Third Party ePCR Requirements for Montana

Background

This guide is designed to assist agencies that elect to use a system other than the state's provided direct entry system (Image Trend Elite) to submit their data. Agencies electing to use a 3rd party software system must accept responsibility for maintaining compliance with all reporting requirements and must always keep the state informed on what software system they are using.

State submission requirements

Montana requires that all transporting EMS agencies electronically submit data for each EMS Incident to the state repository (Image Trend) within 48 hours of the conclusion of each EMS incident, and a completed patient care report to the receiving facility within 24 hours (ref ARM 37.104.501(15), ARM 37.104.506). Non-transporting agencies may also submit data electronically but are not required to do so. All data submitted to the state must comply with the NEMSIS 3.5.0 data standard and must include all required national and state elements. The list of elements that Montana requires can be found in the Montana StateDataset. Data should be complete in that it contains all required elements and is completed to the satisfaction of the ePCR's author.

Exporting Data

Integration Account

An integration account specific to your agency and your software vendor is required to export data to the state repository. If your agency does not yet have an integration account or has recently switched 3rd party vendors, contact the EMSTS office to begin the process. EMSTS will provide you and your vendor with the login information which the vendor will add to their system.

Automated Exports

Most ePCR systems use a criteria-based automated process to export incidents to the state repository. When configuring auto-exports, please keep the 48-hour submission rule (24 to hospitals) in mind. For agencies that have an internal quality assurance (QA) process or export to a third-party billing site, this oftentimes means the initial draft of the ePCR must be submitted to the state before the completion of QA or billing (which can take longer than 48 hours). Any updates made to an ePCR after it has been initially exported should trigger a re-export from the 3rd party site which will simply update the existing record in the state repository. Make sure to check with your vendor to ensure that updates will in fact be re-exported.

See below for suggested auto-export criteria. If your criteria are too stringent, some reports may never meet the criteria to be sent, thereby putting you out of compliance with reporting requirements. An example of this is only exporting incidents that have a 100% validation score, which results in incidents not being exported if there is any type of discrepancy.

Agencies that currently rely on manual export are strongly encouraged to transition to an automated export to ensure incidents arrive in the state repository within the required timeframe (48 hours) 100% of the time.

If the requirement to provide a copy of the PCR to the receiving facility within 24 hours is also accomplished using electronic transfer of the ePCR data, then the above concepts also apply.

Suggested auto-export criteria:

Criteria	Note
NEMSIS Version= 3.5	
eDisposition.27 (Unit Disposition) is not blank	NEMSIS required field
eResponse.05 (Type of Service) is not blank	NEMSIS required field
eTimes.03 (Unit Notified by Dispatch) is not blank	Blank eTimes.03 often indicates an 'orphaned' incident
eTimes.13 (Unit Back in Service) is not blank	Blank eTimes.13 often indicates that report has not yet been completed by the author
Validity Score >= 60	Setting this too high will inadvertently exclude incidents from uploading (please do not set above 95, 60 is preferred)
Minutes Since Creation >= 480	(8 hours) This keeps ePCRs from being uploaded multiple times while the ECP is still writing the report.
Incident Status does not equal 'Test PCR'	Does not send test records

Monitoring Your Exports

Agencies that elect to use a 3rd party software system are responsible for implementing a process to verify that all required data is being exported to the state repository, AND that all exported files are accepted into the state repository.

Please ensure that you thoroughly understand how to do the following within your ePCR software:

- Review any ePCRs that are legitimately excluded from the auto-post criteria and export them to the state
- Monitor for any exports that fail (See Common Data Transfer Issues) and re-export them to the state

To assist with this process, EMSTS provides a monthly report for every 3rd party agency that lists all records received into the state repository which agencies can compare with the records present in their software system to identify any gaps. This report also shows common state schematron warnings. Contact EMSTS if you need to obtain this report.

Schematrons

A schematron is a type of XML file that validates data quality. All data being exported from 3rd party software should be validated against the Montana State Schematron as well as the NEMSIS National Schematron.
- The Montana Schematron is available on the [Montana NEMSIS Page](#).
- The National Schematron is available [on the NEMSIS website](#)

Each agency (or their 3rd party vendor) exporting data to the state repository should develop validation rules that mirror state and national schematron rules. The goal of these validation rules is to prevent users of the software from entering invalid data into the system.

Schematron errors will prevent the record from entering the state repository whereas files with schematron warnings will be accepted with a warning message. It is each agency's responsibility to identify any errors or warnings and create or modify validation rules to correct them. Contact EMSTS if you need assistance with this process.

Service Licensing

Agencies must maintain up-to-date service license information via the OPHI e-Licensing Portal. Updates must be made within 10 days of any change (ref ARM 37.104.510 (11)). Failure to do this can result in data transfer interruptions for 3rd party agencies. Below are the service licensing fields that can affect data transfer:

OHPI e-Licensing Portal	Note
EMS Vehicles & Call Signs	Must have at least 1 vehicle rostered to submit data (Can be ambulance or non-transporting vehicle)
EMS Personnel Roster	
Service Area Information	Counties, Postal Codes, Census Tracts
Station Information, Mailing Address, Physical Address	
Emergency Medical Dispatch	
Organization Status	Non-Volunteer, Mixed Paid/Volunteer, Volunteer
Primary Type of Service	Assigned by EMSTS
Classification	Assigned by EMSTS
Level of Service	Assigned by EMSTS

Data Synchronization

When configuring 3rd party software, care must be taken to align key data elements to ensure a smooth transfer of data. Key data elements that must match Montana data values can be found below:

NEMSIS Field:	Note
dAgency.01 (EMS Agency Unique State ID)	Assigned by EMSTS (Agency Number)
dAgency.02 (EMS Agency Number)	Assigned by EMSTS (Agency Number)
dAgency.04 (EMS Agency State)	For all records submitted to Montana use **30**
Crew Members • eCrew.01(Crew Member ID) • eCrew.02 (Crew Member Level)	These values must exactly match the ECP's license number as assigned by Dept of Labor & Industry
Vehicles • dVehicle.01 (Vehicle Unit Number) • dVehicle.03 (EMS Unit Call Sign)	These values must exactly match the information entered into the OPHI e-Licensing Portal
Other Agencies at Scene List • eScene.02 & eScene.03	This list must be synchronized with the "Non-EMS First Responders (for CARES)" list found on the Montana NEMSIS Page to facilitate CARES uploads
Facilities List • eDisposition.02 & eScene.10	This list must be synchronized with the Montana Facilities List found on the Montana NEMSIS Page *If you submit a record with a destination facility code that is not on the state list, the record will fail*
Custom Elements (optional)	Montana Custom Elements List
Drop Down List codes • eInjury.01- Cause of Injury • eMedications.03- Medication Given • eProcedures.03- Procedures Done • eSituation.09 & eSituation.10 - Symptoms • eSituation.11 & eSituation.12- Provider Impressions	Drop down list codes used by the state are available on the Montana NEMSIS Page. It is not required to synchronize your lists with the codes used by the state, however, if your values differ they should be mapped to the most appropriate value from the state list.

Common Data Transfer Issues

Schematron Errors

When data is exported from your ePCR system it must pass through at least one schematron (a type of XML file that validates the completion and accuracy of the data). While incidents with warnings are allowed through, incidents with errors are rejected and are not exported. The Montana state schematron only has 2 rules that are errors.

1. The most common error is the "Facility Code" error. This rule checks to make sure that the destination facility code (eDisposition.02) is a recognized facility code from the list found on this page: Montana - NEMSIS. Any record with an unrecognized facility code will be rejected.

   Fix: If there is a facility that you would like on the list, please submit a suggestion box ticket so that it can be added to the list. In the meantime, please use one of the generic codes (ie- 'MT-ALF', 'MT-OTHER', etc) when submitting records for that facility.

2. The other error pertains to ePatient.25 (Patient Sex). Montana requires that this data element be sent as "Not Recorded". If any other value is sent in ePatient.25, this will cause an error.

   Fix: Make sure that your software exports valid values for ePatient.13 (Patient Gender) and "Not Recorded" for ePatient.25 (Patient Sex). Upon export to NEMSIS, Montana maps ePatient.13 to ePatient.25 to ensure NEMSIS compliance.

Schema Errors

Schema is another type of XML validation that happens when a record is exported from an ePCR system which checks to make sure the structure of the file is valid (for example, entering 'eighteen' instead of '18' for patient age is not allowed). Records with schema errors will not export from the system and require follow-up. The most common schema errors are omission of NEMSIS Mandatory Fields (no value entered or pertinent negative/not value). The NEMSIS mandatory fields are:

- eResponse.01 (Agency Number)
- eResponse.05 (Type of Service)
- eResponse.07 (Unit Equip. Capability)
- eResponse.13 (EMS Vehicle Number)
- eResponse.14 (EMS Unit Call Sign)
- eResponse.23 (Response Mode to Scene)
- dAgency.01 (Agency Unique ID)
- dAgency.02 (Agency Number)
- dAgenecy.04 (Agency State)
- Dispatch.01 (Dispatch Reason)
- eDisposition.27 (Unit Disposition)
- eTimes.03 (Unit Notified Date/Time)
- eTimes.13 (Unit Back In Service Date/Time)
- eRecord.01 (PCR Number)
- eRecord.02 (Software Creator)
- eRecord.03 (Software Name)
- eRecord.04 (Software Version)

Fix: Make sure all mandatory fields have a real value in them and attempt to re-export the PCR. If all fields are complete but you still get a schema error, refer to the error message and the NEMSIS Data Dictionary to determine the solution. Work with your software vendor to fix the problem.

Incidents are not Being Exported

The last and most difficult of the common problems is incidents not being exported from the system. If they don't get sent they obviously don't end up in the state system. There are two common flavors of this problem:

1. Your system relies on a human manually exporting incidents which is error prone and does not always meet the required time constraints

Fix for #1: Set up a system to automatically post the incidents whether a human is there to do it or not.

2. Your system's criteria for automatically exporting incidents are too stringent.

Fix for #2: As an example of this problem consider these criteria: Validity = 100%, Status = QA/QI Complete, Incident Locked = Yes

At first glance, they seem reasonable but when we dig deeper, they are actually far too stringent:

- Validity = 100% - Even if your agency is great about completing incidents on time, one error with your system can cause an incident to stick at 99% (or lower) thereby preventing it from exporting and putting your agency out of compliance with ARM 37.104.506

- Status = QA/QI Complete – QA/QI often takes quite a while to complete, if you are not posting incidents until after QA/QI is complete you will be far outside of the 24/48 hours specified in ARM 37.104.506 (The same goes for billing)

- Incident Locked = Yes – the same concepts mentioned with validity = 100% apply. If someone forgets to lock an incident, it doesn't export, and your agency is out of compliance

While investigating missing data, we commonly see 5-15% of an agency's incidents that have been "orphaned" by auto-export criteria that are too stringent. A common misconception is that you can only send us the 'final' completed PCR. In reality, you can send us a PCR at any stage of completion – any subsequent updates to the PCR in your system should then trigger a re-export which will update the record in the state system.

Other Possible Issues
- Integration account credentials are bad
- dAgency.01, 02, or 04 values are incorrect in DEM file
- Wrong time zone
- Validating against an old/incorrect schematron
- Incidents export but fail to successfully post to the state

Note for Third Party ImageTrend Clients

ImageTrend clients who do not use the state provided direct entry system can subscribe to various resources in the ImageTrend Library to help facilitate data transfer to the state, including:

- Schematron Files: 3.5 Montana Schematron
- EMS Validation Rules: Montana State-Level Validation Rules (NEMSIS 3.5)
- Facilities: Montana Facilities
- EMS Forms: Montana EMS Elite Runform (NEMSIS 3.5)