Reviewer's report

Title: Technology-Dependency Among Patients Discharged from a Children's Hospital: A Retrospective Cohort Study

Version: Date: 17 November 2004

Reviewer: Michelle Mayer

Reviewer's report:

General

This manuscript provides an interesting glimpse of the extent to which children discharged from a tertiary medical center are technology dependent. The manuscript is well written and addressed an existing gap in the literature. With additional changes, I think the manuscript will be an useful addition to the literature.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1. The authors classify children as having special health care needs as well as dependence on technologies; however, the title and the majority of the discussion focus exclusively on technology dependence. The makes the CSHCN classification seem like an afterthought. The authors should either remove the focus on CHSCN, i.e., making it another independent variable, or discuss the implications of the findings with regard to CSHCN.

2. The authors do not addressing the timing aspect of the CSHCN definition delineated by MCHB. How did the authors estimate the duration of illness? Similarly, how did the authors classify children who were discharged on a drug for a limited time period, such as a 10-day course of antibiotics? Overall, I feel like I need more information on how the CSHCN definition was operationalized.

3. I assume that the technology dependence definition included medications. If so, the authors need to make that explicit in the methods. How did the authors decide which medications warranted classification as technology dependent?

4. The authors should detail the characteristics of cases where there was disagreement over the child's classification as CSHCN or TD.

5. I am puzzled by the description of the percent of children who are TD. The authors state that 41% are TD and 16% are device dependent, 32% drug dependent and 11% device and drug dependent. The latter three numbers neither sum to 100% (for the subsample of children who are TD) or 41%. A more useful breakdown would be, among those TD, the % who are device dependent only, the % who are drug dependent only, and the % who are drug and device dependent.

6. Please clarify if the data on use of a medical device was collected at the time of discharge or during the hospitalization only.

7. In the first paragraph of the discussion the authors state that their findings suggest that more attention should be given to this group of children? What in their findings suggest that? Clearly the prevalence of special health care needs and TD is higher in this sample than in the general pediatric population, but that is expected given that they are hospitalized children. Why should we be concerned about this group? I think the authors need to frame the discussion better. For example, the point made in the second paragraph about the concentration of these children in pediatric referral centers has financial implications for these centers if reimbursement is inadequate.

8. How do the findings "outline an interconnected pattern of reasons why the phenomenon of technology dependency warrents study"?
9. How could a TD child not be a CSHCN (Table 3 footnote)?
10. I think the authors should add some bivariate comparisons of TD children vs. non-TD children with regard to payer status, age, diagnosis, etc.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Overall
1. Avoid use of parenthetical remarks: either incorporate them into the sentence or remove them.

Abstract
1. Sentence 1: change "be increasing" to "increase"
2. Space missing after 0.56
3. Remove the sentence, "One patient died." Add the following clause to the next sentence, "Of 100 discharges ..."
4. The percentages listed for device and medication dependency do not make sense.

Introduction
1. I assume the Medicaid waiver to which the authors refer was for long term care services at home. This point should be clarified.
2. Place reference 7 after the period.
3. Remove "who are" from the final sentence.

Methods
1. The authors need to clarify the operationalization of their definitions. Specific examples might be helpful.
2. How were the instruments pilot tested?
3. Paragraph three: change "based on the date contained therein determined" to determined.

Results
1. The results section is very choppy. Several paragraphs could be combined to improve flow.

Tables
Revise percentages on Table 3

Discretionary Revisions (which the author can choose to ignore)
None

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: No

Declaration of competing interests:
I declare that I have no competing interests