

ADL - Merrilee Clarke

We're now moving from a little bit of theory to actual practice and best practice. I mentioned the four case studies on best practice inventory management, well one of those comes from South Australia and I'm very pleased to introduce the architects behind that particular initiative in South Australia and that's Mr Rick Tocchetti and also Merrilee Clarke.

Rick is the medical scientist lead of BloodMove, the blood organ and tissue program South Australian Department of Health. He holds a Masters degree by research thesis in the area of platelets. In the early 1980s he worked in biochemistry, pharmacology and radiology research and then later entered the blood transfusion field, initially at the Queen Elizabeth Hospital and then at INVS Royal Adelaide Hospital. To date Rick has totalled some 30 years in blood transfusion at South Australia Pathology with a seven year side trip in the area of cellular therapy and specialised blood derived therapeutic products including the development of TGA licensure.

I'd also like to welcome Merrilee who is the nurse management facilitator for BloodMove, Country Health South Australia Local Health Network. Merrilee has worked as a Registered Nurse for the last 23 years and has a post graduate diploma in peri operative nursing and certificate in critical care. She currently works with Country Health South Australia as the Nurse Management Facilitator of the BloodMove project at Glenelg Community Hospital as a Registered Nurse in the peri operative area. She's got extensive experience across a range of hospitals, both small public and private, metropolitan and regional South Australia and Queensland. She's worked in areas of management, clinical administration in BloodSafety and Quality, project management, peri operative, critical care, surgical and medical nursing.

Could you please join me in welcoming Rick and Merrilee.

Thank you very much.

Excuse me if I sound a bit shaky. I've never really spoken in a big forum like this before. I've spoken a lot to nurses and done education but not really this big a forum. But what I'm going to talk to you about today is something that I'm very passionate about, we've got a great team that I've worked with.

Firstly I would like to thank the National Blood Authority and the Australian Commission on Safety and Quality for inviting Rick and myself to talk today regarding Criterion 8 in Standard 7 which as you know is minimising unnecessary wastage of blood and blood products.

We've been asked to inform you about a BloodMove program across South Australia and we've successfully managed to reduce our wastage of red cells throughout country SA.

Firstly I'd like to thank the sponsors of our program which are Blood Organ and Tissue program and Country Health SA for their ongoing funding and support of

our program. I'd also like to thank our stakeholders, the transfusion community who have a number of dedicated members who assist us with supplying good governance, which we've already heard about today and which is very important, advice, support and guidance to help us implement it.

All of our regional and site BloodSafe nurses, without their hard work and support at each hospital we would not have seen the support of all of the staff at all of our sites; and finally and just as importantly are all of our transfusion service providers for their continued supply of products in a timely and efficient manner, their continued collaboration and support.

A number of these important team members are in our audience today and I would like to take this time to personally thank them for their ongoing support. Without this support we would not have been as successful as we have been.

As we are all aware, blood is a precious product that is freely donated by volunteers. Their donation needs to be respected and as health professionals we have a stewardship to ensure that we minimise wastage of this limited resource that the product is delivered to our patients, it is of good quality and it is safe when it is administered.

The aim of Rick and my talk today is to give you an overview of the process and results regarding the minimising the wastage of red blood cells in relation to the Country SA BloodMove program and our talk will cover the following topics.

Now I'd like to introduce you to Regional South Australia and give you some facts. Country Health South Australia Local Health Network covers almost a million square kilometres, which is 99.8% of South Australia. We are the largest local health network in Australia.

In 2012 approximately half a million people were living in Country SA. This equates to 29.2% of the state's population. There are 60 acute hospitals and the top five reasons for admissions are general medicine, obstetrics, cardiology orthopaedics and general surgery. Ten of these hospitals have an SA pathology onsite and they hold a range of fresh blood and blood products. Forty of these hospitals have remote blood fridges, which Peter talked about can be an issue. Twenty-five of these hospitals hold between two to four units of emergency red cells which is supplied by either regional laboratories or our five metropolitan Adelaide based laboratories. The remaining 25 hospitals have no holdings of emergency red cells and they transfuse cross matched red cells only. Ten of these hospitals do not have a blood fridge and this is all done through a shipper.

Our blood is transported to these sites by a variety of mediums. Unlike in other states, it's usually done by rail. We have regional commercial airplanes, we have mail planes that land in the middle of nowhere, we have bus, TOLL couriers and SA pathology couriers. So we were presented with a few challenges when we started this project.

The main aims of the BloodMove program when it was established through blood organ and tissue at the commencement of 2008, we were briefed to establish a collaborative best practice blood management program for regional South Australia. We were briefed to minimise blood wastage through improvements of our cold chain systems, our blood inventory and our rotation practices. We were

also to ensure effective supply and use of emergency blood in our regional centres.

Blood wastage before BloodMove started. Any blood not transfused was discarded. This included 60% cold chain known or suspected breaches and 40% expiry of our products. No effort was made to return the unused red cells safely. This was considered to be unavoidably wastage.

This is a graph of our results since 2007; 2008 saw an increase awareness, so as you can see up there, there is a bit of a rise in 2007. Within country SA funding was sought to see if this could be minimised.

Following this push for funding the wastage figures decreased as staff and laboratories and sites became aware of the increase in wastage.

2008 saw the appointment of a Level 3 Nursing Lead, that was Trudy Verrall who began the program and four regional Level 2 BloodSafe Clinical Nurses, three of whom are still involved with the program.

2009 was a variant year for BloodMove and included a comprehensive fridge audit that identified problems with a number of our blood fridges. This commenced the process of purchasing new fridges and also sought the implementation of stage 1 in Riverland which we've now based the model of our program on.

2010 saw a four month period where the Lead Nursing role was vacant and the transfusion committee went into a hiatus. In 2010 I was appointed to the role and I was actually one of the original Level 2 BloodSafe nurses and this was followed in 2011 with a team being expanded to include six more BloodSafe clinical nurses and Rick in the role as Medical Scientist.

Implementation of the Riverland model was then commenced at various times at different clusters across Country SA with full support from the BloodMove team. All Science in Country SA are now returning all unused emergency and cross match red cells. Instead of wasting around 90 units per month we are now wasting between 1 to 12 per month. This equates to over a 350,000 of emergency and unused cross matched stock savings. If we had continued with the wastage of 2007 without any changes the cost to the government would equate to around \$1.4m. The initiatives of BloodMove has contributed to South Australia now having the lowest wastage in Australia.

BloodMove implementation. Implementing of BloodMove was done under the Continuous Practice Improvement model. We established the team and governance, identified our blood distribution networks, identified blood fridges that required replacement with a TGA approved fridge, we implemented cold chain systems in our hospitals, partnered the hospitals with regional or metropolitan laboratories, developed and conducted site education and training programs and we continually review and maintain the systems that we've put in place.

Our BloodMove team consists of myself, Rick who is in the audience, we have 10 regional clinical nurses and they oversee between five to eight hospitals and we then have also established a site contact blood nurse who holds the portfolio in

their hospital and there is 60 of those. We have 10 regional laboratories and five metropolitan.

To assist us with our implementation overall good governance was essential. Country Health SA has established an efficient transfusion committee that we meet bimonthly. The two BloodMove project leads report to this committee and each regional clinical nurse also reports through to what is happening within their area and they have good communication with their regional SA pathology laboratories and their supplying metropolitan labs and this has been achieved using the hub and spoke model.

The blood unit's journey, which is slightly different to the slide that Peter used, we've changed it slightly. This is just to give you an understanding of the process that we mapped out our blood unit's journey.

Blood is sent to the hospital and we send it with a thermometer strip, dispatch form which the hospital completes and faxes back to the lab to confirm the receipt and temperature acceptance.

Once the blood is received it's stored at the hospital. This was where our process stopped back in 2008. Since implementing BloodMove we now return the unused blood to the transfusion service lab with between 10 to 14 days prior to expiry. This is done with a thermometer strip, return storage confirmation form and blood fridge quality assurance sheet which Rick will elaborate on later, we then have it cold chain assured.

Initial and ongoing education and training has been essential to ensuring the success and sustainability of this program. Numerous site visits have been conducted and staff educated on the importance of blood stewardship, fridge maintenance, cold chain security, packing and unpacking of shippers and the processes required to return the unused red cells. These have all been included in our education and training sessions. Hospital staff have also been actively involved in the conducting of audits and implementation of any recommendations. We have used the trained staff onsite who have then taken on the responsibility of training other staff who have missed out on the session because as you can understand being shift workers it's quite hard.

I would now like to take this opportunity to commend and thank all of the hospital staff in Country SA who have and continue to respect this precious donation and fully embrace the BloodMove program by ensuring that every effort is made to ensure that all unused red cells are returned for possible re-issue. Without their support BloodMove would not have been able to achieve the changing culture of what was deemed unavoidable wastage to now be avoidable.

I would now like to hand you over to Rick who will talk to you about how we ensure cold chain security.