Internship Training

at

UNICEF

SNCU

Community & Facility Follow-up.

by

Name : **TANUJ KAUSHIK**

Enroll No. : **PG/20/095**

Under the guidance of

Mrs. Divya Aggarwal

PGDM (Hospital and Health Management)

2020-22

International Institute of Health Management Research

New Delhi

Internship Training

at

UNICEF

SNCU

Community & Facility Follow-up.

by

Name : **TANUJ KAUSHIK**

Enroll No. : **PG/20/095**

Under the guidance of

Mrs. Divya Aggarwal

PGDM (Hospital and Health Management)

2020-22

International Institute of Health Management Research

New Delhi

Abstract

The study was conducted in SNCU, of Government Medical College and Hospital, at Purnea Bihar from January 2022 to May 2022. It was observed that the outcome during the period was 60.3 % of population was treated and discharged from SNCU , 21.5 % of population were referred to higher facilities, 16.6 % of Child Death cases and 0.6 % of population opted for LAMA . The study also stated that even though number of males were admitted more, but percentage of female deaths were more. The population of OBC category were highest in the SNCU and on the basis of age, less than 1 day of age population were highest. Community follow ups of the discharged children has to be done on day 1,3,7,14,21 and 28 by ASHA worker and this was monitored by SNCU. The constant improvement can be seen through out the year of 2022 in Community Follow ups and average was above 50%. Facility follow ups are clinical check up of patients on Day 8 after discharged followed by 1 month, 3 months, 6 months and 1 year. In Purnea due to various reasons this data was below 20% throughout the year, and need improvements.

Completion of Dissertation from UNICEF

The certificate is awarded to

TANUJ KAUSHIK

in recognition of having successfully completed his

Internship in the department of

SNCU (Special Newborn Care Unit)

and has successfully completed his Project on

SNCU Community & Facility Follow-up

Date : 02 July, 2022

UNICEF

He comes across as a committed, sincere & diligent person who has a strong drive & zeal for learning.

We wish him all the best for future endeavors.

Zonal Head

TO WHOMSOEVER IT MAY CONCERN

This is to certify that *TANUJ KAUSHIK* student of PGDM (Hospital & Health Management) from International Institute of Health Management Research, New Delhi has undergone internship training at *UNICEF,* from *January 2022* to *May 2022*.

The Candidate has successfully carried out the study designated to him during internship training and his approach to the study has been sincere, scientific and analytical.

The Internship is in fulfillment of the course requirements.
I wish him all success in all his future endeavors.

Dr. Sumesh Kumar

Associate Dean, Academic and Student Affairs

IIHMR, New Delhi

Mrs. Divya Aggarwal

Mentor

IIHMR, New Delhi

Certificate of Approval

The following dissertation titled **"SNCU Community & Facility Follow-up"** at **"UNICEF"** is hereby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a prerequisite for the award of **PGDM (Hospital & Health Management)** for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed or conclusion drawn therein but approve the dissertation only for the purpose it is submitted.

Dissertation Examination Committee for evaluation of dissertation.

Name	Signature
1) Dr. VIRENDER LAL	
2) VINAY	
3) ROHINI	

Certificate from Dissertation Advisory Committee

This is to certify that **Mr. TANUJ KAUSHIK ,** a graduate student of the **PGDM (Hospital & Health Management)** has worked under our guidance and supervision. He is submitting this dissertation titled " SNCU Community and Facility Follow-up" at "UNICEF" in partial fulfillment of the requirements for the award of the **PGDM (Hospital & Health Management).**

This dissertation has the requisite standard and to the best of our knowledge no part of it has been reproduced from any other dissertation, monograph, report or book.

Mrs. Divya Aggarwal
[redacted] Associate Dean,
IIHMR, Delhi

Mr. Shiv Shekhar Anand
Aspirational District Consultant
UNICEF

INTERNATIONAL INSTITUTE OF HEALTH MANAGEMENT RESEARCH, NEW DELHI

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled "*SNCU Community & Facility Follow-up"* and submitted by *TANUJ KAUSHIK* . Enrollment No. *PG/20/095* under the supervision of *"Mrs. Divya Aggarwal"* for award of PGDM (Hospital & Health Management) of the Institute carried out during the period from *January 2022* to *May 2022* .

embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other Institute or other similar institution of higher learning.

Signature

FEEDBACK FORM (ORGANIZATION)

Name of the Student: TANUJ KAUSHIK

Name of the Organization in Which Dissertation Has Been Completed: UNICEF

Area of Dissertation: SNCU; Community & Facility Follow UP

Attendance: 100%

Objectives achieved: To Achieved gap analysis of Community & facility follow ups with the action Pla

Deliverables:

Strengths: Sincere, Punctual, Dedicated, Result-Oriented

Suggestions for Improvement: –

Suggestions for Institute (course curriculum, industry interaction, placement, alumni):

Date: 24d July 2022

Place: Purnea.

Signature of the Officer-in-Charge/ (Organization Mentor)

FEEDBACK FORM

Name of the Student: TANUJ KAUSHIK

Name of the Organization in Which Dissertation Has Been Completed: UNICEF

Area of Dissertation: SNCU; Community and Facility Follow Up

Attendance: 100 %

Objectives achieved: Gap Analysis of SNCU, Community & Facility Follow up with Action Plan.

Deliverables: Weekly progress Report
Finalization of Project Title

Strengths: Analytical and good grasping of the concepts

Suggestions for Improvement: More focussed approach has to be developed.

Suggestions for Institute (course curriculum, industry interaction, placement, alumni):

Date: 18-8-22

Place: New Delhi

J. N. Aggarwal

Signature of the Mentor

ACKNOWLEDGEMENT

It is esteemed pleasure to present this dissertation report by thanking everyone who helped me.

I would like to express my sincere gratitude towards my nodal person **Mr. Shiv Sekhar Anand** (Aspirational District Consultant UNICEF), who helped me immensely throughout the tenure of my dissertation. He inspired me greatly to work in this period with his valuable guidance, support, interest, encouragement, involvement, and advice.

I would like to thank **Dr. Sala Siddarth Reddy (**State health specialist, UNICEF) and whole UNICEF Bihar Team for providing me this great opportunity to work in this ample organization and gain experience. I would also like to give credit to **Dr. S.K. Verma** (Civil surgeon Purnea), DMP, and RPM for the support

.

I would also like to express my special thanks to **Dr. Sutapa Bandyopadhyay Neogi (**Director, IIHMR Delhi), my mentor **Mrs. Divya Aggarwal (**Associate Dean, IIHMR Delhi), **Dr. Siddarth Shekhar Mishra** (Assistant professor, IIHMR Delhi) and whole placement team of IIHMR for providing such great opportunity which helps in to grow and learn about many interesting aspects.

I would like to give my special thanks to **Mr. Moammar Hashmi, Mr. Nandan Kumar Jha, Ms. Ruchi Singh** and **Ms. Deepali Bhardwaj** for all the help, guidance and support which makes this dissertation possible.

TABLE OF CONTENT

LIST OF FIGURES

LIST OF FIGURES

1. INTRODUCTION

Special Newborn Treatment Units (SNCUs) have been set up at district and sub district hospitals with an annual delivery load of more than 3000 to offer care for unwell infants, including all types of neonatal care excluding assisted ventilation and major procedures. It is a separate unit with 12 or more beds that is close to the labour room and is overseen by appropriately trained doctors, staff nurses, and support staff to provide services 24 hours a day, seven days a week.

SNCU (Special Newborn Care Unit) is one of the strategies that is assisting in ensuring that more children in India have a safe journey through their first thousand days of life. UNICEF and the IKEA Foundation promote this notion, which asks for a holistic strategy that integrates health, nutrition, and WASH (water, sanitation, and hygiene) activities. The goal is to improve neonates' survival, health, and growth and development.

The work of the SNCU team — the nurses, who had completed a two-day specialised training — is not confined to newborn medical care. They also offer advice to mothers. "We inform women about Kangaroo Mother Care and the need of skin-to-skin contact if the infant is underweight. That establishing eye contact with their infant when breastfeeding helps to boost milk production and is beneficial to both mother and child."

In 2008 there were fewer than 20 SNCUs countrywide. Today, close to 1 million babies are treated in more than 700 SNCUs in India every year.

With the help of UNICEF, the government of Bihar established SNCU with 12 beds in 2015, when the Government Medical College and Hospital was known as Sadar Hospital (DH). Every year, the load increased, reaching a peak of more than threefold in 2021. Human Resources, equipment, and the number of beds have all been expanded to 24 over this time period.

In May 2022, SNCU, Purnea has a paediatrician on call 24 hours a day, 7days a week, more than 18 staff nurses, two housekeeping workers, and three security guards. Also, Child Line staff is available for unclaimed children when needed.

Concept of follow ups. It is a check up to see how patient is doing and ensure there aren't any complication. Follow ups are of two types Community follow up (done by ASHA on Day 1, 3, 7, 14, 21, 28 and 42) and Facility follow up (In SNCU on Day 8, 1 Month, 3 Months, 6 Months and 1 year).

This Report will focus on working of SNCU and monitoring of Community and Facility follow ups, Comparison of last 6 months data, Gaps and Action Plan to fill up the gaps..

2. LITERATURE REVIEW

Special Newborn Care Plus Project in India: Preliminary Findings from Community- Based Follow up to Newborns Discharged from Facilities. (2019).Harish Verma,Rajat Khanna, Stapa B. Neogi. It is a retrospective cohort study on newborns discharged from SNCUs from 13 districts across four states of India. Routine health systems data have been utilized to record key parameters like birth weight, sex, weights during follow-ups, any illnesses reported, status of feeding and survival status. These were compared between normal and low birth weight babies. Follow up of 6319 newborns were conducted by the ANM (25.4%), ASHAs (4.7%) or both (69.8%); 97% of the babies were followed-up at all the visits. The median duration of follow- ups were 1 day post-discharge, 13th day and 45th days of life. Majority (97%) of them were breastfed, and were warm to touch at the time of the visit. More than 11% of the babies needed referral at every visit. Mortality rate in the cohort of babies discharged from SNCUs till 6 weeks of follow up was 1.5%. The major drawback is it is not known if the babies whose records were unavailable were similar to or different from the babies whose records we have.

Catalytic Support for Improving Clinical Care in Special Newborn Care Units (SNCU) Through Composite SNCU Quality of Care Index (SQCI). Harish Verma,Rajat Khanna, Varun Alwadhi, Ashfaq Ahmed Bhat, Stapa B. Neogi. This study was conducted in two stages/phases viz., development of a composite index (SNCU Quality of Care Index or SQCI), and pilot testing the tool for feasibility and applicability in SNCUs.The mean difference in SQCI between Jan-Mar 2016 and 2017

was 0.20 (95% CI 0.13- 0.28; P<0.001). Similar results were obtained for rational admission index, rational use of antibiotics, mortality in normal weight babies, low birth weight survival and optimal bed utilization. A significant improvement in the overall composite score was noted in Odisha (Mean difference 0.22, 95% CI 0.11-0.33, P=0.003) and Rajasthan (Mean difference 0.17, 95% CI 0.05- 0.3, P=0.002).QI approach using SQCI tool is a useful and replicable intervention. Preliminary results show that it does lead to strengthening of implementation of the programs at SNCUs based on the comprehensive scores generated as part of routine system.

Addressing Quality of Care in Pediatric Units using a Digital Tool: Implementation Experience from 18 SNCU of India.Prasant Kumar Saboth, MD, Enisha Sarin, Varun Alwadhi, Avinash Jaiswal, Jaya Swarup Mohanty, Nidhi Choudhary, Sachin Gupta, MD,3 and Harish Kumar, MD. Monthly data were entered by the SNCU data entry operator in a web portal. The Vriddhi data team computed the scores at the end of a quarter while a senior child health expert analyzed the results, and informed all Vriddhi state teams. 7 of the 18 SNCU improved their composite scores from the first to the last quarter. Rational use of antibiotics showed improvement in 12 SNCU. Survival in newborns >2500 g and <2500, low birth weight admission and optimal bed utilization had the most variations between and within facilitiesand, all facilities introduced KMC, 10 facilities improved equipment and drug supply, 9 facilities launched in-house capacity building to improve asphyxia management. A major limitation of the SQCI tool is that it has not been validated. Based on the condition of a child after admission, a clinician may refer the child to a lower SNCU for basic care. In such a case, it cannot rule the admission to be irrational.

Impact of a district level sick newborn care unit on neonatal mortality rate: 2-year follow-up. A Sen, D Mahalanabis, AK Singh, TK Som and S Bandyopadhya. This study was conducted in a district hospital with 6500 deliveries a year. A 14 bed SNCU that included controlled environment, individual warming and monitoring devices, infusion pump, central oxygen and oxygen concentrators, resuscitation and exchange transfusion, portable X-ray and in-house laboratory was created.Compared with the baseline neonatal mortality in the district hospital, neonatal mortality was reduced by 14% in the first year and by 21% in the second year after SNCU became functional. Estimated neonatal deaths averted were 329, which would reduce NMR of the district from 55 to 47 in 2 years. This paper thoroughly explains the modern sick newborn care facility created in a district hospital can substantially reduce hospital neonatal deaths and NMR of the district. This model may be an effective tool to reduce NMR of the country. The major drawback in this study is the relevance between 2 year follow up and SNCU were not explained very well. Secondly, data were taken of 2 years at particular district only, hence no data for comparison.

3. OBJECTIVES

i. To Examine and Analyse the Functioning of SNCU.

ii. To Examine and Analyse the Monitoring of Community and Facility follow up.

iii. To observe the changes and find Gaps in Community and Facility follow up.

iv. To make Action Plan to overcomes gaps of Community and Facility follow up

4. METHODOLOGY

- It is descriptive, quantitative research study.

Study area and population-

- Geographical location used in study in limited to Purnea, District of Bihar.
- Infants, Children below 1 year of age were taken for the study.
- Data is taken from the "SNCUonline" link by Govt. Of India, NHM and UNICEF.
- Other sources are NFHS 5, Research papers, Research Articles and Other Publications.

Inclusion criteria-

- Infants (0 days - 1 year)
- All genders and castes are taken into consideration.

Exclusion Criteria-

- Criteria on the basis of religion, Block, Socioeconomic status.
- Children not admitted in SNCU.
- Children outside Purnea District.

Duration-

- January 2022 - May 2022

Materials and methods-

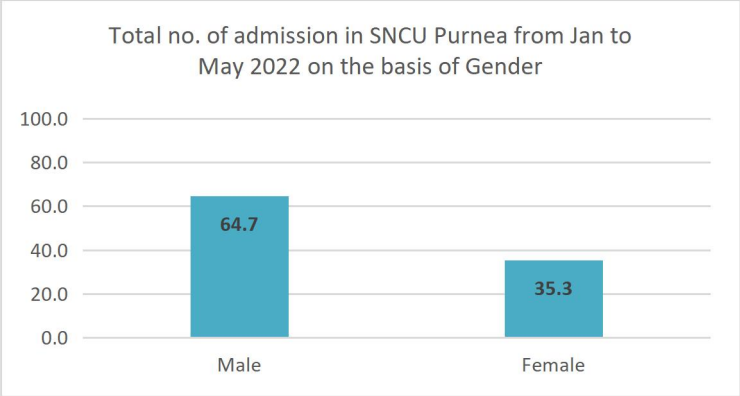
- Approval for using SNCU data.
- Extracting data from the portal.
- General tabulation is the format for data analysis.
- Excel and SPSS are used for the data analysis.

Outcome measures-

- Number of children admitted in SNCU.
- Figures of gender, caste and age based data.
- Outcome of inborn and outborn, weather discharged after treatment, Referred, LAMA or expired.
- Number of targets achieved in community and facility follow ups.

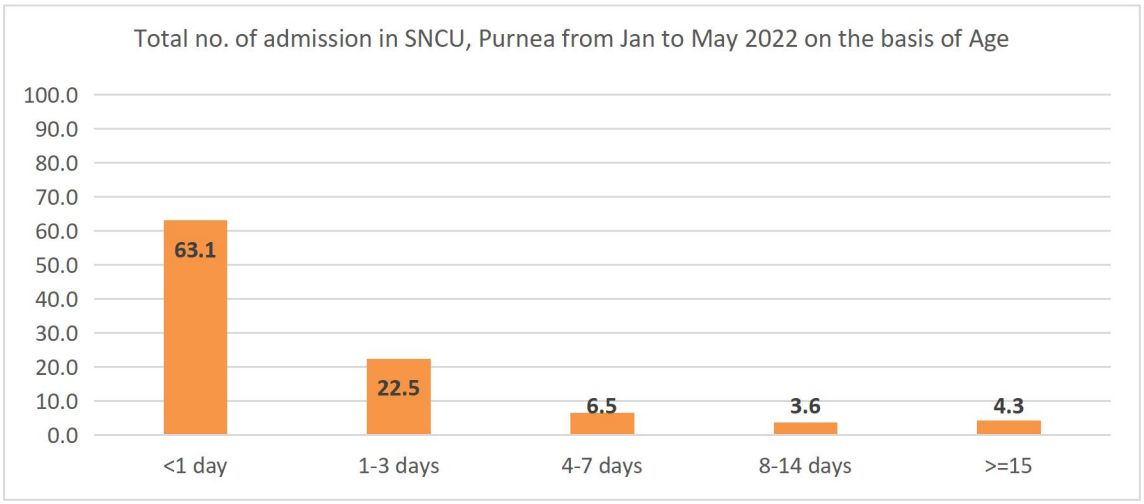
5. RESULTS

On analyzing the Data from SNCUonline.org the following observation were taken into consideration



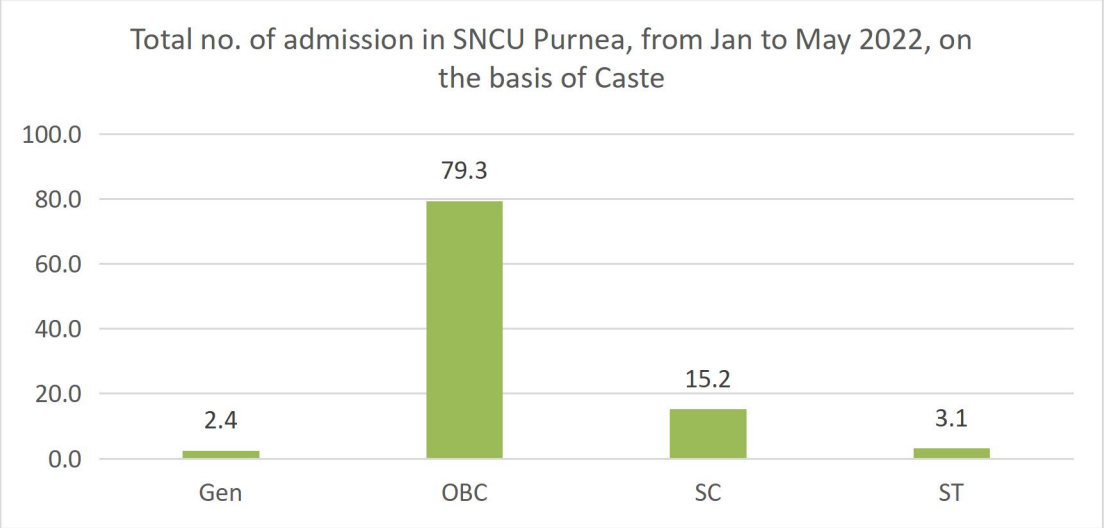
(Fig 5.1; Total no. of admission in SNCU Purnea from January to May 2022 on the basis of Gender)

Fig 5.1 shows that from the period of January to May 2022, out of total number of children admitted in SNCU of Purnea, males had a higher ratio than female child with 64.7 % and 35.3 % respectively.



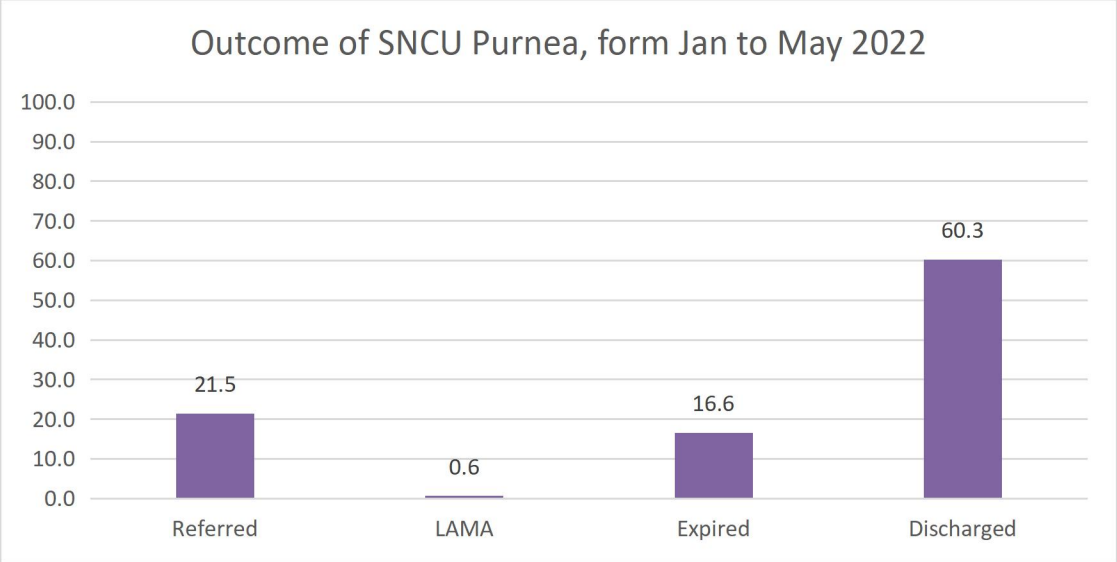
(Fig 5.2; Total no. of admission in SNCU Purnea from January to May 2022 on the basis of Age)

From Fig 5.2 it can be seen that the mostly the children admitted in 24 hours of birth, at SNCU, Medical College Purnea. While the lowest population by birth was between 8 to 14 days of age from January to May 2022. From the figure 5.2 children between age 1 to 3 days were 22.5 % of admission, while age of 4 to 7 days were 6.5 % of admission at SNCU. Along with 4.3 % of population with more than 15 days of age.



(Fig 5.3; Total no. of admission in SNCU Purnea from January to May 2022 on the basis of Caste)

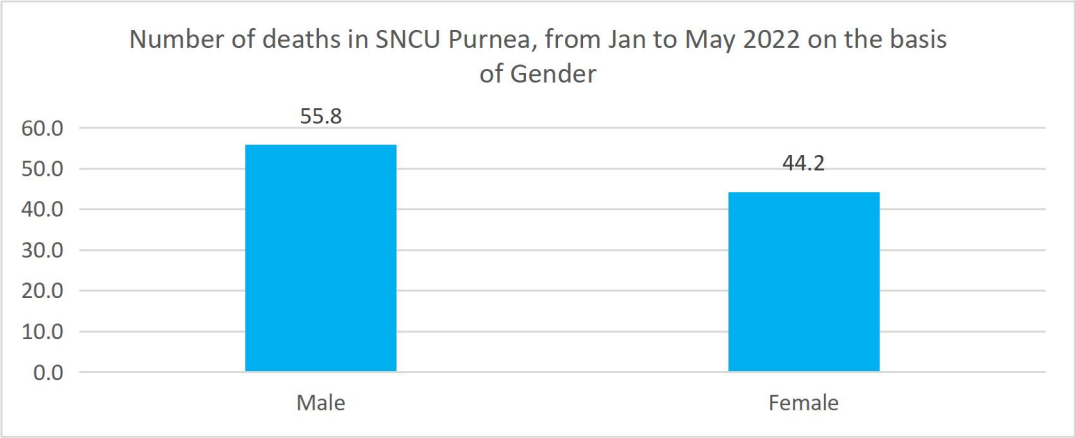
Fig 5.3 shows that from the period of January to May 2022, out of total children admitted in SNCU of Purnea, major portion belonged to OBC with 79.3% of total population, and the least was of General population with only 2.4%, while SC and ST had 15.2% and 3.1% of population respectively.



(Fig 5.4; Outcome of SNCU Purnea, from January to May 2022)

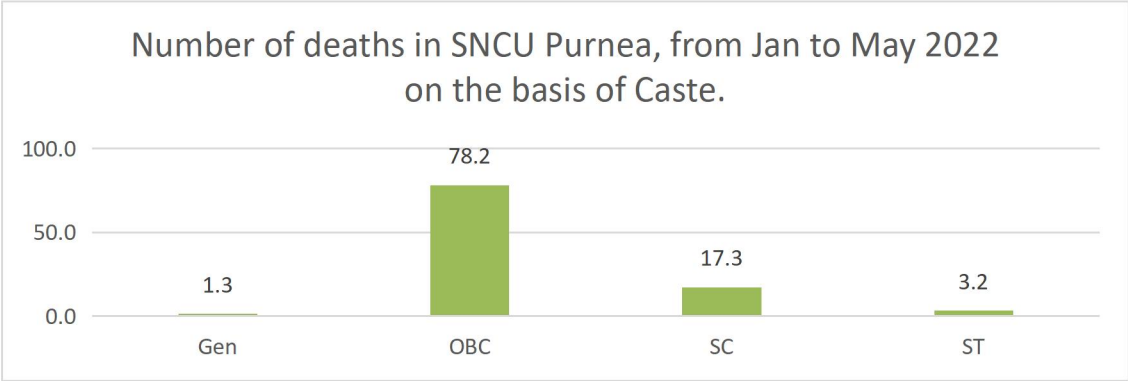
In Fig 5.4 the outcome of SNCU, Medical college Purnea is shown from the period of January to May 2022. The data being divided into 4 categories I.e. 1. Referred (complicated cases which are being referred to higher facilities), 2. LAMA (It stands for Leave Against Medical Advice, means the parents who take away their children from SNCU before the treatment is done by the physician), 3. Expired (refers to the children who died during the treatment in SNCU) and, 4. Discharged (refers to the population who's treatment was successful, and healthy enough to improve their health at home). Thus, the data shows that 60.3 % of population was treated and discharged from SNCU medical college Purnea, during the period of January to May 2022. Along with 21.5 % of population were referred to higher facilities, 16.6 % of Child Death cases and 0.6 % of population opted for LAMA.

5.1 Morbidity



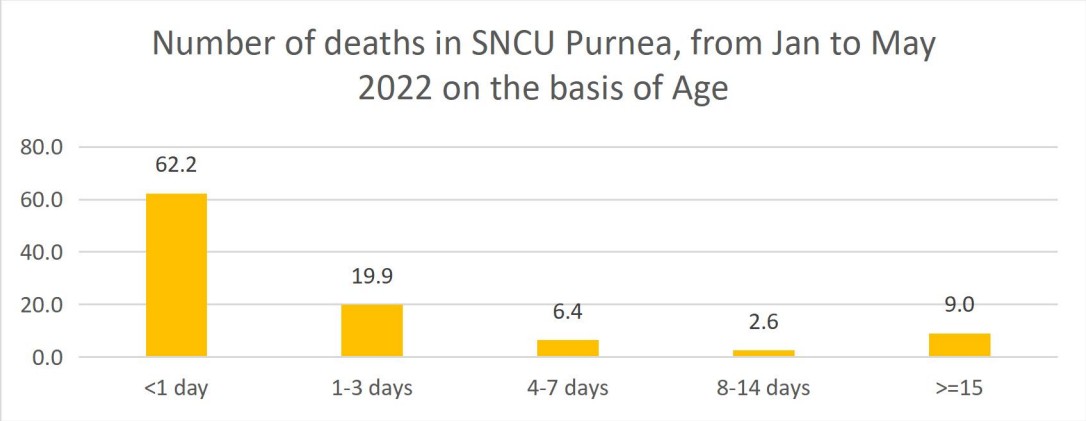
(Fig 5.5: Number of deaths in SNCU Purnea, from January to May 2022 on the basis of Gender)

As the previous figure (fig 5.4) shows that 16.6% of expired cases from the population in SNCU Medical college Purnea, this data been further divided on the basis of Gender, Caste and Age of the children.



(Fig 5.6: Number of deaths in SNCU Purnea, from January to May 2022 on the basis of Caste)

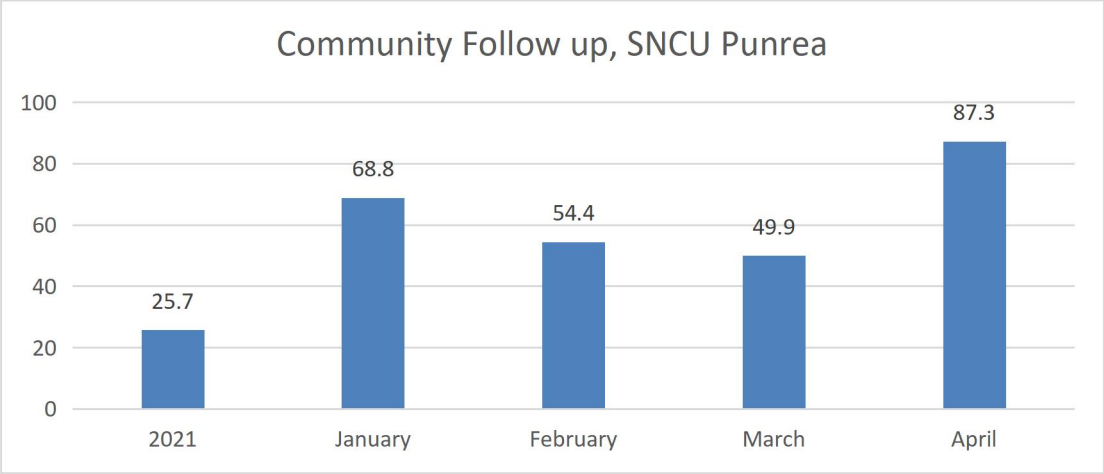
In figure Fig 5.5 the data been categories on the basis of gender, out of 16.2% of morbidity 55.8% were males and 44.2% of female population. Similarly in figure Fig 5.6**,** the data been categorized on the basis of Caste, where out of 16.2% of total morbidity, highest was of OBC with 78.2 %, then SC with 17.3 %, ST with 3.2% and General with 3.2% of population.



(Fig 5.7: Number of deaths in SNCU Purnea, from January to May 2022 on the basis of Age)

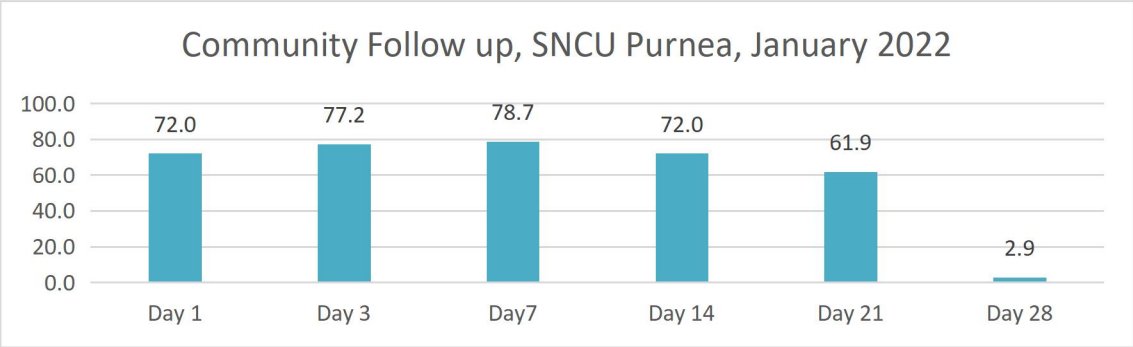
In Fig 5.7 the data been categorized on the basis of age of the children, out of 16.2% of morbidity, 62.2 % were less than 24 hours of age, with 19.9% were between 1 to 3 days of age, 6.4% are between 4 to 7 days of age, 2.6% are 8 to 1 days of age and, 9% were more than 15 days of age.

5.2 COMMUNTY FOLLOW UP



(Fig 5.8: Community follow up Done out of Scheduled, SNCU Purnea from January to April 2022 compared with 2021.)

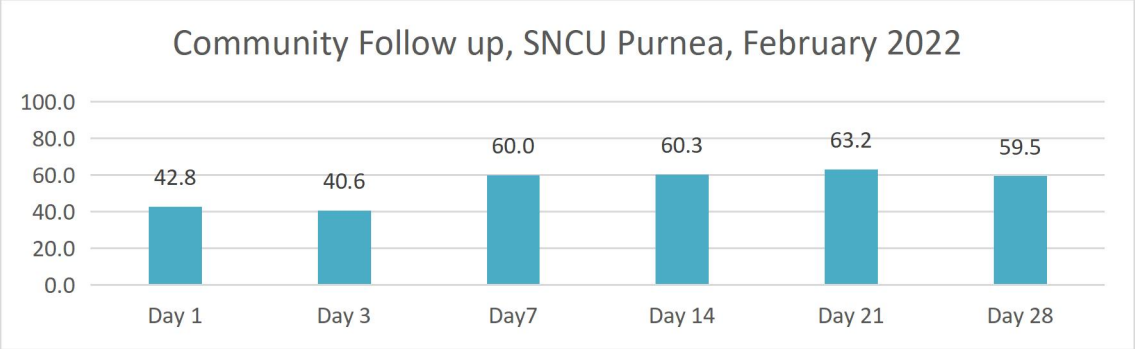
Community Follow ups are done by ASHA workers on day after the release from SNCU which is followed by Day 3, Day 7, Day 14, Day 21 and, Day 28. In Fig 5.8, the data shows the Total visit done out of visits scheduled by ASHA as in whole year of 2021 it was only 25.7 %, while in 2022 from January it was 68.8%, February was 54.4 %, March was of 49.9 % and April was of highest with 87.3%.



(Fig 5.9: Community follow up Done out of Scheduled, SNCU Purnea January 2022.)

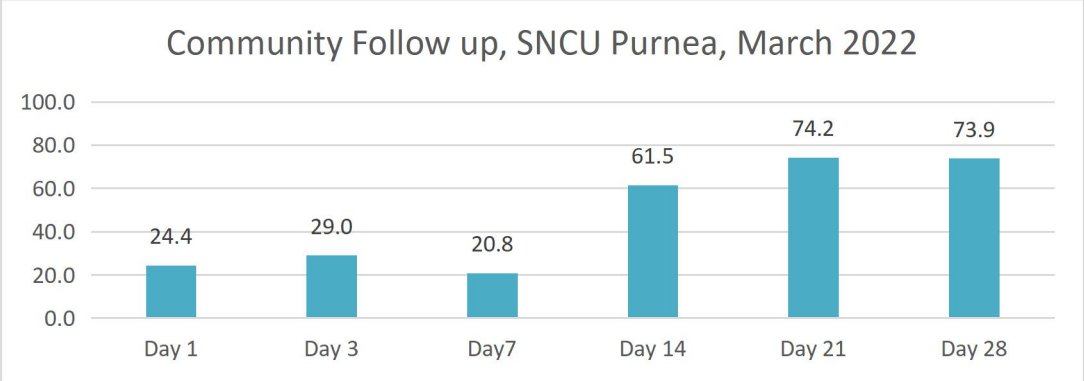
In Fig 5.9 the summary of community follow up of the January month (68.8%) categorized on the basis of Days of visit. It can be observed that visits done on Day 1

out of total visits scheduled was 72%. Similarly on Day 3, it was 77.2%, on Day 7 it was 78.7%, Day 14 was 72%, Day 21 was 61.9% and, on Day 28 with only 2.9% of visits done out of total number of visits scheduled.



(Fig 5.10: Community follow up Done out of Scheduled, SNCU Purnea February 2022.)

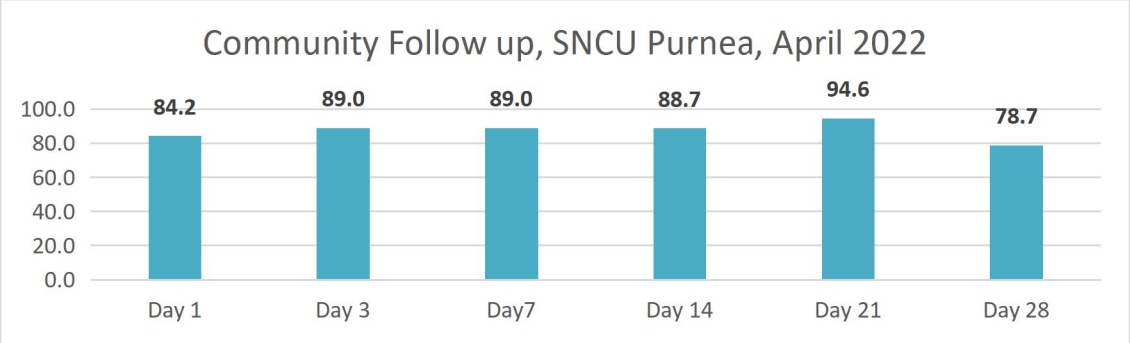
Similarly, in Fig 5.10**,** Data of February (54.4%) is shown. It can be observed that visits done on Day 1 out of total visits scheduled was 42.8%. On Day 3, it was lowest with 40.6%, on Day 7 it was 60.0%, Day 14 was highest with 60.3%, Day 21 was 63.2% and, on Day 28 with 59.5% of visits done out of total number of visits scheduled.



(Fig 5.11: Community follow up Done out of Scheduled, SNCU Purnea March 2022.)

In Fig 5.11**,** Data of March (49.9%) is shown. It can be observed that visits done on Day 1 out of total visits scheduled was 24.4%. On Day 3, it was 29%, on Day 7 it was

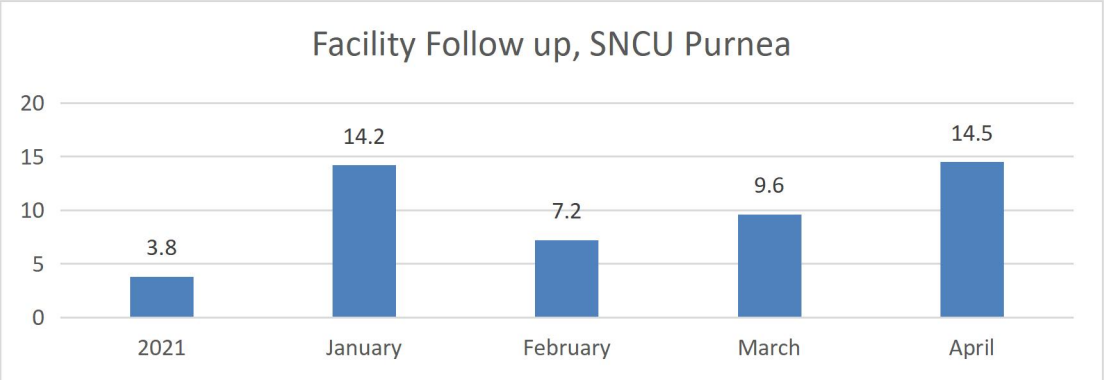
lowest with 20.8%, Day 14 was 61.5%, Day 21 was highest with 74.2% and, on Day 28 with 73.9 % of visits done out of total number of visits scheduled.



(Fig 5.12: Community follow up Done out of Scheduled, SNCU Purnea April 2022.)

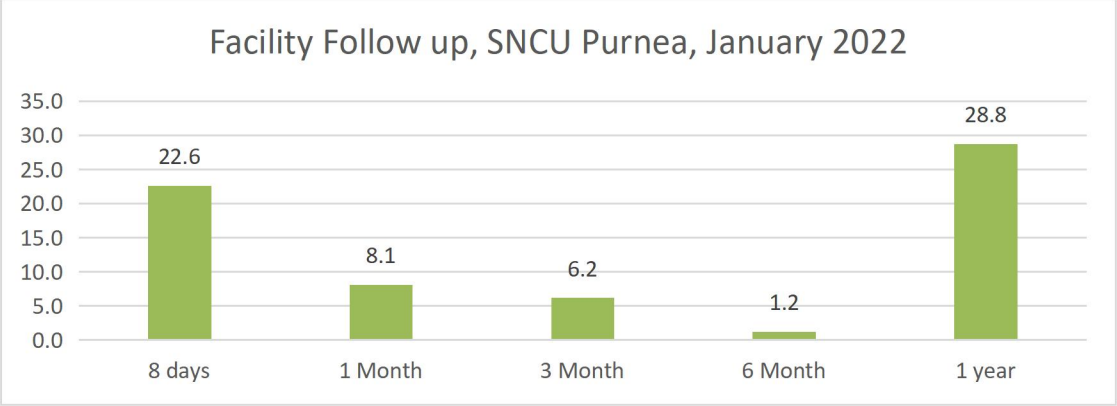
April is considered as an outstanding month with the highest community follow up of 84.7% visits done out of total number of visits scheduled. In Fig 5.12, it can be observed that in the month of April visits done on Day 1 out of total visits scheduled was 84.2%. On Day 3, it was 89%, on Day 7 it was 89.0%, Day 14 was 88.7%, Day 21 was highest with 94.6% and, on Day 28 with 78.7 % of visits done out of total number of visits scheduled.

5.3 FACILITY FOLLOW UP



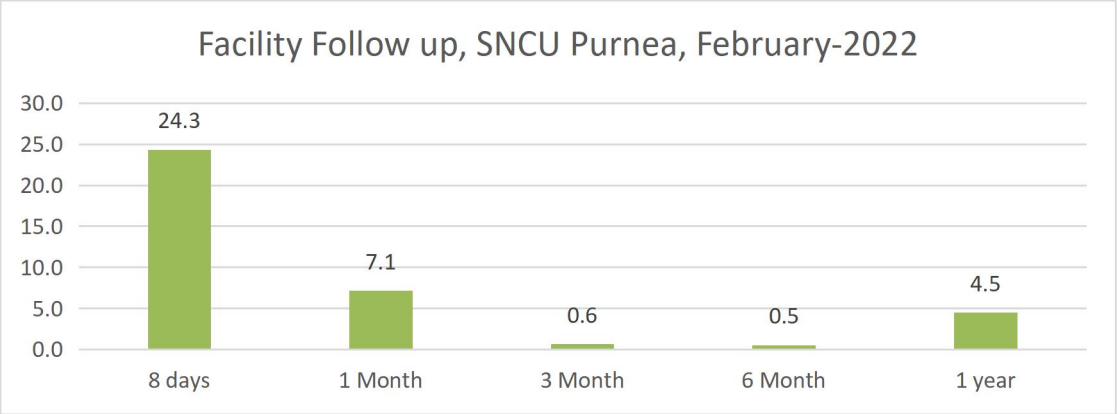
(Fig 5.13: Facility follow up Done out of Scheduled, SNCU Purnea from January to April 2022 compared with 2021.)

Facility Follow ups are done in Facility only (SNCU Medical college), the first one is after 8 days of the release from SNCU which is followed by 1 Month, 3 Months, 6 Months and, last facility follow up after 1 year from discharge. In Fig 5.13, the data shows the Total facility follow ups done out of follow ups scheduled in SNCU Medical College, Purnea in whole year of 2021, it was only 3.8 %, while in 2022 from January it was 14.2%, February was 7.2 %, March was of 9.6 % and April was of highest with 14.5%.



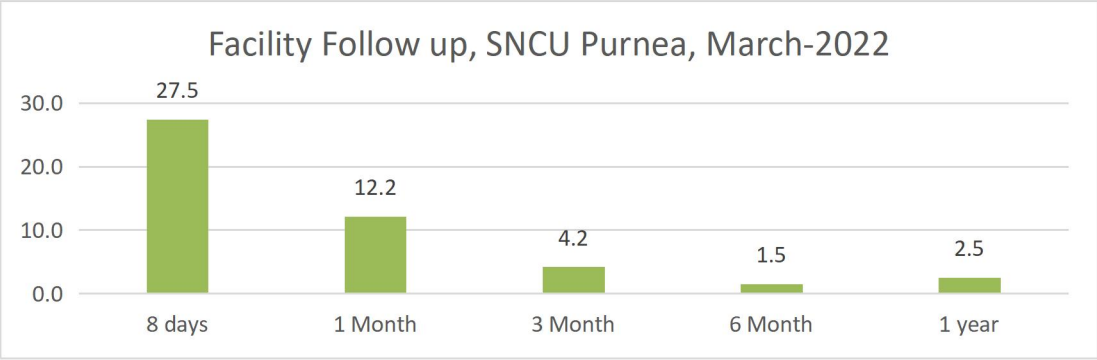
(Fig 5.14: Facility follow up Done out of Scheduled, SNCU Purnea January 2022.)

In Fig 5.14 the summary of facility follow up of the January month (14.2%) categorized on the basis of facility visits. It can be observed that visits done on Day 8 out of total visits scheduled was 22.6%. Similarly after 1 month, it was 8.1%, after 3 months it was 6.2%, after 6 months it was lowest with only 1.2% and, after whole year it was 28.8% of visits done out of total number of visits scheduled.



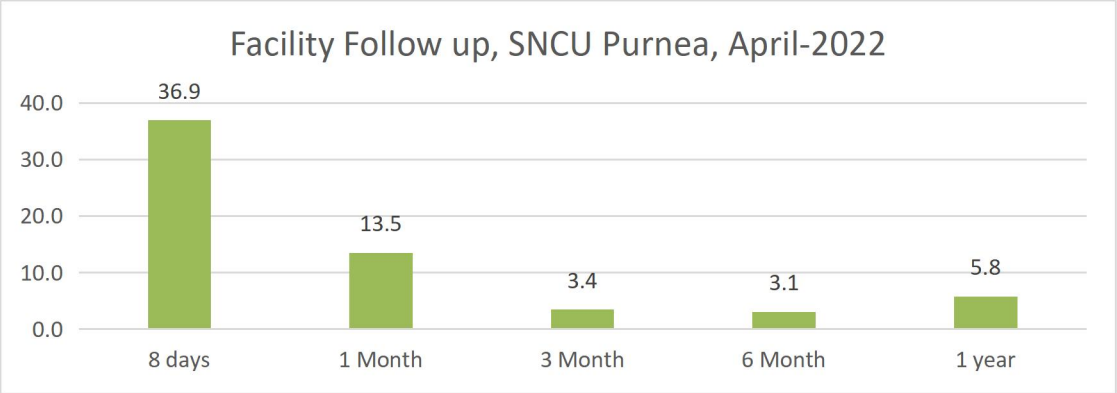
(Fig 5.15: Facility follow up Done out of Scheduled, SNCU Purnea February 2022.)

Similarly, in Fig 5.15 , data of February(7.2%) is observed. It can be observed that visits done on Day 8 out of total visits scheduled was 24.3%. After 1 month, it was 7.1%, after 3 months it was 0.6%, after 6 months it was lowest with only 0.5% and, after whole year it was 4.5% .



(Fig 5.16: Facility follow up Done out of Scheduled, SNCU Purnea, March 2022.)

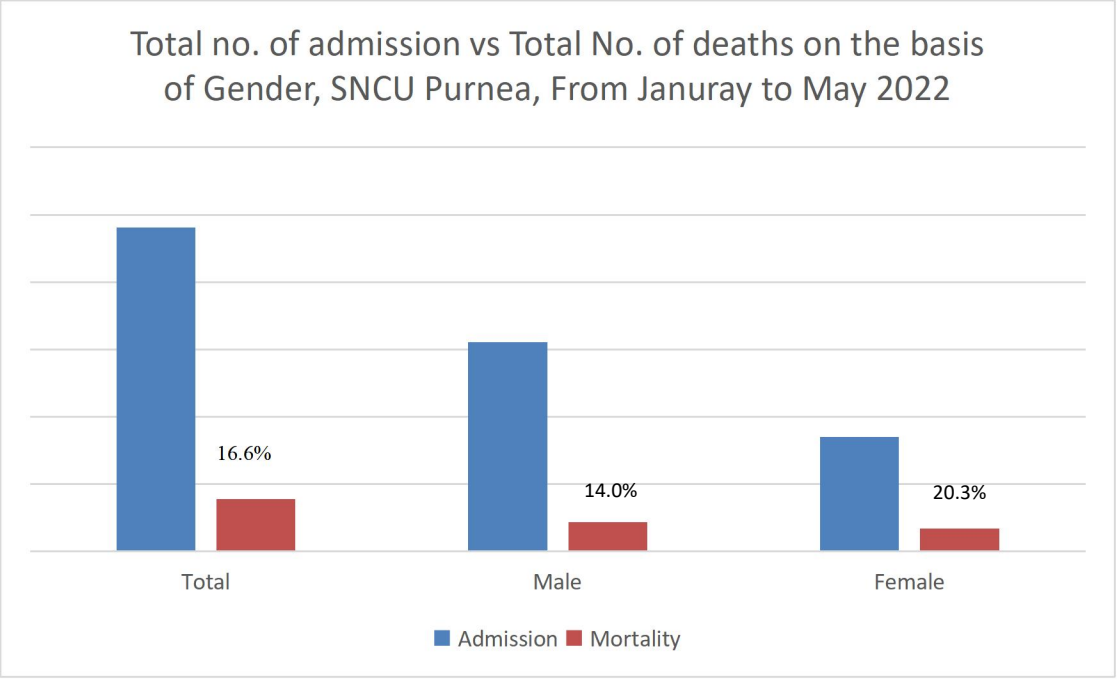
Similarly, in Fig 5.16 , data of March(9.6%) is observed. It can be observed that visits done on Day 8 out of total visits scheduled was 27.5%. After 1 month, it was 12.2%, after 3 months it was 4.2%, after 6 months it was lowest with only 1.5% and, after whole year it was 2.5% .



(Fig 5.17: Facility follow up Done out of Scheduled, SNCU Purnea, April 2022.)

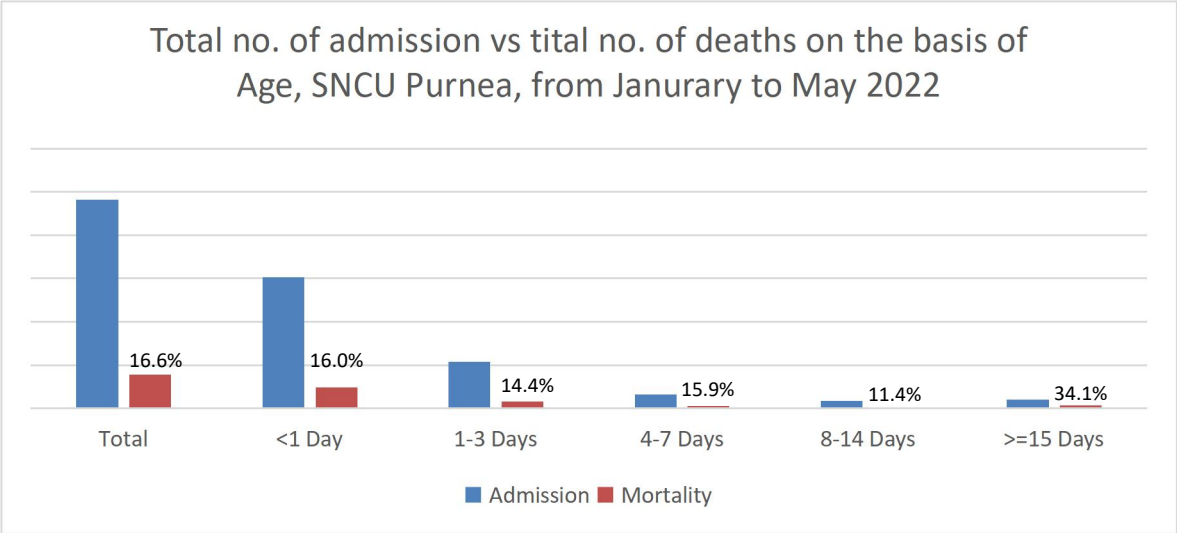
In facility follow up too, April is considered as an outstanding month with the highest follow up of 14.5% visits done out of total number of visits scheduled. In Fig 5.17, it can be observed that in the month of April visits done on Day 8 out of total visits scheduled was 36.9%. After 1 month, it was 13.5%, after 3 months it was 3.4%, after 6 months it was lowest with only 3.1% and, after whole year it was 5.8% .

5.4 ANALYSIS



(Fig 6.1: Total no. of admission vs Total no. of deaths on the basis of Gender, SNCU Purnea, from January to May 2022)

In analysis of deaths in SNCU from the period of January to May, 2022, from Fig 5.4 and Fig. 5.5, it was observed out of 16.6 % mortality, the reason behind higher count in male child mortality was because the admission of males are higher as compared to female. In Fig. 6.1, it can be observed that, individually males had 14.0% of expired cases while female had 20.3% of expired cases which is higher value than male child.

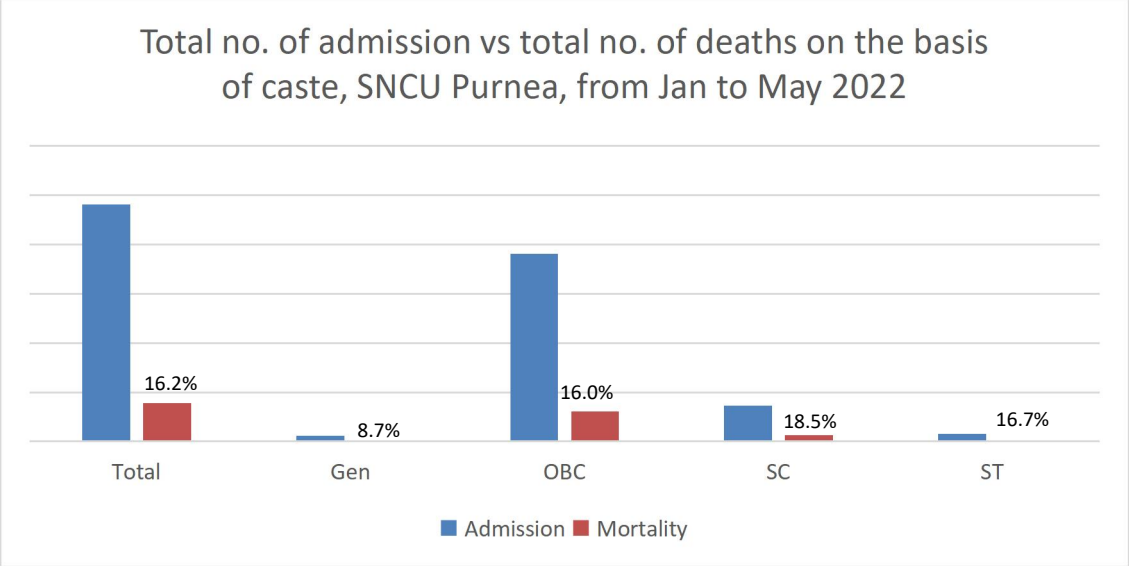


(Fig 6.2: Total no. of admission vs Total no. of deaths on the basis of Age, SNCU Purnea, from January to May 2022)

Similarly, In analysis of deaths on the basis of age in SNCU from the period of January to May, 2022, from Fig 5.7 it was observed out of 16.6 % mortality, the highest count of death was in group of <1 days followed by 1-3 days and then >=15 Days. But on comparison of Fig 5.2 and 5.7, the new Fig 6.2 was formed, which indicated that out of 63.1% of total admissions under 1 year of age, 16.6% were expired, and the highest death count was in the group of 15 days or more in age with 34.1% of mortality.

And in analysis of Deaths on the basis of Castes, it seemed that both the admission count and death count were higher in OBC category, while least in general category. Fig

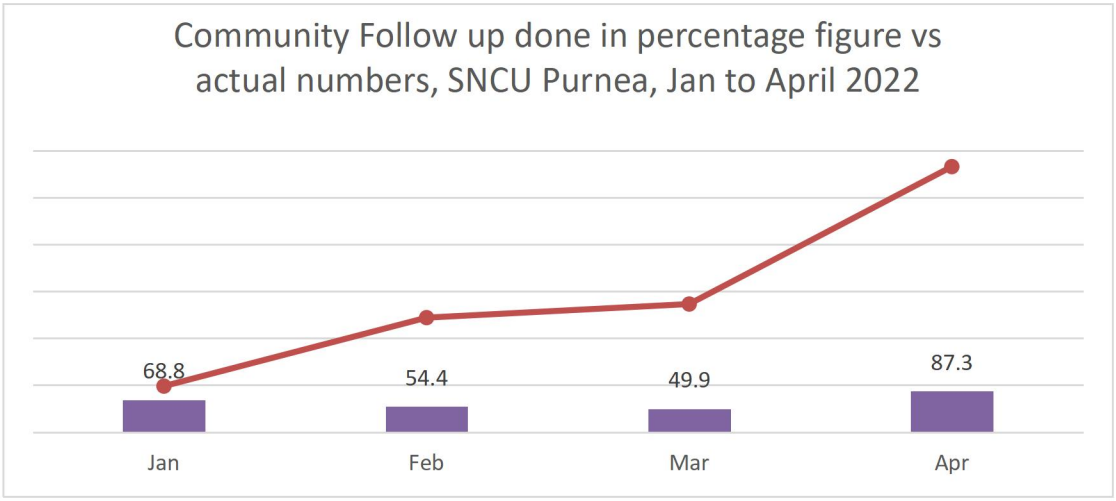
6.3 represents that even though admissions were higher in OBC categories but Percentage of deaths were highest in SC and ST with 18.5% and 16.7% respectively.



(Fig 6.3: Total no. of admission vs Total no. of deaths on the basis of Caste, SNCU Purnea, from January to May 2022)

Community Followup

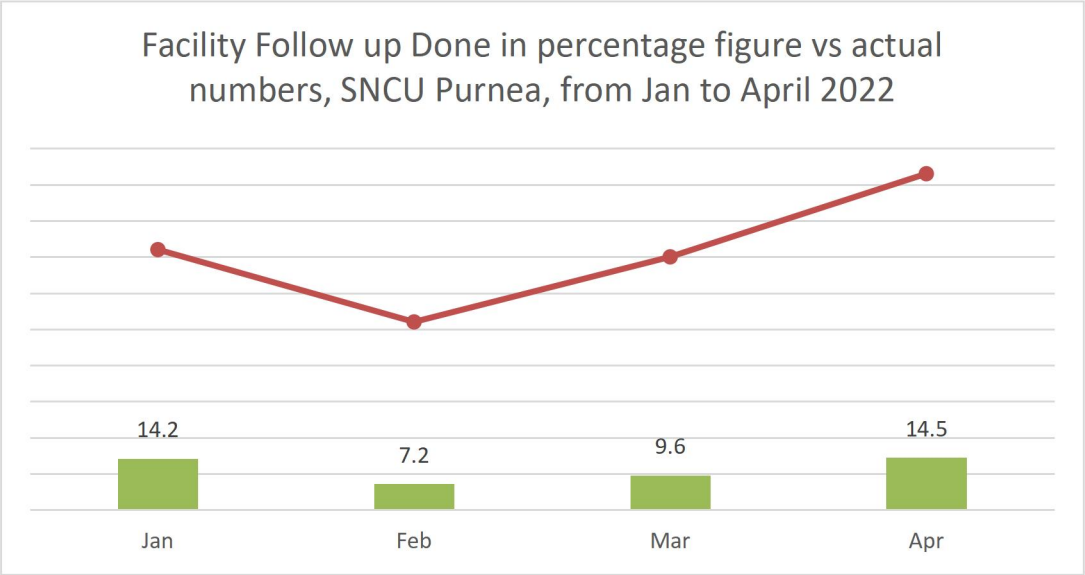
In Fig 6.4 the line graphs represents the target which was achieved by ASHA workers while bars represent the percentage figures achieved.



(Fig 6.4 : Community follow up done in percentage vs actual numbers, SNCU Purnea, from January 2022 to April 2022)

Facility Follow up

In Fig. 6.5 on comparison with numbers of facility follow up done can e seen in line graph, while the percentage figure of facility follow up done with target numbers is represented with bar graphs.the same pattern can be seen in both the figures, with drastic fall in the month of February, improvement in the month of Mach and peak in the month of April.



(Fig 6.4 : Facility follow up done in percentage vs actual numbers, SNCU Purnea, from January 2022 to April 2022)

6. DISCUSSION

From results it is stated that in cases of admission in SNCU, Purnea number of male population is higher than female, according to NHFS 5 report of Purnea even though Sex ratio of the total population were 1128 females per 1000 male population but sex ratio at birth for children born in the last five years were 938 female population per 1000 male population, this showed the relevance in more male population in SNCU. And according to census of 2011, the majority of upper class family is from general category while the whole category of SC and ST counts were 12% and 4.3% of total population of the district, and all of them belongs to economically backward family. Apart from socioeconomic factor, population of OBC category have drastically increased from 2011 to 2022, this could be the reason of highest percentage of deaths in OBC category in Fig 6.3.

6.2 Community Follow up

In Fig 5.8, the dip can be seen in February and again in march and then peak in the month of April. But that data showed the percentage figures, the target was very low in the month of January as compared to April (more than 3 times). But Fig 6.4 showed the improvement in the field via comparing percentage of target achieved vs actual number of follow ups done.

Initially in the month of January, monitoring of community follow up had been started by calling the parents and asking about *How is the newborn? Is ASHA visiting regularly?If there is any problem?etc.*

Because of this the improvement can be seen in the following month of February, where the target achieved were almost doubled. Due to various training camps and many other things scheduled in the end of financial year, therefore the growth in the month of March was quite low, but still it was higher than previous month. And again the enlarge improvement can be seen in the month of April with highest number of target achieved, with highest percentage of community followup.

6.3 Facility Follow up

One of the major reason in higher numbers of facility follow up in the month of January was the climate of Purnea, which was not suitable for the newborns. The temperature dropped down to 7-10º C, with heavy rain fall (in winters) all the month due to Western disturbances. This factor increased complications in newborns hence, the facility visits increased in SNCU of Purnea. But in the following month only limited parents have come to SNCU for facility checkups.

To overcome this gap, while enquiring about community followups, on 7th day and on 28th day, tried to convince the parents for the facility follow up which would be on 8th day and 1 month after release. This method gave results and got approx same number of facility visits in march as in January, but the target population was increased, hence percentage figure of march limited up-to 9.6% only. With the continuous efforts for persuading parents for facility follow month of April showed significant results with peak of highest number of facility follow up with 14.5 % of percentage data.

6.4 Major Gaps

The major gaps that can be seen in SNCU, Government Medical College and Hospital, Purnea, from Fig 5.4, it was that after 60.3% discharge, referred cases were 21.5%, which was mainly due to absence of Ventilator machines in SNCU and lack of human resources for the treatment of such large population. Another issue can be of infrastructure as the SNCU was in limited area which has proposal to be shifted in Medical college building soon.

The other gap in Community follow up was to ensure ASHA workers for every community visits, because it was been seen due to various social and personal reasons ASHA workers skip the follow up.

One of the main reason for less Facility follow ups in SNCU, GMCH Purnea could be less than 15% of population wanted to have facility follow ups. And after further analysis three major causes had been identified. First, parents don't have time or resources to come SNCU, Purnea again and again if their children were not facing any issues. Second, when the parents came for the facility follow up, due to mismanagement, they had to go from places to places and doctors were not available for clinical check up all the time, that is why they avoid the follow ups. Third, lack of persuasion when reminding for Facility follow ups.

6.5 Action Plan

To over the gap of increased referral cases from SNCU can be overcome by making the facility with at least 2 ventilators and increasing the HR staff in SNCU, GMCH Purnea. This would play a major role in improving the quality of services.

In community follow up, ASHA worker gets the incentive for the follow up, but there are no consequences, if one unable to do their work. Their should be proper monitoring of ASHA's work and implement some penalties if fail to achieve least number of targets in the community follow up.

To increase the facility follow ups first the management needs to have some changes, where the parents can have appointment with the physicians as smoothly as it can, this can be helped by increase the timings of doctor for the appointment, and a different area for facility follow ups other than SNCU or OPD. Secondly, while calling the parents for reminding about the follow ups, one have to be more persuasive and convincing in nature.

7. LIMITATIONS

- This study only used percentage data rather than actual figures.
- Study didn't distinguish among Inborn and outborn criteria.
- Factors like socioeconomic status, religion, block, migrations, etc. didn't taken into consideration.
- During the period of this study the District Hospital had being transferred to Government Medical College and Hospital which indirectly effect the study.

8. CONCLUSION

The study was conducted in SNCU, of Government Medical College and Hospital, at Purnea Bihar from January 2022 to May 2022. It was observed that the outcome during the period was 60.3 % of population was treated and discharged from SNCU , 21.5 % of population were referred to higher facilities, 16.6 % of Child Death cases and 0.6 % of population opted for LAMA . The study also stated that even though number of males were admitted more, but percentage of female deaths were more. The population of OBC category were highest in the SNCU and on the basis of age, less than 1 day of age population were highest. Community follow ups of the discharged children has to be done on day 1,3,7,14,21 and 28 by ASHA worker and this was monitored by SNCU. The constant improvement can be seen through out the year of 2022 in Community Follow ups and average was above 50%. Facility follow ups are clinical check up of patients on Day 8 after discharged followed by 1 month, 3 months, 6 months and 1 year. In Purnea due to various reasons this data was below 20% throughout the year, and need improvements.

9. SURVIVAL STORIES

SURVIVAL STORY - I

THE UNCLAIMED FLAME : JYOTI

by :- TANUJ KAUSHIK

"*I was passing by, when I heard a faint cry of baby from the fields, first I thought it was my imagination, but I decided to take a look. There, I have found a baby girl covered in some cloth, I picked her up, she was as small as fist of my hand, bruised all over her back"* said Mrs. Preeti kumar. She added *"I have no idea what to do, I took her home, cleaned her with a clean wet cloth, but I got scared because of continuous convulsions, her body was getting blue, she was very delicate to handle, in the evening I bring her to the SNCU, at Sadar Hospital."*

Jyoti was premature, 7 months born, abandoned by her parents in the wheat field, same night she was born. Mrs. Preeti Kumari a resident of Madhubani hamlet in Purnea, district of Bihar, she saved Jyoti's life by picking her from the field and brining her to the SNCU.

On 9th April the baby was admitted in SNCU Purnea, at 6 PM. She weighed 1460 grams, temperature was 35.5°C, with heart rate of 90 per minute. Her colour was peripheral cyanosis, observed no sucking and feeble cry. The baby was also suffering from convulsions and diagnosed with Perinatal Jaundice and Low Birth Weight.

Oxygen supply was given to the baby as oxygen level was 89%, IV drugs of CF2, Amikacin and 10% Dextrose along with other prescribed drugs were also administered, the treatment was begun under supervision of Dr. Prem. As the case was crtitical, Doctor put this case on priority and gave a special attention towards Jyoti.

Mrs. Madhu Kumari, from nursing staff of SNCU said *"In the evening of 9th April some lady came to SNCU for the admission of the child, The baby was found to be low birth weight, lethargic and cyanosis apparency. The baby was in very poor condition, after taking the vitals of the child, she was admitted as soon as possible, and treatment was begun. Next day in the morning some people visited SNCU from CHLD LINE SERVICE"* Madhu nurse immediately told SNCU in-charge Mrs. Ranchna Mandal about the situation. She added "*Four to Five people were there, for undertaking the abandoned child under CHILD LINE SERIVCE, they said ward members of Madhubani hamlet informed them about the child, and they will be the guardian of the girl from now on and did all the formalities."*

Child Line Service not only undertook the girl, but they also initiate investigation for this cases, and DM Rahul Kumar was also part of the investigation with various other govt. officials. Child Line Service are the one who named that girl JYOTI. Mrs. Ranju Kumari, working of an orphanage from Child Support was appointed for Jyoti. From feeding milk to any other responsibilities of Jyoti were in Mrs. Ranju Kumari's hands. Mrs. Ranju kumari said "*In the morning of 10th April I got to know about the situation and in the same evening I went to SNCU for meeting Jyoti. She looks in very bad condition, and only a faint hope of her survival".*

The improvement in Jyoti's health could be seen gradually. The color changes from peripheral Cyanosis to pale in one day and from pale to pink in 2 days. The convulsions were stop after 2 weeks, normal cry after 2 weeks, and after one month most if the indicators went to normal but the biggest issue was her weight, even after 1 month she weighed 1600 grams only. Mrs. Rachna Mandal said that the condition of baby has been improved, but they had not allowed for discharge of Jyoti until unless she weighed more than 1800 grams.

With continuous care by Nurses of SNCU, Special attention by Doctors and a great affection by Mrs. Ranju Kumari, on 2nd May 2022, after 1 month and 21 days spent in SNCU of Sadar Hospital, Purnea, Jyoti was good to go. All her vitals was normal, she weighted 1910 grams on scale, wrapped in orange colour blanket Jyoti left SNCU with Mrs. Ranju Kumari. Mrs. Ranju kumari said she would take her to the orphanage and wait for her to be adopted by someone. She said " *pata nhi kya Majboori rahi hogi, jo iss masoom ko lawaris chhod gaye"* means "what could be the cause, that they left this innocent child abandoned". She added that she was thankful to all the nurses and doctors in SNCU for saving that child and she would pray that Jyoti would get adopted by some good people and she would get all the happiness in her life that she deserved.

SURVIVAL STORY - II

The Prisoner's Daughter

~ by: TANUJ KAUSHIK

One fine afternoon, a Policeman was waiting outside of the SNCU at Sadar Hospital, Purnea on 9th April 2022. When asked about his presence he said that he was waiting for a prisoner and a police companion, that had gone in the SNCU for breast feeding of Prisoner's newborn Daughter.

In the evening of 7th April 2022, at 7 PM, prisoner Ashiya Khatoon had reached Labour room of Sadar Hospital in Punrea due to excess labour pain. Ashiya who was under a murder trail, have come twice before too, with the issue in pregnancy told by Jisha Nurse who was staff Nurse of Labor Room in sadar Hospital. She added Ashiya didn't have any major complications in her earlier visits but this time she was in so much pain. Ashiya was 19-year-old skinny woman, who was in prison from last 2nd trimester of her pregnancy. When she was reached in the hospital, her vitals were taken, B.P was 122/84, Pulse rate was 80 per minute, 36.4°C temperature, and FHR was 152 per minute.

At mid night Ashiya was ready for the delivery, nurses which were on duty took her and made her to lay on the labour table. The delivery went normal and at 12:28 AM on 8th April 2022 Ashiya gave birth to her baby girl. Mother's conditions were in control,

except she was suffering from pain in her abdomen, but the child didn't cry on the birth and not sowing any activity. Her child was diagnosed with Birth Asphyxia.

In the night at 12:40 AM the baby had shifted to SNCU. The weight of baby was 2425 grams. The policeman told "It was very quiet in the waiting area outside labour room premises, Suddenly there was havoc, I got to know that Ashiya has given to the birth of baby girl, but she was not well, my fellow the lady attendant police officer was with the mother only, and nurse came out with the baby, I accompany her to the SNCU where, another nurse took the hold of the situation and started the treatment immediately".

Nurse Rachna (In charge SNCU) narrated, "the main problem is that the baby didn't cry after the birth. Gestational age of the baby was 37 weeks, a full-term Maturity. As soon as the baby reached SNCU, treatment was started immediately under the guidance of Dr. P Prakash who was in charge at that time". The vitals of baby were taken, she was in alert condition, temperature was 36.1°C, Heart rate was 140 beats per minute, Respiratory rate was 38 per minute, No Apnea, No grunting, but Yes in chest Indrawing, Colour of the baby was Peripheral Cyanosis, No sucking, No Skin pustules and Oxygen Saturation at 78%.

With the help of drugs as per the dosage prescribed by the doctor given to the baby. And with the treatment of 2 days the baby was good to go. When asked to Mrs. Ashiya Khatoon for her experienced she said "I wasn't expecting such a good care for my child. Even though life would be hard in prison, and I have no idea how to raise a child there but happy to see the facilities given by the hospital. I will be regular for her vaccination and follow ups".

10. BIBLIOGRAPHY

1) Kumar H, Khanna R, Alwadhi V, Bhat AA, Neogi SB, Choudhry P, Saboth PK, Khera A. Catalytic Support for Improving Clinical Care in Special Newborn Care Units (SNCU) Through Composite SNCU Quality of Care Index (SQCI). Indian Pediatr. 2021 Apr 15;58(4):338-344. PMID: 33883309.

2) Kumar H, Bhat A, Alwadhi V, Maria A, Khanna R, Neogi SB, Khera A. An Assessment of Implementation of Family Participatory Care in Special Newborn Care Units in Three States of India. Indian Pediatr. 2021 Apr 15;58(4):349-353. Epub 2021 Jan 2. PMID: 33408278.

3) Saboth Md PK, Sarin PhD E, Alwadhi Md V, et al. Addressing Quality of Care in Pediatric Units using a Digital Tool: Implementation Experience from 18 SNCU of India. J Trop Pediatr. 2021;67(1):fmab005. doi:10.1093/tropej/fmab005

4) Sen A, Mahalanabis D, Singh AK, Som TK, Bandyopadhyay S. Impact of a district level sick newborn care unit on neonatal mortality rate: 2-year follow-up. J Perinatol. 2009 Feb;29(2):150-5. doi: 10.1038/jp.2008.177. Epub 2008 Oct 23. PMID: 18946480.

5) Sulthana, S.A. Sardar, et al. "Study of the morbidity pattern in the special new born care unit (SNCU) at a tertiary care teaching Hospital in Kurnool District, Andhra Pradesh, India." Journal of Evolution of Medical and Dental Sciences, vol. 4, no. 52, 29 June 2015, pp. 8999+. Gale OneFile: Health and Medicine.

6) Sharma, R. K., R. Khan, and S. Anjum. “A Study to Evaluate the Functioning of Special Care Newborn Unit (SNCU) Established at a District Hospital”. *International Journal of Biomedical Research*, vol. 8, no. 9, Sept. 2017, pp. 514-20, doi:10.7439/ijbr.v8i9.4369sss.

7) Darmstadt GL, Bhutta ZA, Cousens S, Adam T, Walker N, de Bernis L et al. Evidence-based, cost-effective interventions: how many newborn babies can we save? Lancet 2005; 365: 977–988.

8) Ramji S, Modi M, Gupta N. 50 years of neonatology in India: progress and future. Indian Pediatr 2013; 50: 104–106

9) Nair, Nirmala et al. “Effectiveness of participatory women's groups scaled up by the public health system to improve birth outcomes in Jharkhand, eastern India: a pragmatic cluster non-randomised controlled trial.” *BMJ global health* vol. 6,11 (2021): e005066. doi:10.1136/bmjgh-2021-005066

10) Tripathy, Prasanta et al. “Community mobilisation with women's groups facilitated by Accredited Social Health Activists (ASHAs) to improve maternal and newborn health in underserved areas of Jharkhand and Orissa: study protocol for a cluster-randomised controlled trial.” *Trials* vol. 12 182. 25 Jul. 2011, doi:10.1186/1745-6215-12-182

Tanuj Kaushik report

by Tanuj Kaushik

Submission date: 21-Jun-2022 10:21AM (UTC+0530)
Submission ID: 1860573519
File name: plag check.docx
(183.33K)**Word count:** 3544
Character count: 16226

Tanuj Kaushik report

ORIGINALITY REPORT

6%	6%	1%	0%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	www.unicef.org Internet Source	2%
2	repository.up.ac.za Internet Source	1%
3	docs.microsoft.com Internet Source	1%
4	4rent.md Internet Source	<1%
5	core.ac.uk Internet Source	<1%
6	qdoc.tips Internet Source	<1%
7	voip-forum.tmcnet.com Internet Source	<1%
8	www.bma.org.uk Internet Source	<1%
9	orca.cf.ac.uk Internet Source	<1%

10	Sutapa Bandyopadhyay Neogi, Sumit Malhotra, Sanjay Zodpey, Pavitra Mohan. "Challenges in scaling up of special care newborn units-lessons from India", Indian Pediatrics, 2012 Publication	<1%
11	msjonline.org Internet Source	<1%
12	www.rangelyhospital.com Internet Source	<1%

Exclude quotes	Off	Exclude matches	Off
Exclude bibliography	On		