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Perspective Piece

Pediatric Hospital Medicine and Global Health: A Fitting Niche for an Emerging Subspecialty

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Abstract. As North American hospitals serve increasingly diverse patient populations, including recent immigrants, refugees, and returned travelers, all pediatric hospitalists (PHs) require foundational competency in global health, and a subset of PHs are carving out niches focused in global health. Pediatric hospitalists are uniquely positioned to collaborate with low- and middle-income country clinicians and child health advocates to improve the health of hospitalized children worldwide. Using the 2018 WHO standards for improving the quality of care for children and adolescents worldwide, we describe how PHs' skills align closely with what the WHO and others have identified as essential elements to bring high-quality, sustainable care to children in low- and middle-income countries. Furthermore, North American global health hospitalists bring home expertise that reciprocally benefits their home institutions.

INTRODUCTION

In 2019, pediatric hospital medicine (PHM) became a board-certified subspecialty in North America, focused on provision of high-quality care for hospitalized children. The forces of globalization; human migration; climate change; the impact of epidemics such as malaria, tuberculosis, and HIV; and notably diseases such as COVID-19 and future emerging diseases have made global health (GH) impossible to ignore. As North American hospitals serve increasingly diverse patient populations, including recent immigrants, refugees, and returned travelers,[1] all pediatric hospitalists (PHs) require foundational competency in GH, and a subset of PHs are carving out niches focused in GH.

Nearly six million children under 5 years of age die each year, 90% of whom live in low- and middle-income countries (LMICs).[2] Recently, GH leaders have recognized that improving healthcare access without also focusing on healthcare quality is inadequate to improve outcomes.[3,4] In 2018, the WHO published standards for improving the quality of care for children and adolescents.[4] The purpose of this commentary is to illustrate the importance of GH education for all PHs and suggest the unique role that PHM as an emerging subspecialty could play in the field of GH using the WHO standards of care for improving the quality of care for children and adolescents.

Global health, at its heart, focuses on caring for vulnerable populations, minimizing health disparities, and optimizing the use of limited resources. Using the WHO quality standards as a framework, we describe here how the skillsets of PHs are aligned to address these goals to improve the health of hospitalized children worldwide. This is not to imply that this skillset automatically qualifies any PH to work effectively in LMIC settings but rather to emphasize that PHs possess a unique mix of skills and expertise that can be leveraged as part of sustainable, ethical partnerships to improve global child health.

WHO quality standard: Reliable delivery of evidence-based interventions. *Specialized content expertise across the spectrum of pediatrics.* Pediatric hospitalists care for hospitalized patients across the pediatric spectrum, with some PHs especially skilled in areas such as newborn care and resuscitation, medical complexity, hospital oncology, health services delivery, palliative care, transport, and sedation.[5,6] Globally, causes of under-five mortality are shifting from communicable diseases to perinatal conditions and noncommunicable diseases, partly related to an increase in pediatric medical complexity due to improved survival.[7] These demographic shifts make PHs' expertise in caring for children with medical complexity even more relevant in LMIC settings. Pediatric hospitalists can work in partnership with LMIC clinicians to coordinate care for children with medical complexity, including coordination of referrals for community-based services such as rehabilitation and early intervention programs.[8,9]

Evidence-based practice. A recent multi-country assessment of barriers to implementation of evidence-based guidelines in LMIC hospitals noted inadequate human resources as the largest barrier, both in numbers of clinicians and training and knowledge.[10] Pediatric hospitalists are well suited to partner with hospitals in LMICs to address the barriers impeding evidence-based practice. Pediatric hospitalists often lead guideline implementation through activities related to medical education, quality improvement, clinical effectiveness, and safety.[5,6] Studies have shown PHs adhere more closely to published clinical care guidelines for common illnesses in hospitalized children compared with general pediatricians.[11–13]

Furthermore, PHs are at the forefront of advancing evidence-based care through clinical research in patient outcomes and safety, a core element of PHM. Globally, 90% of the world's research capacity and funding is focused on 10% of the world's children in high-income countries

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(HICs).[14] Pediatric hospitalists with additional GH expertise are both needed and well positioned to support clinical research capacity building in LMICs in collaboration with LMIC colleagues and in accordance with local research regulations, including in areas of quality improvement (QI) and implementation science.

WHO quality standard: Referral systems with appropriate continuity. *Care coordination skills and advocacy.* Pediatric hospitalists play a crucial role in referral and care coordination of acutely ill children across levels of care and ages.[5,7,10] This is even more essential in LMIC settings where critical care is often limited.[7,10] Through the formation of individualized hospital and disposition care plans, PHs use their understanding of healthcare resources while directly advocating for the continued care of their patients. In settings with limited referral sites and support services, PHs can use their care coordination lens to work with clinicians to advocate for these crucial needs within the context of the local health system.

WHO quality standard: Effective communication. *Effective communication across multidisciplinary teams.* Pediatric hospitalists often collaborate across disciplines to care for children with medical complexity and acute care needs, facilitating communication between families, subspecialists, primary care providers, nonmedical staff, community facilities, and critical care providers.[6]

Expertise in working across all levels of health literacy. To communicate effectively across all levels of health literacy, PHs partner with interpreters and families to ensure that patients understand their care regardless of the family's background, culture, and where their care is delivered. In response to calls for family-centered care, PHM developed the practice of family-centered rounds to include patients and families in decision-making at the bedside.[15,16] A 2010 survey demonstrated that nearly half of the PH respondents routinely incorporated family-centered rounds into their practice.[16] The effectiveness of this style of family-centered rounding has not been well established in GH settings; however, PHs can emphasize the tenants of shared decision-making and communication tailored to a patient/family's health literacy level in partnership with local providers who understand local cultures.

WHO quality standard: Skilled staff and monitoring for continuous QI. Recent studies in LMICs demonstrate poor quality as a major driver of avoidable deaths in LMICs.[17] In response, many ministries of health are developing policies, strategic plans, and offices for quality improvement. Pediatric hospitalists often lead multidisciplinary QI teams, utilizing important skills such as process mapping and rapid-cycle QI, which can be leveraged in partnership with LMIC colleagues to find pragmatic, local solutions to quality problems and allow for quick implementation.[5]

WHO quality standard: Functional health information systems. Stronger health information systems within LMICs can improve real-time monitoring of health outcomes. Growth in these systems would aid in outbreak detection, ease the data collection burden on health workers, streamline allocation of funding in national health budgets, and elevate quality of care.[18] However, there is a limited skilled workforce of informatics experts in LMIC settings to address this need. With the near-ubiquity of electronic health records in high-resource settings and the hospitalist's deep understanding of hospital operations, many hospitalists are serving as health informatics experts within their institutions.[19] Pediatric hospitalists could be a valuable resource in supporting health informatics capacity building in LMICs.

Other considerations. *Expert educators.* Academic PHs play an important role in the education of medical students, residents, and fellows as well as allied health professionals.[20] Many PHs gain expertise in adult learning, curriculum development, learner evaluation, and content delivery. Given these skills, PHs are well placed to mentor learners interested in GH, ensuring high-quality GH elective experiences for trainees and partner organizations. Pediatric hospitalists are also equipped to advocate for and facilitate bidirectional learning opportunities for international partners to build efficient, effective, and sustainable educational programs for health professional learners.[21,22]

High-value care. Recently there has been a focus on high-value care, aimed to provide high-quality care while efficiently using resources.[4,13] There is growing evidence that PHs, when compared with general pediatricians, decrease length of stay, inappropriate admissions, cost, and resource utilization without negatively affecting 7-day readmission or mortality rates.[5] Nowhere is this efficiency needed more than in the care of hospitalized children in LMICs where clinicians often care for the sickest children with the fewest resources.[7] Pediatric hospitalists are therefore well positioned to collaborate with LMIC clinicians to support the growing focus on high-value care in these settings.

Skills that GH practitioners bring home with them. Several studies support long-lasting benefits to trainees who complete GH rotations, including improved medical knowledge, cross-cultural and interpersonal communication skills including working with interpeters,[23] high-value care, systems-based practice, practice-based learning and improvement, and professionalism.[24] These benefits also apply to practicing pediatricians,[1] including GH hospitalists who are well positioned to model these skills to their colleagues and impart them to their trainees.

Pediatric GH leaders have called for pediatric departments in HICs to take active roles in improving the health of all children, including those from underserved communities in North America and worldwide.[24] Therefore, there are core GH concepts that should be incorporated into pediatric training curricula for all pediatric trainees.

One of these key concepts is cultural humility, characterized by self-reflection and deference to background and experience.[18] Clinicians with GH experience often provide more culturally sensitive care to immigrant patients in the United States.[1]

Moreover, the value of GH offerings is increasingly recognized among pediatric residency programs, with 58% reporting that they offer international electives and 25% offering formal global child health tracks.[25] The increase in trainee interest in GH necessitates competent faculty to provide GH mentorship and career guidance as well as pre-departure preparation and adequate debriefing for GH rotations.[24] In line with documented increased demand for GH opportunities within residency, there will likely be continued interest among PHM fellowship trainees, with an associated need for GH PH faculty. This mirrors increased demand and offerings for GH opportunities in other pediatric subspecialty fellowship programs.[26]

Finally, GH clinicians' awareness of resource limitations and the resourcefulness gained through their work in low-resource settings are useful in HICs as well. Global health hospitalists can use these perspectives to promote resource consciousness to achieve high-value care[27] and to innovate to improve medical care of children domestically.

CONCLUSION

The PH is recognized in North America as a distinct subspecialist with a specific skill set. Although PHM is not a recognized subspecialty in many LMICs, PHs' skills align closely with what the WHO and others have identified as essential elements to bring high-quality, sustainable care to children in LMICs. Furthermore, North American GH hospitalists bring home expertise that reciprocally benefits their home institutions. From hospital operations and resource utilization in a pandemic, to caring for the breadth of the pediatric lifespan, to providing and improving care for vulnerable children, PHs have a vital and unique role to play in global child health.

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