

HORIZON TPR Charting System

For Brand Patient Monitors

HORIZON TPR Charting System is designed specifically for hospital general wards with brand patient monitors. It equips with patient registration process, patient information and TPR sheet. The TPR sheet is well integrated with HL7 messages from patient monitors. Nurses can finish their TPR chart in minutes after they finished bed side vital signs measurement with patient monitor and get a perfect medical record print out.

Patient Admission

Horizon TPR Charting system provides patient registration function in general ward. It helps on patient status and bed assignment.

- Bed status overview of wards
- Patient registration
Admission, transfer, discharge activities
- Patient history in hospital
- Configurable ward/bed names for HIS information synchronization
- List of discharged patients in one month period
- Support manual patient registration
- Support automatic HIS HL7 patient registration integration. With standard HL7 messages from HIS, Horizon TPR Charting System can do patient admission automatically without manual intervention.

Automatic Vital Sign Charting

- HORIZON TPR Charting System receives PHILIPS SuresSigns vital sign HL7 messages continuously. Vital signs will be inserted into TPR chart by the time they were measured from patients. No manual input is needed to avoid human input error.
- User can chart any vital sign stored in system in past 24 hours. Vital signs sent by patient

monitors can be charted in according to the exact measuring time.

- Dedicated for HL7 messages via hospital network.
- Configurable normal range for all numerical TPR data.

TPR Flowsheet Features

- Includes Vital Signs, Pain Scale, Height/Weight, I/O, Diet, Blood Given and Description sessions.
- Vital signs including “Body Temperature”, “Pulse”, “Respiration”, “Blood Pressure”. All of them are received from patient monitors.
- Data fields of TPR flowsheet can be filled by user manually or via automatic HL7 vital sign data. Upper and lower limits can be defined to avoid human error.
- Per-defined drop-down list and combo-box used for data fields.
- Automatic brings default value or previous record to save typing effort.
- Data fields can be text, number and picture.
- Support various flowsheet display interval (eg. q5m, q30m, q2h, q8h, q12h etc).
- Different color to mark abnormal patient data.
- Vital sign normal range is depend on different patient profiles. For example, it can depend on patient age.
- User can add comment for any data field. A mark will be placed on these data fields.

TPR Trend Graphing

- High quality standard TPR trend graph
- Automatic scaling for different data series to show vital signs on TPR graph.
- Different marks for different body temperatures on one curve.
- Mark of data value on TPR graph is available when it's out of normal range
- Lines for normal ranges will be shown on TPR graph
- Display multiple vital signs with special marks for overlapping data points.
- Graph can be toggled on/off by user any time with single button.

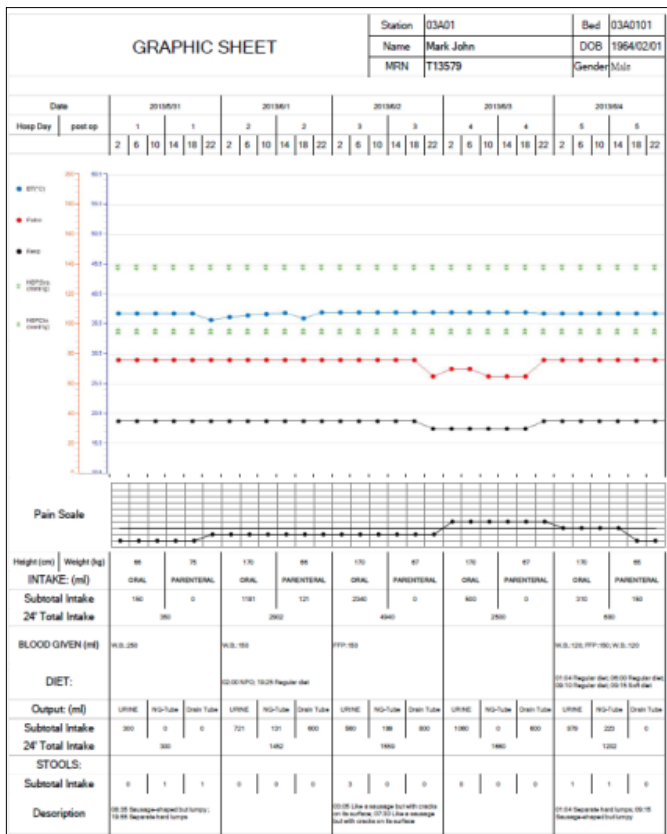
Intake & Output Automatic Calculation

- Built-in Intake items : Oral, IVF, Tube Feedings, Diet, Blood Given
- Built-in Output items : Urine, Foley, NG-Tube, Drain Tube, Stool

- Automatic I/O calculation for total amount of 24-hour period.
- Provides 24-hour subtotal for different items.

High Quality Medical Record Print Out

- TPR chart print out includes color trend graph with baseline and normal range.
- 3 shifts for a day, 5 days on a sheet
- User selectable period for printing.
- Special mark for data overlapping.



Touch Panel Support

- Perfectly works with touch screen systems. Optimized user interface to adapt the advantage of touch panel.
- Flowing and intuitive touch-enabled user interface
- User can identify the exact number or item with “Quick Input Model”, only one touch for long-digit numbers. For example: body temperature and blood pressure numbers. They will be listed in a number grid for quick selection when user touch the number input fields.

System Auditing Features

- All data changes will be recorded for audit trail, including time, user name and content, in order to meet security compliance.
- User login, access and editing activities will be logged.



Usability Features

- No limit on client access in hospital network. Any system with HORIZON TPR System client installed can be used to do TPR charting and doing historical data query.
- On demand user-definable charting intervals. From 5-min to hours.
- Configurable backward charting period. Follow the policy of nurse department.
- Allow partial input for nursing activities. Nurse can finish the charting later in allowed period.
- Support default value of charting fields or brings previous record. Also can be a reference of another data field.
- Supports English, Chinese, localization by request.

Documents

Patient Information

Field	Attribute
Patient Name	Text
Medical Record No.	Text
Admission Number	Text
Date of Birth	Date
Age	Number
Gender	Text
Blood Type	Text
Hospital Admission Date	Date
Unit Admission Date	Date

TPR Flowsheet

Session/Field	Attribute	From HL7	Trend Graph
Patient			
Hospital Day	Number	No	No
Post Op. Day	Number	No	No
Height	Number	No	No
Weight	Number	No	No
Vital Sign			
Temperature ^{*1} (value, measurement)	Number	Yes	Yes
NBPs	Number	Yes	Yes
NBPd	Number	Yes	Yes
NBPm	Number	Yes	Yes
Pulse ^{*1} (value, measurement)	Number	Yes	Yes
Respiration	Number	Yes	Yes
SpO2	Number	Yes	No
Pain Index	Number	Yes ^{*2}	Yes
O2 Type	Text	Yes ^{*2}	No
O2 Therapy	Text	Yes ^{*2}	No
Intake			
Oral	Number	No	No
IFV	Number	No	No
Tube Feedings	Number	No	No
Diet	Text	No	No
Blood Given(volume, type)	Number	No	No
Output			
Urine (volume, type)	Number	No	No
Foley	Number	No	No
NG-Tube	Number	No	No
Stool (volume, frequency, description)	Number	No	No
Drain Tube	Number	No	No
Note			
Comment	Text	No	No

*1: Measurement location selected by users.

*2: Depends on the configuration of Horizon system

System Configuration

Option 1 : physical machine minimum configuration

Workstation	
CPU	Intel® Core® i5-3470
Memory	8GB DDR3
Hard Drive	SATA 750GB
Ethernet	2 Port 10/100/1000 Mbps Ethernet
System Software	<ul style="list-style-type: none">● OS: Microsoft Windows Server 2012 Standard● Database: Microsoft SQL Server 2012 Standard

Options 2 : VMware platform

VMware Workstation Hardware	
CPU	Intel® Core® i5-3470
Memory	16GB DDR3
Hard Drive	SATA 750GB
Ethernet	2 Port 10/100/1000 Mbps Ethernet
OS	Microsoft Windows 7 Professional / Microsoft Windows 8 Professional /Microsoft Windows Server 2012 Standard
VMware	VMware Workstation 9

Virtual Machine	
Memory	8GB DDR3
Hard Drive	SATA 500GB
Ethernet	2 Port 10/100/1000 Mbps Ethernet
System Software	<ul style="list-style-type: none">● OS: Microsoft Windows Server 2012 Standard● Database: Microsoft SQL Server 2012 Standard

HORIZON client PC minimum configuration

HORIZON Client Workstation	
CPU	Intel® Core® i3-3220
Memory	8GB DDR3
Hard Drive	SATA 750GB
Ethernet	2 Port 10/100/1000 Mbps Ethernet
System Software	Microsoft Windows 7 Professional / Microsoft Windows 8 Professional .Net Framework 3.5+.Net Framework 4.5