Children in Hospitals Before There Were Children’s Hospitals

Until recently, physician–historians of pediatrics have generally assumed that “pediatries as a specialized branch of medicine had no real existence before the middle of the nineteenth century.”¹ This may be true if we equate pediatrics with professional organizations and specialized children’s hospitals.²,³ But as a body of knowledge and practices addressing the sick child, pediatrics has a much longer history.⁴,⁵ Reconstructing the history of what might be called “pediatries before pediatricians” entails going beyond the rare books and treatises that were long the traditional sources for medical historians. In this article, we explore 18th-century English hospital admission registers with respect to the medical care of neurodisability.

We present analyzed data of 1483 children (defined as ≤18 years old) hospitalized at 5 18th-century English hospitals whose records have survived. Compiled from admission registers, this is the largest database of pre-1800 pediatric hospital admissions in existence. Some of its implications for historians of medicine have already been explored in a previous historical article.⁶ At the very least, this database demonstrates that English hospitals provided inpatient care for substantial numbers of children long before the mid-19th century, as historians once assumed. Readers are invited to explore the database itself, which is accessible through the Duke University Libraries’ DukeSpace (http://dukespace.lib.duke.edu/dspace/handle/10161/8915).

Hospital records such as these must be viewed through the grim perspective of 17th-century children. Contemporary records from St Martin-in-the-Fields Parish in London indicate that infant mortality rates exceeded 450 per 1000 infants in the early 1770s and averaged 300 per 1000 infants before 1800. These extremely high mortality rates were mainly the result of infectious diseases, exacerbated by smallpox epidemics.⁷

In England in the 18th century, 35 voluntary hospitals were founded.⁸ These hospitals were called “voluntary” because they were entirely supported by charitable contributions from the local community through donation or subscription. These locally administered voluntary hospitals provided health care for the benefit of “the Sick and Lame Poor.” For admission, which occurred every Saturday morning between 11 AM and 1 PM, each patient needed a signed letter of recommendation from a hospital benefactor such as a donor or subscriber. Treatment was free, and inpatient stays of up to 3 months were common. The wards were separated by gender. Conditions were very austere. Patients were expected “to assist in nursing the patients, washing and ironing linen, washing and cleaning the wards.”⁹ Friendly Advice to a Patient (1748), a book published at that time, also encouraged patients “to read to others, and by teaching them to read; by learning some of them to write and cast accounts . . . or by assisting, in which duty you ought, under the direction of the Matron, in attending upon others.”¹⁰ In this 18th-century infirmary there was equal emphasis on an inpatient’s religious health, through strong encouragement of Christian religious observance and practice in the hospital setting. The regulations made it clear that failure in this observance, such as nonattendance for prayers, was sufficient reason for discharge (Fig 1).⁹

Although a wide variety of conditions might lead to child hospitalization, our
focus was on those whose illnesses were of neurologic origin. Although child neurology did not emerge as a specialty until the mid-20th century, physicians have long been interested in the conditions that have come to be known today under the umbrella of “neurodisability.”

Cerebral palsy and epilepsy in childhood have been described for centuries. Most notably, 17th-century English physician and neuroanatomist Thomas Willis described childhood epilepsy, palsy, coma, and mental retardation in the context of clinical histories and postmortems. Willis made a distinction between adult and pediatric epilepsy, with different causation, treatments, and outcome. Willis considered adult seizures to have started when puberty had finished, which he took to be 25 years of age. In the mid-18th century, William Buchan’s popular medical guide Domestic Medicine (1769) stated that for childhood epilepsy, “when the disease is hereditary, or proceeds from a wrong formation of the brain, a cure is not to be expected.” Buchan did suggest a treatment of seizures due to teething: “The feet frequently bathed in warm water; and, if the fits prove obstinate blistering plaster may be placed between the shoulders.” In other words, medical therapy seems unlikely to have provided anything of potential benefit for a child with epilepsy.

In this 18th-century data set, 67 cases of pediatric neurodisability made up 4.5% of the total number of admissions. Of these, 25 had a diagnosis consistent with epilepsy, and the other 42 had a diagnosis consistent with a neuromuscular disability. There is a wide range of descriptive terms in the data set. Epilepsy is described under the terms Spasms clonic, Fits/Fitts, Epilepsy/Epileptic, and Convulsions (Most extraordinary). Neuromuscular disability is described under the terms Palsy, Sciatica, Lameness, Weakness, Distorted spine, Chorea, and Hemiplegia (Table 1).

What do we learn from the database that would not be apparent from textual evidence such as that of Willis or Buchan?

First, we learn that in the 18th century there were pediatric inpatient stays, and these were typically for months, far longer than current inpatient stays of <1 day. Such prolonged inpatient stays would allow chronically malnourished children a sustained period of recovery on a hospital diet that more than met their nutritional needs, in a ward environment that emphasized cleanliness.

Table 1

<table>
<thead>
<tr>
<th>Variable</th>
<th>Epilepsy</th>
<th>Neuromuscular Disability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean (SD) age at admission, y</td>
<td>12 (4)</td>
<td>10 (6)</td>
</tr>
<tr>
<td>Male, %</td>
<td>40</td>
<td>49</td>
</tr>
<tr>
<td>Inpatient, %</td>
<td>23</td>
<td>23</td>
</tr>
<tr>
<td>Outpatient, %</td>
<td>77</td>
<td>77</td>
</tr>
<tr>
<td>Cured, %</td>
<td>67</td>
<td>47</td>
</tr>
<tr>
<td>Relieved, %</td>
<td>13</td>
<td>26</td>
</tr>
<tr>
<td>Incurable or died, %</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>Nonattendance or self-discharged, %</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>Median (interquartile range) duration of illness before admission (mo)</td>
<td>6 (1–24)</td>
<td>5 (2–9)</td>
</tr>
<tr>
<td>Median (interquartile range) duration of stay as inpatient (days)</td>
<td>60 (29–112)</td>
<td>95 (55–143)</td>
</tr>
</tbody>
</table>

| Newcastle year 1779, % of total cases         | 13       | 14                       |
| Northampton years 1756–1757, % of total cases | 21       | 5                        |
| Manchester year 1756, % of total cases        | 21       | 37                       |
| Chester year 1756, % of total cases           | 38       | 35                       |
| Bristol years 1756 and 1779, % of total cases | 8        | 9                        |

*Alternatively, is it possible that some 18th-century patients, their families, or their sponsors were not fully truthful when giving the patient histories, to access health care resources otherwise unavailable? Patients or their parents may also have become unhappy with further outpatient attendances or with long inpatient stays and declared themselves or their child “cured.”
This database raises other areas for future inquiry, including referral pathways, early pediatric hospital specialization, and differences between hospitals. Additional exploration outside the hospital can explore health networks at home and in the community, supporting the sick child and his or her family.

CONCLUSIONS

This important data set has identified for the first time that a large number of pediatric patients were being treated in a hospital inpatient setting before the establishment of children’s hospitals, often with a stay of many months. It demonstrates that pediatric neurodisability accounted for a significant percentage of pediatric hospitalizations, and most strangely, they were often discharged as “cured.” Such a data set ultimately asks why, despite the clear need and demand, did it then take another 100 years before the founding of the first specialized children’s hospitals? When taken with contemporary medical literature and other records, this data set allows an individually named sick child’s perspective to be fully placed in its social context. It is possible that other such admission registers exist, awaiting discovery. Thus, from a time of “pediatrics before pediatricians” to whatever future evolution child health care brings, the authors hope that present and future readers, in their time, build on such historical cornerstones improving the care delivered to sick children and their families.

ACKNOWLEDGMENTS

We thank Dr Alysa Levene and Professor Jonathon Reinarz, who (with A.N.W.) constructed the original data set and who have declined authorship in this article. We would also like to thank the staff at the Northamptonshire County Record Office and the Richmond Library at Northampton General Hospital and Dr Corallie Murray for their assistance and Mrs Sheridan Friedman for her genealogical inquiries about James Riding. We also thank the Wellcome Trust, which funded the original pilot study.

REFERENCES


FINANCIAL DISCLOSURE: The authors have indicated they have no financial relationships relevant to this article to disclose.

FUNDING: The Wellcome Trust funded the original pilot study that collected these data (grant 081351/Z/06). The analysis for the purposes of this article was unfunded, and no external funding was secured for this part of the study.

POTENTIAL CONFLICT OF INTEREST: Dr Andrew Williams was a coauthor on an earlier social historical article (Levene et al, 2012), that undertook a limited analysis of the 18th-century data set. This other article has been submitted with this manuscript for referees’ view, together with an e-mail from Dr Alysa Levene, the senior author of the former article, disavowing involvement in this study. This submitted historical perspectives article is written up from a clinical medical perspective but using the same database as the Levene et al (2012) article. There clearly will be some overlap of data and results, but Drs Sharma and Williams have constructed a completely independent article. We believe our submitted article is materially different from the other article. Dr Raman Sharma has no conflict of interest.
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Pediatrics 2014;134;425
DOI: 10.1542/peds.2013-0746 originally published online August 11, 2014;

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