

TERUMO BCT SOFTWARE CASE STUDY

Software Helps INEN in Lima, Peru Improve Platelet Split Rates

OVERVIEW

- **Customer:** Instituto Nacional de Enfermedades Neoplásicas (INEN), a 350-bed hospital in Lima, Peru
- **Contact:** Dr. Enrique Argumanis, Hematologist and Blood Bank Manager

ISSUES/CHALLENGES

In the past, the INEN blood center was not able to collect enough platelets to meet hospital demand, which negatively impacted patient treatment. INEN performed the majority of collections using devices from other companies. Some challenges the blood center faced included:

- Operators were reluctant to perform double platelet collections, due to time constraints
- Cumbersome and tedious in-house software created extra work for operators
- Manual transcription was time-consuming and created errors
- Workflow delays and uneven donor traffic created process inefficiencies
- Pretesting blood samples caused donor wait times of up to 90 minutes

TERUMO BCT SOLUTION

- Cadence® Data Collection System
- Trima Accel® Automated Blood Collection System
- InfoVu: Trima Accel Procedure Summary (TAPS) Interface and Trima KPI Dashboard applications

While implementing new devices and software can potentially be disruptive, the simple installation process at INEN did not negatively affect operator workflow. INEN staff were inspired by the training and implementation team from Terumo BCT and went on to train other operators to perform more efficiently and productively. After the original training, the newly trained hospital staff trained other operators to perform more efficiently and productively. This collaborative training method created a “positive competitive spirit,” according to Dr. Argumanis.

BENEFITS

Key Performance Indicators	2015	2016
Platelet components per successful platelet procedure	1.18	1.41
Single-component procedure rate	81%	59%
Duration of successful procedures (in minutes)	62	66

The new Terumo BCT devices and software benefited INEN through increased collection efficiencies, improved operator productivity and smoother administrative processes. Some advantages of the new system include:

- Transfusion of platelets from a single donor instead of multiple donors, which reduces patient risk^{1,2}
- Ability to troubleshoot operator issues with TAPS and Cadence for timely error resolution
- Improved platelet collection split rate from 1.18 to 1.41 components collected per procedure, which represents an additional 563 platelet units available for transfusion without any additional collection costs
- Decrease of 23 percent in the single-component collection rate from 2015 to 2016

FUTURE

Using collection data available through Cadence and InfoVu, researchers at INEN plan to submit a paper to *Transfusion* analyzing whether repeat donors' hemoglobin levels decrease.

Because apheresis products reduce transfusion-associated risks for patients,^{1,2} INEN would like to reduce the number of whole-blood-derived platelets it transfuses by relying on Trima Accel for platelet collection. Eventually, it wants to eliminate the transfusion of whole-blood-derived platelets—increasing the annual number of apheresis-derived platelet transfusions from 5,000 to 9,000.

Because INEN had great results with Cadence, it plans to implement new barcode readers for use with the data collection system.

INEN would also like to leverage KPI Dashboard to compare its Trima Accel collection data with data about other institutions' apheresis products. This comparison model would become a regional quality control mechanism. INEN hopes to learn why some institutions are more successful than others in collecting double products. The lessons learned could educate teams at other hospitals so they can begin collecting more double products as well.

ADVICE FOR OTHER BLOOD CENTERS

"I highly recommend that other hospitals use Trima Accel, Cadence and InfoVu to improve patient care and to increase platelet stores."

—Dr. Enrique Argumanis, Hematologist and Blood Bank Manager

¹Vamvakas EC. Relative safety of pooled whole blood-derived versus single-donor (apheresis) platelets in the United States: a systematic review of disparate risks. *Transfusion*. 2009;49(12):2743-2758.

²Vassallo RR, Murphy S. A critical comparison of platelet preparation methods. *Curr Opin Hematol*. 2006;13(5):323-330.

The information in this case study is based on an interview with Dr. Enrique Argumanis in January 2018.

Trima Accel Automated Blood Collection System is available in select markets.

Cadence Data Collection System is available in select markets.

TERUMOBCT

As a global leader in blood component, therapeutic apheresis and cellular technologies, we believe in the potential of blood to do even more for patients than it does today. This belief inspires our innovation and strengthens our collaboration with customers.

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