
BloodTrack® AutoFate

A Simple Solution to Recording Final Disposition of Blood

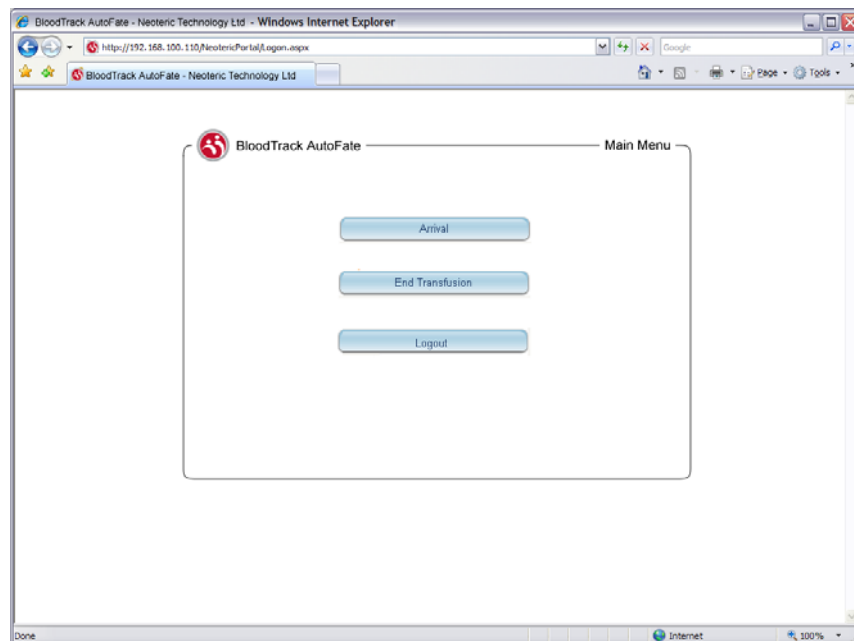
Problem

In most cases, once a blood unit leaves the blood bank the unit is presumed transfused if it does not return within 24 hours, regardless of its final disposition. Even if blood banks have policies in place that require caregivers to return paperwork indicating the patient and status of the transfusion (aborted, spiked, transfused, etc), most blood bankers will admit that compliance is low. Traceability of blood units is important to the effective operation of a modern blood bank and a key component to the hemovigilance program being developed in the US.

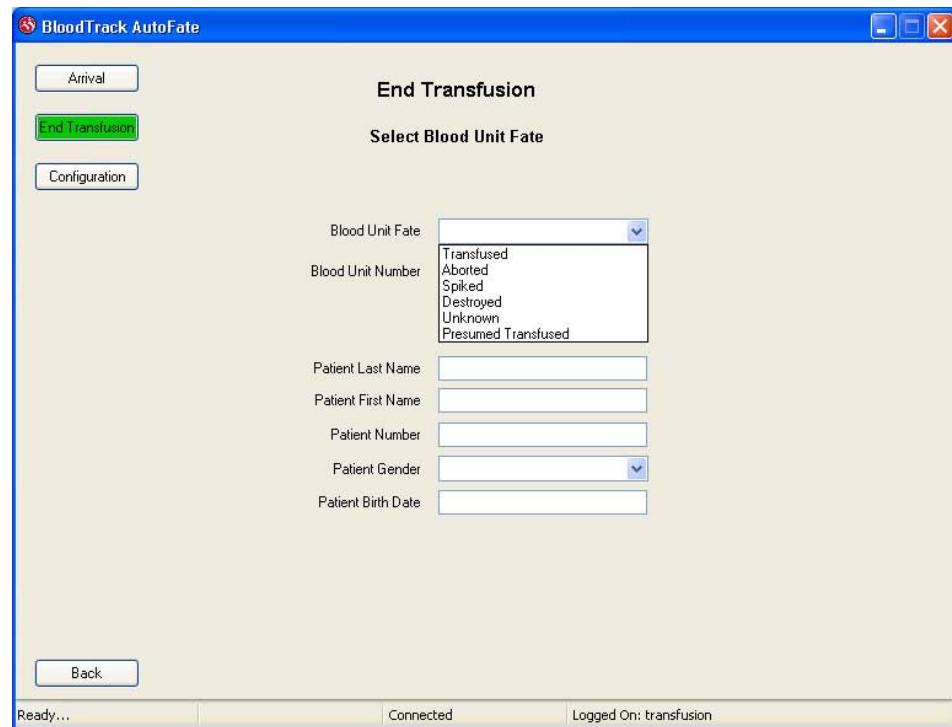
Solution

To increase compliance with recording the final disposition of blood units, Neoteric has developed BloodTrack AutoFate Web to electronically record the blood unit and fate in the clinical area where the blood is transfused.

Process



BloodTrack AutoFate Web-based



BloodTrack AutoFate Desktop Application

When the blood product arrives at the nursing station from the blood bank, the caregiver can access AutoFate (on the nursing station PC, COW or tablet) as a web-page in Internet Explorer or as a traditional software program. When AutoFate is first launched the system prompts with two options: ARRIVAL or END TRANSFUSION. If ARRIVAL is chosen, the person entering the information identifies themselves by scanning their barcoded ID (and optional PIN code) and the blood unit number and product linear barcodes are scanned and the unit is recorded as *arrived*. The arrival recording process is optional but increases traceability. If BloodTrack Courier (refrigerator control system) is also installed, the AutoFate system will check when the unit was removed from storage and alarm if the maximum period allowed has been exceeded when the unit arrives at the nursing station.

When the transfusion has been completed, the unit (or transfusion label from the unit) is again taken to the nursing station PC and the END TRANSFUSION option is selected in the AutoFate software. The caregiver (optional), unit number and product code are again scanned and there are four options now available: Transfused, Spiked, Destroyed, or Unknown (these options are configurable). This fate-of-unit information is sent to the BloodTrack database via the hospital network and an electronic record is stored indefinitely. If an interface has been developed between the Blood Bank Computer System (BBCS) and BloodTrack, then this fate-of-unit information is automatically sent to the BBCS. If an interface has not been developed, then a report of fated units can be generated. This report contains the blood unit numbers in barcoded format so they can be quickly and easily be scanned into the BBCS.

Complete Audit Trail

Using the BloodTrack Manager software residing on a PC in the Blood Bank, staff can generate a number of blood management reports including a report on all blood units that

have not been fated. This report includes the last known location of this unit and its entire previous movement history (if BloodTrack Courier is also installed). Staff can then follow-up with caregivers to ensure that all units are accounted for.

Requirements

AutoFate can be deployed as a web-based (thin client) or as an installed application (thick client). Either deployment requires that all PCs running AutoFate must have a linear bar code scanner and have Windows 2000 operating system or above (Windows XP recommended). The web-based version supports all major browsers (e.g. Internet Explorer, Firefox) on the client side and Microsoft Windows IIS server (with ASP.NET) on the server side. The application based thick-client can be easily installed via a silent installer process over the network while configuration and authentication is managed centrally with BloodTrack Manager.

BloodTrack Manager can be installed on any PC in the Blood Bank running Windows 2000 or above.

The BloodTrack database and services require installation on a dedicated server running SQL or MSDE.

Integration

The AutoFate system can be run together with BloodTrack Courier (refrigerator control system), BloodTrack Tx (bedside verification system) or as a separate stand alone fate-of-unit system. It can be upgraded seamlessly to include a mixture of AutoFate and BloodTrack Tx handhelds at the bedside by using exactly the same databases and management software etc.

Case Study

The largest installation of BloodTrack Courier is in the Leeds area where the software is installed in six hospitals with a combined 3800 beds serviced by two Blood Banks with four BloodTrack Manager stations. There are 27 BloodTrack Courier kiosks and over 300 BloodTrack AutoFate installations all connected via a WAN. Over 50,000 blood units tracked per year. The Leeds system is interfaced to Telepath.

Conclusion

AutoFate provides an electronic and paperless capability where the fate of the unit can be uploaded to the BBCS. It has the capability to identify the caregiver, to insure that time limits for out of cold storage are observed, to identify the blood product and to provide reports to facilitate the recording of the last known location and staff member associated with the last transaction for blood products. It also allows for the tracing of unfated units. It is not reliant on a paper trail and it allows for a seamless transition to a full implementation of the BloodTrack Tx bedside verification system while staff become accustomed to the procedures required for the use of an electronic system.

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