnout.

### CONCLUSION

This pilot program, consisting of carefully designed professional development workshops based on established ACGME standards and informed by an internal residency survey, presents an innovative approach to fostering well-being and professionalism within a large Med-Peds residency program. Though limited, our data demonstrates that participating residents viewed this targeted professional development program as relevant, worthwhile, and valuable. This approach yielded positive outcomes for all involved, with residents gaining confidence and professional skills, while the residency program identified an innovative and effective way to meet accreditation standards.

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## Disclaimer

The views expressed herein are those of the authors and do not necessarily reflect the views of the University of Tennessee Health Science Center.

## Disclosures

None.

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