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Physician's Role in Coordinating Care of Hospitalized Children

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abstract

The hospitalization of a child is a stressful event for the child and family. The physician responsible for the admission has an important role in directing the care of the child, communicating with the child's providers (medical and primary caregivers), and advocating for the safety of the child during the hospitalization and transition out of the hospital. These challenges remain constant across the varied facilities in which children are hospitalized. The purpose of this revised clinical report is to update pediatricians about principles to improve the coordination of care and review expectations and practice.

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Dr Rauch was responsible for all aspects of revising, writing, and editing the document, reviewing and responding to questions and comments from reviewers and the Board of Directors, and approved the final manuscript as submitted.

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DOI: https://doi.org/10.1542/peds.2018-1503

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PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275).

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To cite: Rauch DA, AAP COMMITTEE ON HOSPITAL CARE, AAP SECTION ON HOSPITAL MEDICINE. Physician's Role in Coordinating Care of Hospitalized Children. *Pediatrics.* 2018; 142(2):e20181503

Although infrequent, the hospitalization of a child is a stressful experience for the child and his or her family. Most children are hospitalized for an acute illness or injury.[1] Children can be cared for in freestanding children's hospitals, children's hospitals within general hospitals, or in nonchildren's hospital facilities.[2] The processes of care are different in each environment. In some facilities, children are cared for by a team of pediatricians and pediatric medical subspecialists, surgeons, or other providers, and in others, care is performed by the primary care physician. Some care models can result in fragmentation of care, with the potential loss of information that is vital to the care of the child. Children and youth with special health care needs are particularly vulnerable to these risks because of the complexity of their care, the multiple consultants involved, and a sometimes poor connection to a medical home.[3] Furthermore, overall satisfaction with the hospital experience from the patient and family perspective is an important element of quality of care and a metric that is being used to determine payment rates, so good coordination affects both patient outcomes and net earnings.

Physicians caring for hospitalized children need to direct systems that coordinate care of the hospitalized child at admission, throughout the stay, and on discharge through direct communication with the child's primary care physician. In addition, the hospitalization should be used as an opportunity to review the child's health history to identify unmet needs that may or may not contribute to the hospitalization, such

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as the coordination of multiple subspecialty-care issues for the child or youth with special health care needs, incomplete immunizations, or dental needs. Admission also provides an opportunity to identify social determinants of health that may require nonmedical intervention, such as social work or even legal referrals. During the hospitalization, multiple sign-outs among care teams, residents in teaching venues, and hospitalists in other venues create additional opportunities for incomplete information transfer. A good quality sign-out system has been the focus of many recent investigations, such as the I-PASS study, which standardized the method and content of sign-outs.[4,5]

This clinical report is an update of the previous version published by the American Academy of Pediatrics Committee on Hospital Care in 2010.[6] The purpose of this revision is to update pediatricians about principles to improve coordination of care.

PHYSICIAN'S ROLE IN COORDINATING CARE OF HOSPITALIZED CHILDREN

Children are hospitalized in a wide variety of environments, from community hospitals to large quaternary-care children's hospitals. For a growing subset of children, especially children and youth with special health care needs, hospitalization is an expected part of their ongoing illness.[7] The physician of record can vary from the child's primary care physician to a hospitalist to a pediatric medical subspecialist to a surgeon, depending on both the reason for admission and the facility. Despite this variation in circumstances, there are similarities in the needs of every hospitalized child that must be addressed by the physician in charge of the child's care.

Care coordination, as an integral part of the medical home, is vitally important to ongoing care of the child and family. Care delivery is an important component of patient and/or family satisfaction that can affect medical, social, and psychological outcomes. Attention to the processes of hospitalization, from admission to patient handoffs to discharge, is crucial because of the potential opportunities for miscommunication to adversely affect care.

Admission to the hospital may be planned or unplanned. For the scheduled admission, the goal of the hospitalization usually is clearly stated, and there has been previous communication between the referring physician and the hospital as well as approval by the child's insurance carrier. Unfortunately, scheduled admissions may not include real-time physician interaction. It is useful for hospitals to have a mechanism for the receiving physician to contact the referring physician. Health information technology can play a pivotal role in care coordination. Electronic health records (EHRs) and other communication tools can facilitate information sharing among patients and/or families and their health care teams. Unfortunately, many EHR systems do not interact, limiting the ability of some health information technology–facilitated communication. Scheduled admissions usually occur in the context of an ongoing treatment plan for the child, which implies that the child is engaged in ongoing medical care through which the child's health care maintenance is being addressed. However, in the case of children and youth with special health care needs or other children with medical complexity, there may be multiple outpatient providers focused on specific disease processes and less attention paid to general health care needs.

Many pediatric hospital admissions are unscheduled,[8] which presents several challenges to hospital providers. The child and family experience stress during such a medical emergency. Because the inciting incident was unplanned, the family may not have all the necessary information about the child's health at hand, such as immunization records. Shared EHRs, patient portal access, and patient databases (such as immunization registries) can be used to alleviate some of the challenges of unplanned admissions. The acute timing may have precluded a visit or even communication with the primary care physician, who may be unaware of the necessity for hospitalization. The history and physical examination performed by the inpatient physician are an important aspect of assessing the child's general health. Acute problems will be dealt with during the hospitalization, and other health care gaps may be directly addressed or referred back to the primary care physician. A mechanism should in place for the inpatient physician to contact the primary care physician as soon as possible after admission to give notice and share information. This initial contact establishes the foundation for communication that will continue throughout the hospitalization and the discharge process. Because most unscheduled admissions initiate in the emergency department, communication and coordination with the emergency physician are necessary to learn about all evaluations that have already been performed and any pending tests and to understand the need for hospitalization.

Every admission includes an initial assessment, which may begin before the child's arrival or during the discussion between the referring provider and the accepting service at the hospital. At this point, the receiving facility needs to confirm that it can manage the anticipated problem; otherwise, a higher level of care should be recommended. If the child is accepted for admission,

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then safe transport must be arranged. Once the child has arrived, a timely initial evaluation must be performed, which includes a history of the presenting illness, past medical history, allergies, medications, a review of systems, immunization history, growth and developmental history, family and social history (including an assessment of safety and HEADSS[9] assessment for teenagers), and a thorough physical examination that includes a pain assessment. Depending on the acuity and severity of the presenting illness as well as the time of admission, parts of the history may be deferred to the following day or a time when the child can be interviewed privately. When necessary, medical interpretation services (not a sibling or other patient)[10] should be used, and attention should be given to cultural issues. Attempts to secure a copy of any recent notes, testing, or treatments associated with the current problem should be made. Facilities should be equipped to send and receive necessary medical records in a reliable, timely, and confidential manner. However, direct communication with the referring physician and primary care physician should not be overlooked because this will help provide a context of the child's illness within the family, confirm current medication, and prevent unnecessary duplication of previous tests. Continuing this conversation during the hospitalization (particularly when the family is faced with difficult decisions) may help the family gain trust in a new, hospital-based provider.

Admission to the hospital also provides an opportunity to review the general health care of the child. Although most children in the United States have access to primary care, not all do. A hospital admission may come from a breakdown in outpatient care resulting from a lack of access. Additionally, a thorough history and physical examination may reveal issues that do not relate to the reason for admission but are significant. These issues may be addressed during the hospitalization, or the patient can be referred for outpatient management afterward.

Lastly but also importantly, discharge planning begins on admission. Every admission to the hospital should have a defined treatment end point or at least a critical fork in the decision tree (ie, for abdominal pain, go to the operating room or a trial of oral intake). Defining the discharge parameters at the time of admission helps focus the family on clinical parameters rather than the clock or calendar. Anticipating discharge needs at the time of admission helps involve services that can provide services during the hospitalization or arrange for appropriate outpatient follow-up, such as social work, occupational therapy, and physical therapy.

All pediatric patients admitted to the hospital are cared for by a team of providers on the inpatient service. It is likely that care will be handed off as shifts change or the physician leaves the inpatient area. It is the responsibility of the admitting physician service to provide for accurate and appropriate handoffs to other physician team members. There has been much recent literature about different handoff processes.[5,11,12] The key is that there is no single mnemonic or practice that ensures quality handoffs but a bundle of tactics and a commitment to a consistent standardized process. This coordination of care becomes more important as the care extends beyond the admitting provider to consulting services, and it then becomes the responsibility of the physician of record to acknowledge every consultant's recommendation and ensure that a care plan is achieved and that the care plan is communicated to the family and primary care physician. When necessary, the attending physician must consider the options when there is disagreement among consultants and call for care meetings to establish a clear care plan. These meetings may include the family when discussing treatment options or may be for providers only when the issue is communication between providers to attain an agreed-on plan. When comanagement is in effect, physicians need to respect protocols regarding the scope of their involvement and communicate regularly with the comanagers.[13,14] These protocols are institution specific and may even vary between services, but define the expected role of each service in patient care. When necessary, this communication should be verbal and not solely through the chart. Ultimately, there needs to be a single physician who has the final decision-making ability, and this should be decided at admission. Circumstances may arise during the hospitalization in which the physician of record changes so that there may be more than one over the hospital course, but there should be only one at any point in time. Patients boarded in the emergency department or being treated under observation status require the same amount of attention of the responsible attending physician as all other admitted patients. When the physician of record does not routinely care for pediatric patients or has a narrow clinical focus, consultation with a generalist (such as a hospitalist or general pediatrician) can provide a more holistic approach to the child and family as well as specific attention to pediatric issues, such as weight-dependent medication dosing and developmentally appropriate care. This is recommended for any child or youth with special health care needs or with behavioral issues.[15] Some hospitals have set age (<14 years), weight (<40 kg), or length of stay (>24 hours) criteria for mandatory consultation.[16]

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Discharge should represent the achievement of the goal of admission agreed on by the family and medical team. Communication with the primary care physician during the course of the hospitalization prepares the patient for the transition back to the outpatient environment. To reduce potential errors, thorough medication reconciliation should be provided to the family in verbal and written form and be available in the discharge summary to providers who continue to care for the child (Table 1). Referrals should be provided at the time of discharge, including primary care if the child does not have a medical home. Robust education and ongoing family support via telephone or home-based visits have been shown to prevent subsequent acute-care utilization. Communication with the primary care physician does not end at discharge but continues until all pending test results are obtained, and this has been recognized by transitional care management *Current Procedural Terminology* codes published by the Centers for Medicare and Medicaid Services in 2015. Even in a shared EHR environment, tests originating during hospitalization are the joint responsibility of the inpatient physician of record[17] and medical home physician.

The ability to serve as an inpatient physician is determined by the hospital as part of the credentialing process.[18] This physician increasingly is not the primary care physician, thus the emphasis is on communication between the primary care physician and hospital staff and interoperability of EHRs. In many hospitals, the inpatient physician is a hospitalist. In teaching hospitals, residents, fellows, and students are part of the care team. In tertiary-care centers, subspecialists and surgeons may serve as the physician of record. There is always an attending-level physician responsible for the child.

TABLE 1 Key Elements of a Discharge Summary

- dates of admission and discharge
- discharge diagnoses
- brief hospital course, including procedures and test results
- discharge medications
- immunizations given during hospitalization
- pending laboratory or test results
- follow-up appointments

Coughlin DT, Leyenaar JK, Shen M, et al. Pediatric discharge content: a multisite assessment of physician preferences and experiences. *Hosp Pediatr*. 2014;4(1):9–15.

Resident work hour restrictions have created more handoffs of care and a team approach to care. This requires more attention to high-quality handoffs. The expectations enumerated in this report for communication and coordination ultimately fall on the attending physician. The expectations are no less for subspecialists or surgeons.

Coordinating care involves more than ensuring proper medical care. The treating physician is responsible for the patient's safety during the hospitalization. Although a safe hospital environment requires a commitment to safety from the hospital culture and often depends on systems of care, individual physicians should be aware of the safety initiatives at the hospital and be active participants. Safety initiatives include proven efforts, such as medication reconciliation and hand-washing. Performing handoffs properly and effectively[19] minimizes potential information loss. Other safety initiatives include attention to overuse of tests, pediatric dosing of medication and radiation, and adherence to practice pathways that reduce variation in care. It is important for physicians caring for hospitalized children to be strong advocates for children in the hospital environment, especially in nonchildren's hospital environments, where children are the minority of patients and systems for adult patients may be the default setup even if they are inappropriate for pediatric patients.

The American Academy of Pediatrics recommends patient- and family-centered rounds,[20] which require a multidisciplined commitment to participation in rounds, engagement of the family (with interpretation services as needed), and a physician leader who is skilled in patient- and family-centered care. There may be circumstances in which patient- and family-centered rounds are not performed either because of logistics (such as no available guardian) or family preference, but these should be exceptions to the standard of care.

CONCLUSIONS

The hospitalization of a child is a dramatic event for the child and the child's family. The physician's role in coordinating the hospitalization is to minimize the drama and trauma while maximizing the benefits to be gained from the hospitalization. Coordination of care should include careful attention to specific needs of the child and family and communication with all care providers to ensure safe transit from the outpatient arena, through the hospital, and back to the medical home.

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ABBREVIATION

EHR: electronic health record

FINANCIAL DISCLOSURE: Dr Rauch has indicated he serves as Chair of the American Board of Pediatrics Hospital Medicine Sub-board and receives $4800 annually as part of that position.

FUNDING: No external funding.

POTENTIAL CONFLICT OF INTEREST: The author has indicated he has no potential conflicts of interest to disclose.

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