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REVIEW ARTICLE

The Shift Away From Primary Care Towards Medium And High Complexity Care In Pediatrics

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Primary Health Care, Tertiary Health Care, Unified Healthcare System, Child Health Services, Pediatric Emergency Medicine, Pediatrics.

Abstract

Introduction: Primary healthcare comprises a series of interventions that make up the doorway into healthcare services, while medium and high complexity care includes hospitals, outpatient clinics, emergency services, and the delivery of tests and procedures. A recent shift has seen patients seeking care in medium and high complexity centers instead of primary healthcare services. **Objective:** To discuss the reasons for the aforementioned phenomenon, its consequences, and propose ideas to reverse the situation. **Methods:** This literature review included articles on the subject from databases Lilacs, Bireme, and PubMed. **Discussion:** One of the causes for this shift is the perception that emergency services provide easier, more convenient access to medical services, which might also derive from lack of knowledge about what constitutes an emergency situation. Parents also choose to take their children to emergency services due to the availability of physicians from a wide range of medical specialties, an element that might improve the chances of getting one-stop full treatment. **Conclusion:** The choice for medium and high complexity centers has produced effects not only on the health of children, but also on the entire healthcare system. Emergency services end up not being used they way they were designed to and are unable to deal with patient needs. These services were designed to treat acute events and lack the diagnostic capabilities of longitudinal care.

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INTRODUCTION

Healthcare systems are made up by three layers of service, namely primary, medium, and high complexity care. Primary healthcare comprises a set of interventions at an individual and collective level devised to promote good health and strengthen prevention, diagnosis, treatment, and rehabilitation. Primary healthcare services are the first point of contact individuals have with the healthcare system. Care is provided around the health issues that are more relevant regionally and organized around the Family Health Strategy.

Medium complexity care includes hospitals and outpatient clinics that offer specialized care to the population in order to address the complications that "in clinical practice, require the availability of specialized medical care and the use of technology in diagnosis and treatment".[1] In other words, it includes the clinics from different medical specialties and provides the structure for the delivery of services at hospitals and emergency units such as testing and procedures.[1]

High complexity care includes procedures that involve high technology devices and more specific procedures such as surgery, ultrasound examination, physiotherapy, specialized treatment, and etc.[1]

A voluntary shift from primary to high complexity care has been observed in pediatrics. Likely causes include ease of access and convenience, perception of delivery of a one-stop solution, availability of a variety of medical specialties, and lack of knowledge of what constitutes an emergency. Emergency services are being used inadequately, since they were designed to provide care for acute medical conditions and not continuous, comprehensive healthcare to children.

This article aims to discuss some of the reasons behind this phenomenon and its possible consequences, and to briefly discuss the commonalities between different countries facing this issue. Ideas and interventions to reverse the situation are also proposed.

METHODS

This literature review included papers, books, and an article from a government program on the subject. Preliminary searches were carried out in databases Pubmed, LILACS, and Bireme. The following keywords were used: Primary Healthcare, Tertiary Healthcare, Unified Healthcare System, Child Health Services, Pediatrics, Pediatric Emergency Medicine, in accordance with Health Sciences Descriptors (DeCS).

Articles published prior to 1995, papers not contemplating pediatric populations, articles about the economic impact of the shift in question, and papers discussing emergency care procedures and ethical matters were excluded.

First, the titles and abstracts of the remaining articles were analyzed. An article from a government program designed to tackle the issue was kept in the references so as to allow the discussion of proposed solutions; and book *Cuidando de crianças e adolescentes sob o olhar da ética e bioética* was added to the references by the advisors working in this article. A more specific review was later conducted to select publications on the subject, which resulted in the inclusion of 11 papers in this review.

DISCUSSION

An article about a retrospective study conducted at the School of Medicine of Cincinnati looked into the records of pediatric patients given primary care at home within their first years of life and discussed the impact of such approach on the utilization of emergency units in future years. One of the most important findings was a high proportion of patients taken to emergency units for emergency and non-emergency reasons before they reached the age of two years[2] and potential misconceptions by their parents over what constitutes an emergency. Similarly to the United States, it is very likely that parents in Brazil might feel distressed and helpless, believing that it is better to take their children to an emergency unit in any situation. Doubt about how urgent a situation is and questions related to the health of children may explain why parents seek care for their children at a hospital or emergency unit even in situations in which this level of complex care is not needed.

In Spain, the government created an educational project called "yes, it is an emergency for you… but is it an emergency for me?" with the purpose of incentivizing the rational use of pediatric emergency services and instruct parents about what to do when faced with the most common health problems[3]. Healthcare workers in Spain teach the population, using interactive educational tools, about what may be considered an emergency and what may be dealt with through primary healthcare. The idea is that the protocol is made available at health centers, so that healthcare workers may provide advice to ordinary citizens based on what can be done at the local clinic. This subject is discussed in more detail further ahead in this article. The purpose of this tool is to address the current issue affecting pediatric care in Brazil, in which emergency has become synonymous with prompt care instead of circumstances requiring urgent attention[3]. Emergency units were designed to take care or urgent cases that require immediate attention, while other cases require proper follow-up with a specialist through a primary care service, a reality often neglected by parents.

Another element in the preference parents have for medium and high complexity centers is centered on the notion of a one-stop solution, agility, and availability of specialized care. As described by Prof. Dr. Jayme Murahovschi in his open letter entitled "The Dangerous Emergency Unit Culture", emergency units have been used as if they were outpatient clinics due to the "tyranny of urgency", which calls for a quick solution to a "problem" with as little inconvenience as possible.[4] The impression that emergency units are one-stop shops exists because patients can have an appointment with a physician, have tests ordered and medication prescribed, all at the same place, which comforts parents worried about their children and gives them a feeling of satisfaction and closure.

Parents see it as a place in which care is delivered quickly and effectively, all done at the same place, where diseases are diagnosed by a medical professional who provides parents with advice about treatment.[5] Parents prefer to promptly address matters related to the health of their children instead of promoting continuous care through the primary healthcare system.

Another factor to consider is that emergency units are open around the clock and not only during business hours. Therefore, medium complexity services become more convenient, since there is no need to schedule an appointment, change one's plans for the day, missing a day at work, dealing with communication problems, or having to reschedule an appointment. In an American study cited previously, the authors found that parents had trouble reaching primary healthcare services or were not satisfied with the services provided or with the healthcare teams working in these units, and that they preferred to go to an emergency unit because, in their view, they were able to immediately reach the services they needed in a more convenient way and were seen by more experienced staff.[2]

An additional element in the misuse of emergency units is that people believe that they are equipped with more medical specialists and that, therefore, their children will be better served. This is not necessarily true, since a pediatrician in an emergency unit might not be able to deal so well with a non-emergency situation. Parents also think that it is easier to have tests done at an emergency unit and choose to take their children there to save the trip to a laboratory.[5] Contrary to what many believe, tests increase waiting time and might not have been needed if the child were seen by a pediatrician that knows them and assesses the progression of the case while keeping in touch with the patient's parents.[4] This compulsion for answers leads to requests such as "since I am here, why don't we get an X-ray done" or demands for a second opinion since "he was seen by a doctor yesterday but nothing has changed". These types of statements characterize the trivialization of medium complexity care, which becomes a surrogate for return visits, a door to getting tests done without having to set an appointment and medical assessments before the necessary recovery time, all of which would have been best dealt with in the office of a pediatrician responsible for providing continuous patient care.[5]

In an article published in the journal of the American Academy of Pediatrics with the purpose of looking into whether continuity of care was disrupted when a child was seen at a pediatric emergency unit, two terms were discussed to clarify the difference between emergency care and care provided by a specialist: continuous care and longitudinal care. Continuous care is the means through which the parts of a disease are grouped together, whether in cases of acute disease and its follow-up or chronic disease and the related care in progress.[6]

Longitudinal care is about the presence and use of a single source of care in the long run. This is often used in pediatrics in primary care settings, since children mostly consult with the same physician, which strengthens the bond between patients, physicians, and parents with time[7]. With these ideas in mind, emergency units are designed to address the need for acute, immediate care, but are unable to provide long-term preventive and follow-up care. In other words, emergency units do not provide longitudinal care, but if complemented with primary care, medium complexity care might not disrupt the continuity of care.[4,6,7]

The preference parents have for taking their children to emergency units instead of a pediatrician has become highly prevalent. However, parents have not realized that children taken to emergency units are exposed to the pathogens present in that environment. In addition, opportunities are missed when children are taken to an emergency unit instead of seeing a pediatrician. Physicians in emergency units do not schedule follow-up visits and usually do not look into growth or development disorders, urinary malformations, respiratory allergies, chronic lung disease, immunodeficiency in recurrent upper respiratory tract infection, bouts of asthma, orthopedic conditions, or gaps in the immunization schedule. This causes breaches in the sequence and comprehensiveness of treatment, which is harmful to patients.[4,5,7]

In order to safeguard the preventive aspect of primary care, it is important to intervene on the erroneous use of medium complexity services. If diagnosed and investigated early on, certain conditions in pediatrics can be taken to a more favorable and less invasive outcome. Hospitalization for conditions that would otherwise have been the subject of primary care is an important marker of access to healthcare services and their ability to solve patient problems[8], since many conditions, when monitored frequently and from their onset, do not require emergency care or rushed hospitalization.[8,9]

Examples range from diseases preventable through immunization, skin infections and even the management of chronic diseases such as asthma to avoid complications[8]. The analysis of the clinical profiles of patients seen at the ward of a pediatric teaching hospital in 2019 revealed a relatively high proportion - about 42% - of patients admitted due to complicated pre-existing conditions.[8,9]

Overall, follow-up in primary care services covers different age ranges of growth and development[10]. The longitudinal aspect of such services provide for the continuity of care, familiarity with the medical professional in charge, and easier communication and clarification, all of which decisive factors in the development of a good physician-patient relationship and, consequently, a healthy bond.[10]

Additionally, physicians in outpatient services often work as educators, since they may provide patients with advice, not only about their current circumstances but also about prevention, about what to do in an emergency situation, and what an emergency situation is, and where and when to seek care. Outpatient care is not limited to managing the patient's current disease, but to cover their past, present, and future conditions through one same physician at one same service, without intermediaries or interference. [10,11]

Child development is a multidimensional comprehensive process that covers physical growth and neurologic (behavioral, sensorial, cognitive, and language) development. Pediatricians are the first physicians to have contact with children. Their job is to follow their patients longitudinally, working closely with them during their first one thousand days of life. In this critical time period, known for high levels of stimulation and neurobiological development, any change may result in undesired consequences, and that is why first-hand follow-up is primordial for good progression. The role of pediatricians in primary care is thus reinforced, to prioritize constant monitoring of child development during early childhood to allow early detection and intervention while safeguarding the quality of life of children.[11]

In the project "yes, it is an emergency for you… but is it an emergency for me?", the Spanish government aimed at finding a solution to the shift away from primary care though an educational program. The project involved families and attempted to build awareness over the proper use of pediatric emergency units and what might be done about the most common childhood diseases.

Featuring a book and presentations using an instructional style, healthcare workers can post information on their workplaces so that the population is involved and acquires knowledge about what to do and how to tell non-emergency from emergency situations, thereby preventing the misuse of emergency units. Consequently, parents will not feel helpless, distressed, or pressured to act precipitously and expose their children to the risks inherent to emergency units, since they are now better equipped to decide where to take their children.[3]

The program contains information such as how emergency units work; how to tell whether a child has fever; how to properly check a child's temperature; severity criteria; signs of respiratory infection and how to administer prescribed medication; how to identify cases of gastroenteritis and its risk factors; the most common childhood skin diseases and their causes; how to properly contact emergency services in the event of an accident; and what to do in cases of concussion, wounds, or burns. An interesting fact about the program is that it includes questions that participants have to answer before and after they were introduced to the contents of the program, which is an effective way of measuring how much they picked up from what was presented to them and letting the healthcare workers involved in the project know of the need for additional information that specific regions might have.[3]

When parents understand the importance of continuous care, preferentially delivered by one same healthcare professional, the bond between the patient, the physician and the parents becomes stronger. This and the knowledge of what constitutes an emergency and what to do in these cases should help parents let go of the preference for emergency services and go back to outpatient care. Once a relationship has been established, the physician will have the trust of the parents and their children, which facilitates compliance with treatment and reciprocal conversations about patient development and treatment options[7]. The physician may even become more acutely aware of the child's behavior and personality, which might help in the diagnosis of certain disorders and impairments.[7,10,11]

CONCLUSION

The shift away from primary care towards high complexity services in pediatrics has caused repercussions on the health of children and healthcare systems. The causes for this phenomenon include ease of access, convenience, perception of delivery of a one-stop solution, and availability of a wide range of medical specialties at emergency units. Lack of knowledge of what constitutes an emergency situation is also an element to consider. The preference for seeking an immediate solution to a specific condition instead of engaging in longitudinal follow-up care has changed the practice of pediatrics and potentially harmed and deprived patients of diagnoses relevant for their development.

Emergency services have been misused, since they were designed to provide medical services to address acute conditions and not to provide continuous comprehensive healthcare to children. Therefore, the continuity of care present in primary healthcare services must be appreciated by the parents of pediatric patients since it includes prevention, advice, compliance to treatment, and the strengthening of the bond between physicians and patients. The shift away from primary care may affect the treatment and follow-up of pediatric patients and jeopardize the coordination of child long-term care.

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