

EDUCATIONAL DILEMMA:

A 3-year-old female is brought to the ED with abdominal pain. She is triaged; after 30 minutes, she is brought to a treatment space. 20 minutes later, she is assessed by the bedside nurse and her parents tell her story for the second time. 30 minutes later, the patient is assessed by a resident; the parents tell the story for the third time. Investigations and orders are initiated by the resident after discussion with the attending physician and are processed 45 minutes later. Eventually the attending physician assesses the patient and communicates the plan. The parents are frustrated by having to repeat the story multiple times and because they feel “out of the loop” of communication. The resident is frustrated by the lack of teaching on the case.

Could a novel model called “swarming” improve both efficiency and education in the emergency department?

Reference

Perniciaro JL, Schmidt AR, Pham PK, Liu DR. Defining “Swarming” as a New Model to Optimize Efficiency and Education in an Academic Emergency Department. *Academic Emergency Medicine Education and Training*. 2019;00:1-11. <https://doi-org.uml.idm.oclc.org/10.1002/aet2.10388>

Why Is This Paper Relevant to Emergency Medicine Education?

Efficiency and education often compete for the precious resource of time in emergency medicine. Moreover, this problem is growing as patient volumes and ED overcrowding increase. The model called swarming aims to improve both efficiency and education. This paper examines swarming by examining the perceived benefits and barriers to its implementation.

Level of Evidence

Not applicable.

Level of Learning

Postgraduate

Study Design

Mixed methods study with convergent design.

Funding Sources

None

Setting

A tertiary care academic pediatric ED

Synopsis

Swarming is a model in which a patient is simultaneously assessed by a bedside nurse, resident and attending physician. The nurse completes the initial assessment and vitals; the resident and attending physician complete a focused history and physical exam as well as initiate documentation and orders. A plan is discussed by the team members and the patient’s family thereby creating a shared understanding of the plan and expectations. This study used focus groups and questionnaires to examine all participants’ perceptions of the benefits of, and barriers to, the model of swarming.

The swarming model was introduced within a departmental process redesign which saw an improvement in length of stay, door-to-provider times and left-without-being-seen rates.

Synopsis (continued)

The perceived benefits of swarming included:

- Improved education through increased bedside teaching, role modelling by attending physicians and timely feedback to residents.
- An overall increase in efficiency in patient care compared to the traditional model of serial visits by nursing, residents and physicians.
- A very high level of satisfaction from families who appreciated not having to repeat information many times.
- Development of a shared mental model leading to improved communication amongst the ED team and families.

The perceived barriers to swarming included:

- Qualities inherent to the ED such as overcrowding, unpredictability and fatigue later in shifts.
- Variability with which swarming was implemented.
- Lack of availability of computers for simultaneous documentation and orders.
- Decreased resident autonomy (may be addressed by pre-defined roles/responsibilities).
- Decreased efficiency reported by nurses for their role.

BOTTOM LINE

Swarming appears to be a promising model to improve both efficiency and education in the ED while achieving a high level of patient, family, resident and ED staff satisfaction. Further research is needed to define which patients would benefit the most from this model.