

eNICQ

Vermont Oxford Network Software for Data Entry and Submission

Introduction and General Features

eNICQ will allow members to enter data for all Vermont Oxford Network data forms, including Supplemental Data items for the Expanded Database. The software supports detailed error checking of records and submission of complete and correct records via the Internet. All of the item definitions are available using the online help system. Reports provided include error and warning reports, data form status reports, the patient log and the transfer log. The file export facility supports automatic transmission of encrypted, password-protected data to a secure Network server. To keep the system up to date, the software automatically checks for the latest version, downloads any available updates and installs the new version. For centers currently using another data entry application and who want to use **eNICQ**, data may be imported to the **eNICQ** database. User access is controlled by the center administrator to assure security and patient privacy.

Beta Test

Between September and November 2003, the Vermont Oxford Network conducted a beta test of **eNICQ** with three international and six US centers participating. These nine centers volunteered to help test the system and were a tremendous help in working out the kinks for the general release. A number of valuable lessons were learned, and the resulting changes to the system significantly improved the software which is now available to all Network members.

Patient Privacy and Data Security

Patient data entered into **eNICQ** and available to the center include patient identifiers such as name, medical record number and birth date. To protect this sensitive information, the system can only be accessed by users designated by the center administrators. Administrators can allow users with administrative or user access. All users must enter a login name and strong password to access the system. None of these personal identifiers can be exported to the Vermont Oxford Network. The Vermont Oxford Network does not accept protected health information.

Software Requirements

The **eNICQ** application is designed to be used on a single computer and uses Microsoft® Access as a development platform. Users need not have Access pre-installed on the computer - a run-time version is provided with the software. The minimum system requirements for the application are the same as for Microsoft® Office 2000, which may be found at this address on the Internet:

<http://www.microsoft.com/office/previous/sysreq2000.asp>

For user efficiency and to enhance the Network's product support capabilities, it is recommended that the computer have 400 MB of disk space, a 233 MHz or faster processor, 128 MB or more memory, and be running the Microsoft® Windows 2000 or XP operating system. An Internet connection is required for file submission and to download new versions.

eNICQ

Vermont Oxford Network Software for Data Entry and Submission

Main Menu

The Main Application Menu screen shows the categories of tasks available with the **eNICQ** system. From the Main Menu, users can view the Patient Log, search for a patient previously entered, enter a new patient, export data, create a report and, if administrative access is allowed, use the administrative utilities provided by the software.

Center Administration Screen

General Tab

After **eNICQ** is installed, the first order of business is to setup the system, which is accomplished by the center administrator from the Administrative Form item on the Main Menu. Administration choices include setting up the system environment, defining who can use the system and who can perform administrative tasks, importing data from other systems if applicable and checking to see whether the software version is current. The General Tab is used to enter general system environment specifications.

Security Tab

With the security tab the center administrator defines who can use the system, which level of access is authorized and the user login names and passwords. There are two levels of access: Administrator and User. Only administrators are allowed access to the software administrative functions. When a new user is added, the user's name, a login name and password are entered. The login name and password must be entered each time the software is started. Only passwords which meet certain specifications are allowed.

Import Data Tab

For centers that want to move data from an existing electronic data entry system to **eNICQ**, the Import Data tab provides the ability to import data from other systems. Three different import formats are supported. Specifications for importing data are included in the **eNICQ** User's Guide.

Version Tab

When the Version tab is clicked, the software automatically checks with a Vermont Oxford Network server to see if the local version is up to date. If it is not, the administrator can download and install the latest version automatically. There are three separate version components which can change: the Application version, which is visible to the users, the Database version, which may change from year to year as database items are added or removed, and the Business Rules version, which may change as the error checking rules are updated. If the local version is up to date, there will be a message stating this in the box below the version information. If any component is not up to date, the Download Upgrade button will be active, and the new version may be automatically downloaded and installed.

eNICQ

Vermont Oxford Network Software for Data Entry and Submission

Patient Log

Patient Selection Screen

Clicking the Patient Log button of the Main Menu brings up the Patient Selection screen, which allows viewing of all records or selecting records by specific categories. Records may be chosen for a specific birth date range, for a specific record status, for a particular disposition status or by birth location. There is also an option to view deleted records. To view all records in the log, simply clear the selection criteria and click the View Records button.

Patient Log Form

The Patient Log shows each infant's Vermont Oxford Network ID number, Patient Name, Birth Date, Record Status, whether the infant transferred or not, whether the infant died in the delivery room, the date of day 28, date of week 36 and the date that a record was last exported. At the bottom of the Patient Log screen each of the form status codes for the selected record is shown. The Patient Log can be printed by clicking on the Print Form button on the right side of the screen. With the Patient Log Selection, Patient Log and Print Form button, there are many different ways of viewing the data.

Patient Search

Searching for a previously entered record is very simple. After clicking on the Patient Search button on the Main Menu, enter any part of the infant's name or the infant's medical record number or Vermont Oxford Network ID number and click the Search button. All matching records will appear in the Matching Infants box. The desired record can then be opened by clicking the Edit Record button or by double clicking on the record.

Patient Identification Form

The Patient Identification Form includes the infant's Vermont Oxford Network ID number, name, mother's name, MRN, date of birth, whether the infant died in the DR, location of birth and, if the infant is outborn, the date of admission to your hospital. This is the first form that is completed when a new patient record is created. The form status codes at the bottom of the screen tell the operator whether each form is correct, is incomplete or has errors, etc. **Please note that none of the patient identifiers appearing on the Patient ID Form are exported to the Vermont Oxford Network. These identifiers remain on the local center database only and are not included on any export files. None of the patient identifiers on any of the forms are included in the export files.**

28 Day Form

After entering Patient ID data, data may be entered for the 28 Day Form. This eNICQ form is similar to the paper form with a couple of differences. For example, the date of day 28 is automatically calculated by the system and appears next to the oxygen on day 28 item. In general, all calculated dates and lengths of stay are

eNICQ

Vermont Oxford Network Software for Data Entry and Submission

automatically calculated by **eNICQ** when the applicable information on which the calculations depend has been entered. None of the dates are exported since these are considered patient identifiers.

Help System – Item Definitions

When entering data for the 28 Day Form or other data forms, the item definitions can be accessed online by placing the cursor in the item field and pressing the F1 key.

Discharge Form

The **eNICQ** Discharge Form is very similar to the paper form, with a few differences. On the **eNICQ** Discharge Form the Date of Week 36 is automatically calculated and is next to the Oxygen at Week 36 Item. The **eNICQ** Discharge Form also includes the Date of Initial Disposition after the Initial Disposition status item. After the Date of Initial Disposition is entered, the system automatically calculates the Initial Length of Stay. To print the Discharge Form, or any data form, simply click the Print Form button on the right side of the screen. The system will print a completed form that looks like a Vermont Oxford Network paper form, which means that none of the patient identifiers are included on the data forms.

Transfer and Readmission Form

The Transfer and Readmission Form is entered for all infants who transfer from the reporting center to another hospital. If the Initial Disposition status indicates 'Home' or 'Died', the Transfer Form button is inactive and cannot be selected. Differences between the **eNICQ** Transfer and Readmission Form and the paper form include: (1) operators can enter the transfer hospital name, which will appear on the Transfer Log report but will not be included in the export file; (2) for infants who are readmitted, the operator will be asked for the Date of Readmission, which is used for error checking but not included in the export file; (3) the operator will enter the date of final discharge, which will be used to calculate total length of stay but not be included in the export file. When the Date of Final Disposition is entered, the system automatically calculates the Total Length of Stay.

Supplemental Data Form

The Supplemental Data Form button is only active if the administrator checked the box 'Submit Expanded Data' on the Center Administration Screen. For centers submitting data for very low birth weight infants only, the Supplemental Data Form is not used. The **eNICQ** Supplemental Data Form is basically the same as the paper version.

Error Checking an Individual Record

After data for an infant's record is entered, the record can be checked for errors by clicking the Error Check button on the right sided of the screen. This creates an Error and Warning Report for the active record, showing any errors or warnings for the record. The error checking capabilities of **eNICQ** are the same as are available

eNICQ

Vermont Oxford Network Software for Data Entry and Submission

to the Vermont Oxford Network staff. If the rules are modified at Vermont Oxford, **eNICQ** users will receive a new version of the software.

Reports Menu

Clicking the Reports Menu button on the Main Menu will activate the Reports Menu screen, which shows three report options: Error and Warning Reports, Data Form Status Reports and the Transfer Log. With **eNICQ**, reports currently being mailed or emailed to the center by the Vermont Oxford Network staff can be obtained in real time with the click of a button.

Error and Warning Report

Clicking the Error and Warning Report button does two things. First, all records in the database within the selected birth weight range will be checked for errors and the form status codes will be set. A report will then appear showing any errors or warnings for each record. Errors are listed in Vermont Oxford Network ID number order, showing the infant's birth date, and the form and item number to which the error applies. This report is the same as the Error and Warning Summaries that are currently being sent to centers by the Network. Recall that with **eNICQ** there is also the option of checking an individual patient record for errors.

Data Form Status Report

The Data Form Status Report will show the status of each form for all infants in the selected birth weight range by Vermont Oxford Network ID number. The report also shows each infant's birth date, birth weight and whether the infant died in the DR. This report is the same as Data Form Status Summaries being sent to centers by the Network.

Transfer Log

The Transfer Log Report shows all infants who have transferred to another center in Vermont Oxford Network ID Number order. The report includes the patient's name, birth date, transfer date, transfer hospital name, whether the infant was transferred to another Vermont Oxford Network center, the status of each part of the Transfer and Readmission Form and the overall record status.

Exporting Data

Exporting data is very simple with **eNICQ**. The operator clicks the Export Data button on the Main Menu, verifies that there are records ready to export and click the Export Data button. After the export file is created, the operator then clicks the Upload File button to send an encrypted file to a secure Network server. When local procedures require, the export files need not be uploaded to the Network. The **eNICQ** User's Guide describes procedures for emailing these password protected files to an intermediate data center. There are also special options for exporting data should there be a need to do so. In most cases operators will choose the typical export option, which creates a file of records that are new or updated since the last export. Operators can also resend a file that was previously sent to the Network, or create an export file which includes all records.

eNICQ

Vermont Oxford Network Software for Data Entry and Submission

eNICQ Support

In addition to online help, support for **eNICQ** includes the capability of submitting support requests via www.vtoxford.org to a special support site. The Network policy is to respond to support requests within four business hours. An eNICQ User's Group is planned to help improve the software and help steer development efforts.

Future Enhancements to eNICQ

Plans are being formulated to allow **eNICQ** to augment quality improvement efforts. Data collection modules and reports for more in-depth study of clinical outcomes will allow centers to augment their quality improvement efforts with data items which have been identified by research in the field.

For Further Information

Please contact us if you have any questions or would like additional information about **eNICQ**. The eNICQ Support Coordinator is Nancy Morse, nancy@vtoxford.org. Look for additional information on our web site www.vtoxford.org in the near future.