



Follow-up study first year of life Update # 2

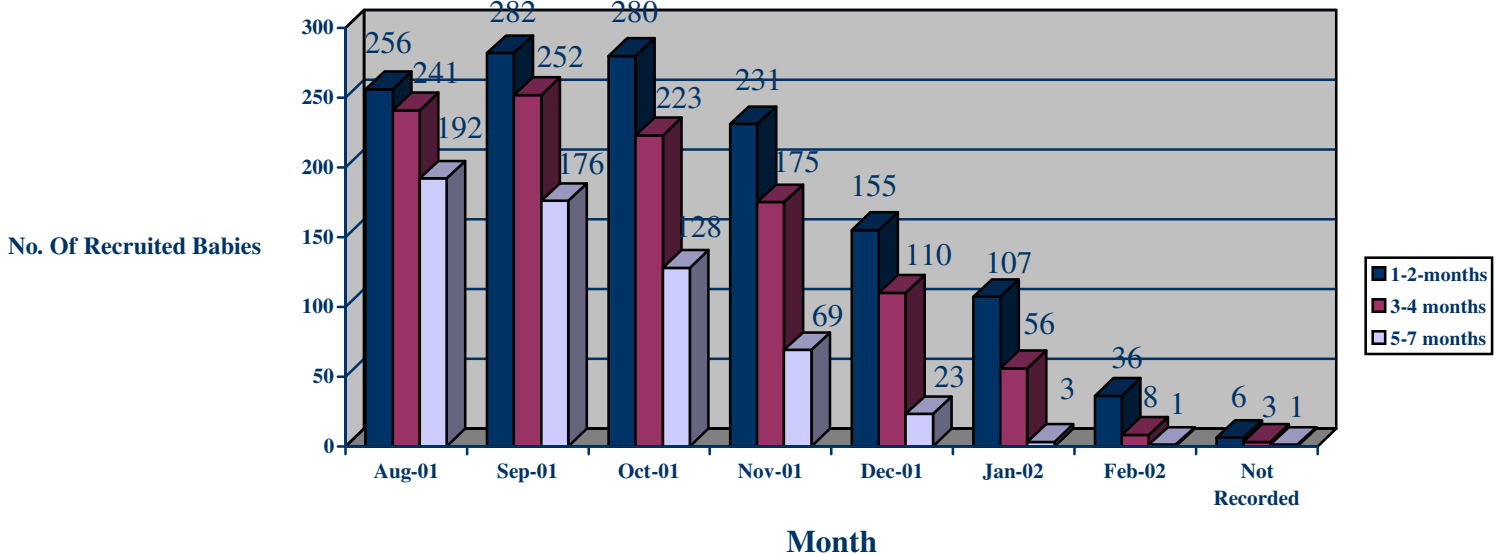
The main objectives of the “**Follow-up Study First Year of Life**” are to assess the impact of early discharge on morbidity patterns of infants during the neonatal period of life, and to identify the causes of morbidity and mortality during the first year of life.

In our previous newsletter we presented some preliminary analysis concerning morbidity, readmission rates, infectious diseases, injuries, and others at 1-2 months and 3-4 months of age for 1,037 infants. This newsletter provides an update on the recruitment and discusses the effects of early discharge on readmission rates, and causes of readmission.

The current Results summarize the data obtained for the period between August 1st, 2001 and June 15th, 2002. 1,361 infants have been recruited through the joint efforts of 116 pediatricians. Out of those, **1,354** – 706 males and 648 females – had their data entered into the computerized database. All **1,354** cases include a 1-2 months FUP, **1,068** (78.8%) had 3-4 months FUP and **593** (43.8%) had 5-7 months FUP currently available for statistical analysis.

Figure 1 represents the pattern of recruitment over a period of 7 months and the follow-up on all 1,361 recruited babies collected so far by month of birth of the baby.

Fig.1 Pattern of recruitment and follow-Up per month



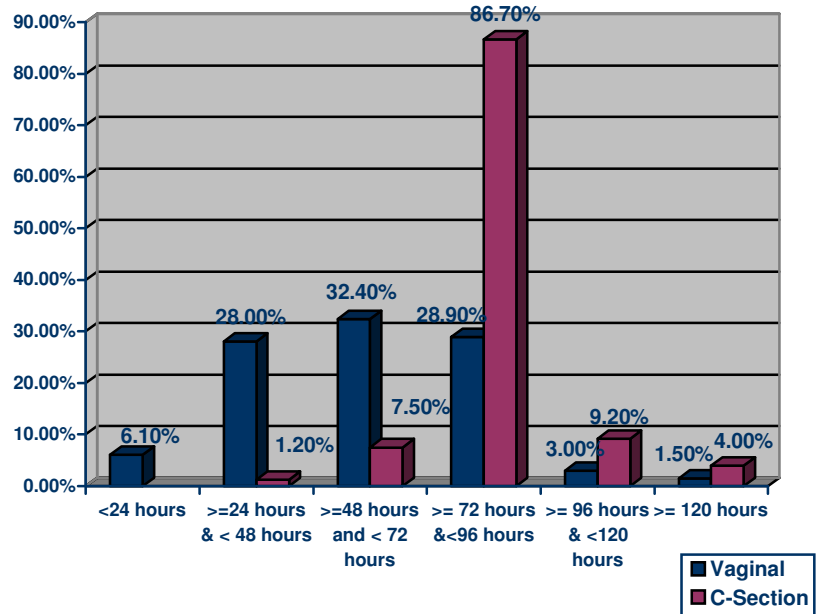
I.Length of post partum hospital stay:

Data on length of post-partum hospitalization is available for 828 infants, 584 vaginal deliveries and 244 cesarean section.

Figure 2 presents the length of post partum hospital stay by mode of delivery, 6.1 % of vaginal deliveries were discharged within the first 24 hours of life and 1.2 % of cesarean sections were discharged within 48 hours of life. 91.3 % of the cesarean sections were discharged at 72 hours or later. Out of those cases, 86.7 % were discharged at 72 hours, 9.2 % at 96 hours, and 4 % were discharged later than 120 hours.

It is important to note that readmission rate was affected by length of post-partum hospital stay, 7.54 % of the cases readmitted to the hospital within 28 days of life had their length of post-partum hospital stay less than 24 hours.

Fig 2. Length of post-partum hospital stay by mode of delivery



II.Causes of Hospital readmission:

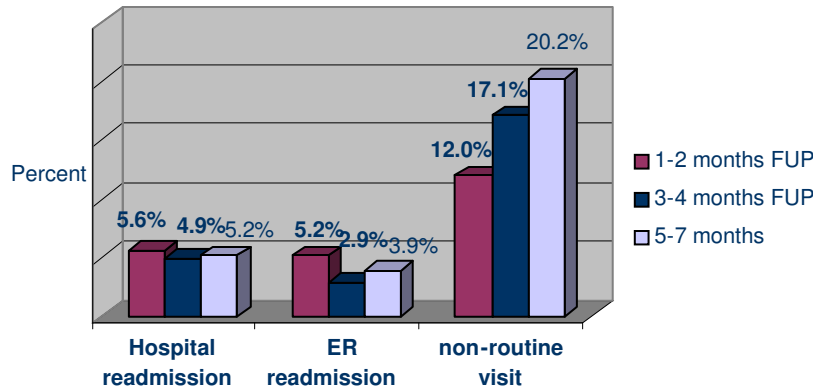
Out of 1,354 infants recruited, 53 (3.9%) were readmitted to the hospital within the first 28 days of life, 50 (3.7%) visited the ER and 143 (10.6%) had non-routine visits to their pediatrician’s clinic.

The main reasons for hospital readmission within the first 28 days of life were jaundice or hyperbilirubinemia (28.3%), bronchiolitis (16.9%) and suspected neonatal infection or sepsis (18.8%). Other important morbidities include feeding problems such as vomiting, diarrhea or dehydration (5.7%) as well as herniorrhaphy (5.7%) (c.f. **Table 1**).

Table 1. Main reasons for hospital readmission within the first 28 days of life (n=53)

<i>Hospital readmission:</i>	N	%
Jaundice or hyperbilirubinemia	15	28.3
Vomiting/Diarrhea/Dehydration	3	5.7
Bronchiolitis	9	16.9
Suspected neonatal infection or sepsis	10	18.8
Respiratory infection	3	5.7
Skin infection	1	1.9
Hirschprung disease	1	1.9
Herniorrhaphy	3	5.7
Pyloric stenosis	1	1.9
Sacro-coccygeal teratoma	1	1.9
Poor feeding	1	1.9

Fig 3. Readmission patterns at 1-2 months, 3-4 months and 5-7 months of age



III. Readmission rates:

Nearly 5-6 % of infants were readmitted at least once to the hospital after discharge at 1-2, 3-4, and 5-7 months FUP visit. Emergency room readmission was highest at 1-2 months FUP, whereas the proportion having non-routine visits increased with time to reach 20.2 % at 5-7 months FUP.

Note: n = 1,354 at 1-2 months, 1,068 at 3-4 months and 593 at 5-7 months.

IV. Patterns of infectious diseases:

Overall, the morbidity from infectious diseases increased with age, from 21.4% at 1-2 months FUP to 42.2% at 5-7 months FUP, with common cold being the most prevalent type of infectious diseases. c.f **Table 2.a.** Patterns of hospital readmissions among infectious diseases are described in **Table 2.b.** at 1-2 months, 3-4 months and 5-7 months of age.

Table 2.a. Patterns of infectious diseases at 1-2 months, 3-4 months and 5-7 months of age

	1-2 months FUP (n=1,354)		3-4 months FUP (n=1,068)		5-7 months FUP (n=593)	
	No.	% ^a	No.	% ^b	No.	% ^c
Common cold	141	10.4	163	15.3	92	15.5
Otitis	19	1.4	62	5.8	45	7.6
Bronchiolitis	23	1.7	71	6.6	87	14.7
Pneumonia	8	0.6	10	0.9	5	0.8
Meningitis	1	0.07	1	0.09	1	0.7
Gastrointestinal	6	0.4	12	1.1	4	0.7
Rash	24	1.8	11	1.0	6	1.0
Urinary	5	0.4	5	0.5	4	0.7
Other ^d	94	6.9	43	4.0	50	8.4
Total	290	21.4	338	31.6	250	42.2

^a Percentages are out of the total number of 1-2 months follow-ups (n=1,354) available.

^b Percentages are out of the total number of 3-4 months follow-ups (n=1,068) available.

^c Percentages are out of the total number of 5-7 months follow-ups (n=593) available.

^d Include conjunctivitis, rhinitis, upper respiratory tract infection and viral infection.

Table 2.b. Patterns of hospital readmissions in terms of infectious diseases:

	1-2 months		3-4 months		5-7 Months	
	No.	Hosp-Read	No.	Hosp-Read	No.	Hosp-Read
Common cold	141	0	163	0	92	1
Otitis	19	2	62	7	45	3
Bronchiolitis	23	7	71	11	87	17
Pneumonia	8	4	10	5	5	0
Meningitis	1	1	1	1	1	1
Urinary	5	2	5	1	4	0
Total	227	8	335	16	244	14

V. Mortality:

From the data collected so far, we had 2 deaths. One was the result of Bronchiolitis and one the result of SIDS. This leaves us with a death rate of 1.5 per 1000 normal healthy newborn.

Follow-Up first year of life collaborating pediatricians and investigators by family name:

<i>Dr. Sawsan Abdallah</i>	<i>Dr. Georges Nasri El Hajj</i>	<i>Dr. Marie Christine</i>	<i>Dr. Rony Sayyad</i>
<i>Dr. Lama Abiad</i>	<i>Dr. Hassan Fakhoury</i>	<i>Khoury</i>	<i>Dr. Izzat Sbeity</i>
<i>Dr. Ramzi Abou Jawdeh</i>	<i>Dr. Antoine Farah</i>	<i>Dr. Huda Kronfol</i>	<i>Dr. Haitham Serhal</i>
<i>Dr. Bassem Abou Merhi</i>	<i>Dr. Rola Farah Sayyad</i>	<i>Dr. Aziz Kuleilat</i>	<i>Dr. Zeina Sfeir</i>
<i>Dr. Massoud Abou Zeid</i>	<i>Dr. Elissar Farhat</i>	<i>Dr. Caroline Mahfouz</i>	<i>Dr. Fadi Shamseddine</i>
<i>Dr. Mustafa Ajjour</i>	<i>Dr. Wissam Fayyad</i>	<i>Dr. Shadi Malaeb</i>	<i>Dr. Ghassan Shehab</i>
<i>Dr. Carlo Akatchirian</i>	<i>Dr. Georges Ferzli</i>	<i>Dr. Hanan Masri</i>	<i>Dr. Maha Shouman</i>
<i>Dr. Ali Al Khalil</i>	<i>Dr. Zuheir Fleifel</i>	<i>Dr. Imad Melki</i>	<i>Dr. Elianne Simaan</i>
<i>Dr. Nada Al Khatib</i>	<i>Dr. Bernard Gerbaka</i>	<i>Dr. Muheiddine Moheb</i>	<i>Dr. Douria Sinno</i>
<i>Dr. Manal Al sayyed</i>	<i>Dr. Hisham Ghali</i>	<i>Dr. Samar Mouakat</i>	<i>Dr. Rima Sinno</i>
<i>Dr. Abed Al kader Al Tal</i>	<i>Dr. Ali Ghoul</i>	<i>Dr. Nabil Mounla</i>	<i>Dr. Sanaa Sinno</i>
<i>Dr. Mona Alemeh</i>	<i>Dr. Nadra Haddad</i>	<i>Dr. Chibil Mourani</i>	<i>Dr. Ousama Skafi</i>
<i>Dr. Alia Araj</i>	<i>Dr. Bisan Harkous</i>	<i>Dr. Salman Mroueh</i>	<i>Dr. Maroun Sokhn</i>
<i>Dr. Georges Aramouni</i>	<i>Dr. Christine Hakmeh</i>	<i>Dr. Imad Mufti</i>	<i>Dr. Zeinab Tahsh</i>
<i>Dr. Iman Awada</i>	<i>Dr. Shawki Hammoud</i>	<i>Dr. Salim Musallam</i>	<i>Dr. Haitham Taksh</i>
<i>Dr. Charles Ayyoub</i>	<i>Dr. Ninette Hawwat</i>	<i>Dr. Mona Nabulsi</i>	<i>Dr. Hala Tamim</i>
<i>Dr. Nathalia Baalbaki</i>	<i>Dr. Mirvat Hemadeh</i>	<i>Dr. Samia Nabulsi</i>	<i>Dr. Ikram Tannir</i>
<i>Dr. Fadia Badran</i>	<i>Dr. Shafik Hoss</i>	<i>Dr. Ziad Naja</i>	<i>Dr. Paul Henry Torbey</i>
<i>Dr. Sawsan Bahbahani</i>	<i>Dr. Jamal Hout</i>	<i>Dr. Fadlallah Nassif</i>	<i>Dr. Mona Uthman</i>
<i>Dr. Nada Barakeh</i>	<i>Dr. Ahmad Issa</i>	<i>Dr. Yolla Nassif</i>	<i>Dr. Gerard Wakim</i>
<i>Dr. Aida Chaib</i>	<i>Dr. Ghassan Issa</i>	<i>Dr. Mohammad Omran</i>	<i>Dr. Nabil Yassine</i>
<i>Dr. Hilda Chakar</i>	<i>Dr. Mohammad Itani</i>	<i>Dr. Isabelle Pharaon</i>	<i>Dr. Nadine Yazbeck</i>
<i>Dr. Imad Chami</i>	<i>Dr. Mustafa Itani</i>	<i>Dr. Randa Rahhal</i>	<i>Dr. Aida Yazigi</i>
<i>Dr. Ali Cheaitani</i>	<i>Dr. Najwa Jawhar</i>	<i>Dr. Mariam Rajab</i>	<i>Dr. Khalid Yunis</i>
<i>Dr. Philippe Chedid</i>	<i>Dr. Raymond Kamel</i>	<i>Dr. Kamal Saad</i>	<i>Dr. Sawsan Zugheib</i>
<i>Dr. Imad Chokr</i>	<i>Dr. Kamal Kanso</i>	<i>Dr. Khadigeh Sabeh</i>	<u>Research Assistants:</u>
<i>Dr. Hayat Daher</i>	<i>Dr. Marie Claude</i>	<i>Dr. Robert Sacy</i>	<i>Dania Abi Haidar, BSc</i>
<i>Dr. Randa Damerji</i>	<i>Khalifeh</i>	<i>Dr. Samira Sahyoun</i>	<i>Hiba Al Assaad, BSc</i>
<i>Dr. Ruweida Dana</i>	<i>Dr. Elianne Khallouf</i>	<i>Dr. Georges Salem</i>	<i>May Al Kassar, BSc</i>
<i>Dr. Ghassan Dbeibo</i>	<i>Dr. Claudia Khayyat</i>	<i>Dr. Shadi Saleeby</i>	<u>Supporting personnel:</u>
<i>Dr. Lena Eid</i>	<i>Dr. Imad Khayyat</i>	<i>Dr. Johnny Sayegh</i>	<i>Mrs. Haifa Hammoud</i>
<i>Dr. Hiam El Eid</i>	<i>Dr. Mustafa Khogali</i>	<i>Dr. Alain Sayyad</i>	

For any further information please contact NCPNN at:

NCPNN Network address:

P.O. Box 113 – 5814
Beirut – Lebanon
Tel: 01/ 374374, 01/350000, extensions 5518 and/or 5512.
Email: ncpnn@hotmail.com

Editor: Pascale Nakad, BSc
With the help of Hala Tamim, PhD, and Hind Beydoun MPH.