Neonatal Discharge Planning: Could Unscheduled Reviews be reduced in the First Six Weeks of Life?

Abstract:

The postnatal period offers an opportunity to provide information and education to new mothers. We analysed factors associated with unscheduled presentations of newborns to local primary care, maternity and paediatric services over a 3 week period to assess whether these could be targeted with discharge planning educational interventions. Data was collected prospectively from electronic databases and manually from patient records in the maternity hospital. Two hundred and seventy six patients under 6 weeks of age presented to the three services over a three week period from (24/2/14 – 16/3/14). Two hundred and seventy six patients under 6 weeks of age presented to the three services over a three week period from (24/2/14 – 16/3/14).

Results

Two hundred and seventy six patients under 6 weeks of age presented to the three services over a three week period from (24/2/14 – 16/3/14). Almost half of these visits were unscheduled (137/49%). 40(29%) of those that were unscheduled were felt to represent benign neonatal variants whilst 28 (20%) presented with feeding problems. Eighty one (59.3%) patients were discharged home, and this was unaffected by referree patterns, GP's 19 (56%), Nurses 13 (57%) or parents?? (67%). At least 40 (29%) of reviews were felt to be inappropriate and could have been prevented. There is room for cost saving and quality improvement of the service through education.
the hospital attended the hospital without a primary care review, approximately 1/3 had been seen by their GP and overall, 7% were referred by the public health nurse. As noted previously, the majority of public health nurse referrals were to the maternity service.

Discussion

A certain proportion of all unscheduled reviews are thought to be unnecessary. A literature review on the topic reveals very little published data, particularly on term babies. There have been studies done into rates of unscheduled review and readmission of preterm infants. Recently, a neonatal research group reported reduced readmission rates among parents of preterm infants who were more involved in the care of their newborn in the NICU. Other studies have shown associations between readmission rates of late preterm infants and maternal age, maternal smoking and longer hospital stay. In the UK, studies have shown similar risk factors for presentation of older children to the ED for unscheduled reviews. A survey conducted in a London Paediatric Emergency Department revealed that 19% of patients had knowledge of their GP’s surgery hours and 50% had made no prior attempt to contact their GP. Half of the attendances were felt to be inappropriate for management in an ED. A further study in the US showed improved access to primary care decreased ED attendance and hospitalisation of children. These studies were performed over 20 years ago indicating that this problem is not new, nor is it confined to our population. A more recent but similar study found that convenience is often a significant factor in the use of the Emergency Department for non-urgent complaints.

Among our population, a high proportion of reviews were for benign neonatal variants, and all were discharged following review. Although the majority of unscheduled attendances were self-referrals (74/137 or 54%), a significant proportion were triggered by General Practitioners and Public Health Nurses. Fifty six percent of those referred by a GP and 57% of those referred by a nurse were discharged home without formal follow up. The second most common reason for review was feeding difficulties. Overall 16% of infants attending services presented with feeding difficulties. Neonatal sepsis is a potentially life-threatening emergency that needs early paediatric assessment in an emergency department. Only 19% of attendances to the Paediatric ED were due to possible sepsis. 10% of all maternity hospital presentations were due to suspected infection which is concerning as the maternity hospital OPD is not the best place for these patients to receive ongoing care. Unwell infants with suspected sepsis assessed in maternity hospitals often have to undergo transfer to paediatric hospitals, via the Paediatric Emergency Department. Eleven point six percent (n=16) of infants presented with respiratory symptoms. Respiratory disease can be unpredictable and there is often a low threshold for admission. This level of paediatric review may be unavoidable. It is reassuring that the patterns of respiratory presentation seems appropriate, avoiding exposure of in- and outpatient vulnerable neonatal population to infectious viral pathogens.

This study is the first to simultaneously investigate why and how neonates under 6 weeks present to three different healthcare settings. It was decided to look at concurrent presentations, as there is significant seasonal variation in infant presentations for medical review in this cohort. The majority of infants did not present with infectious or respiratory symptoms. Benign neonatal variants and feeding issues comprised nearly 50% of unscheduled presentations to both maternity and paediatric hospitals. Parents may not be fully aware of the options available to them in seeking medical attention and where it may be appropriate to bring the infant. There may be a role for increased parental education about normal newborn variants and feeding patterns. It may also be worthwhile to target the infant less than 4 weeks as part of continuing professional education for healthcare workers in the community setting. Most of the conditions identified during this study did not require immediate or emergency review. It is sometimes difficult for practitioners trained in paediatrics to identify the infant who is at serious risk without the benefits of hospital supports. However, many of the presentations identified in this study did not require a hospital review, and a proportion did not present to the most appropriate hospital setting. There is a role for increased information, and possibly education, about how and where best to manage our youngest patients.

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References

1. Health Service Executive Caring For Your Baby Booklet

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