

# CodeNet

## Administration Guide – Version 4.10

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## Chapter 1 Introduction

CodeNet® allows hospital personnel to efficiently and accurately manage resuscitation information. It includes two software programs, CodeNet Writer and CodeNet Central.

CodeNet Writer is a Windows Mobile program that allows you to:

- Log real-time code events.
- Collect medical personnel's signatures.
- Upload resuscitation records directly from ZOLL Medical Corporation defibrillators.
- Attach those records to code events in CodeNet Writer.

You can then upload the code event and resuscitation information stored in CodeNet Writer to a workstation running CodeNet Central, a Windows program that allows you to:

- Collect resuscitation data.
- Add information and annotations to an event.
- View the ECG in its entirety, or in magnified, playback, or analysis mode.
- Route cases for code audits.
- Generate case and aggregate reports.
- Synchronize defibrillator event times and other interventions documented in CodeNet Writer to the workstation to provide consistent and accurate times.
- Submit resuscitation data to the National Registry of Cardiopulmonary Resuscitation (NRCPR), using the NRCPR interface in CodeNet Central.

The NRCPR is the in-hospital resuscitation event registry sponsored by the American Heart Association (AHA). For more information about the NRCPR and the support it provides for practice management and quality improvement, go to <http://www.nrcpr.org/>.

The *CodeNet Administrator's Guide* provides information on the optional tools available in CodeNet:

- Completing highlighted fields in CodeNet Central and CodeNet Writer
- Customizing tab views
- Documenting HIPAA disclosure information
- Performing code audits
- Submitting cases to NRCPR

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You can also download the latest PDF version of this book at any time:

- a. Go to [www.zoll.com](http://www.zoll.com).
- b. Click Documentation.
- c. Click CodeNet Event Data Management.
- d. Under CodeNet Resources, click Literature.
- e. Click the document you want to view.

## Chapter 2 Overview

There are typically two types of users for CodeNet, a documenter (submitter) and an administrator (code auditor). The submitter documents the code in CodeNet Writer and uploads the defibrillator record to the mobile device. The mobile device is then connected to the CodeNet Central workstation and the data is moved to the central share folder on the network. The submitter views the case on the workstation and enters missing data. Later, the code auditor reviews all cases and may add additional data, if necessary.

CodeNet uses Windows user groups to control access to the desktop application, thereby allowing only CodeNet users to start the application and controlling functionality by user type.

- **CodeNet Users.** Only members of this group can start CodeNet Central. All CodeNet users must be a member of this group.
- **CodeNet Submitters.** Only members of this group are restricted from opening cases outside of the unsubmitted folder. Users that will be responsible for documenting codes should be a member of this group.
- **CodeNet Administrators.** Only members of this group can access **Tools › Options**. Users that will be responsible for reviewing cases in the Submitted and Unsubmitted folders should be a member of this group.

See *CodeNet Hardware Software Specifications* for detail on Active Directory user groups and CodeNet Central configuration.

## Chapter 3 Configuring Tab Views

In CodeNet Central, 14 tabs are displayed to the user by default. This number of tabs can be overwhelming, especially if you only enter data on four of those tabs. CodeNet Central provides the ability to specify which tabs are displayed to the user. The configuration of the tabs to display is stored for each user separately and can be set in CodeNet Central by choosing **Tools > Options**. For detailed instructions, see the *CodeNet Central Getting Started Guide*. However, since you would have to log into Windows as each user to set the view configuration, this may not be the easiest way to accomplish this task.

There is a more efficient way to accomplish this when all your users need the same tab view. Contact your deployment specialist about the tabs that you would like to omit. A custom license.cfg file will be created to define the view you want. In this solution, the settings apply to all users of that workstation. If you limit the number of tabs to be displayed, this workstation should be used by CodeNet submitters only; CodeNet administrators should have access to all 14 tabs and will need to run CodeNet on a separate machine.

**Note:** The tabs for which the submitters will be responsible vary by hospital.

## Chapter 4 HIPAA

The Health Insurance Portability and Accountability Act (HIPAA) is a federal law passed in 1996 that allows group coverage to be ported from one carrier to another and includes a privacy rule for protecting personal health information (PHI).

### HIPAA Disclosure Log

CodeNet Central automatically records events in which a patient's PHI is revealed. There are five such events recorded in the HIPAA disclosure log, as described in Table 1.

**Note:** For the document event to take place, the user must manually enter a HIPAA Disclosure Note available in the **Edit** menu. The event is then automatically added to the HIPAA disclosure log.

**Table 1. HIPAA Disclosure Log Events**

Event	Description
Access	The user opened a case. The event includes the name of the user who opened the case and the time the case was opened.
Export	The user exported a case. The event includes the name of the user who exported the case, the time the case was exported, and the location to which the file was exported.
NRCPR Validation	The user validated a case for NRCPR. The event includes the name of the user who validated the case and the time the case was validated.
Adjust defibrillator start time	The user adjusted the defibrillator start time. The event includes the name of the user who adjusted the start time, the time the start time was adjusted, and the original and new start times.
Document	The user added a note to the HIPAA disclosure log. The event includes the name of the user who added the note, the time the note was added, and the text of the note.

## Printing the HIPAA Disclosure Log

The HIPAA Disclosure log is available as a report from the Print menu. To access this report, choose **File > Print > Case > HIPAA Disclosure** (Figure 1).

**Figure 1. HIPAA Disclosure Report**

HIPAA Disclosure		
2007-02-18 21:06:15		
CPR number:		
Report Date: 2007-09-14 13:26:23		
<i>Prepared by CodeNet (TM) Central</i>		
<hr style="border: 2px solid red;"/>		
<b>Patient</b>		
Doe, John		
MR#: MR1112		
Sex:		
Race:		
Date of birth: Unknown		
Height: Undocumented		
Weight: Undocumented		
<b>HIPAA Disclosure Notes</b>		
Time	User	Details
2007-09-14 13:21:54 250	tashmore	User viewed case.
2007-09-14 13:22:30 856	tashmore	User changed defibrillator power on time: from 2007-02-17 21:06:15 to 2007-02-18 21:06:15
2007-09-14 13:22:56 721	tashmore	User viewed case.
2007-09-14 13:23:26 176	tashmore	User entered note: Printed Code Record report.
2007-09-14 13:23:46 509	tashmore	User exported case to C:\Documents and Settings\tashmore\Desktop\temp\2007_

## Chapter 5 Code Audit

CodeNet Central provides mechanisms to help ensure that data entered for a case is complete. For example, fields highlighted in red let the user know that required information is missing. The code audit process tracks incomplete cases to their completion.

### Highlighted fields

You must complete the following red highlighted fields on the **Code Record** tab before you can submit a case for code audit. If you do not complete these fields, you will be prompted to do so before the code audit submission will be successful.

- Patient ID/MR Number
- Last Name
- Event Type
- Patient Type
- Physician Leader
- Recorder

The **Code Quality** tab also requires data. You can either select No code quality issues or enter the required information.

Events on the **Code Log** tab will be displayed in red text if either data is missing or the data needs to be transcribed. However, there is one scenario in which an event may be marked blue to indicate a potential issue: the defibrillator event was manually recorded in CodeNet Writer and automatically recorded by the defibrillator, thereby resulting in two identical events instead of one unique event. CodeNet Central marks the event blue to indicate a possible duplicate shock. You can still submit a blue event for code audit. In the case where defibrillator data exists, CodeNet Central interprets manually-recorded shocks as duplicate shocks and hides them from the user. However, if no defibrillator data exists, the software displays the manually-recorded shocks in black text, indicating that they are unique events. You can display the hidden shocks, using the Show All Hidden Shocks button. When you click this button, CodeNet Central displays the possible duplicate shocks in blue text, and displays Duplicate? in the Comments column. You can accept or re-hide the duplicate shocks. If you accept them, using the Accept Duplicate Shock button, CodeNet Central changes the text that represents the shock from blue to black, thereby marking the shock as a unique event. If you hide them, using the Hide All Duplicate Shocks button, they will again be hidden from view and be ignored.

**Note:** Defibrillator recorded shock events will always be considered unique events, be visible, and appear in black text.

## Code Audit Process

The code audit process involves four statuses: Unsubmitted, Submitted, Rejected, and Accepted, each of which can be searched on individually. The process may include:

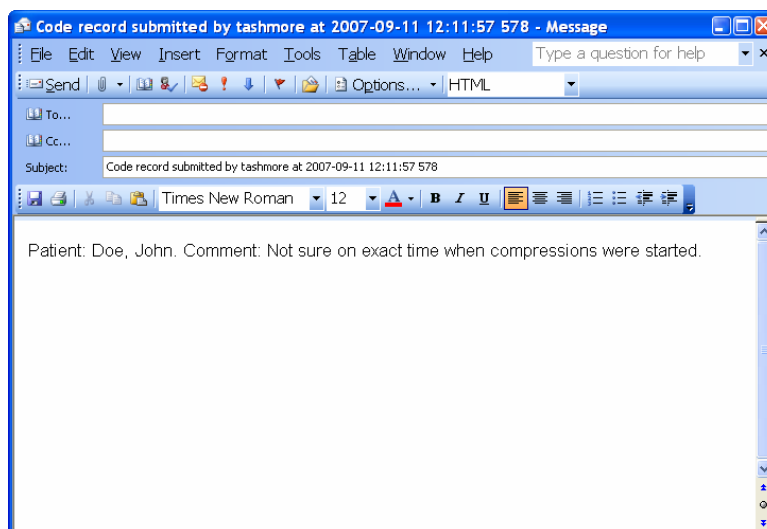
- Reviewing the work of a code documenter.
- Viewing, adding, or editing the information submitted by the code documenter.
- Viewing, adding, or editing information on tabs on which the code documenter does not work.
- Accepting the case, or rejecting it and returning it to the code documenter for additional work.

**Note:** The code audit features work in conjunction with the Windows user groups. See Chapter 2. With the Windows groups in place, the submitter can submit the case only. The Administrator can submit, reject, or accept cases.

To submit, accept, or reject a case:

1. Choose **Tools > Code Audit**, and then choose Submit, Accept, or Reject from the CodeNet Central main window. A popup window opens, prompting you to enter comments about the case.
2. Enter comments, such as an explanation as to why a case is being submitted with missing information or why a case is being rejected.
3. If you want to send an e-mail, go to Step 4. If you do not want to send an email, click OK to complete the action (submit, accept, or reject the code record).
4. If you want to send an e-mail to indicate that a change has occurred in the code audit status, click the Notify via email checkbox and then click OK to complete the action (submit, accept, or reject the code record). A new message of the installed MAPI-compliant e-mail application opens, as shown in Figure 2.

**Figure 2. Code Record E-mail Window**



- In the body of the e-mail, CodeNet Central includes your comments and the name of the patient. The Subject: field contains the submitter's name and time of the audit status transition. The To: field is blank.

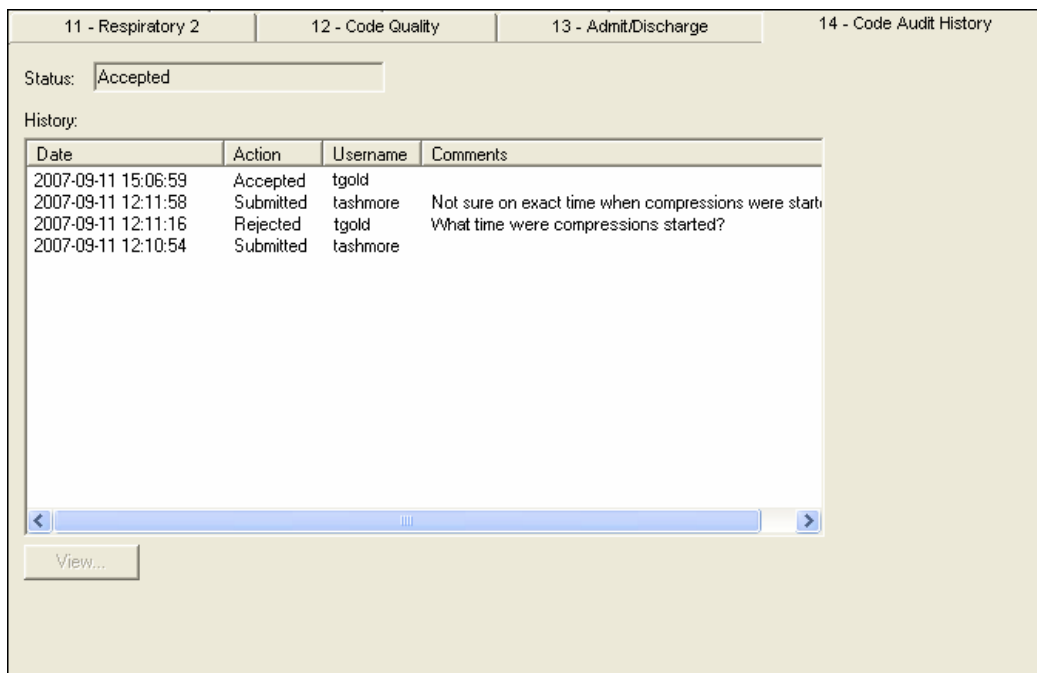
If you want the To: field to always contain the e-mail address of the code auditor, choose **Tools > Options > Code Audit**. In the Default email address for audit notifications: field, enter the e-mail address of the person to which you want to send the messages. When you configure an e-mail address, the Notify via email checkbox in the popup window will always be selected. If you do not configure an e-mail address, the Notify via email check box is not selected, thereby making it optional.

- Click Send to send the e-mail.

## Code Audit History

You can display the history of the code audit from the **Code Audit History** tab (Figure 3) on the CodeNet Central main window. The history information includes the date and time of the action, the action performed (Rejected, Submitted, or Accepted), the name of the user who performed the action, and any comments that the user entered in the popup window.

**Figure 3. Code Audit tab**



11 - Respiratory 2    12 - Code Quality    13 - Admit/Discharge    14 - Code Audit History

Status:

History:

Date	Action	Username	Comments
2007-09-11 15:06:59	Accepted	tgold	
2007-09-11 12:11:58	Submitted	tashmore	Not sure on exact time when compressions were start
2007-09-11 12:11:16	Rejected	tgold	What time were compressions started?
2007-09-11 12:10:54	Submitted	tashmore	

View...

## Chapter 6 NRCPR

CodeNet Central allows you to submit resuscitation data to the National Registry of Cardiopulmonary Resuscitation (NRCPR). Hospitals that participate in NRCPR receive an NRCPR software CD. The NRCPR will train one or more users from those hospitals on how to use the NRCPR software and participate in the NRCPR program. NRCPR provides a local database file in which the records are stored until the hospitals submit them to the NRCPR. Some hospitals choose to submit their NRCPR records once every three months; others may choose to submit their records more frequently, such as once a month.

For more information on NRCPR, go to <http://www.nrcpr.org>. To purchase the NRCPR application, contact your ZOLL Sales Representative.

### CodeNet Integration

NRCPR has its own application that is installed on the workstation. NRCPR is responsible for assigning a facility ID, authorized users, and pointing the software to the correct local database file. Your CodeNet deployment specialist will assist you in creating an ini file that points to your CodeNet installation directory. This file will be placed in the NRCPR install folder so that the NRCPR software knows where CodeNet is installed and the interaction between the two applications can take place. Once this is completed, data stored in CodeNet can be imported into the local NRCPR database. There is no additional configuration needed in CodeNet Central.

Since not every case will meet the criteria for NRCPR, hospitals must review each case individually in CodeNet Central and decide whether to submit it to the NRCPR.

### Importing Cases into NRCPR

A case is ready for review in CodeNet Central. As the CodeNet Administrator and person trained in NRCPR, you decide whether the case meets the NRCPR criteria. If yes, you will need a few bits of data from the event so that you can create the event in the NRCPR application. NRCPR will use this data to match against the event in CodeNet so that the correct event is imported.

Starting in CodeNet Central, you will want to take note of the event start time. For a cardiopulmonary event, this is the time *Need for compressions or defibrillation first recognized*. For a respiratory event, this is the time *Need for assisted ventilation first recognized*. Also for a respiratory event, you will need to know the time of *ROV/ROSV or cardiac event began* as well as the *Reason resuscitation ended* (reason respiratory event ended).

**Note:** The Code Record report contains all this needed data.

With this information in hand, make sure the case is closed in CodeNet Central and then follow these steps:

1. Launch NRCPR.
2. Search on the patient last name.
3. Choose whether to *Add Admission & First Event* or *Add Another Event* as appropriate.

4. Complete the requested data fields to the point that the event is created and the data tabs for the event are presented.

**Note:** CodeNet Central's time format is HH:MM:SS and NRCPR's format is HH:MM. The seconds are ignored.

5. The Import menu will now appear in the main NRCPR application window. Click Import > Import from ZOLL.
6. A successful import will display the message "Data loaded". An unsuccessful import will display the message "No record found". See the *Troubleshooting* section that follows.
7. You are now ready to complete the information for the event and validate the record for NRCPR. Refer to documentation provided by NRCPR for completing records and transmitting them to the NRCPR.

## Troubleshooting

### Error: "No record found"

There are several different causes of this error. After trying a solution, go back to NRCPR and attempt to import again. If you receive the same error, go on to the next solution.

**Cause:** Record is open in CodeNet Central; file is locked.

**Solution:** Close the record in CodeNet Central.

**Cause:** Dates/times do not match.

**Solution:** For a cardiopulmonary event, verify *Need for compressions or defibrillation first recognized* date and time match the event date and time entered in NRCPR. For a respiratory event, verify *Need for assisted ventilation first recognized* date and time match the event date and time in NRCPR. Also verify the reason the respiratory event ended and the time are identical in CodeNet Central and NRCPR. If any time is marked Unknown, verify this is marked as such in both CodeNet Central and NRCPR.

**Cause:** MR number does not match.

**Solution:** Verify MR number is identical in CodeNet Central and in NRCPR.

**Cause:** Patient last name does not match.

**Solution:** Verify patient last name is identical in CodeNet Central and in NRCPR.

## Chapter 7 Getting Help

### Technical and Sales support

For customers in the United States, contact ZOLL Medical Corporation at the following address, telephone numbers, e-mail address, fax number, or URL if you have questions about using the RescuNet software or want information about software sales, upgrades, and support contracts:

ZOLL Medical Corporation  
269 Mill Road  
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