RESEARCH ARTICLE

Evaluating Burnout in the Emergency Departments: Methods, Results, and Lessons Learned

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ABSTRACT

Healthcare professionals practicing in the Emergency Department (ED) play a critical role in providing care in our societies. They interact with an assortment of sub-systems of the hospital and collaborate with various specialties across inpatient and outpatient settings. Research shows that >60% of ED physicians report burnout and, thus, it is important to understand the key factors contributing to their burnout. Over a ten-week period we used a mixed-method, theory-based, participatory, and data-driven approach based on survey, focus groups, and contextual inquiries to collect and analyze data and prioritize improvement efforts. Key areas of improvement were: i) workflows and patient monitoring that add to high cognitive load and stress levels; ii) low staffing, particularly among sitters, nurses, technicians, secretaries, and security staff; iii) suboptimal therapeutic atmosphere for psychiatric patients; iv) disrespectful and violent patients and visitors; v) communication issues, especially between the ED and other departments; and vi) frequent problems with the telecommunication system. We learned that EDs must take time to rigorously evaluate contributing factors to burnout while engaging their people who best know how to change systems to achieve positive and sustainable results.

Introduction

The well-being of our healthcare professionals (HCPs) is central to quality health care but HCP burnout, characterized by things such as exhaustion, mental distancing, negativism, cynicism, and reduced efficacy resulting from unmanaged workplace stress, is threatening that care. Recent surveys have identified record-high levels of burnout and our hospitals' Emergency Departments (EDs) are especially hard hit. In a recent Medscape survey, burnout among physicians, in general, was 47% while among ED physicians it was 60%. [1]

In 2019, the National Academy of Medicine (NAM) released its study of burnout emphasizing a systems approach to this emerging problem.[2] This approach conceptualizes burnout not as a failure on the part of individual HCPs, but as a failure of the larger work system to support those professionals. Notably, this way of thinking gives us a framework for identifying flaws in the work system. However, due to insufficient evidence, the NAM report did not provide strong recommendations for work system-level interventions to address those flaws. Instead, the report recommends that organizations rigorously evaluate burnout; identify, develop, implement, and evaluate their interventions based on those evaluations; and share their experiences with others. In that spirit, we are sharing our experience developing a process for evaluating the factors contributing to burnout and deploying that process in an ED.

Method

At the University of North Carolina at Chapel Hill, we have developed a systems-based well-being evaluation approach so that we can understand the state of burnout in individual units in our organization and identify areas for improvement.

The mixed-method, theory-based, participatory, and data-driven design consists of five parts (Fig 1).

- <u>NAM framework-based survey</u> – evaluate individual levels of burnout (using abbreviated 2-item Maslach Burnout Inventory (MBI) survey) for HCPs in the unit as well as work-system factors contributing to burnout (using 21 general workplace stressors based on the NAM's systems approach to clinicians' burnout).
- <u>Focus groups</u> – gain an understanding of information and issues that surfaced in the survey.
- <u>Contextual inquiries</u> – dedicate 4-6 hours each to on-site shadowing sessions to gain first-hand experience with work breakdowns and opportunities for improvement.
- <u>Modeling</u> – develop a comprehensive affinity diagram representing breakdowns in the work system.
- <u>Validation and prioritization</u> – using a focus group format, confirm our understanding of the breakdowns on the affinity diagram and prioritize the most important items to address. After assembling priorities, we deploy a survey with the top 8-10 items and ask people to rank the items in terms of *impact* on well-being and *effort* to accomplish.
- <u>Recommendations</u> – compile a report highlighting the overall results and the top-ranked recommendations for the health system and unit leaders.

This process takes about 10 weeks to complete, given the attention of a dedicated team equivalent to approximately 1 full-time employee proficient with the described methodology.
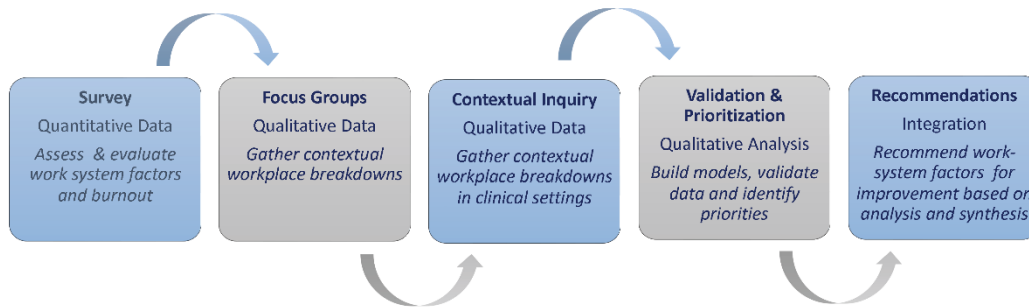
Fig 1. Mixed-method, theory-based, participatory, data-driven design used for well-being evaluation at UNC Chapel Hill.

Application in the ED

We used this approach to evaluate burnout in one of our EDs. With a 35% response rate, the survey identified an 82.5% burnout rate and found that severe sources of work stress included insufficient staffing levels, inefficient workflows, high workload, patient factors, and high time pressure. We then discussed these stressors in focus groups with 19 HCPs and observed and talked to them first-hand during contextual inquiries with 22 HCPs. After building the affinity diagram, we obtained feedback on the model and priority items, resulting in a 2x2 Impact-Effort grid expressing selected priorities for addressing issues related to burnout specific to the UNC REX Healthcare ED (Fig 2).
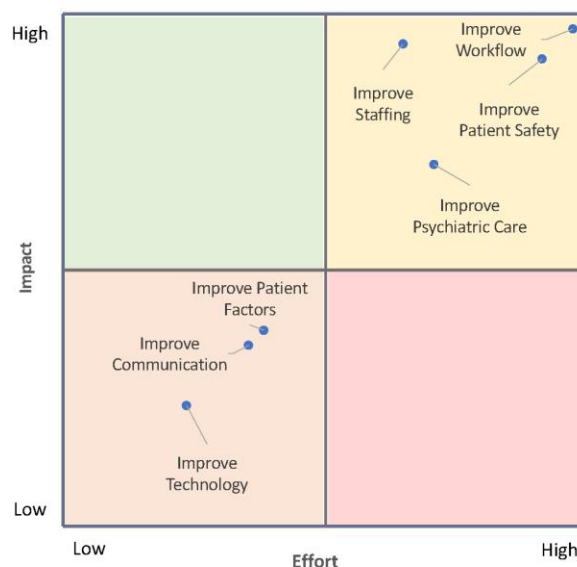

Fig 2. Impact-Effort grid expressing priorities for addressing issues related to burnout.

Importantly, we can tie each of the items on the grid back to specific breakdowns on the validated affinity diagram to begin a conversation about possible interventions. As such, below we provide more context for each priority item included in Figure 2:

- Improve workflow: The ED triage process, use of the lobby and hallways, and excess patient movement are seen as chaotic and unsafe. This workflow adds to high cognitive load and stress levels.

- Improve staffing: Low staffing, particularly among sitters, nurses, technicians, secretaries, and security, is evident. These shortfalls affect the ability to provide safe and effective care for all ED patients and are particularly evident when the ED has an influx of psychiatric and/or violent or disrespectful patients or visitors.

- Improve patient safety: Issues with inadequate patient monitoring, inefficient workflow and patient movement, and high employee fatigue are seen as introducing opportunities for errors. These issues are of concern as patient safety is paramount.

- Improve psychiatric care: The ED is not a therapeutic atmosphere for psychiatric patients and there are often difficulties placing or discharging these patients, particularly minors.

- Improve patient factors: A lack of escalation procedures for disrespectful and violent patient and visitor behavior leads to unease and a sense of being in an unsafe work environment. Employees have also noticed an increase in patient acuity, patient volume, and the number of non-emergent patients.

- Improve communication: Breakdowns in communication between the ED and other departments, especially the laboratory and radiology, hamper work efficiency. Inefficient communication around patient status leads to unclear accountability for patient follow-up and concerns for patient safety.

- Improve technology: Employees cite frequent problems with the telecommunication system and view it as inappropriate for use in the ED environment. The defibrillator takes an inordinately long time to turn on if turned off. There is also some concern about poor workstation ergonomics and the inefficiency of older computers.

Key Takeaways

This project supports the NAM's recommendation to evaluate burnout before developing interventions at different levels (e.g., unit, department, institution, organization), highlighting a need for a system approach to solving such complex issues. In our project, arriving at prioritized and contextualized items, while working closely with HCPs, was considered successful as it provided high-quality validated, and trusted data. Directly involving HCPs in this evaluation provided them a safe means to express the breakdowns they see in the ED system and confirm that our understanding of those breakdowns is accurate. Throughout this effort, we knew that providing a safe and respectful environment was crucial to successful project execution. As each hospital and clinical unit represents a different context that influences HCPs' well-being, our experiences confirm NAM's recommendations that organizations must take time to rigorously evaluate and address burnout while engaging their people who best know how to change systems to achieve positive and sustainable results.

We completed the evaluation in 10 weeks. The 10-week effort is an investment that requires buy-in from leadership at all levels and HCPs. Crucially, we identified a champion and two facilitators who explained the purpose of the project to the ED team, reminded people why it was important to engage and participate, relayed our emails concerning each activity, and helped with scheduling. Without this assistance, we doubt we would have had the participation needed.

The team was comprised of faculty (LV [project lead] and LM [overall support]), ED system director, and four graduate students trained in the methods used. The faculty lead organized the team and oversaw scheduling and communication with the champion and facilitators. The entire team worked to conduct the evaluation and interpretation of results. LM and KA provided oversight to the methodology including consultation on required adjustments as needed (e.g., specifics on running on-site vs. virtual focus groups, validations, and prioritization sessions). NC and the ED system director were the project sponsors and removed barriers as needed (e.g., survey and focus group participation, encouragement, and extra communications). This size team was manageable and particularly useful during the contextual inquiry phase when we were able to shadow 22 HCPs for several hours each in just over 3 weeks. We used weekly 2-hour meetings for a debriefing session to go over any logistical issues and to discuss the content of all data collection activities during the week.

We worked to ensure participation from HCPs despite significant survey fatigue. HCPs work long

shifts, operate under high mental workloads with little down-time, and survey response rates from HCPs tend to be low. With the support of ED leadership, we were able to provide protected time for survey completion and focus group attendance. We also gathered the support of ED department administrators who helped with overall project support. We encouraged focus group participation by offering multiple meetings across various times and modes (in-person, virtual and hybrid) to accommodate COVID-19 pandemic requirements and busy work schedules.

For the contextual inquiries it was important to shadow HCPs in a variety of contexts that encompass their workflows and during different shifts – mornings, afternoons, nights, and weekends. When shadowing participants, we needed to be flexible so that participants could fit us into their busy schedules. After each contextual inquiry we conducted short semi-structured interviews. Importantly, each contextual inquiry was followed by an interpretation session wherein the entire research team could review the data gathered. When it came to interviews, the main challenge was the lack of private space for a candid conversation. Thus, many interviews were conducted while standing in a corridor, in available breakrooms, in workrooms, or even in the corner of a nurses' station to protect privacy. Overall, we needed to be sensitive to such situations, and sometimes more frank questions could not be asked.

After gathering data through the surveys, focus groups and contextual inquiries, models were used to outline the breakdowns. First, we consolidated and expressed data using an affinity model that captured the broad range of breakdowns in the ED work systems. The main challenge encountered with the affinity diagram was the strategy to share it for feedback. Thus, the affinity diagram was usually shared electronically to accommodate busy schedules and to encourage participation in validation and prioritization of breakdowns. Using a focus group format with pre-meeting access to the electronic file, we validated the breakdowns on the affinity diagram and prioritized the most important items to address. Next, we used e-mails to deploy a survey with the top 8-10 prioritized breakdowns and ask HCPs to rank the items in terms of *impact* on well-being and *effort* to accomplish.

Above all, we learned to stay flexible and make changes to our procedures as needed to accommodate changes in schedules. Unsurprisingly, the ED is very unpredictable. Our flexibility allowed more people to participate while minimizing disruption and stress associated with participation.

References

[1] https://www.medscape.com/slideshow/2022-lifestyle-burnout-6014664?faf=1#1

[2] *National Academies of Sciences, Engineering, and Medicine 2019. Taking Action Against Clinician Burnout: A Systems Approach to Professional Well-Being. Washington, DC: The National Academies Press.* https://doi.org/10.17226/25521.