Egyptian Neonatal Network for Training Pediatricians

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Egyptian Neonatal Network "EGNN"

"Guide for Users"

2010

"Egyptian Neonatal Network for Training Pediatricians"

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EGNN "Guide for Users" Manual

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Welcome

Welcome to join Egyptian Neonatal Network (EGNN). Whether you are a site investigator, a leader or a member of your center team, you need to be familiar with the method of using the network to get the maximum benefits from it. This manual is your resource for training your center's data management staff. Anyone involved in collecting and submitting and storing data at your center should thoroughly understand how to identify eligible infants, collect and submit data and make data corrections.

Attendance of one day- training workshop is mandatory to use the network. We are pleased to have you with us in a nearby workshop. Encourage your colleague to attend. For any additional information, feel free to contact EGNN help desk. Contact details are present on the inside of back cover of this manual. Our Team is ready to help.

EGNN Management Team

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Organizing Your Data Management System

Steps to Organize Your EGNN Data Management System

Step 1: Identify all eligible infants.
Step 2: Designate a working Team.
Step 3: Record the Network ID Number that will be automatically given to the baby upon his registration on the Network.
Step 4: Use Forms and Documentation.
Step 5: Submitting Data to the EGNN.
Step 6: Establish procedures for data security and patient Confidentiality.
Step 7: Establish a system for filing and storing forms.
Step 8: Train data management staff.
Step 9: Organize a Multidisciplinary Team.
Step 10: Getting Help.
Step 11: Complete the Annual Hospital Membership Survey.

Step 1: Identify all eligible infants

Infant eligibility criteria have been established so that data from your center will be comparable to other EGNN centers. To assure that your data are useful for quality improvement, it is very important that data are collected for all eligible infants.

Eligibility Criteria for EGNN Database:

You are free to select one of the following two options according to the presence or absence of delivery facilities in your center:

A. Option A: You do not have *delivery* facilities:

- *All outborn newborn infants* admitted to a Neonatal Care Unit (NCU) of your hospital within 28 days of birth should be included regardless of birth location, their gestational age or birth weight.
  A "NCU" is any location within the hospital in which newborn infants receive medical care at any level (I, II, III).

B. Option B: You have *delivery* facilities:

- *All inborn newborn infants* born alive, who are admitted to a Neonatal Care Unit (NCU) or who die in the delivery room (at your hospital) regardless of their gestational age or birth weight.
- *All outborn newborn infants* admitted to the NCU of your hospital within 28 days of birth should also be included regardless of birth location, their gestational age or birth weight.

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Note: Outborn babies admitted to NCU after the 28th day of life should not be included in the database, since by international definitions those babies are no longer "newborn" but infants

There are several critical details about the eligibility criteria that you should note. Read the following explanations carefully.

Infants who are discharged home prior to admission are also eligible. The infants for whom you report data may have gone home before being admitted to your hospital. For instance, infants discharged home from another hospital before being admitted to your hospital are eligible. The infants born at home or in transit: these infants are eligible if they arrive at your hospital alive and meet all the other criteria.

Stillborn infants are not eligible. A stillborn infant is any infant who is not live born. A live born infant is one who breathes or has any evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles.

All eligible Database infants who die must be included, regardless of where in your hospital they die, including the delivery room. This applies to:

- Any eligible infant who is admitted to a NCU in your hospital within 28 days of life and who dies.

Note: Infants who never received care in a NCU, and who would therefore not have been included in the database, must be reported if they die within the first 28 days of life. This includes full-term infants and infants who are not in the very low birth weight category.

Step 2: Designate A Working Team:

The Team Leader (Site Investigator):

- He/she is the person at your center who assumes ultimate responsibility for leading and coordinating the activities involved in participating in the Network. Selecting the right person for this job will help ensure that your center's participation in the Network runs smoothly.
- *The Team Leader is responsible for:*

A. Supervising all EGNN Database activities at your center.
B. Establishing procedures for data collection and submission, and monitoring their implementation.
C. Developing an Eligibility Verification Plan and monitoring its implementation.
D. Overseeing training.

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E. Supervising the data collection and submission tasks.
F. Determining data submission schedules.
G. Verifying that all eligible infants are included.
H. Verifying that the data conform to all the definitions and conventions of the database.

The Team Members: (at least two members, one of them may or may not be site investigator)
For two separated tasks:

A. Task A:

1. Follow all patients admitted in the center and identify all eligible infants according to his center chosen option (A or B).
2. Register these infants in the Patients Logs (See Appendices)
3. After completion of a page (contain 10 patients) in the patient log, he will cut the original page (at the mark) and send it to EGNN by scanned mail, Fax. And keep these detached parts in sequence safely in special Folder for later quality checks.

Note: Patient Log is a register of 50 (original and carbon copy) pages. Each page can fit 10 patients. The pages are numbered serially (from 1-50). It is not allowed to detach one page. This is important for secure check up and monitoring. EGNN team at DMC will match the sent forms with the patients' data entered electronically.

B. Task B:

a) Task B, a: (Data Entry using Hard Copy Form):

1. Each identifiable eligible baby data will be entered in the appropriate hard copy Forms (Delivery Room Death form or 28 Day/Discharge Form) using the data from patient hospital file
2. The team member who performs this task (Task A) should write his name on the completed form and date of completion.

Note: The team member whose perform this task should not perform Task A .

b) Task B, b: (Electronic Data Entry using)

1. Using the completed hard copy form (Task B a), this team member will go to submit the data on the EGNN web site using the designated password.
2. The team member who performs this task (Task B b) should write his name on the completed form and date of electronic data submission.
3. Keep the submitted signed forms in a special folder for future data check up, correction or monitoring.

Note: Your center may decide to include additional staff to collect, submit, and maintain the data. We recommend that you develop an internal plan detailing the roles of the various members of your team and their access to the data.

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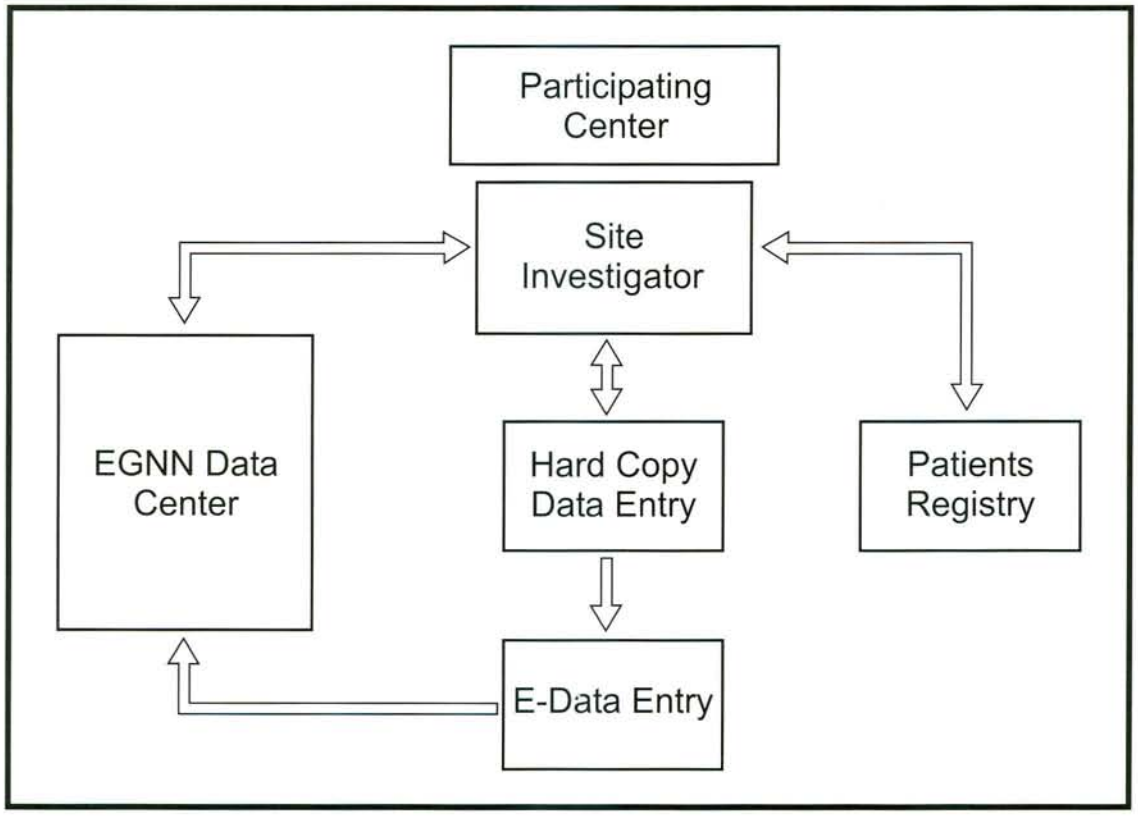
EGNN Work Flow Chart



Step 3: Record the Network ID Number that will be automatically given to the baby upon his registration on the Network

The assigned Network ID Number is the unique infant identifier for all EGNN data submissions. You can also use the Network ID to re-identify specific patient records. The Network ID is the only piece of information that links a specific infant in the Network databases with infant's identifying information that you retain at your center.
Only your center will look at two numbers: The Network ID and Patient Medical Record Number at your Hospital in addition to personal patient identifiers (such as the patient's name). For security only the Network ID will appear at the coordinating center and to the network administrators. You can use it to associate data you've reported to the Network with the patient's records in your local system. This is important when you need to re-examine a patient's records to make corrections to the data you've submitted, as well as for data audits, quality improvement activities and peer reviews.

Note: A different Network ID Number will be assigned to every baby in multiple birth.

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Step 4: Use Forms and Documentation

Completing the Logs

There are two confidential logs to facilitate tracking of eligible infants and their disposition status, as well as to provide a record of data submission. All eligible infants should be noted in the Patient Log. Eligible infants who transfer to other hospitals before being discharged home should be entered into the Transfer Log.

Note: Do not submit Patient or Transfer Logs to the Network. These logs contain personal patient identifiers and must be treated as protected health care information. EGNN does not accept protected health care information. **However, there is a part in the original form of each log that does not contain patient's identifier when detached. This detached part should be sent to EGNN.**

Patient Log

Enter data into the Patient Log (See Appendices) for each eligible infant. This will allow you to cross check the Network ID Number with the patient name for data integrity.

The Importance of Patient Log:

It provides a link between the data in your local system and the data you have submitted to the EGNN. Because this log contains both patient identifiers, such as the infant's name and medical record number, and an anonymous Network ID that has been assigned to that infant, it allows you to associate a specific infant's records in your local system with the data about that infant that you have reported to the Network. This is important when you need to make corrections to the data you have submitted, as well as for data audits and peer reviews.

Use the Patient Log to record the assigned Network ID for each infant, to document and track the submission of the necessary data forms and to re-identify infants you have reported to the Network. Consult it when you enter data on a form for a particular patient. By cross-checking the Network ID you have entered on the log against the Network ID on each form, you can reduce the chance of reporting data for the wrong infant.

Guidelines for Completing the Patient Log

- Before you enter data in the Patient Log, establish the infant's eligibility for inclusion in the EGNN database **(described in Step 1)**.
- Enter the name of your Center at the top of the Patient Log.
- Enter the Network ID Number for the patient. Network ID Numbers are assigned when you start to register patient data on the website. It is a randomly given number and unique for each new patient. Different Network ID Numbers will be assigned to each eligible infant in multiple births.

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- Enter the patient's name **in Arabic**, medical record number, and birth date. With this information you will be able to accurately match the patient with the data submitted to EGNN.
- In the column labeled "**DR Death**?", enter Yes or No to indicate whether the infant meets the delivery room death criteria (**described in Step 1**). Records for infants who die in the delivery room or initial resuscitation area within 12 hours are submitted on the "Delivery Room Death" Form.
- Enter the Patient's Birth Location. If outborn, enter the date that the infant was admitted to your hospital and name of the hospital from which the infant was transferred.
- Data submitted for outborn infants must include events that occurred at the hospital from which transferred, unless the item definition only asks whether the event occurred at your hospital.
- Enter the infant's Initial Disposition (Home, Transfer, Died or Still Hospitalized as of First Birthday) and the date of Initial Disposition. This column indicates the infant's status when first discharged from your center. EGNN data collection ends at the infant's first birthday if the infant is still hospitalized and has not been discharged home.
- If the infant was transferred to another hospital without first having gone home, enter the name of the hospital to which the infant transferred.
- Enter the date when your center submitted the patient record to EGNN. Submitting data for all eligible infants helps assure accurate reporting of your center data and for the Network database as a whole. This information will help track which infant records have not been submitted to the Network.

Note: Look for Transfer Log on EGNN web site

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Step 5: Submitting Data to the EGNN

In order to provide accurate indicators of your hospital's performance, it is important that your hospital must submit *complete and correct data*. This in turn requires that your staff understand the data item definitions in Dataset Definition Manual, identify all eligible infants and record accurately all procedures and events.

Records and Data Items

The data in the Network's databases are organized into individual infant records, and each record includes all the data items on the various data forms: 28 Day/Discharge Form and Delivery Room Death Form. Each record is uniquely identified by infant's Network ID Number, which was assigned when you start to enter patient data on the website.

A data item contains a single piece of information within a record. Each data item is identified by a number and a name. For instance, ITEM 1 is Birth Weight and is on the 28 Day/Discharge Form. Some form numbers include multiple data items. For instance, the Initial Resuscitation Item includes five data items.

Data items that do not apply are coded as "Not Applicable" or N/A in the databases. For example, for infants who meet the delivery room death criteria (**described in Step 1**), only items on the Delivery Room Death Form are applicable.

How to Submit Data

EGNN allows submission of data **only electronically** through EGNN website. You must have a connection to the internet.

First collect data on paper forms and then use the paper forms as a basis for data entry. This will allow you to double-check data before submission and also provide backup data in case you have problems with your computer. Do not submit the paper forms to the EGNN. Electronically submit data records to the Network at least every 2 weeks and more often when requested.

General Guidelines for Completing and Submitting Data Forms

- Collect and submit data for eligible infants only.
- Use the patient logs to keep track of patients and data submissions.
- Do not submit the patient logs to the Network. These include personal patient identifiers and must be retained at your hospital.
- For each eligible infant, complete the data forms that are applicable. When completing the data forms, understand and carefully apply the data definitions writte

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in Data Set Definitions Manual for items on the data forms. This will assure that data submitted by your hospital are comparable to other hospitals in the Network.

- Code data items as "**Unknown**" only if the answer to an item is truly unknown and cannot be obtained. Do not code items as unknown to indicate temporary or pending values. Leave these items blank until an answer is known.
- To encourage data accuracy and completion, complete data forms while the infant is about to be discharged.
- When completing the data forms for eligible outborn infants who transferred to your hospital, record events that occurred in the transferring hospital as well as at your own hospital after admission. For example, if an infant received Indomethacin at the transferring hospital, answer this data item "Yes" on the Discharge Form. If the infant had a cranial ultrasound exam at the transferring hospital, answer this item "Yes" on the 28 Day/Discharge Form and record the worst grade of PIH.
- For eligible inborn infants who meet the delivery room death criteria described use the Delivery Room Death Form rather than the 28Day/Discharge Form. Complete the 28 Day/Discharge Form for all other eligible infants (**See Appendices**). For infants who transfer from your hospital to another hospital, follow the guidelines that will be displayed on EGNN web site.

Completing the 28 Day/Discharge Form

- Data on the 28 Day/Discharge Form (See Appendices) must be submitted for each eligible infant who does not meet the Delivery Room Death Criteria. This form does not contain personal patient identifiers. However, you can register Hospital Medical Record number as you will not send these forms to EGNN.
- Use the definitions in Dataset Definitions Manual when recording data on the 28 Day/Discharge Form. For database integrity and accuracy of reporting, assure that the data item definitions are understood and uniformly applied by staff members who are recording these data.

Completing the Delivery Room Death Form

- For eligible infants who meet the delivery room death criteria, the only data items that are applicable are those on the Delivery Room Death Form (**See Appendices**)
- If your center has deliveries and chooses to participate in Delivery Room Death Database this Delivery Room Death Form must be completed.
- The Delivery Room Death Form includes items from the 28 Day/ Discharge Form that are applicable to infants who meet these criteria. All of these items must be submitted for eligible infants who meet the delivery room death criteria.

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Step 6: Establish Procedures for Data Security and Patient Confidentiality

As a member of the EGNN, your center is responsible for protecting patient privacy and for ensuring that patient data are secure. Patient Logs and Transfer Logs contain personal patient identifiers and are considered to be protected health care information. Do not send any forms contain personal patient identifying information to the EGNN.

Step 7: Establish a System for Filing and Storing Forms

To ensure the integrity of the data you submit, it is important to keep all original forms for each infant together. If infants transfer from your center to another hospital, the Transfer and Readmission Form should be kept with the other forms in special Folder.

It is the responsibility of each participating center to maintain and store all logs, and forms to ensure that patient privacy and data security requirements are met.

In addition, EGNN data entry programs automatically cross-check records to prevent duplication and to help ensure that the correct data are being reported for each infant. Of course, it is still critical to double-check any data you enter against patient logs and other data sources. Remember that errors can still be created during the data entry process.

Step 8: Train Data Management Staff

All staff members who are involved in data collection, submission, and maintenance should be thoroughly familiar with:

- The purposes of the database
- The eligibility criteria for patients
- The data definitions —the information required for each data item
- Procedures for collecting and submitting data
- Procedures for filing and storing forms

This manual is your resource for training your center's data management staff. Anyone involved in collecting and submitting data at your center should thoroughly understand how to identify eligible infants, collect and submit data and make data corrections.

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Step 9: Organize a Multidisciplinary Team

To get maximum benefits from the EGNN membership, your center should establish a multidisciplinary team to review the Network's reports. The team's goal is to help direct your center's local quality improvement efforts using the comprehensive performance data provided by the Network.
The team may include doctors, nurses, pharmacists and any other health professionals involved in neonatal care at your center. The team should use the comparative data and the analyses of interventions and outcomes provided by the reports to target specific clinical practices and identify opportunities for improvement. The team should also track change, monitoring the effect of your center's quality improvement interventions over time.

We recommend that you develop an internal system for sharing the data from reports and the Horus Reporting System with the multidisciplinary team. The reports contain sensitive data, including data on morbidity, mortality and length of stay at your hospital. It is important to protect the confidentiality of this information, while at the same time making the most effective use of it to advance your center's quality improvement projects.

EGNN will provide training courses to help your team to perform these tasks. Encourage your staff to register for these courses. If you need help with any aspect of organizing your system or managing your data, do not hesitate to contact helpdesk at EGNN.

Step 10: Getting Help

When your center becomes a member of the EGNN, A password will be given to the site investigator to enter the Member site. You can ask for help by:

- ***Using the internal mailing system:***

You can send a message to get help from the Data Management Center (DMC) if you have any problems concerning data definitions or submission. The team in DMC will help to answer any questions and assist you about collecting, recording, or submitting data and will support your center in achieving complete and accurate data reporting.

- ***Contact EGNN Helpdesk:*** (***Mobile***: 0101511138).

- ***Getting copies of the EGNN forms:***

You can copy them from this manual "Appendices A & B". They are also available on the EGNN web site at (Member Tools/Downloads).

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Step 11: Complete the Annual Hospital Membership Survey

At the beginning of each year, the Annual Hospital Membership Survey will be sent to you and should be completed based on your hospital characteristics as of the previous year. For example, in early 2010 you will receive the Membership Survey for 2009.
Data from the membership surveys are summarized and reported in the Annual Quality Management Reports. These reports allow you to compare characteristics and capabilities at your hospital to other hospitals in the Network. Reports are also generated using survey data which allow you to compare infant procedures and outcomes to other hospitals with your "**NCU Type**". Classification of NCUs will be announced on the website and sent to you with the annual report.

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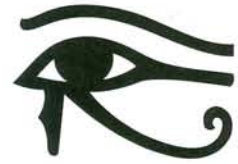
Horus Reporting System (HRS)



The Network's Internet "*Horus Reporting System*" is available to all members who have signed the applicable membership agreement. This online reporting system significantly extends the availability of neonatal care and outcome data for Network members and provides near real time information for quality improvement initiatives.
Horus provides reports for members via the Internet. HRS allows users to access historical and up-to-date information on infant care and outcomes. System access is controlled by administrators appointed by the member center, Access to your center's data on the Horus system is controlled by Web Services Administrators appointed by your center.

The features of the HRS include:

- The following infant populations are reported on HRS. You can view your center data and Network or group comparison data for each of these populations.
    - Infants with different birth weights.
    - Infants with different gestational ages.
    - All eligible Database infants.
- Users can select to view the results in graph and/or table format. Once displayed, users may download tables and graphs as PDF documents and save or print them.
- Risk adjusted outcomes and other summary information for a specific year are available in a center summary PDF document, which may be downloaded and printed.

From a clinical category such as Infection, users can choose a specific type of infection and view results by:

- Birth year,
- Birth weight category,
- Gestational age category or
- Birth location.

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At the category level, overall results for related measures can be viewed and compared to Network results or results for centers in the member center's NCU Type. If your center participates in a group of hospitals, you can also compare your center performance to that of the group as a whole. From the measure level, the user can view results within the clinical grouping of interest (e.g., birth weight or gestational age category), then drill down to the infant level to identify specific cases with the infection.

Year-to-Date reports on Horus are similar to the quarterly reports distributed to members. HRS users can view up-to-date information on all collected data items for the current birth year and prior years.

Site investigators can download their center's infant data as an *Excel spreadsheet* for any studied years.

- Data collected from the Annual Membership Survey is tabulated and available for comparison with the Network and the member center's NCU Type.

- Members can provide online feedback and suggest improvements to the HRS using the internal message system of Ibn-Sina software.

Note: Validation of the submitted data will be executed at Data Management Center. The validation process will take some time. This delay will be reflected on some difference that will be found between the reports extracted from HRS and those sent periodically from EGNN.

References

1. Canadian Neonatal Network Database (2010)
2. EuroNeoNet 2010 Perinatal Dataset Manual
3. Vermont Oxford Network Database, Manual of Operations For Infants Born in 2010, Release 14.0

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Egyptian Neonatal Network for Training Pediatricians

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"Electronic Data Submission"

Introduction

Egyptian Neonatal Network uses two software programs to accomplish its functions:

- Ibn-Sina Software
- Horus Reporting System

Ibn-Sina Software

The ***Ibn-Sina*** software allows electronic data entry and secure submission of deidentified data files via the Internet. With a simple, menu-driven user interface, the software supports EGNN Database.
The ***Ibn-Sina*** software can also accommodate "Neonatal Registry" for any planned approved research.

The ***Ibn-Sina*** software supports:

- Secure application login.
- Administrator control of user access.
- Extensive range and error checking.
- Internal message center to communicate with DMC Staff.
- Multiple search criteria for finding and viewing records.
- On-line help to include all data item definitions (*Download Dataset Definition Manual*).

For additional information about ***Ibn-Sina software***, go online to www.egynewborn.net and select Ibn-Sina Software under **"Member Tools and Downloads"**.

To learn how you can use the network, download this manual from **"Member Tools and Downloads"**.

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Using Ibn-Sina Software

Creating a new EGNN case:

1) Go to **EGNN Data Entry**; Click the small arrow for new case
2) Enter the network record number and admission date/time.
3) User enters admission info in the admission screen that opens up
4) Browse through the screens using the left navigation menu **(History, Diagnosis, Discharge, and End Case)**.

> ***Note:*** Each yellow screen corresponds to a large ***black bordered box*** on the hard copy forms, (Death in Delivery Room form OR 28 Days/Discharge form).

5) For each screen **(e.g. History)** number of ***black colored items*** appears on the top, Click on ***"admission data"*** and enters the information required for the items in the yellow screen. All the starred items must be completed then the **"save"** button appears at the bottom of the screen. Click the **"save"** button, now your screen was saved and the ***"admission data"*** color changes to red. The **"save"** button will be replaced by the **"Edit"** button. You are still able to change data if needed by clicking the **"Edit"** button.

> ***Note:*** The **"save"** button will not change to the **"Edit"** button unless you complete all the starred items correctly and respond to validation small popup screens that appear beside the incorrect data.

6) Now you can move to the next screen by clicking ***"maternal data"*** and follow the same steps
7) Once you have finished all screens under **(History)**, you can click the left navigation menu **(Diagnosis** or **Discharge)** and follow the same procedures to complete the data in the yellow screens that appear under any of them.
8) If you click the **(End Case)** button and save its data, the patient will disappear from the screen when you close it. Now the patient is transferred to patient records where you can retrieve his/her data, however, you cannot do any changes in it as it is a locked file.

> ***Note:*** If you want to unlock patient's file, you need to contact the DMC. If you select **"follow up"** from **(End Case)**, the locked file can also be retrieved, but not changed, from the [Neonatal Follow up Program] screen.

Searching and updating existing cases that have been discharged after 28 days and/or readmitted before 28 days:

1) Go to the search panel, enter the search criteria (Patient Network Number, or Name) and click Search.
2) Select the record you want to update by double-clicking on the row in the patient list search results box.
3) Update the fields as required on the ***"admission screen"*** that opened up.
4) Browse to any of the other screens to do any updates required.
5) If the update for the current case is done, click the **"save"** button.
6) You can also select another case to update in the patient list search results box or perform a new search. A readmission will appear as ***a second visit*** in the patient data file.

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Error Checking

Computer data checks

The computer program has several error checking systems in place. At a primary level, the program performs error checks during data entry, to help ensure accurate data capture. For instance, there are checks for reasonableness".

For example, if you entered '11' as a value for Apgar Score, the computer will generate an error message "The ***one minute Apgar score*** must be between 1 and 10 or equal to 99" prompting you that this is not a valid entry, and will require you to change this value before proceeding to the next screen.

At a secondary level, once you have completed an entire patient file and wish to submit your data a final error check (validation) will be run.

A third error check occurs after your data has been submitted to the DMC, in which you may be contacted by the EGNN Staff to confirm any unusual entries. If you enter something unusual, please write an explanation in the "Notes" section of the 28day/Discharge Form hard copy to save the time of rechecking the chart.
You can use internal mailing system to send your message to DMC Staff. If you receive an error message that is not self-explanatory, contact the DMC for advice.

Abstractor checks

Some data items are not easily checked by the program. It is crucial that everything you enter into patient's file makes sense to you. If it doesn't, please ask questions of the NCU staff to protect the data integrity. In addition, please read through each data screen before closing it to make sure you have filled in all the information correctly.

Abstractor organization

It is important for data abstractors to be organized to help alleviate errors and missed or overlooked data. In order for the DMC to determine the difference between missing data that is unavailable from the chart versus data that may simply have been overlooked by the abstractor it is crucial that the abstractor enter appropriate values.

Whenever possible, a blank space should be left any time a data field cannot be completed because the information is not directly noted or cannot be inferred from information anywhere in the patient's complete file.

Abstractors are also advised to keep a separate excel file to keep track of which patient records are complete (*following discharge*) and which records are still missing information and need to be followed up on. The excel file can also be a way to record which infants have had name changes in order to avoid confusion or duplicate entries.

> ***Note:*** When babies are transferred to other hospitals it is the responsibility of the first hospital's Staff to provide the UI to subsequent hospital's data abstractor in a timely fashion (within 3 weeks of transfer to a subsequent facility) so that information on a patient can be linked appropriately.

Please look at the following screen shots and explanation before seeking advice from DMC.

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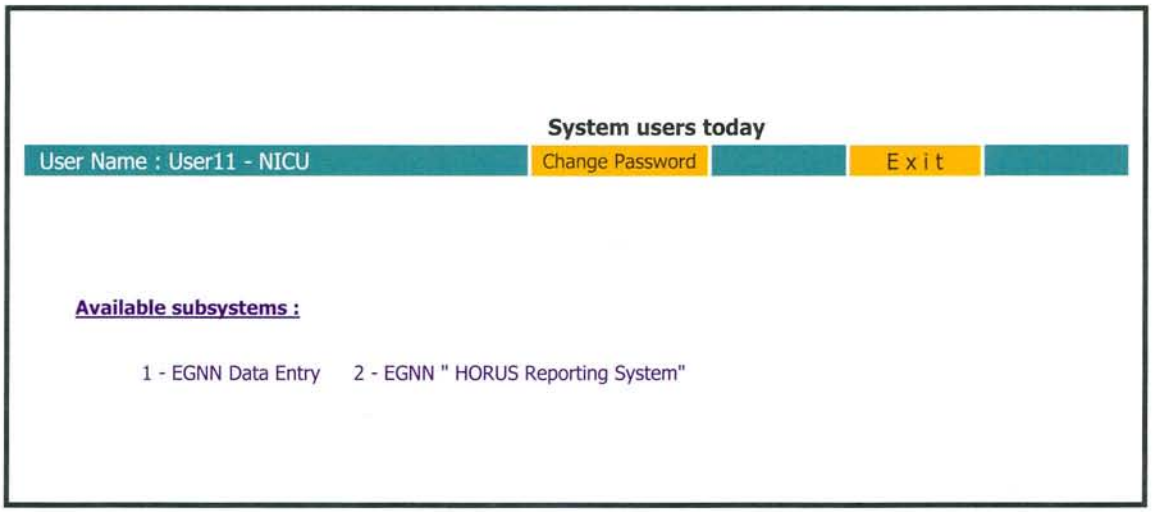
SCREEN 1: ADMISSION SCREEN DEFINITIONS



Note: **The bar shows:**

- User Name
- You can change your password
- **"Exit"** button: Click ***to Exit***

To enter patient data, Click **"EGNN Data Entry"**
To generate your NCU report, Click **"Horus Reporting System"**

Note: "Horus Reporting System" link may not appear to some EGNN users. This depends on the user's rights that were given by EGNN administrators.

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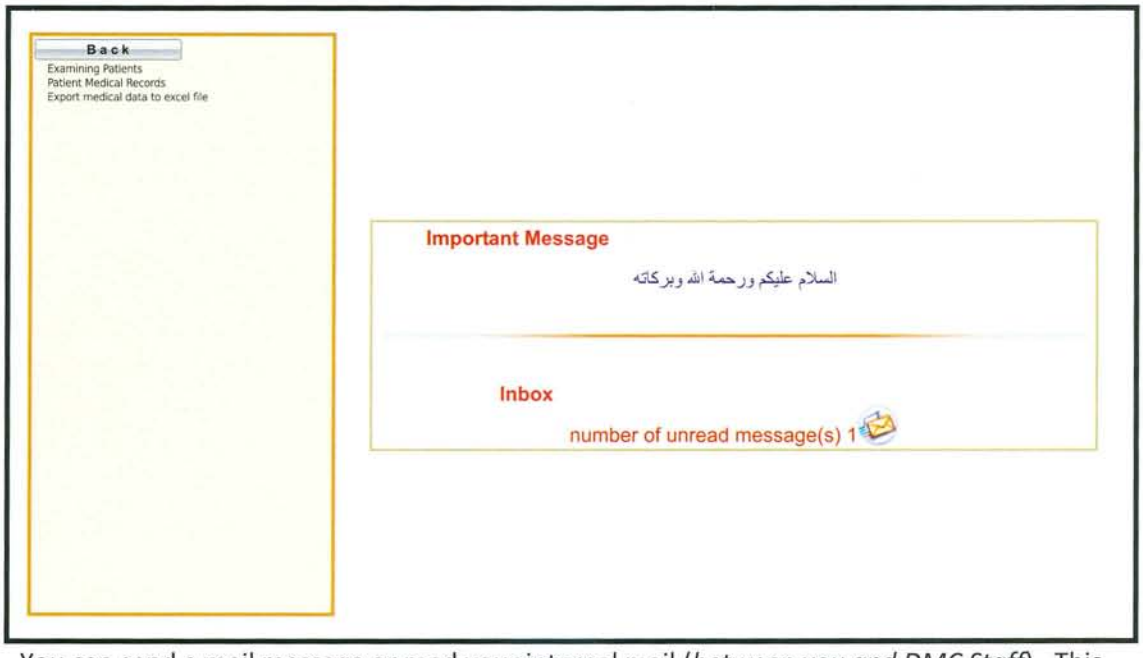
To enter patient data, Click "**EGNN Data Entry**"
This screen will appear:

SCREEN 2: ADMISSION SCREEN DEFINITIONS



You can send a mail message or read your internal mail (*between you and DMC Staff*). This internal mail does not allow message exchange between participating centers.

Click "**Examining Patients**"
This screen will appear:

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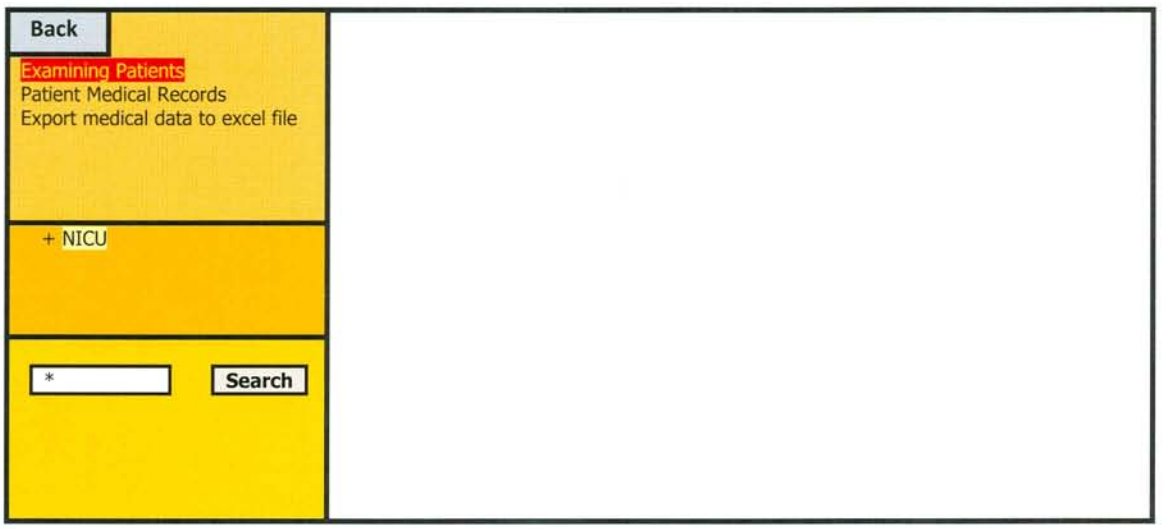
Click **+"NICU"**

This screen will appear:



Click the right mouse button

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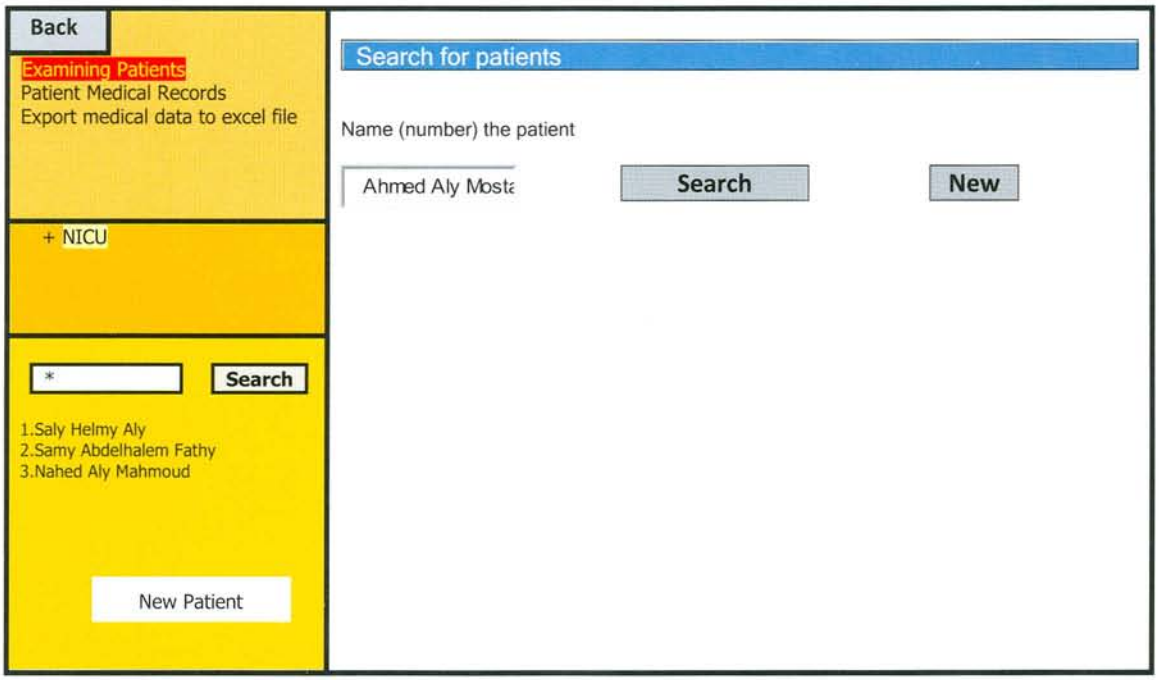
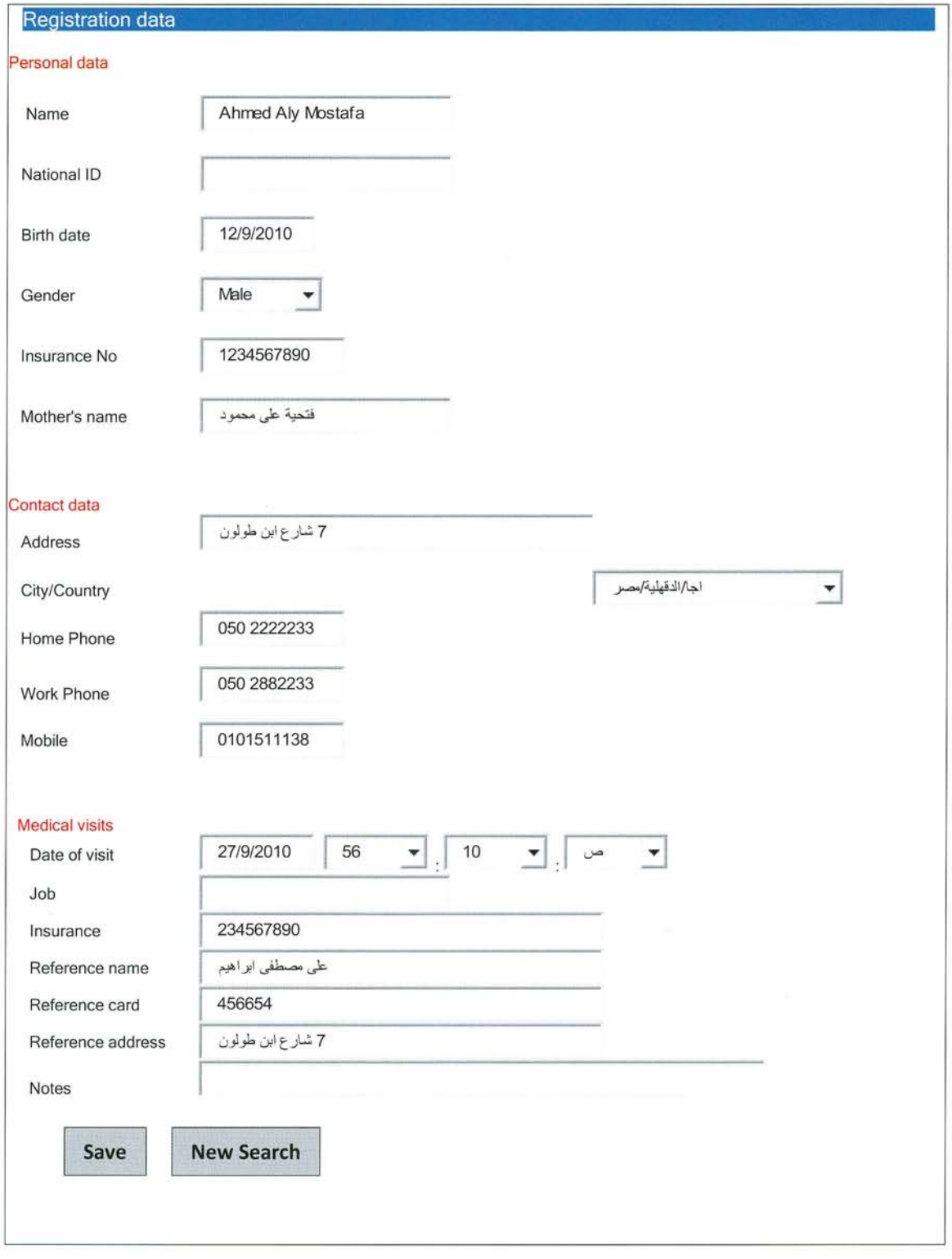


- You can search for the patient by its name or Network number. If there is no match, enter him/her as new patient. Otherwise, you can enter him as new visit.

- Fill data in the following screen. Although both names of patient and mother, address and city can be written in Arabic and English, please use the Arabic language. This is the only screen that accepts both languages. English will be used in all remaining screens.



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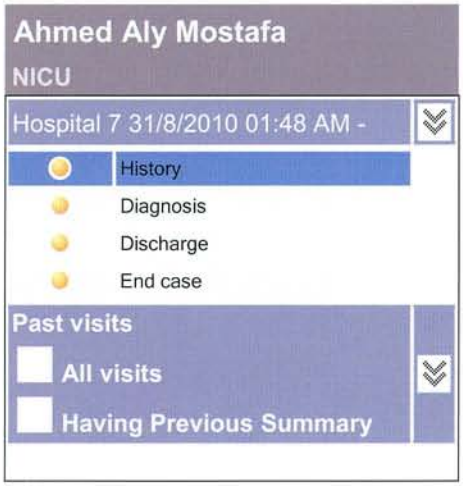
Click "**History**" on the left sided menu. The following 4 screens can be displayed



History SCREEN (1)

Admission Data | Maternal Data | Delivery Room Data | Respiratory support after leaving delivery room

Gestational Age* 32 weeks 0 days

Birth Weight* 2100 gm **Birth Length*** 42 cm

Birth Head Circ.* 29 cm

Sex* Male

Died in Delivery Room* No **Birth Location*** Inborn

Transferred from* Inborn

Date and time of admission 4/9/2010 21 00

Admission Weight 2000 gm **admission Length** 46.5 cm

Admission Head Circ. 33 cm

Doctor*

Save

If the birth date is the same day of admission, admission data (Weight, Length and Head Circ.) will be automatically taken from admission data. If not the same, you need to enter them.

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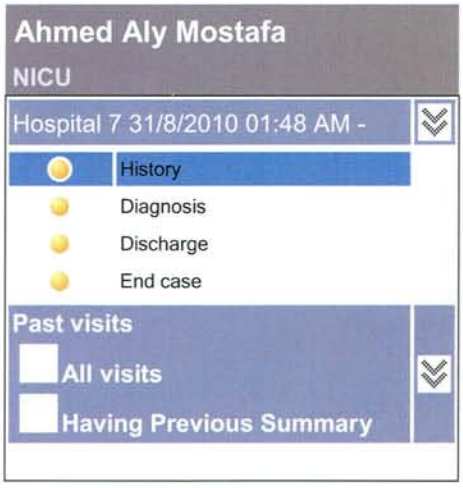

History SCREEN (2)

Admission Data Maternal Data Delivery Room Data Respiratory support after leaving delivery room

Maternal Hospital ID	8674	Maternal Age*	28
Gravidity*	1	Parity*	1
Number of living Children*	1	Prenatal Care*	No
Prenatal Steroids*	No	Mode of Delivery*	Vaginal/Spontanous
Multiple Birth*	No		

Save

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History SCREEN (3)

Admission Data | Maternal Data | Delivery Room Data | Respiratory support after leaving delivery room

Apgar Score

1Min* 4 5Min* 7

Oxygen* Yes Bag/Mask* No

Endotracheal Intubation* No Cardiac Compression* No

Medications* No / Epinephrine / Na HCO3 / Naloxon / Volume expander / Unknow n

Endotracheal Meconium Suction* No

Surfactant in delivery room* Yes

Time 05 15 Dose 6 ml

Save

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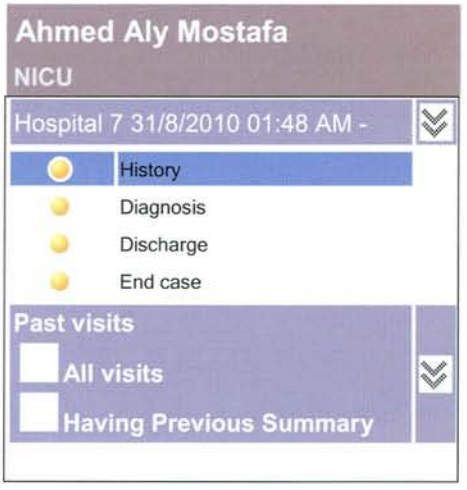

History SCREEN (4)

Admission Data | Maternal Data | Delivery Room Data | Respiratory support after leaving delivery room

Oxygen* Yes

NCPAP* Yes NCPAP before ETT ventilation No

Conventional ventilation* Yes HFV* No

High flow nasal canula* No Nasal(IMV or SIMV)* No

Duration of ventilation 10 days

Surfactant at any time rather than in delivery room* No

First Surfactant ---

Time --- --- Dose ml

Second Surfactant ---

Time --- --- Dose ml

O_2 on day 28* No O_2 at 36 weeks adjusted GA* Yes

Steroids for CLD* Yes

Indomethacin/Ibuprofen for PDA (Prophylactic)* No

Indomethacin/Ibuprofen for PDA (Therapeutic)* No

Save

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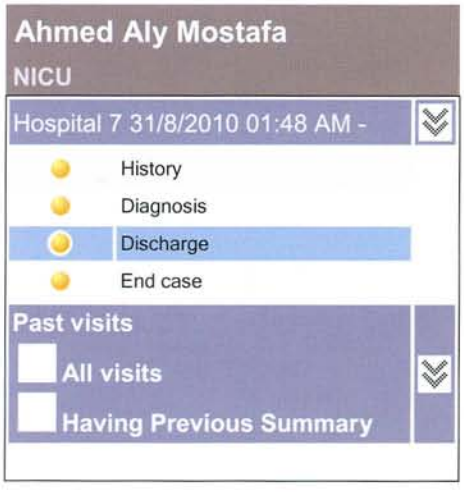
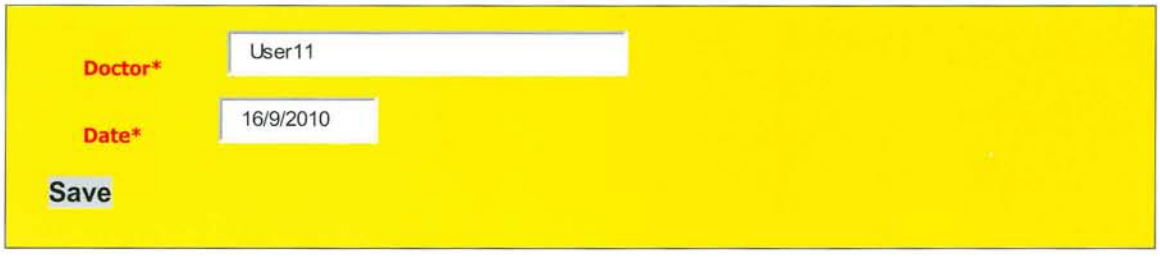
Click "**Discharge**" on the left sided menu. The following 4 screens can be displayed



Discharge SCREEN (1)

Discharge physician and date **Case Progress** **Death** **Procedures, Surgery** **Major Birth Defects** **Situation at discharge**



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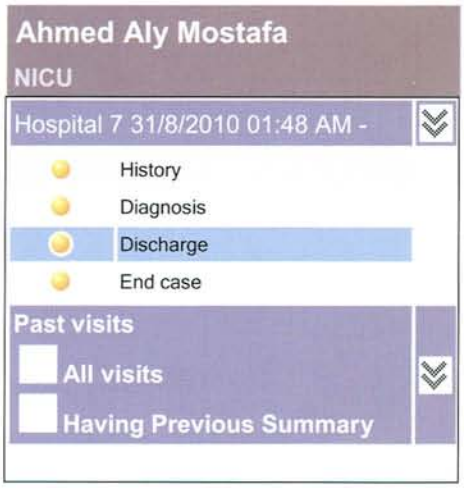

Discharge SCREEN (2)

Discharge: physician and date **Case Progress** **Death** **Procedures, Surgery** **Major Birth Defects** **Situation at discharge**

Medical Problems

RDS* No

Pneumothorax* No

NEC* No

Focal Gastrointestinal Perforation* No

Peri-Intraventricular Hemorrhage* G2

Cystic periventricular leukomalacia* No

Hypoxic ischemic encephalopathy* Mild

Meconiun aspiration syndrome* No

Seizures* Yes

Early Bacterial Sepsis and/or meningitis (before day 3)* Yes

Pathogen

- Achromobacter Species
- Acinetobacter Species
- Aeromonas Species
- Alcaligenes Species
- Bacteroides Species
- Burkholderia Species
- Campylobacter Species
- Chryseobacterium Species
- Citrobacter Species
- Clostridium Species

Antimicrobial

- Penicillin
- Cefaclor
- Meropenm
- Ampicillin
- Cefuroxime
- Amikacin
- Amoxycillin
- Cefoperazone
- Gentamycin
- Augmentin

Sepsis and/or meningitis-UTI-pneumonia (after day 3)* Yes

First episode Yes

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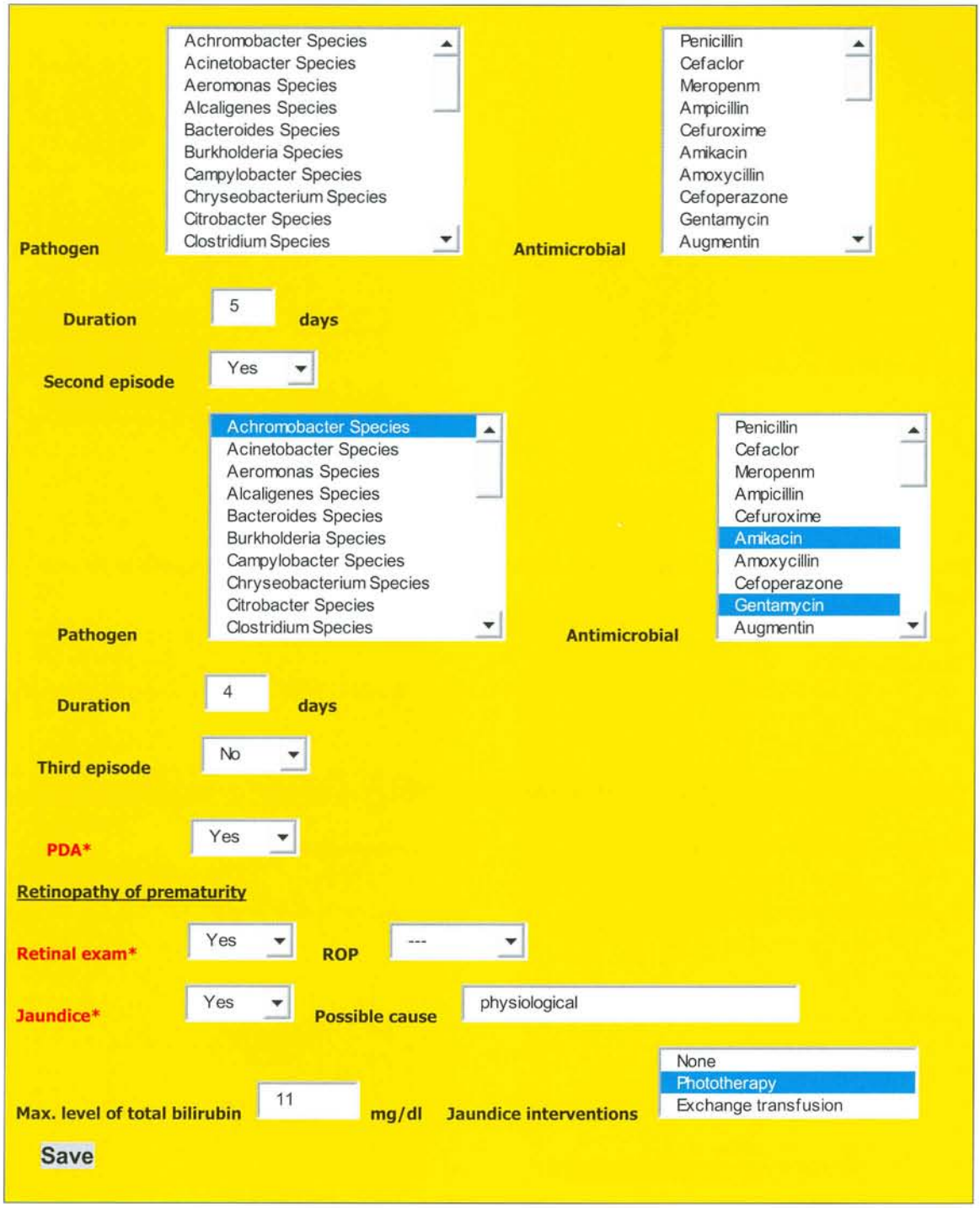

Note: Text appears in black color means it will not be displayed on the screen unless the answer of its preceeding relevant item is positive. ***Example:*** In the above screen the details of First and second episodes of sepsis appear because the preceeding answers of their presence are **"Yes"**. This is not the case when answer of the third episode is **"No"**.

In any selection box where there is a scrolling arrow you can select or deselect one or more item by holding **"ctrl"** Key

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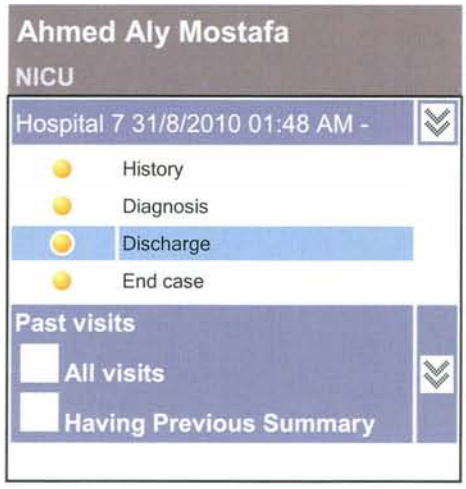

Discharge SCREEN (3)

Discharge physician and date **Case Progress** **Death** **Procedures, Surgery** **Major Birth Defects** **Situation at discharge**

Note: Text appears in black color means it will not be displayed on the screen unless the answer of its preceeding relevant item is positive. ***Example:*** In the above screen the details of Death will not appear if the answer to **"Death"** is **"No"**. This is not the case when answer is **"Yes"**.
In any selection box where there is a scrolling arrow you can select or deselect one or more item by holding **"ctrl"** Key. A box will appear when **"Others"** is selected and you can enter free text.

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Discharge SCREEN (4)

Discharge physician and date **Case Progress** **Death** **Procedures, Surgery** **Major Birth Defects** **Situation at discharge**

Procedures*

None
UVC
UAC
ETT
ICT
Blood transfusion
Exchange transfusion
PICC
CVL

Surgical Operation*

Common premature surgery

None
PDA ligation
ROP surgery
NEC surgery

Head and Neck

None
Tracheostomy/Tracheotomy
Cricoid split
Ophthalmologic surgery OTHER THAN laser or cryosurgery for ROP
Cleft lip or palate repair
Branchial cleft sinus excision
Thyroglossal duct excision
Palliative or definitive repair of choanal atresia
Mandibular (jaw) distraction
Craniotomy

Enter Free Text if select others

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Thorax

None
Tracheal Resection
Aortopexy
Tracheoesophageal atresia and/or fistula repair
Thoracoscopy (with or without pleuridesis or pleurectomy)
Thoracotomy (with or without pleural or lung biopsy)
Thoracotomy (or thoracoscopy) with pneumonectomy, lobectomy or partial
Resection of pulmonary sequestration (intrathoracic or extrathoracic)
Resection of mediastinal mass
Resection of chest wall

Enter Free Text if select others

Abdomen

None
Rectal biopsy with or without anoscopy
Laparoscopy (diagnostic, with/without biopsy)
Laparotomy (diagnostic or exploratory, with/without biopsy)
Fundoplication
Pyloromyotomy
Pyloroplasty
Jejunostomy, ileostomy, enterostomy, colostomy for intestinal diversion (with or
Small bowel resection with or without primary anastomosis
Large bowel resection

Enter Free Text if select others

Genito-Urinary

None
Adrenalectomy
Nephrectomy
Nephrostomy
Urteterostomy
Resection of urachal cyst
Cystostomy
Closure of bladder exstrophy
Resection of posterior urethral valves
Inguinal hernia repair

Enter Free Text if select other

Open heart/vascular procedures

None
Vascular Ring division
Repair of coarctation of the aorta
Repair of major vascular injury
Repair or palliation of congenital heart disease
Heart transplant
Implanted pacemaker (permanent – do not use code for temporary pacemakers)
Other open heart or vascular surgery requiring general or spinal anesthesia

Enter Free Text if select other

Diagnostic or interventional cardiac catheterization

None
Diagnostic cardiac catheterization
Interventional catheterization with balloon septostomy
Interventional catheterization with pulmonary valvuloplasty

Enter Free Text if select other

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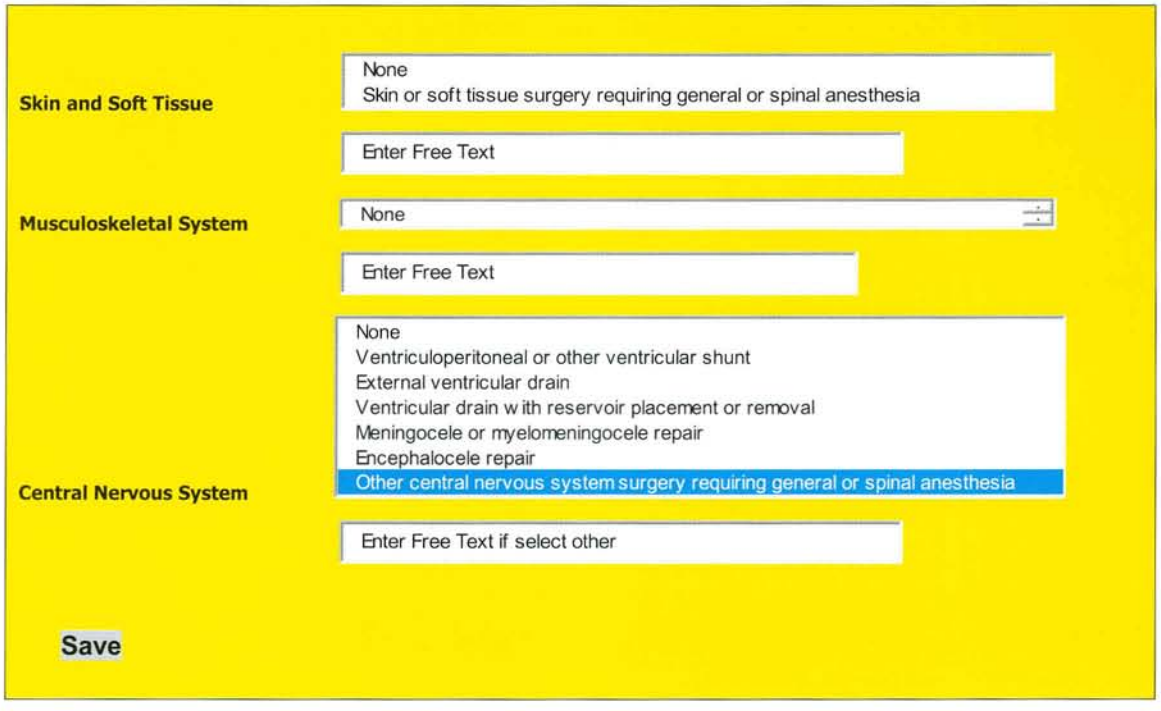

Note: In any selection box where there is a scrolling arrow you can select or deselect one or more item by holding **"ctrl"** Key. A box will appear when **"Others"** is selected and you can enter free text.

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Discharge SCREEN (5)

Discharge physician and date **Case Progress** **Death Procedures, Surgery** **Major Birth Defects** **Situation at discharge**

O_2 at Discharge* No

Apnea or Cardio-Respiratory Monitor at Discharge* No

Enternal feeding at discharge*

Yes | Human milk + (fortifier or formula) | Bebalac EC

Ultimate Disposition*

Transferred to another hospital | Enter Free Text

Date of Disposition* 22/09/201(

Weight at Disposition* 3850 **gm**

Length at Disposition* 58 **cm**

Head Circ. at Disposition* 36.5 **cm**

Save

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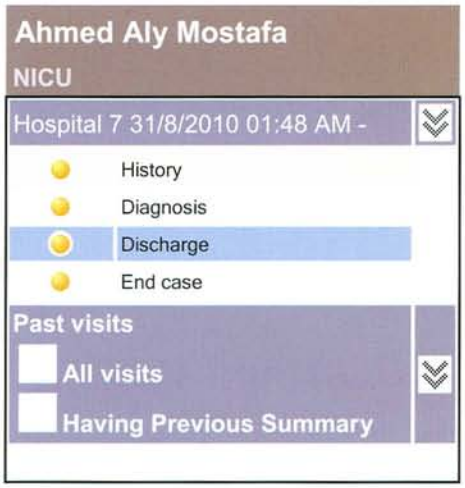

Discharge SCREEN (6)

Discharge physician and date | Case Progress | Death | Procedures, Surgery | Major Birth Defects | Situation at discharge

Central Nervous System

- Anencephaly
- Meningomyelocele
- Hydranencephaly
- Congenital Hydrocephalus
- Holoprosencephaly
- Other lethal or life threatening central nervous system defects not listed above

Chromosomal Abnormalities

- Trisomy 13
- Trisomy 18
- Trisomy 21
- Other Chromosomal Anomaly

Congenital Heart

- Truncus Arteriosus
- Transposition of the Great Vessels
- Tetralogy of Fallot
- Single Ventricle
- Double Outlet Right Ventricle
- Complete Atrio-Ventricular Canal
- Pulmonary Atresia
- Tricuspid Atresia
- Hypoplastic Left Heart Syndrome
- Interrupted Aortic Arch

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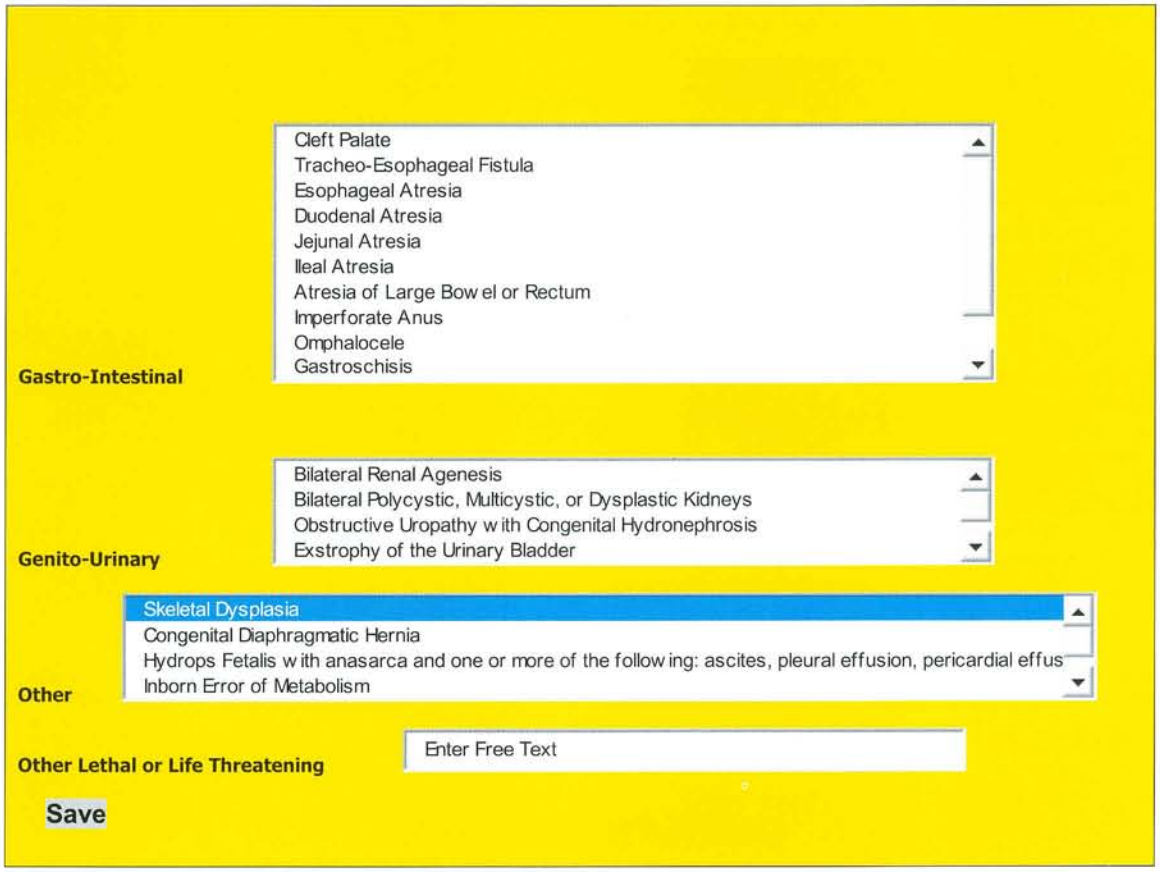

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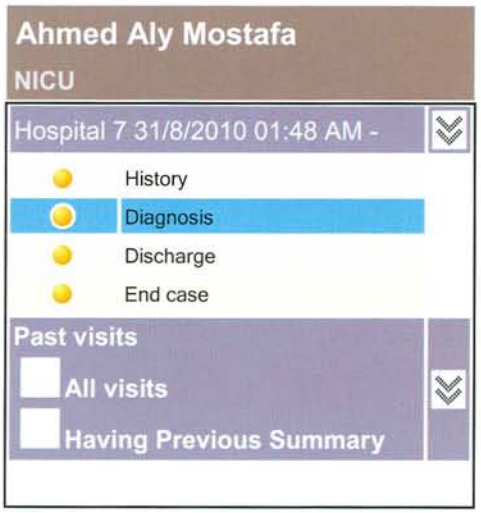
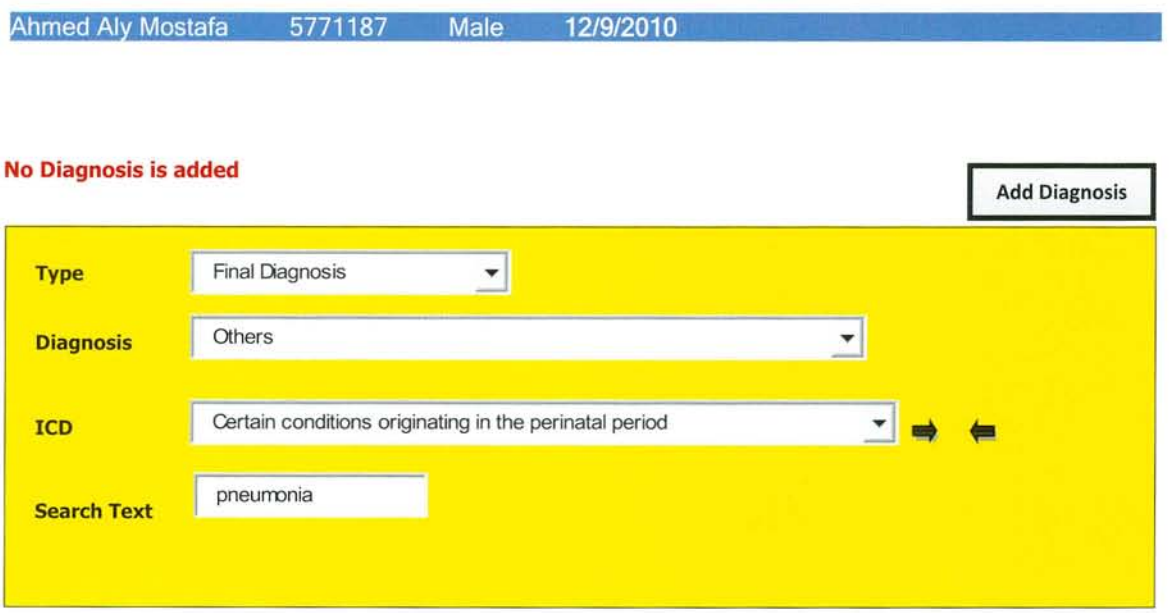
Click "**Diagnosis**" on the left sided menu. The following screen will be displayed



DIAGNOSIS SCREEN



- You can choose final or provisional Diagnosis
- You can scroll to choose from previously entered diagnosis ***(arranged alphabetically)***
- You can search ICD10

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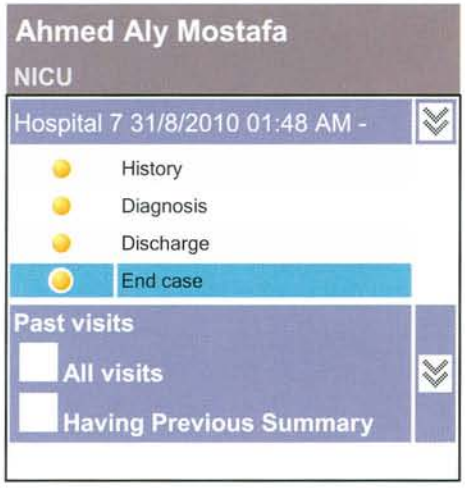

End Case SCREEN

Note: This is the last screen. You select how you end the case:

- **"Discharge"** alive and not directed to any *"Neonatal Follow up program"*
- **"Transfer to other hospital"** you need to enter Hospital name as Free text in the box that appears.
- **"for Follow up"** program if baby is directed to any *"Neonatal Follow up program"*
- **"Dead"** if the baby is discharged dead

Once you click **"save"** the patient name will disappear when you leave this screen. Now you can retrieve patient data only if you click **"Pateint Medical Records"** in the top left corner of the screen. It is locked data that can be read only. To change any data you need to contact DMC staff.

Finally, you can download any selected medical data by exporting it to Excel file format.

Appendices

Appendix (A) - 28 Day/Discharge Form

Appendix (B) - Delivery Room Death Form

Appendix (C) - Patient Log 2010

Appendix (D) - EGNN Participating Centers

Appendix (E) - ICD 10

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Egyptian Neonatal Network
28 Day/Discharge Form

Form Number: 04

52. **BIRTH DEFECT**	No □	Yes □	
	Description	CODE	ICD10CM
1)			
2)			
3)			
4)			
5)			

53. **Situation at discharge**			
a)	O_2 at discharge	No □	Yes □
b)	Apnea or Cardio-Respiratory Monitor at discharge	No □	Yes □
c)	Enteral feeding of discharge	No □	Yes □
	a. Human milk only	No □	Yes □
	b. Formula only	No □	Yes □ Name:
	c. Human milk + (Fortifier or formula)	No □	Yes □ Name:

54. **Initial Disposition**		
Home □	Died □	Still hospitalized of first birthday □
Transferred to another hospital □	Name: _____	
Date of disposition (MM/DD/YYYY) __ __/__ __/_____		

55. **Weight at disposition** _____ **g.**	56. **Length at disposition** __ __.__ **cm.**
57. **Head circumference at disposition** __ __.__ **cm**	

58. **Diagnosis (ICD10):**

a) ----------
b) ----------
c) ----------
d) ----------
e) ----------
f) ----------

59. **Notes:**

Completed □ **at:** / / / **by Dr.** _____	**Electronically entered** □ **at:** / / /

(A1)

Contact Help Desk at:
dmc@egynewborn.net
Mobile: 010 15 111 38

www.egynewborn.net
PO Box 35, Post Code 25516,
Mansoura, Egypt

Egyptian Neonatal Network
28 Day/Discharge Form

Form Number: 04

Network ID:__ __ __/ __ __/ __ __/____/ _____	**Center Name:**
Date of birth (DD/MM/YYYY): __ __/__ __/_____	**Time of birth:** __ __: __ __ (24:00 h based)

1. **Gestational Age** __ __ weeks and days __ (0-6)	2. **Birth Weight** _____ **g**
3. **Length** _____ **cm**	4. **Head Circumference:** _____ **cm**

5. **Sex of infant**	Male □	Female □	Unknown □
6. **Died in Delivery Room**		No □	Yes □
7. **Location of Birth**	□ Inborn	□ Outborn	8. **Transferred from** _____
9. **Date and time of admission to the NICU (DD/MM/YYYY):** __ __/__ __/_____			

10. **Maternal Hospital ID** _____		
11. **Maternal Age:** __ __ **years**	12. **Gravidity**: __ __	13. **Parity**: __ __
14. **Number of living Children** : __ __		

15. **Prenatal Care**	No □	Yes □	Unknown □		
16. **Antenatal Steroids**	No □	Yes □	Betamethasone □	Dexamethasone □	Hydrocortisone □
17. **Mode of Delivery**	Cesarean Section □		Vaginal □	Spontaneous □	Ventose □ Forceps □
18. **Multiple Birth**	No □	Yes □	N° of fetuses __		N° Order __

19. **Apgar** 1min __ __ Apgar 5 min __ __

20. **Delivery Room (or Initial) Resuscitation**

a. Oxygen		No □	Yes □	Unknown □
b. Bag/Mask		No □	Yes □	Unknown □
c. Endotracheal Intubation		No □	Yes □	Unknown □
d. Medication (Epinephrine, $NaHCO_3$, Naloxone, Volume Expander)		No □	Yes □	Unknown □
e. Cardiac compression		No □	Yes □	Unknown □
f. Endotracheal meconium suction	N/A □	No □	Yes □	Unknown □
21. **Surfactant in the delivery room**		No □	Yes □	Unknown □
Surfactant dose: Time (24:00)__ : __ Dose____ mg				

Appendix (A)

Contact Help Desk at:
dmc@egynewborn.net
Mobile: 010 15 111 38

www.egynewborn.net
PO Box 35, Post Code 25516,
Mansoura, Egypt

Egyptian Neonatal Network
28 Day/Discharge Form

Form Number: 04

22. **Respiratory support after leaving delivery room**						
a. Oxygen	No □	Yes □				
b. NCPAP	No □	Yes □	If Yes, NCPAP before ETT ventilation	No □	Yes □	
c. Conventional Ventilation	No □	Yes □	**d. HFV**	No □	Yes □	
e. High flow nasal cannula	No □	Yes □	**f. Nasal (IMV or SIMV)**	No □	Yes □	
23. **Duration of ventilation** __ __	Partial or complete days					
24. **Surfactant at any time rather than in delivery room**	No □	Yes □	Unknown □			

If 24 is yes: Surfactant timing and dosing:

Date:	Time (24:00):	Dose:	
Surfactant 1st dose: __/__/___	__ __: __ __	__ __ __ mg	Unknown □
Surfactant 2nd dose: __/__/___	__ __: __ __	__ __ __ mg	Unknown □
Surfactant 3rd dose: __/__/___	__ __: __ __	__ __ __ mg	Unknown □

25. **O_2 on day 28**	No □	Yes □	N/A □
26. **O_2 at 36 weeks adjusted gestational age**	No □	Yes □	N/A □
27. **Steroids for CLD**	No □	Yes □	N/A □
28. **Indomethacin/Ibuprofen for PDA (Prophylactic)**	No □	Yes □	
29. **Indomethacin/Ibuprofen for PDA (Therapeutic)**	No □	Yes □	
30. **Surgery (common premature surgery)**			
a) PDA ligation	No □	Yes □	
b) ROP surgery	No □	Yes □	
c) NEC surgery	No □	Yes □	
d) Other major surgery (Except NEC, PDA and ROP)	No □	Yes □	

If yes, Specify _____

31. **RDS**	No □	Yes □	32. **Pneumothorax**	No □	Yes □
33. **NEC**	No □	Yes □	34. **Focal gastrointestinal perforation**	No □	Yes □

35. **Peri-Intraventricular Hemorrhage, (cranial ultrasound done before day 28)**		
No U/S □	Yes U/S □	Grades (0-4) ____

36. **Cystic periventricular leukomalacia**	No □	Yes □	N/A □

Diagnosed at date: (DD/MM/YYYY) __ __/__ __/__ __ __ __

Egyptian Neonatal Network
28 Day/Discharge Form

Form Number: 04

37. **Hypoxic Ischemic Encephalopathy (HIE)**	N/A	No □	Yes □	Mild □	Moderate □	Severe □
38. **Meconium Aspiration Syndrome (MAS)**		No □	Yes □			
39. **Seizures**		No □	Yes □			
40. **Early bacterial sepsis and/or meningitis (≤ day 3)**		No □	Yes □	Pathogen:____ _____		
41. **Sepsis and/or meningitis, late (after day 3)**						
1st episode -		No □	Yes □	Pathogen : ____,____,____		
2nd episode -		No □	Yes □	Pathogen: ____,____,____		
3rd episode -		No □	Yes □	Pathogen: ____,____,____		
42. **Patent Ductus Arteriosus (PDA)**		No □	Yes □			

43. **Retinopathy of Prematurity (ROP)**					
a) Retinal exam	No □	Yes □			
b) ROP	No □	Yes □	Grades (1-4) ____ Unknown □		
c) Plus Disease	No □	Yes □			
44. **Jaundice**	No □	Yes □	Possible Cause: ----------	Maxim. T. Bilirubin _ _. _ mg/dl	
45. **Jaundice interventions**					
a) Phototherapy	No □	Yes □	b) Exchange transfusion	No □	Yes □

46. **Procedures**			
UVC □	UAC □	ICT □	Blood Transfusion □
Exchange Transfusion □	PICC □	CVL □	Venous Cut down □

47. **Death**	No □	Yes □

48. **Date of death in days (DD/MM/YYYY)** __ __/__ __/_____ and hours __ __ : __ __ (24:00 h)

49. **Cause of death:**	Respiratory failure	□	Sepsis	□
	Neurological	□	Congenital malformation	□
	Unknown	□		
	Other causes	□	Specify: _____	

50. **Autopsy performed**	No □	Yes □
51. **Therapeutic efforts limited?**	No □	Yes □

Appendix (B)

Egyptian Neonatal Network
Delivery Room Death Form

Form Number: 03

Network ID:__ __ __/ __ __/ __ __/____/ _____			**Center Name:**
Date of birth (DD/MM/YYYY): __ __/ __ __/ ____			**Time of birth:** __ __: __ __ (24:00 h based)
1. **Gestational Age** __ __ weeks and days __ (0-6)			2. **Birth Weight** _____ **g**
3. **Length** _____ **cm**			4. **Head Circumference**: _____ **cm**
5. **Sex of infant**	Male □	Female □	Unknown □
6. **Died in Delivery Room**		No □	Yes □
7. **Location of Birth**	□ Inborn	□ Outborn	8. **Transferred from** _____
9. **Date and time of admission to the NICU (DD/MM/YYYY):** __ __/ __ __/ ____			

10. **Maternal Hospital ID** _____					
11. **Maternal Age:** __ **years**		12. **Gravidity**: __		13. **Parity**: __	
14. **Number of living Children** : __					
15. **Prenatal Care**	No □	Yes □		Unknown □	
16. **Antenatal Steroids**	No □	Yes □	Betamethasone □	Dexamethasone □	Hydrocortisone □
17. **Mode of Delivery**	Cesarean Section □	Vaginal □	Spontaneous □	Ventose □	Forceps □
18. **Multiple Birth**	No □	Yes □	N° of fetuses __	N° Order __	

19. **Apgar** 1min __ __ Apgar 5 min __ __			
20. **Delivery Room (or Initial) Resuscitation**			
a. Oxygen	No □	Yes □	Unknown □
b. Bag/Mask	No □	Yes □	Unknown □
c. Endotracheal Intubation	No □	Yes □	Unknown □
d. Medication (Epinephrine, $NaHCO_3$, Naloxone, Volume Expander)	No □	Yes □	Unknown □
e. Cardiac compression	No □	Yes □	Unknown □
f. Endotracheal meconium suction	No □	Yes □	Unknown □
21. **Surfactant in the delivery room**	No □	Yes □	Unknown □
Surfactant dose: h/h__ : __ ____ mg			

Contact Help Desk at:
dmc@egynewborn.net
Mobile: 010 15 111 38

www.egynewborn.net
PO Box 35, Post Code 25516,
Mansoura, Egypt

Appendix (B)

Egyptian Neonatal Network
Delivery Room Death Form

Form Number: 03

49. **Date of death in days (DD/MM/YYYY)** __ __/ __ __/_____ and hours __ __ : __ __ (24:00 h)				
50. **Cause of death:**	Respiratory failure	□	Sepsis	□
	Neurological	□	Congenital malformation	□
	Unknown	□		
	Other causes	□	Specify: _____	
51. **Autopsy performed**	No □		Yes □	
52. **Therapeutic efforts limited?**	No □		Yes □	
53. **BIRTH DEFECT**	No □		Yes □	

	Description	CODE	ICD10CM
1)			
2)			
3)			
4)			
5)			

58. **Diagnosis (ICD10):**

a. ----------
b. ----------
c. ----------
d. ----------
e. ----------
f. ----------

59. **Notes:**

Completed □ **at:** / / / **by Dr.** _____	**Electronically entered** □ **at:** / / /

Contact Help Desk at:
dmc@egynewborn.net
Mobile: 010 15 111 38

www.egynewborn.net
PO Box 35, Post Code 25516,
Mansoura, Egypt

EGNN - Form 1

EGYPTIAN NEONATAL NETWORK
PATIENT LOG 2010

European Commission
TEMPUS

Center Name _____

Medical Record Number	Patient's Name (Arabic)	Network ID Number	Birth Date (MM/DD/YY)	DR Death? (Yes/No)	Admission Date (MM/DD/YY)	28 Day/Discharge Form Date Sent (MM/DD/YY)	Discharge Date (MM/DD/YY)	Transfer To

Patient logs include protected health care information .
Do not submit to the Egyptian Neonatal Network

Detach this part & send it to EGNN

Sent at / /

(C1)

Appendix (C)

EGNN - Form 1

EGYPTIAN NEONATAL NETWORK
PATIENT LOG 2010

European Commission
TEMPUS

Center Name _____

Medical Record Number	Patient's Name (Arabic)	Network ID Number	Birth Date (MM/DD/YY)	DR Death? (Yes/No)	Admission Date (MM/DD/YY)	28 Day/Discharge Form Date Sent (MM/DD/YY)	Discharge Date (MM/DD/YY)	Transfer To

Patient logs include protected health care information for your center's internal use only.
Do not submit to the Egyptian Neonatal Network

هذا المستند يظهر إسم المريض لذا يعد من البيانات السرية التى يحظر إرسالها الى الشبكة المصرية لطب الأطفال حديثى الولادة

(C2)

Appendix (C)

Appendix (D)

EGNN Participating Centers

Medical Center/Hospital	City	Year of Joining
1.Mansoura University Children's Hospital*	Mansoura	2010
2.Mansoura Insurance Hospital*	Mansoura	2010
3.ALZahraa Hospital*	Cairo	2010
4.Tanta University Hospital*	Tanta	2010
5.Ain Shams University Children's Hospital*	Cairo	2010
6.EL-Shatby Hospital*	Alexandria	2010
7.Al-Kods Hospital *	Al-Mahala Al-Kobra	2010
8.Elgameyya Elshareyya	Kafr ELSheikh	2010
9.ELgameyya ELshareyya	Balteem	2010
10.Assad Ibn El-Forat Center*	Etay El-Barood	2010
11.Lauran Hospital*	Alexandria	2010
12.El Mounira University Children Hospital*	Cairo	2010
13.Alexandria Pediatric Center*	Alexandria	2010
14.Alexandria New Medical Center*	Alexandria	2011
15.Al Hussein University Hospital	Cairo	2011
16.Mitghamr General Hospital*	Dakados-Mitghamr	2011
17.Mansoura General Hospital	Mansoura	2011
18.Dekernes General Hospital	Dekernes	2011
19.AL Wadi Pediatrics & Neonatology Center	Mansoura	2011
20.Ahmad Maher Teaching Hospital	Cairo	2011
21.Talkha General Hospital	Talkha	2011

* Participate in Data Entry

EGNN Partners

EuroNeoNet (ENN)

Egyptian Association of Neonatology (ENA)

Egyptian Society for Neonatal and Preterm Care (ESNPC)

Healthy Newborn Network (HNN)

Appendix (E)

CLASSIFICATION OF OTHER DIAGNOSIS LIST

Name	ICD 10
ABO isoimmunization of fetus and newborn	P55.1
Acquired periventricular cysts of newborn	P91.1
Anaemia of prematurity	P61.2
Antepartum fetal asphyxia first noted before onset of labour	P20.0
Asymmetric intrauterine growth restriction [IUGR]	P05.91
Birth injuries to other parts of peripheral nervous system	P14.8
Birth injuries to other parts of skeleton	P13.8
Birth injury to central nervous system, unspecified	P11.9
Birth injury to external genitalia	P15.5
Birth injury to eye	P15.3
Birth injury to face	P15.4
Birth injury to facial nerve	P11.3
Birth injury to femur	P13.2
Birth injury to humerus	P13.30
Birth injury to liver	P15.0
Birth injury to other cranial nerves	P11.4
Birth injury to other long bones	P13.38
Birth injury to peripheral nervous system, unspecified	P14.9
Birth injury to scalp, unspecified	P12.9
Birth injury to skeleton, unspecified	P13.9
Birth injury to spine and spinal cord	P11.5
Birth injury to spleen	P15.1
Birth injury, unspecified	P15.9
Breast engorgement of newborn	P83.4
Bronchopulmonary dysplasia originating in the perinatal period	P27.1
Bruising of scalp due to birth injury	P12.3
Cardiomyopathy	I42
Cardiovascular disorder originating in the perinatal period, unspecified	P29.9
Cephalhaematoma due to birth injury	P12.0
Cerebellar (nontraumatic) and posterior fossa haemorrhage of fetus and newborn	P52.6
Cerebral haemorrhage due to birth injury	P10.1
Cerebral oedema due to birth injury	P11.0
Chignon due to birth injury	P12.1
Cold injury syndrome	P80.0
Complications of intrauterine procedures, not elsewhere classified	P96.5
Condition of integument specific to fetus and newborn, unspecified	P83.9
Condition originating in the perinatal period, unspecified	P96.9
Congenital anaemia from fetal blood loss	P61.3
Congenital cirrhosis (of liver)	P78.80
Congenital cytomegalovirus infection	P35.1
Congenital falciparum malaria	P37.3
Congenital herpesviral [herpes simplex] infection	P35.2
Congenital hydrocele	P83.5
Congenital hypertonia	P94.1
Congenital hypotonia	P94.2
Congenital infectious and parasitic disease, unspecified	P37.9
Congenital pneumonia due to Chlamydia	P23.1
Congenital pneumonia due to Escherichia coli	P23.4
Congenital pneumonia due to other bacterial agents	P23.6

Congenital pneumonia due to other organisms	P23.8
Congenital pneumonia due to Pseudomonas	P23.5
Congenital pneumonia due to staphylococcus	P23.2
Congenital pneumonia due to streptococcus, group B	P23.3
Congenital pneumonia due to viral agent	P23.0
Congenital pneumonia, unspecified	P23.9
Congenital renal failure	P96.0
Congenital rubella syndrome	P35.0
Congenital toxoplasmosis	P37.1
Congenital tuberculosis	P37.0
Congenital viral disease, unspecified	P35.9
Congenital viral hepatitis	P35.3
Cyanotic attacks of newborn	P28.2
Dehydration of newborn	P74.1
Depressed skull fracture due to birth injury	P13.01
Disorder of muscle tone of newborn, unspecified	P94.9
Disseminated intravascular coagulation of fetus and newborn	P60
Disturbance of temperature regulation of newborn, unspecified	P81.9
Embolism and thrombosis of unspecified artery	I74.9
Embolism and thrombosis of unspecified vein	I82.9
Embolism and thrombosis of abdominal aorta	I74.0
Embolism and thrombosis of vena cava	I82.2
Embolism and thrombosis of renal vein	I82.3
Embolism and thrombosis of arteries of upper extremities	I74.2
Embolism and thrombosis of arteries of lower extremities	I74.3
Environmental hyperthermia of newborn	P81.0
Epicranial subaponeurotic haemorrhage due to birth injury	P12.2
Erb's paralysis due to birth injury	P14.0
Extreme immaturity	P07.2
Feeding problem of newborn, unspecified	P92.9
Fetal asphyxia, unspecified when first noted	P20.9
Fetal blood loss from cut end of co-twin's cord	P50.5
Fetal blood loss from placenta	P50.2
Fetal blood loss from ruptured cord	P50.1
Fetal blood loss from vasa praevia	P50.0
Fetal blood loss, unspecified	P50.9
Fetal death of unspecified cause	P95
Fetal malnutrition without mention of light or small for gestational age	P05.2
Fracture of clavicle due to birth injury	P13.4
Gastroesophageal reflux disease	K21
Haemolytic disease of fetus and newborn, unspecified	P55.9
Haemorrhage into co-twin	P50.3
Haemorrhage into maternal circulation	P50.4
Haemorrhagic disease of fetus and newborn	P53
Hydrops fetalis due to isoimmunization	P56.0
Hydrops fetalis due to other and unspecified haemolytic disease	P56.9
Hydrops fetalis not due to haemolytic disease	P83.2
Hyperkalaemia of newborn	P74.31
Hypernatraemia of newborn	P74.21
Hypokalaemia of newborn	P74.30
Hyponatraemia of newborn	P74.20
Hypothermia of newborn, unspecified	P80.9
Hypoxic ischaemic encephalopathy of newborn	P91.6

Iatrogenic neonatal hypoglycaemia	P70.3
Infection specific to the perinatal period, unspecified	P39.9
Inspissated bile syndrome	P59.1
Intestinal obstruction due to inspissated milk	P76.2
Intestinal obstruction of newborn, unspecified	P76.9
Intra-amniotic infection of fetus, not elsewhere classified	P39.2
Intracerebral (nontraumatic) haemorrhage of fetus and newborn	P52.4
Intracranial (nontraumatic) haemorrhage of fetus and newborn, unspecified	P52.9
Intrapartum fetal asphyxia first noted during labour and delivery	P20.1
Intraventricular haemorrhage due to birth injury	P10.2
Kernicterus due to isoimmunization	P57.0
Kernicterus, unspecified	P57.9
Klumpke's paralysis due to birth injury	P14.1
Late metabolic acidosis of newborn	P74.0
Linear skull fracture due to birth injury	P13.00
Meconium ileus	P75
Meconium plug syndrome	P76.0
Monitoring injury of scalp of newborn	P12.4
Neonatal (disseminated) listeriosis	P37.2
Neonatal adrenal haemorrhage	P54.4
Neonatal aspiration of amniotic fluid and mucus	P24.1
Neonatal aspiration of blood	P24.2
Neonatal aspiration of meconium	P24.0
Neonatal aspiration of milk and regurgitated food	P24.3
Neonatal aspiration syndrome, unspecified	P24.9
Neonatal candidiasis	P37.5
Neonatal cardiac dysrhythmia	P29.1
Neonatal cardiac failure	P29.0
Neonatal cerebral depression	P91.4
Neonatal cerebral irritability	P91.3
Neonatal cerebral ischaemia	P91.0
Neonatal cerebral leukomalacia	P91.2
Neonatal coma	P91.5
Neonatal conjunctivitis and dacryocystitis	P39.1
Neonatal cutaneous haemorrhage	P54.5
Neonatal diabetes mellitus	P70.2
Neonatal difficulty in feeding at breast	P92.5
Neonatal erythema toxicum	P83.1
Neonatal goitre, not elsewhere classified	P72.0
Neonatal haematemesis	P54.0
Neonatal haematemesis and melaena due to swallowed maternal blood	P78.2
Neonatal haemorrhage, unspecified	P54.9
Neonatal hypertension	P29.2
Neonatal hypomagnesaemia	P71.2
Neonatal infective mastitis	P39.0
Neonatal jaundice from breast milk inhibitor	P59.3
Neonatal jaundice from other and unspecified hepatocellular damage	P59.2
Neonatal jaundice from other specified causes	P59.8
Neonatal jaundice, unspecified	P59.9
Neonatal melaena	P54.1
Neonatal rectal haemorrhage	P54.2
Neonatal skin infection	P39.4
Neonatal tetany without calcium or magnesium deficiency	P71.3

Neonatal urinary tract infection	P39.3
Neonatal vaginal haemorrhage	P54.6
Neonatal withdrawal symptoms from maternal use of drugs of addiction	P96.1
Newborn asphyxia, unspecified	P21.9
Noninfective neonatal diarrhoea	P78.3
Omphalitis of newborn with or without mild haemorrhage	P38
Other and unspecified atelectasis of newborn	P28.1
Other and unspecified oedema specific to fetus and newborn	P83.3
Other apnoea of newborn	P28.4
Other birth injuries to scalp	P12.8
Other birth injuries to skull	P13.1
Other brachial plexus birth injuries	P14.3
Other cardiovascular disorders originating in the perinatal period	P29.8
Other chronic respiratory diseases originating in the perinatal period	P27.8
Other conditions related to interstitial emphysema originating in the perinatal period	P25.8
Other congenital anaemias, not elsewhere classified	P61.4
Other congenital malaria	P37.4
Other congenital viral diseases	P35.8
Other disorders of muscle tone of newborn	P94.8
Other feeding problems of newborn	P92.8
Other fetal blood loss	P50.8
Other haemolytic diseases of fetus and newborn	P55.8
Other hypothermia of newborn	P80.8
Other intracranial (nontraumatic) haemorrhages of fetus and newborn	P52.8
Other intracranial lacerations and haemorrhages due to birth injury	P10.8
Other neonatal aspiration syndromes	P24.8
Other neonatal gastrointestinal haemorrhage	P54.3
Other neonatal hypocalcaemia	P71.1
Other neonatal hypoglycaemia	P70.4
Other neonatal peritonitis	P78.1
Other pulmonary haemorrhages originating in the perinatal period	P26.8
Other respiratory distress of newborn	P22.8
Other specified birth injuries	P15.8
Other specified brain damage due to birth injury	P11.1
Other specified conditions of integument specific to fetus and newborn	P83.8
Other specified conditions originating in the perinatal period	P96.8
Other specified congenital infectious and parasitic diseases	P37.8
Other specified disturbances of temperature regulation of newborn	P81.8
Other specified infections specific to the perinatal period	P39.8
Other specified intestinal obstruction of newborn	P76.8
Other specified kernicterus	P57.8
Other specified neonatal haemorrhages	P54.8
Other specified perinatal digestive system disorders	P78.88
Other specified perinatal haematological disorders	P61.8
Other specified respiratory conditions of newborn	P28.8
Other specified transitory neonatal endocrine disorders	P72.8
Other transient neonatal disorders of coagulation	P61.6
Other transitory disorders of carbohydrate metabolism of fetus and newborn	P70.8
Other transitory electrolyte disturbances of newborn	P74.4
Other transitory metabolic disturbances of newborn	P74.8
Other transitory neonatal disorders of calcium and magnesium metabolism	P71.8
Other transitory neonatal disorders of thyroid function, not elsewhere classified	P72.2

Other/multiple skull fracture due to birth injury	P13.08
Overfeeding of newborn	P92.4
Paralysis of vocal cords and larynx	J38.0
Perinatal digestive system disorder, unspecified	P78.9
Perinatal haematological disorder, unspecified	P61.9
Perinatal intestinal perforation	P78.0
Persistent fetal circulation	P29.3
Persistent pulmonary hypertension	P99.9
Phrenic nerve paralysis due to birth injury	P14.2
Pneumomediastinum originating in the perinatal period	P25.2
Pneumopericardium originating in the perinatal period	P25.3
Polycythaemia neonatorum	P61.1
Portal vein thrombosis	I81
Primary atelectasis of newborn	P28.0
Primary sleep apnoea of newborn	P28.3
Pulmonary edema	J81
Pulmonary Interstitial emphysema originating in the perinatal period	P25.0
Reactions and intoxications due to drugs administered to fetus and newborn	P93
Regurgitation and rumination in newborn	P92.1
Respiratory condition of newborn, unspecified	P28.9
Respiratory distress of newborn, unspecified	P22.9
Respiratory failure of newborn	P28.5
Rh isoimmunization of fetus and newborn	P55.0
Sclerema neonatorum	P83.0
Slow feeding of newborn	P92.2
Sternomastoid injury due to birth injury	P15.2
Subarachnoid (nontraumatic) haemorrhage of fetus and newborn	P52.5
Subarachnoid haemorrhage due to birth injury	P10.3
Subcutaneous fat necrosis due to birth injury	P15.6
Subdural haemorrhage due to birth injury	P10.0
Symmetric intrauterine growth restriction [IUGR]	P05.90
Syndrome of infant of a diabetic mother	P70.1
Syndrome of infant of mother with gestational diabetes	P70.0
Tentorial tear due to birth injury	P10.4
Tracheobronchial haemorrhage originating in the perinatal period	P26.0
Transient myocardial ischaemia of newborn	P29.4
Transient neonatal myasthenia gravis	P94.0
Transient neonatal neutropenia	P61.5
Transient neonatal thrombocytopenia	P61.0
Transient tachypnoea of newborn	P22.1
Transitory disorder of carbohydrate metabolism of fetus and newborn, unspecified	P70.9
Transitory ileus of newborn	P76.1
Transitory metabolic disturbance of newborn, unspecified	P74.9
Transitory neonatal disorder of calcium and magnesium metabolism, unspecified	P71.9
Transitory neonatal endocrine disorder, unspecified	P72.9
Transitory neonatal hyperthyroidism	P72.1
Transitory neonatal hypoparathyroidism	P71.4
Transitory tyrosinaemia of newborn	P74.5
Umbilical polyp of newborn	P83.6
Underfeeding of newborn	P92.3

Unspecified brain damage due to birth injury	P11.2
Unspecified chronic respiratory disease originating in the perinatal period	P27.9
Unspecified disturbance of potassium balance of newborn	P74.39
Unspecified disturbance of sodium balance of newborn	P74.29
Unspecified intracranial laceration and haemorrhage due to birth injury	P10.9
Unspecified intrauterine growth restriction [IUGR]	P05.99
Unspecified skull fracture due to birth injury	P13.09
Vomiting in newborn	P92.0
Wilson-Mikity syndrome	P27.0
Withdrawal symptoms from therapeutic use of drugs in newborn	P96.2

CLASSIFICATION OF CONGENITAL ANOMALIES

System	Name	ICD10	Comments
Cardiac Chambers And Circulation	Atrial Septal Defect	Q21.1	
Cardiac Chambers And Circulation	Atrioventricular Septal Defect	Q21.2	
Cardiac Chambers And Circulation	Coarctation Of The Aorta	Q25.1	
Cardiac Chambers And Circulation	Congenital Absence And Hypoplasia Of The Umbilical Artery (Single Umbilical Artery)	Q27.0	
Cardiac Chambers And Circulation	Congenital Heart Block	Q24.6	
Cardiac Chambers And Circulation	Double Outlet Right Ventricle	Q20.1	
Cardiac Chambers And Circulation	Hypoplastic Left Heart Syndrome	Q23.4	
Cardiac Chambers And Circulation	Other Congenital Malformations Of The Circulatory System	Q28	
Cardiac Chambers And Circulation	Other Congenital Malformations Of The Heart	Q24	This includes dextrocardia, cor triatrium, pulmonary infundibular stenosis, subaortic stenosis
Cardiac Chambers And Circulation	Pulmonary Valve Stenosis	Q22.1	
Cardiac Chambers And Circulation	Tetralogy Of Fallot	Q21.3	
Cardiac Chambers And Circulation	Total Anomalous Pulmonary Venous Connection	Q26.2	
Cardiac Chambers And Circulation	Transposition Of The Great Vessels (Tgv)	Q20.3	
Cardiac Chambers And Circulation	Ventricular Septal Defect	Q21	
Chromosomal Abnormalities	Balanced Rearrangements And Structural Markers Not Elsewhere Classified	Q95	
Chromosomal Abnormalities	Down's Syndrome	Q90	
Chromosomal Abnormalities	Edwards' Syndrome Or Trisomy 18	Q91.3	
Chromosomal Abnormalities	Monosomies And Deletions From The Autosomes Not Elsewhereclassified	Q93	
Chromosomal Abnormalities	Other Sex Chromosome Abnormalities, Female Phenotype Not Elsewhere Classified	Q97	

Chromosomal Abnormalities	Other Trisomies And Parial Trisomies Of The Autosomes Not Elsewhere Classified	Q92	
Chromosomal Abnormalities	Patau Syndrome Or Trisomy 13	Q91.7	
Chromosomal Abnormalities	Turner'S Syndrome	Q96	
Digestive	Atresia Of Oesophagus With Tracheo-Oesophageal Fistula	Q39.1	
Digestive	Atresia Of Oesophagus Without Fistula	Q39.0	
Digestive	Atresis Of The Bile Ducts	Q44.2	
Digestive	Congenital Absence, Atresia And Stenosis Of The Anus Without Fistula (Imperforate Anus)	Q42.3	
Digestive	Congenital Absence, Atresia And Stenosis Of The Duodenum	Q41.0	
Digestive	Congenital Absence, Atresia And Stenosis Of The Jejunum	Q41.1	
Digestive	Congenital Absence, Atresia And Stenosis Of The Small Intestine	Q41	
Digestive	Congenital Hypertrophic Pyloric Stenosis	Q40.0	
Digestive	Congenital Malformations Of The Esophagus	Q39	
Digestive	Congenital Malformations Of The Gallbladder, Bile Ducts And Liver	Q44	
Digestive	Congenital Malformations Of The Tongue, Mouth, Pharynx	Q38	
Digestive	Other Congenital Malformations Of The Digestive System	Q45	
Digestive	Other Congenital Malformations Of The Intestine	Q43	This includes meckel's diverticulum, Hirschprung's disease, ECTOPIC ANUS, COLACAL ANOMALY
Ear	Congenital Malformations Of The Ear Causing Impairment Of Hearing	Q16	This includes anomalies of auditory canal, eustachian tube, ossicles
Ear	Other Congenital Malformations Of The Ear	Q17	This includes small ear, large ear, misplaced ear, accessory auricle
Eye	Anophthalomos, Microphthalmos And Macrophthalmos	Q11	
Eye	Congenital Lens Malformations	Q12	This included congenital cataract, lens abnormalities
Eye	Congenital Malformations Of Eyelid,Lacrimal Apparatus And Orbit	Q10	
Eye	Congenital Malformations Of The Anterior Segment Of The Eye	Q13	This includes abnormalities of iris, cornea

Eye	Congenital Malformations Of The Posterior Segment Of The Eye	Q14	This includes abnormalities of vitreous, retina, optic disc, chroid
Eye	Other Congenital Malformations Of The Eye	Q15	
Face And Neck	Congenital Anomalies Of Neck Region	Q18	This includes sinus, cycst, fistula, webbing of neck region
Genital	Congenital Malformations Of Ovaries, Fallopian Tubes And Broad Ligiaments	Q50	
Genital	Congenital Malformations Of The Uterus And Cervix	Q51	
Genital	Hypospadias	Q54.0	
Genital	Indeterminate Sex And Pseudohermaphroditism	Q56	
Genital	Other Congenital Malformations Of The Female Genitals	Q52	
Genital	Other Congenital Malformations Of The Male Organs	Q55	
Genital	Undescended Testicle, Bilateral	Q53.2	
Genital	Undescended Testicle, Unilateral	Q53.1	
Musculoskeletal	Congenital Deformities Of The Feet	Q66	This includes talipes, varus and valgus deformities
Musculoskeletal	Congenital Deformities Of The Hip	Q65	
Musculoskeletal	Congenital Diaphragmatic Hernia	Q79.0	
Musculoskeletal	Congenital Malformations Of The Musculoskeletal System, Not Elsewhere Classified	Q79	
Musculoskeletal	Congenital Malformations Of The Spine And Bony Thorax	Q76	
Musculoskeletal	Congenital Musculoskeletal Deformities Of Arm, Leg, Long Bones	Q68	
Musculoskeletal	Congenital Musculoskeletal Deformities Of Head, Face, Spine And Chest	Q67	
Musculoskeletal	Craniosynostosis	Q75.0	
Musculoskeletal	Exomphalos	Q79.2	
Musculoskeletal	Gastroschisis	Q79.3	
Musculoskeletal	Other Congenital Malformations Of Limbs (Shoulder Girdle, Knee, Arthrogryposis)	Q74	
Musculoskeletal	Other Congenital Malformations Of The Skull And Face Bones	Q75	
Musculoskeletal	Polydactyly	Q69	
Musculoskeletal	Reduction Defects Of The Lower Limb	Q72	

Musculoskeletal	Reduction Defects Of The Upper Limb	Q71	
Musculoskeletal	Reduction Defects Of Unspecified Limb	Q73	
Musculoskeletal	Syndactyly	Q70	
Nervous	Anencephaly	Q00	
Nervous	Congenital Hydrocephalus	Q03	
Nervous	Encephalocele	Q01	
Nervous	Microcephaly	Q02	
Nervous	Other Congenital Malformations Of The Brain	Q04	This includes malformation of corpus callosum, holoprosencephaly, reduction anomaly of brain, cerebellar anomaly
Nervous	Other Congenital Malformations Of The Nervous System	Q07	This includes any other malformations of central nervous sytem not mentioned above
Nervous	Spina Bifida	Q05	
Nervous	Spinal Cord Anomaly Other Than Spina Bifida	Q06	
Other Congenital Malformations	Congenital Ichthyosis	Q80	
Other Congenital Malformations	Congenital Malformations Of The Breast	Q83	
Other Congenital Malformations	Congenital Malformations Syndromes Due To Known Exogenous Causes Not Elsewhere Classified	Q86	This includes fetal alcohol syndrome, fetal hydantoin
Other Congenital Malformations	Epidermolysis Bullosa	Q81	
Other Congenital Malformations	Fetal Alcohol Syndrome (Dysmorphic)	Q86.0	
Other Congenital Malformations	Neurocutaneous Syndromes	Q85	This includes neurofibromatosis, tuberous sclerosis)
Other Congenital Malformations	Other Congenital Malformations Of Skin Appendages Such As Nail, Hair	Q84	This includes hair and nail abnormalities
Other Congenital Malformations	Other Congenital Malformations Of The Skin	Q82	This includes incontinentia pigmenti, mastocytosis, xeroderma, heriditary lymphoedema)
Other Congenital Malformations	Other Congenital Malformations, Not Elsewhere Classified	Q89	This includes malformations of spleen, adrenal, endocrine glands, conjoint twins
Other Congenital Malformations	Other Specified Congenital Malformation Syndromes Affecting Multiple Systems	Q87	
Other Congenital Malformations	Situs Inversus	Q89.3	
Respiratory	Cleft Lip	Q36	
Respiratory	Cleft Palate	Q35	
Respiratory	Cleft Palate With Lip	Q37	
Respiratory	Congenital Cystic Lung	Q33.0	
Respiratory	Congenital Malformations Of The Larynx	Q31	

Respiratory	Congenital Malformations Of The Lung	Q33	This includes agenesis, ectopic, hypoplastic and dysplastic lung
Respiratory	Congenital Malformations Of The Nose	Q30	
Respiratory	Congenital Malformations Of The Trachea And Bronchus	Q32	
Respiratory	Sequestration of The Lung	Q33.2	
Urinary	Congenital Hydronephrosis	Q62.0	
Urinary	Congenital Posterior Urethral Valves	Q64.2	
Urinary	Congenital Renal Cystic Diseases	Q61	
Urinary	Other Congenital Malformations Of The Urinary System	Q64	This includes epispadias, exstrophy of bladder, stricture of meatus
Urinary	Renal Agenesis And Other Defects Of The Kidney	Q60	This includes renal agenesis, hypoplasia, Potter's syndrome

Egyptian Neonatal Network (EGNN)

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Egyptian Neonatal Network for Training Pediatricians

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"دليل مستخدمي الشبكة"

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