STAT and ASAP Delivery Study 2014/15

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Introduction

In 2012, Canadian Blood Services (CBS) finalized the consolidation of production/distribution services in southern Ontario from the three CBS Centres previously located in London, Hamilton and Toronto to a central service in Brampton. With this change, CBS began a trial of a new delivery model whereby CBS would pay for all modes of delivery to the hospitals they serve: routine, ASAP and STAT. This pilot study continues as of the publication date of this report. There is a similar delivery study model at Canadian Blood Services' consolidated facility located in Dartmouth NS.

During the subsequent joint CBS/ORBCoN hospital site visits performed on an annual basis, hospitals were informed of their rates of use of the more costly on demand delivery (ODD) rates versus their routine delivery rates. There were concerns that some hospitals were using so many on demand deliveries, that the costs may become unsustainable for CBS and jeopardize the current delivery model. Hospitals asked for some defined goals and targets to balance the number and cost of on demand deliveries versus red blood cell (RBC) and platelet outdate rates and costs. Outdate rates have been minimized in Ontario hospitals. The CBS Hospital Liaison Specialists offered some suggestions for delivery targets to hospitals at these meetings, but there was no set standard established by CBS.

In 2014, the Ontario Regional Blood Coordinating Network (ORBCON) funded a study in collaboration with the McMaster Transfusion Research Program (MTRP), examining the delivery ordering practices in twelve volunteer hospitals across the Brampton catchment. The goal of the study was to examine the feasibility of establishing on demand delivery targets for hospitals with the view to balance the cost of on demand deliveries with the cost of outdated RBCs and platelets. The hospitals varied in size, services and distance from CBS, but each of the six hospitals were matched to a similar service to enable some comparisons. Some hospitals had low on demand delivery requests; some fell into the high end.

MTRP enlisted the assistance of the Canada Research Chair in Healthcare Operations Management and assistant professor in the Department of Management Sciences at the University of Waterloo, Hossein Abouee Mehrizi. The study focused on red blood cells (RBCs) and platelets because these are the most frequently requested products. It is acknowledged that this investigation is a mere snapshot in time that raises questions for further investigation.

The study took place from September 1 to October 3 in 2014. The data collected included:

1. The number of routine deliveries scheduled during the study time period
2. The distance to the Brampton site
3. The number of STAT and ASAP deliveries
4. The rationale for the on demand deliveries
5. The average cost of an on demand delivery to each hospital
6. The cost of outdated platelet units: both apheresis ($434.00 each) and pooled ($185.00 each)
7. The size of the transfusion service based on the number of RBCs and platelets transfused during the study period
8. Inventory levels

It should be noted that CBS was experiencing a RBC shortage during this time, but the hospital stocks did not appear to be affected and no surgeries were cancelled or postponed.

Results

Five teaching and seven community hospitals participated in this study. The per cent of ODDs ranged from 4-62% in this study period (Table 1). The rational for the ODD was not consistently provided. The number of potential routine deliveries per hospital ranged from a low of 10 to a high of 58. Only hospital K used their maximum potential of routine deliveries. The distance to Brampton ranged from 24-167 Km. Most ODD orders contained platelets. Hospitals F and G were the exception to this trend.

Table 1: On Demand Delivery Rate Including Platelets vs. Routine Delivery Uptake

Hosp. type: (least to most ODD by %)	STAT+ASAP Orders & % of Total	STAT+ASAP Orders with Platelets	# Potential Routine Deliveries	# Actual Routine Deliveries	Distance to Brampton Km
A Teaching	1 (4%)	1 (100%)	29	27	167
B Teaching	4 (10%)	2 (50%)	58	35	38
C Community	3 (12%)	2 (67%)	24	23	12
D Community	3 (12%)	2 (67%)	24	22	164
E Teaching	3 (15%)	3 (100%)	28	23	51
F Community	5 (19%)	2 (40%)	24	21	155
G Teaching	9 (24%)	2 (22%)	29	28	38
H Teaching	9 (24%)	7 (78%)	33	29	37
I Community	8 (36%)	8 (100%)	16	14	88
J Community	16 (43%)	16 (100%)	24	23	69
K Community*	11 (60%)	10 (90%)	10	10	63
L Community*	17 (62%)	16 (94%)	14	11	24
* Platelets NOT routinely stocked					

The number of RBCs and platelets transfused during the study period was examined along with the corresponding number of outdated components (Table 2). The RBC and platelet usage reflects the size of the transfusion service. The highest RBC user was hospital C at 723 RBCs transfused and the lowest is hospital D at 128 RBCs. RBC outdates were low for all hospitals in the study and ranged from 0-1.5%.

Platelet use ranged from a high of 257 units, hospital B, to 12 at hospital D. Platelet outdate rates were quite variable with a rate of 0-56%. Hospitals having a platelet outdate rate of 30% (about twice the provincial rate overall) or higher have some of the lowest on demand delivery requests. See hospitals A, C, D, E and F.

Table 2: RBC and Platelet Transfused and Outdated (OD)

Hosp/type: (least – most %)	STAT+ASAP Orders	RBC Trns Sept 2014	RBC OD Sept 2014	Plt Trns Sept 2014	Plt OD Sept 2014
A Teaching	1 (4%)	651	0 (0%)	58	33 (36%)
B Teaching	4 (10%)	618	4 (1%)	257	5 (2%)
C Community	3 (12%)	723	0 (0%)	29	21 (42%)
D Community	3 (12%)	128	0 (0%)	12	15 (56%)
E Teaching	3 (15%)	555	0 (0%)	22	15 (40%)
F Community	5 (19%)	285	2 (1%)	19	8 (30%)
G Teaching	9 (24%)	523	1 (0.2%)	120	11 (8%)
H Teaching	9 (24%)	648	0 (0%)	92	6 (6%)
I Community	8 (36%)	193	3 (1.5%)	28	10 (26%)
J Community	16 (43%)	483	1 (0.2%)	54	10 (15%)
K Community	11 (60%)	240	0 (0%)	24	4 (14.3%)
L Community	17 (62%)	287	1 (0.3%)	23	0 (0%)

The highest number of routine deliveries allotted by CBS for community hospitals during this timeframe is 24 (Table 3). Although the size of service for hospital D is the smallest, it has the same number of routine deliveries as the larger community hospitals such as C and J. When hospital D is compared to smaller community hospitals like I, K and L, hospital D has substantially more scheduled routine deliveries, even though the transfusion service is the smallest of the four.

Table 3: Community Hospitals: Number of Routine Deliveries Comparison

Hospital	RBCs Trns	Plts Trns	Distance to CBS	# Scheduled Deliveries
C	723	29	12	24
D	128	12	164	24
F	285	19	155	24
I	193	28	88	16
J	483	54	69	24
K	240	24	63	10
L	287	23	24	14

Further discussion with CBS and hospital D revealed that it is both a distribution and redistribution centre for five other hospitals in its region. The extra number of routine deliveries was scheduled by CBS for these reasons. The other 11 hospitals were asked to supply their distribution and redistribution practices for RBCs and platelets in relation to the number of routine deliveries scheduled (Table 4).

Table 4: Distribution and Redistribution Practices

Hospital	On Demand Orders (ODD)	Distance to Brampton Km	Single ODD Cost $	Total ODD Cost (for study period) $	Distribute RBCs or Plts/week	Receive RBCs or Plts/week
A Teaching	1 (4%)	167	180.05	180.05	No	Yearly: Periodic plts
B Teaching	4 (10%)	38	38.68	154.72		
C Community	3 (12%)	12	15.28	45.84	Occasionally plts	Occasionally both
D Community	3 (12%)	164	157.63	472.89	Yes to 5 sites: 20	10
E Teaching	3 (15%)	51	73.78	221.34	Occasionally plts	No
F Community	5 (19%)	155	148.85	744.29	4 RBCs; 1 plt	4 RBCs
G Teaching	9 (24%)	38	38.68	348.12		
H Teaching	9 (24%)	37	38.68	348.12	Occasionally plts	0-1 a year
I Community	8 (36%)	88	91.33	730.64		
J Community	16 (43%)	69	56.23	899.68	No	2-5 RBCs; 1 plt
K Community	11 (60%)	63	77.68	854.48	2 RBCs	No
L Community	17 (62%)	24	43.55	740.35	No	5 RBCs

Shaded regions indicate “no response”

Hospital D is the highest routine distributor and redistributor of RBCs and platelets of the respondents in Table 4. Hospital F, a community hospital over twice the size of hospital D, also distributes and redistributes blood products routinely and has the same number of routine deliveries as hospital D (24). Hospital K, about twice the size of hospital D, routinely distributes RBCs, but has the lowest number of scheduled deliveries (10).

Table 5 compares the average on demand delivery costs for each hospital to the cost of their platelet outdate rate for the study period.

Table 5: Cost of On Demand Deliveries (ODD) and Platelet (Plt) Outdates

Hospital	On Demand Orders	Distance to Brampton Km	*Single ODD Cost $	Total ODD Cost (for study period) $	# Plts Outdated	**Cost of Outdated Plts $
A Teaching	1 (4%)	167	180.05	180.05	33 (36%)	13,892
B Teaching	4 (10%)	38	38.68	154.72	5 (2%)	1,523
C Community	3 (12%)	12	15.28	45.84	21 (42%)	5,081
D Community	3 (12%)	164	157.63	472.89	15 (56%)	3,074
E Teaching	3 (15%)	51	73.78	221.34	15 (40%)	5,238
F Community	5 (19%)	155	148.85	744.29	8 (30%)	1,779
G Teaching	9 (24%)	38	38.68	348.12	11 (8%)	3,350
H Teaching	9 (24%)	37	38.68	348.12	6 (6%)	1,409
I Community	8 (36%)	88	91.33	730.64	10 (26%)	2,448
J Community	16 (43%)	69	56.23	899.68	10 (15%)	4,014
K Community	11 (60%)	63	77.68	854.48	4 (14%)	740
L Community	17 (62%)	24	43.55	740.35	0 (0%)	0

* CBS ODD costing for Brampton Centre

** CBS Blood Component Cost per Unit Summary 2014-2015 for apheresis and buffy coat platelets

On demand delivery costs ranged from a low of $45.84 to $899.68. Platelet outdate costs were generally much higher. One hospital had a zero cost for platelet outdates, but they had the highest rate for on demand deliveries. Since this hospital is located close to the blood centre, even though its on demand requests were high, the total delivery cost was relatively low at $740. The remaining 11 hospitals' outdating costs ranged from $1,409 to $13,892.

Analysis and Discussion

Factors Not Influencing High Rates of On Demand Deliveries

Being far away from the blood distribution centre did not appear to be a factor in driving up the rate of on demand deliveries. For example in Table 1, three of the hospitals that are over 100 Km away from CBS fall in the top six (positions 1, 4 and 6) performers for low on demand deliveries. At the other end

of the scale, three of the four hospitals that are less than 40 Km away from the blood supplier have a higher use of ODDs (positions 7, 8 and 10). The lowest user is the farthest away at 167 Km and the highest user is only 24 Km from CBS. It appears that hospitals that are the furthest away from Canadian Blood Services have lower request rates for on demand deliveries.

Hospital type did not appear to be a factor with increased on demand use. There were three teaching and three community hospitals in the top six performers and two teaching and four community hospitals in the high on demand utilization group.

Factors that May Influence High Rates of On Demand Deliveries

The number of routine deliveries scheduled by CBS relates to an increase in on demand requests in that the lower the number of routine deliveries, the higher the number of on demand requests by those hospitals. In Table 1, all of the hospitals receiving less than 20 routine orders during this time period, fell within the bottom four hospitals having the highest STAT and ASAP use. Note that hospitals I (16 routine), K (10 routine) and L (14 routine) fell in positions 9, 11 and 12 in Table 1.

Platelets also factored into on demand delivery requests. Platelets were the most frequently ordered component. For example, 6/12 hospitals had greater than 90% of the on demand orders containing platelets; 10/12 had 50% or greater deliveries that contained platelets. Additionally, hospitals K and L do not routinely stock platelets and they had the highest rates of on demand deliveries.

Transfusion Service Size, Product Outdates and Distribution/Redistribution

In the section above, the number of scheduled routine deliveries was identified as a significant factor in higher on demand use. How will the "magic number" of deliveries per hospital be determined?

Red blood cell (RBC) and platelet transfusions were examined to ascertain the size of the transfusion service. Presumably, bigger services require more scheduled deliveries. Outdate rates of both of these products were also analyzed to determine if high outdate rates signal possible over stocking by some hospitals in order to maintain a low on demand delivery rate.

For RBCs, outdate rates appear to be consistently low, ranging from 0-1.5%. Further, 6/12 hospitals had a 0% outdate rate for RBCs. Since low RBC outdate rates occur across the on demand delivery spectrum, they do not appear to be an indicator of overstocking in order to reduce on demand deliveries. RBC utilization is well managed and not a major factor in driving up on demand delivery rates.

The outdate rate for platelets varied greatly: 0-56%. The hospitals that had a platelet outdate rate of 30% or higher, (30% is about twice the provincial rate), had the lowest on demand delivery requests. Therefore it would appear that platelet overstocking is a factor in maintaining low on demand delivery rates. This platelet stocking practice may be a direct result of hospitals' responses to the CBS message delivered at site visits and other meetings that ODDs from Brampton need to be reduced. See Table 2 for hospitals A, C, D, E and F. Hospital D outdated more platelets than it used and may want to consider stocking less or getting involved in a platelet redistribution program to reduce platelet wastage. The challenge for many hospitals that want to be involved in redistribution to reduce outdate rates is that

there is no courier in place or budget or funding for the transportation of blood components and products for redistribution.

The methodology behind the number of scheduled deliveries by CBS is not clear to the hospitals. As previously discussed, a small community hospital (D) had many more scheduled deliveries than community hospitals that are larger because they are a distribution/redistribution centre for their region. However, a larger community hospital (K) is also regularly involved with distribution (see Table 4) on a weekly basis and they had the lowest number of scheduled deliveries of this group. Therefore the size of service and being a distribution centre did not factor into hospital K's delivery schedule since they had the lowest number of routine deliveries possible.

Size of the service and distance from CBS do not consistently factor into the equation either. For example, the largest RBC user (hospital C) had 24 scheduled deliveries, and the next three largest users (A, B and H) had 29, 58 and 33 routine deliveries scheduled. Of these hospitals, A is the furthest away from the blood centre at 167 Km, and they have the least number of scheduled deliveries of the higher user teaching hospitals.

Hospital B had substantially more scheduled deliveries (58) than any other hospital. Upon further investigation, one of the delivery times was 0130 hours and platelets were frequently not ready for CBS distribution at this time, so further delivery runs were scheduled. CBS has since revised their process and reduced the number of deliveries for this hospital.

It should be noted that Canadian Blood Services continually adjusts routine deliveries to keep up with hospital demands and revisions to the delivery schedules for the hospitals involved in this study have already been made. However, it would be beneficial to all parties to be informed about the rationale and process for the number of scheduled CBS routine runs that each hospital can expect.

Cost of On Demand Deliveries versus the Cost of Platelet Wastage

There may not be "one-size-fits all" model for guiding hospitals in optimal usage of on demand deliveries. The cost of on demand deliveries must be balanced with the cost of outdating product. The outdate focus for the purposes of this discussion is on platelets since the data from this study demonstrated that platelets, rather than RBCs appear to be the main driver of on demand delivery requests. Also high platelet outdates play a factor in low on demand delivery request rates (Table 2).

Because each hospital's ODD costs and services are different, the data presented in Table 5 will be discussed on a case by case basis. Please note that redistribution is identified as a mitigation strategy to platelet outdating a great deal in the following case by case discussion. However redistribution initiatives are often hampered by a lack of courier infrastructure and/or funding to implement one.

Hospital A -167 Km

# of ODD	ODD Cost $	# of OD Platelets	Platelet OD Cost $
1	180.65	33	13,892

Hospital A had a very low on demand delivery rate, even though they are the farthest of the 12 hospitals from CBS, which is commendable. However, the rate of platelet outdating was high, and the outdating cost was the highest of the 12 hospitals. The cost of wasting these platelets far surpasses this hospital's on demand delivery costs. CBS and this hospital may want to pursue further discussions about gradually reducing the platelet stock at the hospital with the possibility of incurring more on demand expenses. This will be a moving target until the right balance is determined between cost of on demand deliveries, platelet wastage and patient safety. Additionally, a platelet redistribution program could assist with platelet supply needs as well as the reduction of outdate rates.

Hospital B-38 Km

# of ODDs	ODDs Cost $	# of OD Platelets	Platelet OD Cost $
4	154.72	5	1,523

Hospital B had a low on demand delivery request rate and a low platelet outdate rate. They should continue to monitor their inventory needs as well as their levels of ODDs, but they have determined a good balance and should maintain status quo for now.

Hospital C-12 Km

# of ODDs	ODDs Cost $	# of OD Platelets	Platelet OD Cost $
3	45.84	21	5,081

Hospital C had a very low on demand delivery rate and low ODD costs for two reasons: the rate of use was low and the proximity to CBS is very close. It had the third highest platelet outdate rate at a cost of $5,081. The cost of wasting these platelets far surpassed this hospital's on demand delivery costs. Like hospital A, CBS and this hospital may want to pursue further discussions about gradually reducing the platelet stock at the hospital with the possibility of incurring more on demand expenses. This will be a moving target until the right balance is determined between cost of ODDs, patient safety and platelet wastage. Unlike hospital A, this hospital is very close to CBS so patient safety concerns with regard to reducing platelet stock should not be a factor. Additionally, a platelet redistribution program could assist in reducing outdate rates.

Hospital D-164 Km

# of ODDs	ODDs Cost $	# of OD Platelets	Platelet OD Cost $
3	472.89	15	3,074

Hospital D also had a very low ODD rate, even though they are quite far from the blood centre, which is commendable. This hospital outdated more platelets than they transfused at a cost of $3,074. Like hospital A, CBS and this hospital may want to pursue further discussions about gradually reducing the platelet stock at the hospital with the possibility of incurring more on demand expenses. This will be a moving target until the right balance is determined between cost of on demand deliveries, platelet wastage and patient safety. A platelet redistribution program would prove helpful both for stock and to prevent outdating.

Hospital E-51 Km

# of ODDs	ODDs Cost $	# of OD Platelets	Platelet OD Cost $
3	221.34	15	5,238

Hospital E has a lower ODD rate but has the second highest platelet outdate cost of $5,238. Like some of the previous hospitals already discussed, CBS and this hospital may want to pursue further discussions about gradually reducing the platelet stock at the hospital with the possibility of incurring more on demand expenses. This will be a moving target until the right balance is determined between cost of on demand deliveries, platelet wastage and patient safety. Patient safety issues with regard to long wait times for ODD orders may be less of a concern for hospital E when compared to A or D. This is because it is situated much closer to the blood centre. A platelet redistribution program would prove helpful both for stock and to prevent outdating.

Hospital F-155 Km

# of ODDs	ODDs Cost $	# of OD Platelets	Platelet OD Cost $
5	744.29	8	1,779

Hospital F had a good ODD rate, but the outdate costs are slightly higher than the ODD costs. There may be an opportunity for hospital F to reduce platelet outdates slightly, so CBS may want to pursue further discussions about gradually reducing the platelet stock at the hospital with the possibility of incurring more on demand expenses. This will be a moving target until the right balance is determined between cost of on demand deliveries, platelet wastage and patient safety. A platelet redistribution program would prove helpful both for stock and to prevent outdating.

Hospital G-38 Km

# of ODDs	ODDs Cost $	# of OD Platelets	Platelet OD Cost $
9	348.12	11	3,350

Hospital G had a good ODD rate, which is just under the proposed target of 25% (See recommendation 10). The platelet OD was excellent at about half of the provincial average. However, the platelet OD costs are still $3,350. Since hospital G is so close to CBS, they may want to consider a slight reduction in platelet inventory to reduce outdating costs. This may increase ODD expenses and will be a moving target until the right balance is determined between cost of on demand deliveries and platelet wastage.

Hospital H-37 Km

# of ODDs	ODDs Cost $	# of OD Platelets	Platelet OD Cost $
9	348.12	6	1,409

Hospital H had a good ODD rate, which is just under the proposed target of 25%. The platelet outdate rate was excellent at less than half of the provincial average. The platelet outdate costs are one of the lowest at $1,409. This hospital should continue to monitor its inventory needs as well as its levels of ODDs, but it has determined a good balance and should maintain status quo for now.

Hospital I-88 Km

# of ODDs	ODDs Cost $	# of OD Platelets	Platelet OD Cost $
8	730.64	10	2,448

Hospital I had a higher ODD rate but was one of the hospitals that had a low number of scheduled, routine deliveries. The platelet outdate rate is higher than the provincial rate at a cost of $2,448. Hospital I and CBS may want to pursue further discussions about increasing the number of routine deliveries to decrease platelet outdate and on demand delivery costs. A platelet redistribution program would prove helpful both for stock and to prevent outdating.

Hospital J-69 Km

# of ODDs	ODDs Cost $	# of OD Platelets	Platelet OD Cost $
16	899.68	10	4,014

Hospital J had a high rate of ODD and the highest incurred cost at $899.68. The platelet rate of outdating is about the same as the provincial average and cost $4,014. This community hospital has the same number of routine deliveries (24) as three other community hospitals, some of which are larger and others are smaller. Hospital J and CBS may want to pursue further discussions about adjusting inventory to reduce the number of platelet outdates. A platelet redistribution program would prove helpful both for stock and to prevent outdating.

Hospital K-63 Km

# of ODDs	ODDs Cost $	# of OD Platelets	Platelet OD Cost $
11	854.48	4	740

Hospital K had a higher ODD rate and the second highest delivery expense, but was one of the hospitals that had a low number of scheduled, routine deliveries. The platelet outdate rate is below the provincial average, as would be expected from a hospital that does not stock platelets. Hospital K and CBS may want to pursue further discussions about increasing the number of routine deliveries to further decrease platelet outdating and on demand delivery costs. Presently, this hospital has balanced their ODD and platelet outdate costs.

Hospital L-24 Km

# of ODDs	ODDs Cost $	# of OD Platelets	Platelet OD Cost $
17	740.35	0	0

Hospital L had a higher ODD rate but was one of the hospitals that had a low number of scheduled, routine deliveries. This hospital is the only hospital that outdated no platelets, but they are not routinely stocked. The ODD delivery costs incurred are the fourth highest in this study group, but there are no platelet outdate costs. Hospital L and CBS may want to pursue further discussions about increasing the number of routine deliveries to further decrease on demand delivery costs. Another point to discuss is the stocking of platelets. Since this site is so close to Brampton, should they continue to order platelets “on demand” rather than stocking them and incurring outdating costs?

Conclusion, Recommendations and Next Steps

The number of scheduled routine deliveries and platelet orders factor heavily into increased rates of on demand deliveries. Being a greater distance from the Canadian Blood Services centre, RBC use and hospital type (teaching vs. community) do not seem to be factors in increased on demand deliveries.

Hospitals are awaiting further direction on CBS's expectations and how to balance ODD and platelet outdate costs with patient safety. Each hospital's situation is quite unique and what might be acceptable ordering and stocking practices at one hospital may not work for another. CBS and hospitals should discuss what types of goals are relevant to each hospital. The hospitals do not want the current blood delivery model jeopardized.

In the meantime, our supply chain expert recommends aiming for 25% or less for on demand deliveries, but be mindful of the platelet outdate rates and the resulting costs.

The following recommendations and next steps were gathered from ORBCoN, hospital and CBS staff after reviewing the results of this study.

1. CBS: share rationale and process for determining the routine delivery schedule with hospitals and ORBCoN
2. CBS: work together with individual hospitals to determine appropriate ODD targets based on location, service, the number of routine deliveries, platelet demands and stocking, etc.
3. All: expand platelet redistribution programs to minimize outdating. Could LHIN transportation systems be utilized to facilitate this? The use of ORBCoN's platelet web app may prove to be helpful and should be considered
4. Hospitals: currently stocking, or considering stocking platelets, put policies and procedures in place to ensure you can easily cross the ABO and Rh "barriers" for adults in order to use older platelets to prevent outdating if possible
5. Hospitals: use the most current recommendations for CMV and irradiated requirements to expand the number of patients who are able receive redistributed products
6. CBS and ORBCoN: continue to review wastage rates and use of ODD with hospitals through various modes like email notices, websites and annual site visits
7. CBS and ORBCoN: consider including rates of ODD use, platelet outdates and both costs on the CEO/CoS/TC chair letter
8. Hospitals: audit your use of ODD to ensure it is appropriate. Review findings with staff
9. Hospitals: educate front line staff about the costs your hospital incurs with regard to platelet inventory, outdate and ODD costs
10. Hospitals should aim for a 25% or less usage rate of on demand deliveries (STAT and ASAP), but balance the delivery rate with platelet outdate rates and costs

A Final Word from Canadian Blood Services

Canadian Blood Services is committed to serving its hospital customers with timely product delivery under both routine and emergency conditions. We believe we are in a position to provide the most cost effective service available within the total system. We look forward to further collaboration with our

hospital colleagues to ensure hospitals are able to serve their patients within mutually agreed and cost effective targets.

We are currently examining the platelet outdate rate in Canada, both at Canadian Blood Services and within the hospital sector. We recognize that it is higher than expected when compared to other countries. Platelet outdate costs within the CBS catchment were $9.8 million last year. Clearly there is room for improvement. Canadian Blood Services is continually examining ways it can assist with minimizing platelet wastage without over-escalating the cost of on demand deliveries. This study has reminded us all of the importance of considering the total system cost and to look at the larger picture as we try to improve our efficiencies. We will welcome hospital input.

As this work progresses further and targets become more refined, we would encourage our hospital partners to aim for the recommended on demand delivery target or 25% or less while ensuring there is a balance with the cost of outdates, particularly platelets.

Sincerely, your Canadian blood system partner,
Rick Prinzen, Chief Supply Chain Officer

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