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Neonatal presentations to the paediatric emergency department in Singapore

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ABSTRACT

Introduction: This study aimed to characterise neonatal paediatric emergency department (PED) visits, analyse the main paediatric illnesses and establish associations of these demographics with the readmission rates and severity of their presentation.

Methods: A retrospective analysis of neonates (aged < 28 days) presenting to the PEDs of our hospital over seven months was performed. Associations between the clinical and demographic data of admissions to the PED and inpatient admissions were analysed.

Results: In total, 1,200 neonates presented during the study period, 79.4% of whom presented at less than 15 days since birth. Length of stay in the PED was less than four hours for 94.0% of the neonates. Predominant triage categories comprised non-P1 cases (97.5%). The main diagnoses at the PED were neonatal jaundice (NNJ; 66.8%) and neonatal pyrexia (NNP; 14.6%), which corresponded to the main diagnoses upon discharge from the hospital: NNJ (68.4%) and NNP (19.6%). 48.2% of neonates were referred from polyclinics or other clinics. 57.7% of the neonates were admitted. Interestingly, 87.0% of the well babies who presented to the emergency department were brought in owing to parental concerns by the parents themselves, without prior consultation with the doctor.

Conclusion: Outpatient management of NNJ can be considered. Caregivers should be provided better education regarding normal physiological characteristics of newborns through standardised educational materials. Other potential avenues for parents to seek medical advice, for example hotlines and ChatBots such as the recently piloted 'Urgent Paediatric Advice Line' online service, should be considered.

Keywords: emergency, neonates, newborn, paediatric, presentations

INTRODUCTION

Increased attendance of neonates to the paediatric emergency department (PED) has been observed over the past few decades worldwide.[1-3] This trend appears to be in line with the shifting paradigm towards earlier discharge of the neonatal population in the postpartum period.[1,4,5,6]

Shorter neonatal hospital stays might be a part of efforts to more efficiently allocate healthcare resources and cut costs arising from unnecessarily prolonged hospitalisations.[7] Early postnatal discharge could also improve maternal-infant bonding and paternal involvement.[8] However, the neonatal population is a group that is highly susceptible to infections, and their increased attendance and consequent exposure to the infectious environment of the PED raises concerns.

Many studies have been conducted to ascertain the benefits and risks[9-12] of this trend of earlier discharges, with many of these studies using readmission rates as an indicator of morbidity.[9,13,14] Several studies have demonstrated a correlation of shorter postpartum hospital stay with increased neonatal readmission rates.[15-17] However, reviews of these studies have also concluded that methodological flaws and insufficient sample sizes might make it difficult to accurately conclude the consequences of shorter neonatal hospital stays.[18,19]

The PED provides not only acute care for sick newborn infants but also a significant amount of primary care, reassurance and parental education.[6] Several studies have pointed out physiological characteristics of the neonates and parents' doubts as the main reasons for neonatal presentations to the PED.[1,6,20] With the trend towards earlier neonatal discharge, there has been a shift in focus of early infant care from the tertiary to the outpatient setting in the form of family physician follow-up, in-house nursing support and PED care.[9,21-23] Measures to provide a coordinated care programme with early discharge have been shown to

reduce the use of PED in infancy, indicating that some PED visits are potentially preventable.[24]

This study, performed in the largest tertiary paediatric centre in Singapore, aimed to characterise neonatal PED visits, analyse the main illnesses and establish associations of these demographics with the readmission rates and severity of their presentation.

METHODS

A retrospective review of neonatal (≤ 28 days of life) presentations to the emergency department (PED) of KK Women's and Children's Hospital (KKH), Singapore, from September 2016 to March 2017 was conducted. Data was collected from the electronic database (Citrix) of neonatal factors and emergency data of neonatal presentation based on the PED visit documentation.

Neonatal factors included gestational age, gender, race, birth weight, Apgar score, labour type and time of discharge after birth. Emergency data of neonatal presentation included age at presentation, triage category, re-attendance, length of stay in the PED, method of referral, presenting complaint, diagnosis, disposition and highest level of care (for admitted neonates) and the final diagnosis.

Data was entered in a Microsoft Excel spreadsheet (version 2016). IBM SPSS Statistics version 22.0 for Windows (IBM Corp, Armonk, NY, USA) was used to generate descriptive data for reporting. Values were reported as mean ± standard deviation or median with interquartile range for continuous variables (depending on normality) and as percentages for categorical variables. Continuous variables were analysed using t-test (or its non-parametric equivalent) and dichotomous variables were analysed using chi-square test or Fisher's exact test, as appropriate.

RESULTS

The demographic profile of the neonates as well as their emergency visit and admission demographics in the PED are described below.

A total of 1,200 neonates (age < 28 days) presented to the PED during the study period. 51.7% of these were male and 48.3% were female (Table I). 53.7% of the neonates belonged to Chinese race, 26.4% to Malay race, 10.4% to Indian race and 9.5% to other races. 87.2% of the neonates were born at term and 8.8% were born preterm (Table I). The birth weight of 90.8% of neonates was more than 2,500 grams; 7.3% of them had a low birth weight. 61.3% of neonates were born by normal vaginal delivery, 13.4% by elective lower segment caesarean section (LSCS), 12.8% by emergency LSCS, 8.0% by vacuum delivery and 1.6% by forceps-assisted delivery. Among the neonates who presented to the PED, 89.8% and 90.7% of the neonates had one-minute and five-minute Apgar scores ≥ 7, respectively, while 1.0% and 0.1% of the neonates had a one-minute and five-minute Apgar score < 7, respectively (Table I). In terms of the time of discharge since birth (discharge from the first hospitalisation for the birth of the child), 65.2% of the neonates were discharged before Day 4 of life and 6.7% were discharged on or after Day 4 of life (data was unavailable for 28.2% of neonates, owing to the lack of information about babies born outside of KKH).

Table I. Demographics of neonates presenting to the PED.

Demographic variable	No. (%)
Gestation (wk)	
< 37	106 (8.8)
≥ 37	1,046 (87.2)
Unknown	48 (4.0)
Gender	
Male	620 (51.7)
Female	580 (48.3)
Apgar score (1 min)	
< 7	12 (1.0)
≥ 7	1,077 (89.8)
Unknown	111 (9.3)
Apgar score (5 min)	

< 7	1 (0.1)
≥ 7	1,088 (90.7)
Unknown	111 (9.3)
No. of days of life at discharge from birth (discharge from the first hospitalisation for the birth of the child)	
< 4	782 (65.2)
≥ 4	80 (6.7)
Unknown	338 (28.2)
Age at presentation (days of life)	
< 15	953 (79.4)
≥ 15	247 (20.6)
Re-attendance within 72 hr of first presentation to the PED	
Yes	78 (6.5)
No	1,122 (93.5)
Triage category	
P1	30 (2.5)
Non-P1	1,170 (97.5)
Length of stay in PED (hr)	
< 4	1,128 (94.0)
≥ 4	72 (6.0)
Method of referral	
Self	608 (50.7)
Polyclinic	351 (29.3)
Others	227 (18.9)
Unknown	14 (1.2)

PED: paediatric emergency department

Age at presentation to the PED was < 15 days for 79.4% of the neonates and ≥ 15 days for 20.6% of the neonates. The triage category of the neonates in this study comprised 2.5% in the P1 category and 97.5% in the non-P1 category. 6.5% of the neonates re-attended the PED within 72 hours of their first attendance to the PED (Table I). Out of the 78 (6.5%) neonates that re-attended, all had a general ward status and none were admitted to the high-dependency or intensive care unit (ICU); one had sepsis, and none had meningitis or hypoglycaemia. The length of stay in the emergency department was < 4 hours for 94.0% of neonates, while 6.0% of these stayed in the emergency department for ≥ 4 hours.

The majority (50.7%) of the patients were brought in by the parents themselves, whereas 48.2% were referred by the polyclinics and other clinics (Table I). 65.1% of the neonates with neonatal jaundice (NNJ) were referred by the polyclinics or other clinics. Importantly, 87.0% of the well babies (diagnosed at the end of the PED consultation) who attended the PED were brought in owing to parental concerns by the parents themselves, without a prior consultation with the doctor (Table II). Of these 69 well babies, 9 (13.0%) were eventually admitted likely owing to parental concerns and also from the lack of confidence in first-time parents. Of these nine babies, none were re-attendances and all were of general ward status. None of them went to the high-dependency unit or ICU.

NNJ accounted for the largest proportion (66.8%) of cases seen in the PED. However, it is important to contextualise this information, as these patients were usually sent for admission from the polyclinics during the weekdays or for checking serum bilirubin during the weekends, given that polyclinics are closed on the weekends. After excluding NNJ, neonatal pyrexia (NNP; 14.6%) was the most common diagnosis at the end of PED consultation (Table III). The next common diagnoses included well baby, viral upper respiratory tract infection, gastroesophageal reflex, conjunctivitis and colic. Serious conditions such as sepsis (2.2%), meningitis (1.4%) and urinary tract infection contributed to only a minor proportion of the spectrum of diagnosis (Table III).

Table III. **Diagnoses of neonates presenting to the PED.**

Diagnosis	**No. (%)**	
	At the end of PED consultation	**Final diagnosis after admission**
Neonatal jaundice	802 (66.8)	474 (68.4)
Neonatal pyrexia	175 (14.6)	136 (19.6)
Others	127 (10.6)	63 (9.1)
Well baby	69 (5.8)	28 (4.0)
Viral upper respiratory tract infection	64 (5.3)	38 (5.5)
Gastroesophageal reflux	17 (0.4)	38 (5.5)
Conjunctivitis	14 (1.2)	11 (1.6)
Viral gastroenteritis	13 (1.1)	11 (1.6)

Colic	13 (1.1)	0 (0)
Apparent life-threatening event	11 (0.9)	7 (1.0)
Lower respiratory tract infection	9 (0.8)	10 (1.4)
Sepsis	8 (0.1)	15 (2.2)
Ophthalmia neonatorum	7 (0.6)	4 (0.6)
Erythema toxicum	7 (0.6)	4 (0.6)
Hypoglycaemia	3 (0.3)	1 (0.1)
Urinary tract infection	1 (0.1)	12 (1.7)
Meningitis	0 (0)	10 (1.4)
Total number of PED diagnoses	**1,340**	**862**

PED: Paediatric emergency department

Developmental dysplasia of the hip, neck torticollis and bilateral congenital talipus equino varus were the musculoskeletal concerns for which the parents brought their babies to the PED. The predominantly observed dermatological conditions were neonatal acne, eczema, erythema toxicum and fungal diaper rash. Surgical conditions such as ileal atresia, pyloric stenosis, imperforate anus, malrotation with volvulus and abdominal distention secondary to Hirschsprung disease were observed in 9.0% of the neonates. Hypoglycaemia and congenital adrenal hyperplasia were the predominant endocrinological disorders.

Of the 802 patients with NNJ, 73 patients had concurrent NNP, three patients had concurrent viral upper respiratory tract infections, three patients had concurrent gastroesophageal reflux disease, two patients had concurrent hypoglycaemia and two patients had concurrent conjunctivitis. Sepsis, colic, ophthalmia neonatorum and erythema toxicum were concurrently diagnosed in four patients with NNJ.

Out of the 1,200 neonates who attended the emergency department during the study period, 693 (57.7%) were admitted for inpatient care. In terms of their disposition, 98.6% of these neonates went to the general ward, 1.2% to the high-dependency unit and 0.3% to the ICU. Out of the 693 neonates admitted, 668 (96.4%) were under the non-P1 category, with the most frequent being NNJ (56.2% of non-P1 admissions), followed by NNP (20.7%).

Among the patients with NNJ, 459 (57.2%) patients were admitted, 169 (21.0%) were treated and discharged, 169 (21.0%) were referred for outpatient follow-up, 4 (0.5%) were discharged against medical advice and 1 (0.1%) was referred to another hospital. The disposition of the patients with NNP was as follows: 169 (96.6%) patients were admitted; and 5 (3.4%) patients were discharged against medical advice.

The mean age of the admitted patients was similar to that of discharged patients (Table IV). The ratio of male to female patients was similar between admitted and non-admitted patients (Table IV). The mean gestational age of the admitted and non-admitted patients slightly differed; however, the difference was not statistically significant (p = 1.11). The median Apgar scores at 1 and 5 minutes were similar in both admitted and non-admitted patients. The mean age at discharge from the hospital after birth was lower for the admitted babies than for the non-admitted babies; however, this was not statistically significant (p = 1.45) (Table IV). Similarly, the mean age at presentation to the PED for the admitted babies was lower than that for the non-admitted babies, but the difference was not statistically significant (p = 2.34) (Table IV). The predominant triage category among the admitted and discharged neonates was the non-P1 category (Table IV). Nearly half of both the admitted and non-admitted neonates (52.1% and 53.7%, respectively) were brought into the PED by the parents themselves (Tables II and V). It is noteworthy that among the admitted neonates, the rates of self-referrals for well babies, less serious pathologies (e.g. colic) and more serious conditions (e.g. sepsis and apparent life threatening event [ALTE]) were comparable (Table V). 35.3% of the admitted neonates and 21.0% of the non-admitted neonates were referred to the PED after assessment by the polyclinic doctor. Similar proportions of patients (10.0%) were referred by the general practitioners in both the admitted and non-admitted categories.

Table IV. Characteristics of admitted and non-admitted neonates.

Parameters	Mean ± SD (IQR)		p-value
	Admitted	Not admitted	
No. of patients*	693 (57.7)	507 (42.3)	
Gestational age (wk)	38.3 ± 1.4 (37.2–39.5)	38.4 ± 1.2 (37.3–39.4)	1.15
Gender			
Male	353	268	0.51
Female	340	239	
Birth weight (g)	3088.5 ± 421.1 (2756.9–3409.3)	3122.2 ± 416.9 (2811.9–3450.7)	1.11
Apgar score (1 min)†	9	9	4.44
Apgar score (5 min)†	9	9	< 0.05
No. of days of life at discharge from inpatient: from birth	2.8 ± 1.6 (1.8–4.9)	3.2 ± 1.4 (1.8–4.8)	1.45
Age at PED presentation (day)	8.2 ± 6.9 (4.0–17.4)	9.4 ± 7.1 (4.1–16)	2.34
Triage category*			
P1	25 (3.6)	5 (1.0)	4.57
Non-P1	668 (96.4)	502 (99.0)	
Method of referral*			
Self	338 (48.8)	270 (53.2)	4.87
GP	69 (10.0)	51 (10.0)	
Polyclinic	245 (35.3)	106 (21.0)	
Other restructured hospitals	11 (1.6)	8 (1.6)	
Private doctors	12 (1.7)	0	
KKH clinic	12 (1.7)	64 (12.6)	
Unknown	6 (0.9)	8 (1.6)	

*Data presented as *no. (%) or †median. PED: Paediatric emergency department; GP: general practitioner; IQR: interquartile range; KKH: KK Women's and Children's Hospital*

DISCUSSION

Neonates remain a highly vulnerable population with variable physiological characteristics; caregiver (especially first-time parents) anxiety accompanied by a lack of information or education could contribute to increased visits to the PED. Shorter postpartum hospital stays, insufficient information or poor support and education during the perinatal and postpartum period might also contribute to increased PED use. Easy access to the PED, and greater availability of paediatricians and diagnostic tools might also lead to increased PED visits.

We found that the majority (50.7%) of the patients were brought in by the parents themselves, whereas 48.2% were referred by polyclinics and other clinics. 87.0% of the well babies (diagnosis at the end of the PED consultation) who attended our PED were brought in

owing to parental concerns by the parents themselves, without a prior consultation with another doctor. Given that the PED in a tertiary centre should be utilised judiciously for more serious or urgent pathologies, these high rates of self-referrals (parents bringing their child to the PED without a referral) for well babies could imply childcare doubts and unfamiliarity among caregivers, especially first-time parents, regarding the physiological characteristics of newborns.[25]

We observed that the percentage of self-referrals (for each specific diagnosis) for well babies, less serious pathologies (such as colic) and more serious conditions (such as sepsis and ALTE) were comparable among the admitted neonates (Table V). This is likely attributable to the availability and easy accessibility of our local PED for provision of timely specialised care by trained paediatricians alongside robust laboratory support, with a quicker turnaround time.

In terms of presenting complaints, NNJ was the most common (66.8%), a similar finding when compared to other series.[1,26,27] In terms of the eventual diagnosis, NNJ (66.8%) and NNP (14.6%) were the most common diagnoses at the end of the PED consultation in our study. These conditions persisted as the two most common diagnoses (with similar preponderance) during discharge from the hospital: NNJ (68.4%); and NNP (19.6%).

A similar finding was reported by Ruiz et al,[25] where 13.6% of the patients presented with NNP, making it the second most common presenting complaint. Vomiting (11.0%) and upper respiratory tract infection (10.8%) closely followed NNP. A complete workup for sepsis (serum, urine, lumbar puncture samples with analysis and culture of all fluids) was performed for 8.8% (n = 131) of all neonates that presented to the PED. Of these, most had fever without focus, appeared septic or had a poor general condition. Out of these patients who underwent a complete workup for sepsis, 118 (90.1%) were admitted. In our study, 96.5% (169 out of 175) of neonates with NNP were admitted.

This is likely accounted for by the current practice in our PED, where limited

investigations are performed for cases of NNP. An expeditious admission for all cases for a thorough workup and subsequent management is favoured in our current practice. This might be one of the contributing factors to the higher admission rates (57.7%) in our study, as compared to the study by Ruiz et al (26.0%), where their investigative findings in neonates with pyrexia might have allowed them to better risk stratify and determine the population that can be discharged. For example, a clinically well neonate, who has a fever without focus with a septic workup that is not suggestive of a serious bacterial infection, would be discharged with an early outpatient follow-up instead.

The rate of visits with referral (48.0%) was higher in our study than those reported in other series: 24.5% in the study by Ruiz et al;[25] 21% in the study by Millar et al;[1] and 17.2% in the study by Claudia et al.[27] This difference could be attributable to the different healthcare structure, protocols and workflows, as well as the free access to hospital PEDs in other countries. In Singapore, routine jaundice checks are largely conducted in polyclinics or clinics (primary healthcare setting) at highly subsidised rates, and referrals are made accordingly to PEDs when bilirubin levels reach high enough to require phototherapy (according to a standardised workflow provided by our institution). In our study, it was noted that a large proportion (65.1%) of neonates with NNJ were referred by the polyclinics or other clinics.

PED visits in Singapore are not free, as compared to the countries where the other abovementioned series were conducted (Spain, Canada and Portugal), wherein PED visits are free or heavily insured. Parents of neonates in such countries might choose to directly go to the PED, where more specialised paediatric care and diagnostic tools are available, instead of seeing a general practitioner first, leading to an overall lower rate of referral to the PED from primary care.

The admission rate (57.7%) in our study was significantly higher than that in the studies by Millar et al[1] (32.9%), Ruiz et al[25] (26%) and Claudia et al[27] (13%). This disparity could

be attributed to a culmination of factors. The most common diagnosis in our study was NNJ, which differed from other series,[1,6,25] where non-apparent pathology was the main diagnosis, followed by infant colic. Most cases of NNJ in our study required admission for further evaluation and treatment with phototherapy, which could account for the higher admission rates. Similar to the series by Ruiz et al, where a high rate of admission for fever without focalisation was observed, we observed a significant admission rate for NNP as well. This is likely contributed by the current practice in our PED, where limited investigations are performed for cases of NNP, as stated earlier. Another reason for the higher rate of hospital admissions would be the higher unpredictability of disease in newborns as well as the higher risk for serious bacterial infections.

This study has several limitations. Firstly, data regarding some of the neonatal demographics (e.g. gestational age, Apgar scores and day of discharge from birth) were missing, given that neonates seen in our PED might be out-born (born in hospitals other than KKH), limiting our access to some of these data. Secondly, data regarding mortality and long-term morbidity of the studied neonatal population was also unavailable; future studies should attempt to obtain these data. Thirdly, corrections for multiple comparisons of some of the statistical observations were not made, which could limit the validity of these observations. Another consideration is the inherent subjectivity during the prognostication and diagnostic process in the PED by different physicians.

In conclusion, we present a summary of our pertinent findings and the corresponding recommendations. NNJ and NNP were the two main diagnoses, both in the PED and during discharge from the hospital. The rate of referral from polyclinics and other clinics (48.0%) was higher than the rates reported in other series, which could be attributable to the different healthcare structure, protocols and workflows in the different studies. The rate of hospital admission (57.7%) was also higher than that reported in other series. These findings suggest

that more robust infrastructure for community paediatrics, coordinated care programmes and potential facilities for outpatient management of jaundice in newborns can be considered to minimise PED visits and hospitalisations and the consequent exposure of neonates to these infective environments.

The finding that 87.0% of well babies that attended the PED were brought in owing to parental concerns without a prior consultation with another doctor suggests that there is a potential need to better educate caregivers with regard to the physiological characteristics of newborns and childcare needs. In addition, red flag signs and symptoms suggestive of disease should be initiated, preferably during the gestation period. Standardised educational materials can be provided in conjunction with educational sessions in the primary care settings (e.g. polyclinics), which would greatly help prepare caregivers in terms of what to expect after the birth of the newborn. This could also increase their awareness regarding the healthcare resources available to them. Other potential initiatives, for example the use of hotlines and ChatBots, such as the recently piloted 'Urgent Paediatric Advice Line' online service, should be considered.

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Table II. Diagnoses of neonates discharged from the PED.

Diagnosis	No. of patients discharged	%		No. of re-attendance	%		No. of self-referred	%	
		Total discharged patients	Total discharge diagnosis		Specific discharge diagnosis	Total discharge diagnosis		Specific discharge diagnosis	Total discharge diagnosis
Neonatal jaundice	343	67.7	65.3	23	6.7	88.5	123	35.9	43.6
Well baby	60	11.8	11.4	0	0	0	52	86.7	18.4
Others	45	8.9	8.6	3	6.7	11.5	39	86.7	13.8
Viral upper respiratory tract infection	39	7.7	7.4	0	0	0	37	94.9	13.1
Colic	12	2.4	2.3	0	0	0	12	100.0	4.3
Conjunctivitis	8	1.6	1.5	0	0	0	6	75.0	2.1
Neonatal pyrexia	6	1.2	1.1	0	0	0	3	50.0	1.1
Ophthalmia neonatorum	4	0.8	0.8	0	0	0	2	50.0	0.7
Erythema toxicum	3	0.6	0.6	0	0	0	3	100.0	1.1
Gastroesophageal reflux disease	2	0.4	0.4	0	0	0	2	100.0	0.7
Viral gastroenteritis	2	0.4	0.4	0	0	0	2	100.0	0.7
Lower respiratory tract infection	1	0.2	0.2	0	0	0	1	100.0	0.4
Sepsis	0	0	0	0	0	0	0	0	0
Apparent life-threatening event	0	0	0	0	0	0	0	0	0
Hypoglycaemia	0	0	0	0	0	0	0	0	0
Urinary tract infection	0	0	0	0	0	0	0	0	0
Meningitis	0	0	0	0	0	0	0	0	0
Total no. of diagnoses	**525**		100.0	26		100.0	282	53.7	100.0
Total no. of discharged patients	**507**								

Out of 1,200 patients, 507 were discharged with a total of 525 discharge diagnoses due to some overlapping diagnoses. The '% of total discharged patients' uses 507 (no. of discharged patients) as the denominator. The '% of total discharge diagnosis' uses 525 (no. of total discharge diagnosis) as the denominator. The '% of specific discharge diagnosis' uses the no. of patients discharged for that specific diagnosis as the denominator. PED: paediatric emergency department

Table V. Diagnoses of neonates admitted to the PED.

Diagnosis	No. of patients admitted	%		No. of re-attendance	%		No. of self-referred patients	%	
		Total admitted patients	Total admitted diagnosis		Specific discharge diagnosis	Total admitted diagnosis		Specific discharge diagnosis	Total admitted diagnosis
Neonatal jaundice	468	67.5	54.7	17	3.6	70.8	158	33.8	35.4
Neonatal pyrexia	136	19.6	15.9	3	2.2	12.5	90	66.2	20.2
Others	63	9.1	7.4	2	3.2	8.3	42	66.7	9.4
Gastroesophageal reflux disease	38	5.5	4.4	1	2.6	4.2	34	89.5	7.6
Viral upper respiratory tract infection	37	5.3	4.3	0	0	0	35	94.6	7.9
Well baby	28	4.0	3.3	0	0	0	22	78.6	4.9
Sepsis	15	2.2	1.8	1	6.7	4.2	11	73.3	2.5
Urinary tract infection	12	1.7	1.4	0	0	0	10	83.3	2.2
Conjunctivitis	11	1.6	1.3	0	0	0	9	81.8	2.0
Viral gastroenteritis	11	1.6	1.3	0	0	0	8	72.7	1.8
Lower respiratory tract infection	10	1.4	1.2	0	0	0	8	80.0	1.8
Meningitis	10	1.4	1.2	0	0	0	7	70.0	1.6
Apparent life-threatening event	7	1.0	0.8	0	0	0	6	85.7	1.4
Ophthalmia neonatorum	4	0.6	0.5	0	0	0	2	50.0	0.5
Erythema toxicum	4	0.6	0.5	0	0	0	3	75.0	0.7
Hypoglycaemia	1	0.1	0.1	0	0	0	1	100.0	0.2
Colic	0	0	0	0	0	0	0	0	0
Total no. of diagnoses	**855**		100.0	24		100.0	446	52.1	100.0
Total no. of admitted patients	**693**								

Out of 1,200 patients, 693 were discharged with a total of 855 diagnoses, owing to some overlapping diagnoses. The '% of total admitted patients' uses 693 (no. of admitted patients) as the denominator. The '% of total admitted diagnosis' uses 855 (number of total admitted diagnoses) as the denominator. The '% of specific discharge diagnosis' uses the number of patients admitted for that specific diagnosis as the denominator.