

Barreras y facilitadores de la práctica docente en la especialidad de medicina de urgencias.

Barriers and facilitators of teaching practice in the emergency medicine specialty.

Ana María Sandoval-Moreno ¹, Laura Andrea Calderón-Padilla ², Carlos Alberto Andrade-Castellanos ^{3*}.

¹ Simulation Center for Clinical and Surgical Excellence (CESiECQ), Mexican Social Security Institute, Guadalajara, Jalisco, Mexico; anytavale@gmail.com, <https://orcid.org/0000-0002-9939-5369>.

² Department of Applied Clinical Nursing, University Center for Health Sciences, University of Guadalajara, Jalisco, Mexico; andrea.calderon@academicos.udg.mx, <https://orcid.org/0009-0009-1254-8296>

³ Internal Medicine Service, New Civil Hospital of Guadalajara "Dr. Juan I Menchaca", Guadalajara, Jalisco, Mexico; caandrade@hcg.gob.mx, <https://orcid.org/0000-0003-4720-3289>

* Correspondence: caandrade@hcg.gob.mx

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Summary.

Background. Emergency medicine residency training takes place in environments characterized by high demand for care, unpredictability, and constant pressure. These conditions create tension between clinical productivity and teaching practice, posing challenges to the quality of the training process. **Objective.** To explore and understand the barriers and facilitators to teaching practice as perceived by emergency medicine residency faculty at a secondary-level hospital of the Mexican Social Security Institute (IMSS). **Methods.** A qualitative study with an instrumental case study design was conducted. Participants were faculty members from the emergency department of IMSS Regional General Hospital No. 46. Data were collected through semi-structured interviews and analyzed using thematic analysis following the approach of Braun and Clarke. **Results.** Four main themes were identified: 1) pedagogical flexibility and the teaching capital of the instructor, 2) clinical practice in the emergency department as a situated learning setting, 3) pedagogical inertia associated with workload overload and lack of teacher reflection, and 4) institutional identity gap and precariousness of the teaching role. Intrinsic motivation emerged as a key element for sustaining educational commitment despite structural barriers. **Conclusions.** Teaching practice in emergency medicine is a situated process, influenced by individual and institutional factors. Strengthening the academic recognition and pedagogical training of clinical instructors is fundamental to sustaining quality medical education in complex healthcare settings.

Keywords: Medical education; Teaching; Teachers; Qualitative research; Emergency medicine.

Resumen.

Antecedentes. La formación en la especialidad de medicina de urgencias se desarrolla en entornos caracterizados por alta demanda asistencial, imprevisibilidad y presión constante. Estas condiciones generan tensiones entre la productividad clínica y la práctica docente, lo que plantea desafíos para la calidad del proceso formativo. **Objetivo.** Explorar y comprender las barreras y los facilitadores de la práctica docente percibidos por docentes de la especialidad de medicina de urgencias en un hospital de segundo nivel del Instituto Mexicano del Seguro Social (IMSS). **Métodos.** Se realizó un estudio cualitativo con diseño de caso instrumental. Participaron docentes del servicio de urgencias del Hospital General Regional No. 46 del IMSS. Los datos se recolectaron mediante entrevistas semiestructuradas y se analizaron a través de análisis temático siguiendo el enfoque de Braun y Clarke. **Resultados.** Se identificaron cuatro temas principales: 1) flexibilidad pedagógica y capital didáctico del docente, 2) la práctica clínica en urgencias como escenario de aprendizaje situado, 3)

inercia pedagógica asociada a la sobrecarga laboral y falta de reflexividad docente, y 4) brecha de identidad institucional y precarización del rol docente. La motivación intrínseca emergió como un elemento clave para sostener el compromiso educativo pese a las barreras estructurales. **Conclusiones.** La práctica docente en medicina de urgencias es un proceso situado, influido por factores individuales e institucionales. Fortalecer el reconocimiento académico y la formación pedagógica de los docentes clínicos resulta fundamental para sostener una educación médica de calidad en contextos asistenciales complejos.

Palabras clave: Educación médica; Enseñanza; Docentes; Investigación cualitativa; Medicina de emergencia.

1. Introduction

In the field of medical education, training in critical specialties such as emergency medicine faces particular challenges stemming from the unpredictable, dynamic, and high-pressure nature of care in emergency settings. The quality of the training process in this context has a direct impact on the responsiveness, clinical decision-making, and professional competence of future specialists (1). However, achieving effective integration between theory and practice, as well as adapting teaching strategies to highly demanding clinical environments, remains a significant challenge (2).

In emergency departments, faculty members face increasing pressure to boost clinical productivity, leading to persistent concerns about the shrinking time available for teaching and supervising residents and students (3). This pressure is exacerbated by multiple factors, including overcrowding due to high patient volume, prolonged stays for hospitalized patients in the emergency department, increased administrative burden, staff shortages, and time spent on clinical documentation (4). In this context, teaching practice is constantly strained by the demands of patient care.

With the aim of protecting teaching time from the demands of clinical productivity, some academic departments of emergency medicine have implemented initiatives to incentivize or formalize teaching activities (5). These strategies are based on the premise that clinical productivity and effective bedside teaching are competing and, at times, conflicting demands. However, the available evidence is limited and inconclusive regarding the need for or actual effectiveness of these interventions (6,7).

Several studies have indicated that residents' perceptions of teaching quality are more strongly associated with specific faculty characteristics (such as their enthusiasm and ability to adapt teaching methods) than with their perceived clinical workload (7-8). These qualities appear to promote both clinical efficiency and teaching effectiveness, allowing some clinicians to perform competently in both areas. Despite these findings, a knowledge gap persists regarding how emergency department instructors themselves interpret and experience the barriers and facilitators of their educational practice in high-demand healthcare settings (9-10).

In particular, few studies address this phenomenon from a qualitative perspective, focusing on the voices of teachers, and considering teaching practice as a complex, dialogical, and situated process, influenced not only by individual factors but also by institutional, organizational, and cultural conditions (10-11). Understanding these experiences is fundamental to guiding the design of contextualized and sustainable educational strategies in emergency services. Therefore, the objective of this research is to explore and understand the barriers and facilitators to teaching practice as perceived by teachers specializing in emergency medicine at a secondary-level hospital of the Mexican Social Security Institute (IMSS).

2. Methods

An instrumental case study was employed to explore in depth the barriers and facilitators of teaching practice within the emergency medicine residency program at IMSS Regional General Hospital No. 46. This design is particularly suitable when seeking to understand a complex phenomenon embedded in a specific context, using the case as a means to illuminate a broader problem of interest (12-13). The study was based on a constructivist epistemological stance, which assumes that knowledge and meaning are constructed from the interaction of individuals with their social and professional environment. From this perspective, prior experiences, beliefs, and accumulated learning decisively influence how individuals interpret their reality. Consequently, the existence of multiple constructed realities is recognized, rather than a single objective truth (14). This epistemological positioning grounded the study's interest in understanding the subjective experiences of emergency medicine faculty and how these shape their teaching practice.

2.1 Participants and context

The research was conducted between February and June 2025 in the emergency department of the IMSS Regional General Hospital No. 46. The department is staffed by a core team of 12 faculty members, whose primary function is the supervision of resident physicians. Six faculty members specializing in emergency medicine participated, one of whom held a university professorship. Participants were selected using convenience sampling, considering their availability and the relevance of their teaching role within the program. The selected faculty members had received similar initial training, allowing for the exploration of comparable experiences within a shared context. The number of interviews was determined based on the principle of data sufficiency inherent in qualitative research, prioritizing the depth of the testimonies over the numerical representativeness of the sample. Consequently, the inclusion of new participants was discontinued when the interviews began to reiterate previously identified themes without contributing additional analytical codes or categories.

2.2 Information gathering techniques

Semi-structured interviews were conducted to explore participants' perceptions of the barriers and facilitators to their teaching practice in the context of emergency medicine. The interview guide was developed by the research team based on specialized literature on teaching practice (15,16) and was piloted beforehand to ensure the clarity and relevance of the questions. The interviews were conducted in person, lasted an average of 45 minutes, and were led by the first author of the study.

2.3 Analysis Strategy

The interviews were audio-recorded and subsequently transcribed verbatim for analysis. Data processing was performed using thematic analysis, following the six phases proposed by Braun and Clarke: 1) data familiarization, 2) code generation, 3) theme search, 4) theme review, 5) theme definition, and 6) report production (17). Atlas.ti software was used for data organization and coding. The SRQR guidelines were used as a framework for the development and reporting of the study (18).

2.4 Methodological rigor

To strengthen the credibility and reliability of the analysis, rigorous methodological strategies were implemented, such as verification with participants and peer discussion sessions during the analytical process. A reflective perspective was also adopted, explicitly considering the researchers' position and role in the construction and interpretation of the data. The first author participated as an internal researcher, belonging to the core teaching staff of the emergency department, which facilitated access to and understanding of the context. To mitigate potential biases arising from this position, the analysis was conducted in collaboration with two researchers external to the context, who contributed external perspectives and promoted critical examination of the interpretations.

2.5 Ethical considerations

The study was conducted in accordance with the ethical principles set forth in the Declaration of Helsinki and applicable standards for research involving human subjects (19). Approval was obtained from the Institutional Ethics Committee (R-2024-1306-081), and the anonymity of participants and the confidentiality of the information obtained were guaranteed. All participants provided their informed consent prior to their inclusion in the study.

3. Results

Qualitative analysis allowed us to understand how emergency medicine faculty construct and negotiate their educational practice within a highly demanding clinical context. Across all areas, the findings reveal a constant tension between the individual agency of the faculty member and the structural constraints of the service, a tension that permeates their pedagogical decisions, their relationship with the institutional environment, and how they conceive of their educational role. This network of experiences and perceptions is analytically organized into four main themes: 1) pedagogical flexibility and the teaching capital of the emergency medicine faculty member, 2) clinical practice in the emergency department as a situated learning environment, 3) pedagogical inertia, overload, and lack of faculty reflection, and 4) institutional identity gap and precariousness of the teaching role. The results, organized by themes and subthemes (table 1), are presented below, described through textual fragments that illustrate the interpretive framework.

3.1 Topic 1. Pedagogical flexibility and teaching capital of the teacher in emergency care

This topic highlights the variety of pedagogical strategies that teachers employ to promote meaningful learning. The availability of a wide range of teaching resources allows for adapting instruction to the changing conditions of the clinical environment, where the rigidity of traditional approaches proves ineffective.

“I have developed several teaching and learning strategies in the years I have been a teacher: flipped classroom, collaborative work, use of technological tools, and they have worked well” (E4).

The transition from lecture-based methods to active strategies is configured as an internal facilitator of teaching practice, as it depends on the competence, experience, and disposition of each teacher; in this sense, the ability to diversify teaching strategies seems to be closely related to their pedagogical capital, understood as the set of didactic knowledge, skills, and experiences accumulated throughout their teaching career:

“I give them a preliminary activity and then on that day I give them the class in a PowerPoint presentation... I try to make sure it has a problematized clinical case” (E1).

The use of strategies such as case-based learning promotes the integration of theory and practice, while also optimizing the time available for teaching in a context characterized by a high workload.

Table 1. Topics and subtopics of the study.

Topics	Subtopics
Pedagogical flexibility and teaching capital of the teacher in emergency care	Diversification of teaching and learning strategies
	Pedagogical capital built from teaching experience
	Transition from traditional models to active approaches
	Pedagogical adaptation to the dynamics of the emergency service
	Optimization of teaching time through problem-solving clinical strategies
Clinical practice in the	Learning at the patient's bedside

emergency department as a situated learning setting	Immediate integration between theory and practice
	Teacher modeling and observational learning
	Peer learning and professional socialization
	The complexity of the emergency environment as a facilitator of learning
Pedagogical inertia, overload, and lack of teacher reflection	Work overload and teacher burnout
	Difficulty in sustaining innovative educational strategies
	Return to traditional pedagogical practices
	Lack of teacher-student feedback
	Limitation of reflective and continuous improvement processes
Institutional identity gap and precarization of the teaching role	Weak sense of belonging to the university
	Ambiguity of the teaching-clinical role
	Lack of academic recognition and remuneration
	Emotional exhaustion and risk of institutional disengagement
	Intrinsic motivation and teacher agency in the face of precariousness

3.2 Topic 2. Clinical practice in emergency departments as a situated learning setting

The emergency department clinical setting provides a privileged environment for situated learning, where instruction occurs directly at the patient's bedside through modeling and the hierarchical dynamics inherent to residency. The nature and inherent complexity of the emergency department serve as an operational and didactic facilitator, enabling immediate integration of theory and practice.

“When I make rounds, I always take the last beds because that’s where the most seriously ill patients are and that’s where I can teach them a little more... they learn in the daily practice that surrounds them” (E6).

In this context, daily operations become a pedagogical resource in themselves, where learning is continuous, contextualized, and based on real-world problems. Constant exposure to critically ill patients fosters the development of skills that could hardly be acquired solely in simulated or classroom settings. While faculty play a central role, residents acquire a significant proportion of knowledge and skills through peer learning, which reinforces professional socialization processes.

“Most of what residents learn, they learn from each other... because of the time they spend living together in the hospital” (E3).

3.3 Topic 3. Pedagogical inertia, overload and lack of teacher reflexivity

Although some teachers incorporate active learning strategies (such as clinical simulation), their sustained implementation is limited by various barriers associated with excessive workload and personal burnout. In this context, teachers are forced to establish boundaries between their personal lives and academic demands, which hinders the continuity of innovative educational activities.

“And it happened to me that last year at the simulation center I had like five or six classes a month, and well the center is very far away from me... so I also learned to set limits... because I was already very tired, I was overwhelmed” (E2).

The lack of time and the dynamics of the emergency department favor a gradual return to traditional teaching strategies, even among teachers with an explicit intention to innovate. This situation generates a form of pedagogical inertia, in which environmental conditions limit the possibility of transforming teaching practice.

“In the end, sometimes I fall into the same pattern because of the dynamics of the service... even if you want to do more things, time doesn't allow it” (E5).

Additionally, the lack of feedback from students limits teachers' ability to self-assess and improve their practice.

“We don't use any techniques that promote reflection... we don't have a way for them to give us feedback on the class... we don't do that” (E1).

Taken together, these elements constitute a relevant methodological barrier, characterized by the difficulty in sustaining reflective processes and continuous improvement of teaching in a context of high healthcare demand.

3.4 Topic 4. Institutional identity gap and precariousness of the teaching role

This issue highlights a structural barrier characterized by a disconnect between faculty, the host hospital, and the university responsible for the academic accreditation of the specialty. The absence of a formal teaching contract, the lack of remuneration, and the limited institutional recognition contribute to a weak institutional identity, understood as a sense of belonging and academic affiliation with the university.

“I do not see the university as our area where we work as professors...” (E3).

In this context, teachers are perceived primarily as IMSS employees who perform teaching activities, rather than as academics formally integrated into the university. This ambiguity reinforces the symbolic distance between the training institution and those who provide teaching in the emergency department.

“The professors feel more like professors of the IMSS, not so much of the university, even though the university is the one that endorses the specialties” (E6).

The precariousness of the teaching role, expressed in the lack of remuneration or mechanisms of academic recognition, generates emotional exhaustion and favors processes of disengagement with the university entity.

“The professors do not feel part of the university... there is no remuneration or reward from the university either” (E4).

However, despite these adverse conditions, the teachers demonstrate agency in maintaining their educational commitment. Intrinsic motivation, linked to the desire to improve the residents' training and their personal experience as alumni of the program, emerges as a factor that allows them to cope with the structural precarity.

“The fact that we don't have a contract or a salary makes it quite complex, but... the motivation that most of us have is that the residence is better... I think most of us are here for that reason” (E1).

4. Discussion

The findings of this study reveal multiple factors that influence teaching practice within the specialty of emergency medicine. These results highlight that this practice is not an isolated act, but a situated process, closely linked to the organizational and sociocultural conditions of the hospital context (20).

Among the main facilitators identified, the diversity and flexibility of pedagogical strategies employed by teachers stand out. The ability to adapt teaching to dynamic scenarios, through the use of active and problem-solving-oriented methodologies, coincides with the literature that emphasizes the relevance of the teacher's pedagogical capital in promoting meaningful learning (21-23). In line with previous studies, the results suggest that it is not the teaching load itself that determines the quality of teaching, but rather the teacher's ability to deliberately integrate teaching into daily practice (7-8).

Furthermore, the critical environment of the emergency department emerges as a facilitator of situated learning. Bedside teaching, modeling, and peer learning promote an articulation between theory and practice, contributing to the development of contextualized competencies. These findings align with sociocultural approaches to learning, which emphasize active participation in communities of practice and exposure to authentic problems as central elements in knowledge construction (20, 24).

On the other hand, the study identified relevant barriers that limit the consolidation and continuity of reflective and sustainable teaching practices. Pedagogical inertia, associated with lack of time, work overload, and the absence of reflection and feedback techniques, leads to a recurring return to traditional teaching methods (25). This finding coincides with research indicating that educational innovation in clinical contexts is often hindered not by a lack of teacher intent, but by structural conditions that restrict the possibility of planning, evaluating, and adjusting educational practice continuously (26).

Of particular relevance is the precariousness of the teaching role, identified as a structural barrier that contributes to burnout, demotivation, and disengagement from the university. This problem was documented by Repullo et al., who point out that, in Spain, more than a third of emergency room teachers lack a direct contractual link with the university; moreover, the vast majority of those who do have a contract are employed as associate professors, a position characterized by a lack of job security. According to the authors, these conditions hinder the consolidation of the teaching staff and, consequently, compromise their involvement in the processes of continuous improvement of academic training (27).

Chavarrias Islas and colleagues reported a higher prevalence of burnout syndrome among faculty responsible for postgraduate activities, a phenomenon closely associated with organizational factors and a lack of professional recognition (28). These conditions act as symbolic messages that delegitimize the teaching role and erode its sense of value and purpose within the institution. This scenario invites reflection on its indirect effects on the training of resident physicians: if faculty are perceived as peripheral actors with little recognition from the university, it is pertinent to question how this fragility of identity translates into teaching, supervision, and evaluation practices.

Despite this adverse environment, the teaching staff demonstrates a remarkable capacity for agency. Their educational commitment is sustained, to a large extent, by intrinsic motivation and a genuine desire to contribute to the quality of education for new generations (29). However, this agency should not be interpreted as a substitute for institutional responsibility. On the contrary, its

persistence highlights a structural tension: medical education in teaching hospitals continues to rely on resilient teaching identities, while postponing essential organizational transformations to guarantee the recognition, stability, and legitimacy of the teaching role as the central axis of the educational process in these settings.

From a practical perspective, the results underscore the need for institutional strategies that strengthen teachers' pedagogical training, formally recognize teaching work within specialty programs, and promote reflection and feedback from students (30-31). Likewise, the importance of moving toward more integrated collaborative models between hospitals and universities, which would help reduce the institutional identity gap, becomes evident.

The findings of this study are transferable to other public health systems in the region insofar as they reveal common tensions between healthcare pressure, clinical teaching, and institutional recognition of the teaching role—characteristics shared by emergency services in Latin American contexts. Likewise, the findings have relevant implications for systems with similar university structures, where specialist training relies on collaboration between universities and healthcare services, by underscoring the need to strengthen the academic recognition and pedagogical training of faculty as conditions for sustaining quality medical education in dynamic healthcare settings (32).

Limitations of the study

This study has several limitations. First, because it was conducted in a single hospital, the results are not intended to be generalizable, but rather to offer a contextualized understanding of teaching practices in emergency medicine. Second, the information was obtained exclusively from the perceptions of the instructors; that is, it did not include the perspectives of other stakeholders, such as residents, which would have provided a broader view of the phenomenon. Future research could incorporate these perspectives to enrich our understanding of the training process in emergency medicine.

5. Conclusions

- Teaching practice in the specialty of emergency medicine is built in a complex context, where teachers develop their work based on experience, personal commitment and constant adaptation.
- Our study shows that teaching in emergency departments does not occur despite the chaos, but rather within it, and that this environment can act as both a barrier and a facilitator, depending on the underlying institutional conditions. The findings, presented from the perspective of the teachers themselves, reveal how these tensions shape teaching in critical contexts and offer insights for rethinking the institutional strengthening of clinical teaching in specialty programs.
- Recognizing clinical teaching as a central axis of specialized medical training is an indispensable step to guarantee academically sound postgraduate programs in highly complex settings.

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