



TRANSFUSION CRS NEUCHÂTEL-JURA

Novel Challenges in Blood Depot Management

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During 2013, one of our regional hospital asked for a secure procurement of blood products.

This establishment is situated 20 km away, needed a blood deposit for their patients and wanted to entrust us the responsibility of pre-transfusion testing.





We imagined that managing a distant deposit (in the hospital) which is directly linked to our blood bank and IT system, will be the best solution.



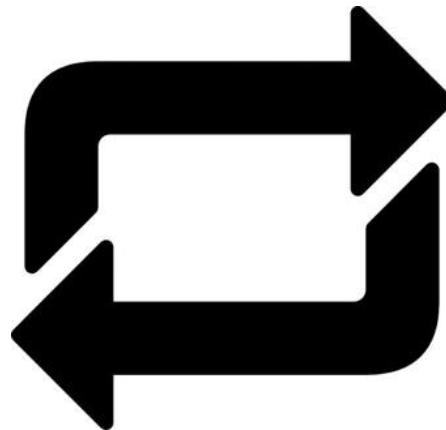
The question was : how to find adequate technical means to ensure this distant management ?



We didn't find an existing adequate solution in first time
and we ensured blood supply by several transport
networks.

carrying of blood samples
carrying of blood products

whenever needed





It was quickly confirmed that this solution was bad and not long lasting.

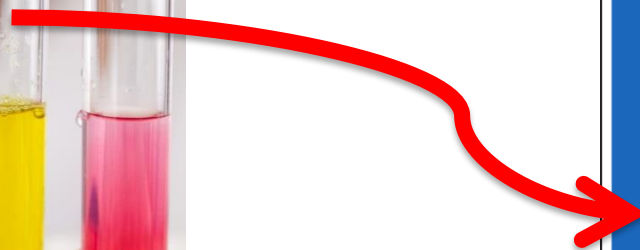
Delays, linked to the transport, doesn't allows an optimal availability of blood products for each patient and blood products have to be transported several times between institutions.





With distant management, it would be possible to realize pre-transfusion tests in our UMT laboratory and to assign remote blood products chosen in the hospital blood deposit for a patient.

The critical point was to secure the remote assignment.





We chose RFID technology, linked to a specific software, to follow the blood products between blood bank and hospital.

Blood products are labeled with an RFID tag, which contains all the key information about the blood unit allowing their automatic transfer between blood bank and distant hospital.





Smart fridge enabled a real time control of blood products availability and location as well as storage conditions.

Blood products remains in the smart fridge and need not undergo several round trips.





Assignment of blood products to the patients is done only by specialized and trained staff member of our laboratory after pre-transfusion testing.

This remote assignment was possible thanks to an IT interface between our system and the specific RFID software.

Laboratory staff continue to work with our system to assign blood products to patients and information is automatically and instantly transmitted.



People on the hospital side could deliver only assigned products in a safe way.

RFID system reinforce security by controlling complete patients identity, double determination of blood group and validity of pre-transfusion tests.





Results

Before introduction :

40% of products assigned were really transfused and 60%
return to our blood bank

Blood stock was about 30 units

Which means only 12 units were transfused against 18 units
returned to blood bank

4 transports per day (for blood products and samples)



After introduction :

60% of products assigned are really transfused

Blood stock was reduced to about 20 units

Which means 12 units transfused and only 8 units returned to
blood bank

Another major improvement was the reduction of transports :
1 per day for blood samples and only 2 or 3 per week for
blood products (except emergency).



4 great improvements :

more products transfused vs stored

less unused products

less transports

All the procedure is under blood bank control !



Thank for your attention !

Danke vielmal für ihre
Aufmerksamkeit !