

Teaching Non-Clinical Skills Essential to a Career in Community Hospital Medicine: A Curriculum for Skills Beyond the Bedside – Dr. Rebecca Ivancie, Clinical Associate Professor, Pediatric Hospital Medicine

1. Specific Educational Aims

Non-clinical skills (NCS) such as the business of medicine, career development and health systems knowledge are rarely taught in pediatric residenciesⁱ and are often not the primary educational emphasis in fellowships. Pediatric Hospital Medicine (PHM) fellows are in training to become both great clinicians as well as leaders in quality, research, and administration. However, a local needs assessment of the Stanford PHM fellowship and a preliminary national needs assessment with leaders from the AAP PHM Fellowship directors and Community PHM subcommittee highlighted a potential knowledge gap for fellows learning non-clinical skills (NCS) essential to careers in community hospital medicine (CPHM). Our objective is (1) to explore graduated PHM fellows' perspectives on what they learned and what gaps they see in learning non-clinical skills in community hospital settings during fellowship, and (2) to improve PHM fellowship training using a novel online, module-based curriculum centered on NCS in community hospital medicine, both for trainees at Stanford and across the country. We will design a curriculum that will be available nationally to PHM fellowship programs online, such that this curriculum can become a sustaining part of training for all future fellows. Our research group includes PHM leaders Dr. Nehal Thakkar (subcommittee director on PHM Fellowship curriculum) and Dr. Jackie Walker (co-chair of PHM fellowship Program Directors), both of whom are committed to the execution of this project.

2. Project rationale

Many residencies and fellowships do not deliberately teach the non-clinical skills necessary for community programs to thrive (e.g., business administration, billing, co-management). In partnering with PHM Fellowships, we have an opportunity to develop a novel NCS curriculum and teach these NCS with an online module-based curriculum. These skills are particularly important given the estimate that 30-50% of pediatric hospitalists practice in community settingsⁱⁱ, but many programs have been closed in the face of financial constraints.ⁱⁱⁱ This curriculum will also be beneficial to residents on a PHM elective or who directly enter the CPHM workforce without prior fellowship training, as there are not enough PHM fellowships to match the demand of residents applying each year.^{iv}

Through informal feedback and yearly evaluations from our Stanford PHM fellows and discussions with PHM leaders, we identified a gap for teaching trainees these non-clinical skills essential to CPHM. In a literature review, one needs assessment of a potential resident PHM curriculum identified non-clinical topics to be included such as "administration, hospital committee involvement, communication, conflict resolution, health care operations, and patient safety." However, a minority of the respondents in this study (4%) were practicing in a community setting, thus reflecting the perspective of hospitalists practicing at a tertiary center.^{vi} Our needs assessment will focus on gaps in PHM fellowship education and will interview community hospitalists, specifically.

3. Approach

Phase I – Targeted needs assessment (IRB submitted 6/2023, currently under review): Focus groups will be performed with graduated PHM fellows who currently practice in CPHM. We will do a purposive sampling of PHM Fellows who have graduated in the last 6 years (graduation year 2017 and after) who have at least part of their FTE in community PHM. Community PHM is defined primarily by the ACGME definition: a site NOT the primary rotation site for pediatric resident training AND does NOT have the full spectrum of pediatric subspecialist consultants. These focus groups will be performed either over Zoom or in-person at our national PHM conference in 2023. The focus group materials (questions, demographic survey, recruitment emails, consent forms) will be IRB approved. The grant would cover gift cards to incentive participation in the 90-minute focus groups, transcription services, and to pay for the qualitative coding software, Dedoose. Focus groups will be conducted Fall 2023, with the goal to complete coding for thematic saturation and completion of focus groups by December 2023.

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Each transcript will be analyzed by two study members using modified grounded theory with sensitizing concepts from the theories of deliberate practice (themes might include business of medicine, co-management) and reflective practice (e.g. communication and leadership).

Phase II - Curriculum design: Using Kern's six steps of curriculum development, our team will design an online, rigorous module-based curriculum with a flipped classroom approach for fellows to use prior to and during their CPHM rotation. We will pilot this curriculum with 2-3 sites.

Phase III – Curriculum Implementation and Assessment: Recognizing that this portion of the study is outside the funding period, it is important to see the full timeline, as the curriculum must launch with the start of new PHM fellowship class in July 2024. After official launch in 2024, we will evaluate the impact of the curriculum through pre/post surveys that assess fellows' knowledge, skills, and attitudes, with at least 4 sites across the country.

4. Timeline and plan for implementation

- **Phase I - August 2023 – December 2023:** Focus groups to be performed with concurrent data analysis until thematic saturation is reached with qualitative analysis of the focus groups transcripts. Goal is a draft of manuscript for publication by December 2023
- **Phase II - January 2023 – June 2024:** Curriculum design using Kern's six step curriculum development with outside PHM expert review.
- Phase III is outside the scope of this grant application but is discussed above for clarity on timeline.

5. Anticipated work product:

Work products from this study can be broadly applicable across disciplines to teach NCS. By the completion of the grant period our aim is to have completed (1) a needs assessment based on our national focus groups, (2) written and submitted a manuscript with this focus group data to the journal *Hospital Pediatrics*, and (3) have completed a pilot curriculum for PHM fellows centered around non-clinical skillsets needed to be successful in community PHM. We will also have piloted this curriculum at a set handful of sites for feedback and edits. In the next academic year (2024-25), we aim to formally study and evaluate outcomes of trainee knowledge, skills, and attitude. We will submit our curriculum to MedEdPortal for open-source access.

6. Evaluation Plan:

For Phase I (our qualitative national needs assessment), we will know we have been successful in our needs assessment study when no new themes emerge from subsequent focus groups and analysis. For Phase II of our study, curriculum design, we will base the curriculum on adult learning theory, and will have outside medical educators review the final draft of the curriculum for feedback to ensure that the objectives and content link back to corresponding EPAs and G&O's for the PHM fellowship^{vii}. For Phase III, we will evaluate the impact of the curriculum on fellows' knowledge, skills, and attitudes.

7. Dissemination of results

We plan to submit our initial focus group needs assessment data in a manuscript for publication in *Hospital Pediatrics*. We will also present this in abstract/poster form at the annual Stanford Innovation in Medical Education Symposium. Once the curriculum is designed and piloted, we will submit this to MedEdPortal for dissemination and anticipate making this a part of the formal curriculum for our fellows, as well as an optional elective for pediatric residents interested in pursuing PHM as a career.

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