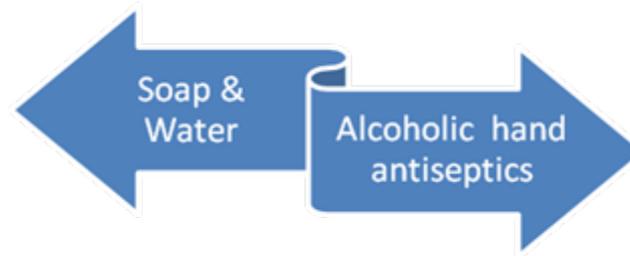


Evidence-Based Medicine Group

December 10, 2010

Maryland Hand Hygiene Collaborative

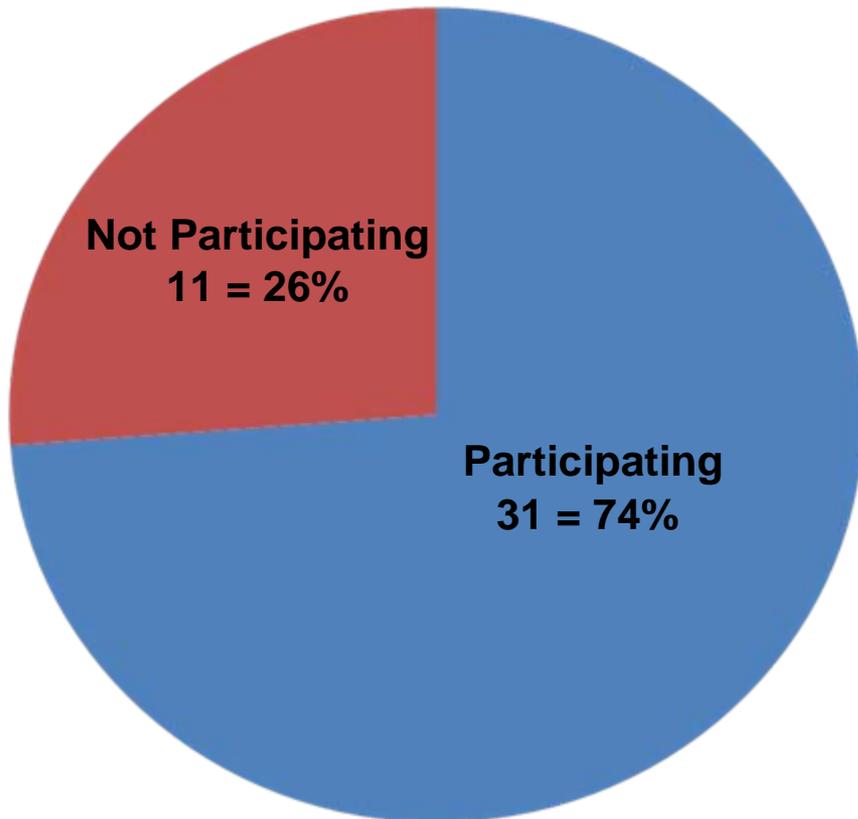


Hospital Participation Matrix

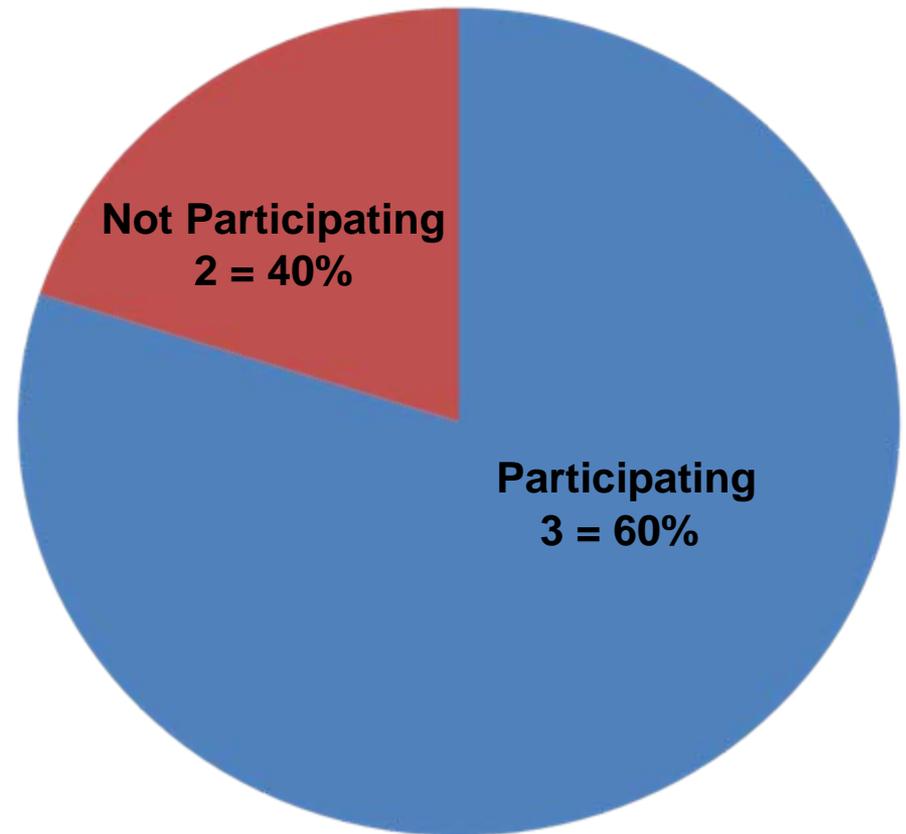
Status of the Hospital as of September 1, 2010	HandStats	Process Measures	Technical Assistance	Learning Sessions	Monthly Calls & Webinars	Listserve	Website & Tools
<p>Full compliance: Standard training Unknown observers All units involved 30 observations/unit/month Process measures</p>	√	√	√	√	√	√	√
<p>Non-compliant: Not using unknown observers</p>		√		√	√	√	√

Maryland Hospital Hand Hygiene Collaborative Participation Status

Acute Care (N = 42)

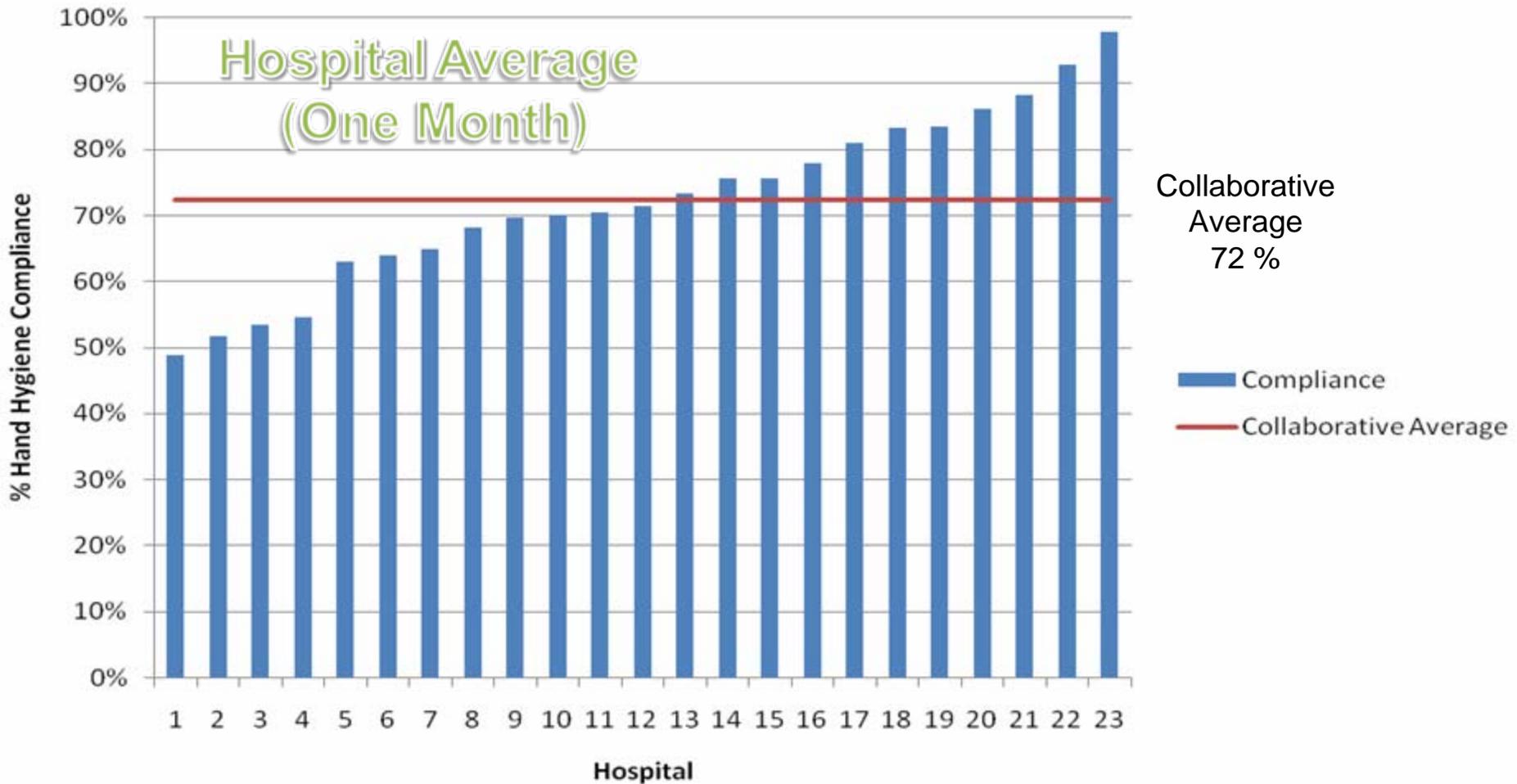


Specialty (N = 5)



N = number of hospitals previously committed to program. Overall, 67% of Maryland acute care general hospitals are participating in the Collaborative

HH Compliance on "Exit" Measure by Hospital, October 2010 N = 23



****Includes only acute care hospitals with at least an 80% participation rate among required units as of 11/25/10****

Executive Sponsor Report Card

Maryland Hospital Hand Hygiene Collaborative Report Card

Insert Organization Name Here

Current and Prior Activity

	Your hospital				MD State Collaborative	
	# Observed Units	# Total Observations	Overall Hand Hygiene Compliance (all observed measures at your hospital)	Hand hygiene compliance (based on Exit only)	Hand hygiene compliance (based on Exit only)	Process Measures Reported
October						
September						
August						
July						
June						

Technical Assistance Outcomes:

Disclaimer: Collaborative average includes only those hospitals with at least 80 % of required units (med-surg, peds, ICU's) participating in observations

Current/Future Activities of the Hand Hygiene Collaborative

- Monthly Hand Hygiene Team Calls/Webinars
- Monthly Planning Committee Calls
- Monthly Steering Committee Calls
- Monthly Technical Assistance Calls to Participating Teams
- Monthly Submission of Compliance Data by the 10th
- Targeted site visits; struggling teams or for recognition
- Quarterly Submission of Process Measures
 - 15th of September, December, March and June
- CEO and Executive Sponsor Report Card (Future)
- Validation of standard methodology
- Consider adding hospitals as they are ready
- **Possible expansion to non-acute care settings (Future)**

On the CUSP: Stop BSI*



- 89% participation from MD acute care hospitals
- Hospitals formed internal unit-based teams
- Weekly in-depth team calls began September 30, 2010
- Maryland CEO Leadership Reception October 27, 2010
- Developing data infrastructure
- Face-to-Face Kickoff on December 6, 2010

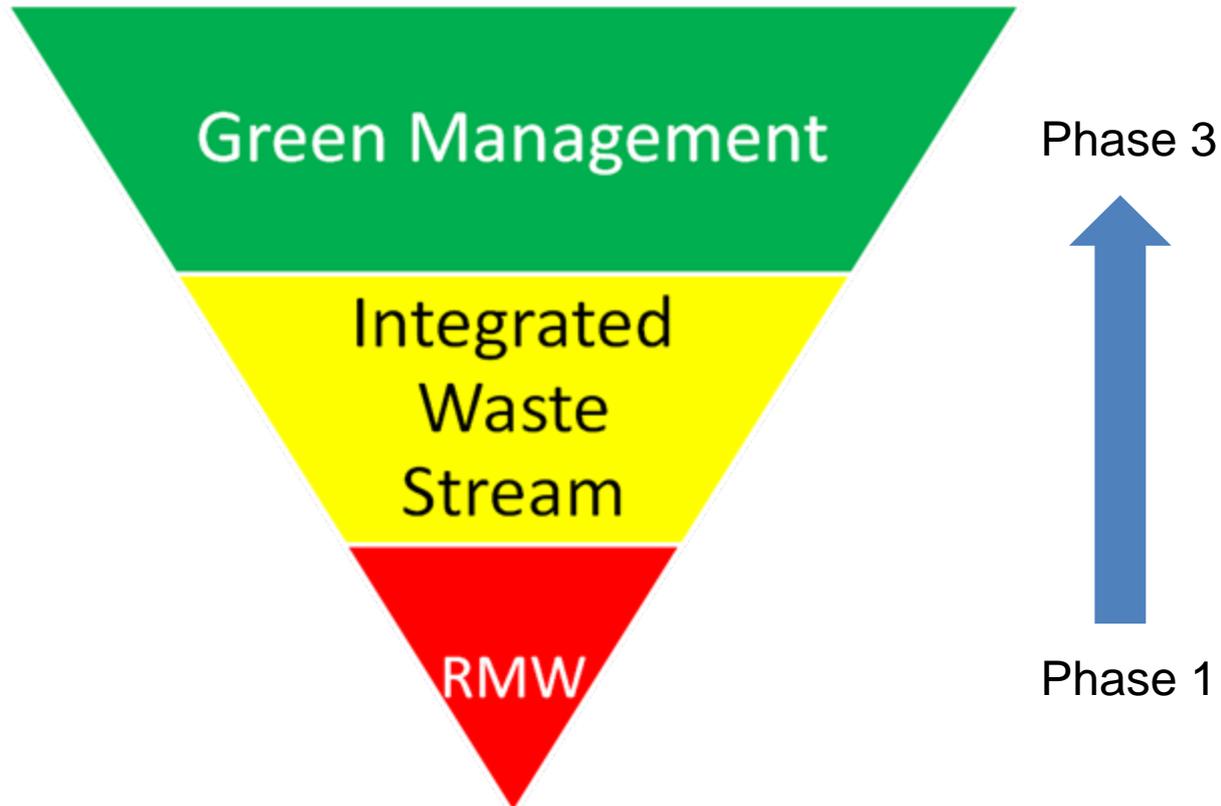
*CUSP = Comprehensive Unit based Safety Program, BSI = Blood Stream Infection

Maryland Regulated Medical Waste ("RMW") Reduction Collaborative



Initial Approach

- Most recent meeting to review initiative goals and roadmap: October 28, 2010
 - Representatives present from AHA, DHMH, GBMC, MD H2E, JHM, MDE, MHA, UMMC
- Lead with RMW to capture early \$\$ wins
 - (**may adjust based on findings from initial survey**)



Maryland Regulated Medical Waste Collaborative

Work Group Members

- Co-Chairs
 - Joan Plisko, *MD H2E*
 - Amanda Llewellyn, *JHM*
- Members
 - Frank Monius, *MHA – ad hoc*
 - Laura Brannen, *AHA – ad hoc*
 - I-Fong Sun, Sean Nelson, Zahi Jurdi, *JHM*
 - Denise Choiniere, *UMMC*
 - Michael Forthman, *GBMC*
 - TBD, *Union Hospital of Cecil County*
 - Mary Mussman, Nicole Stallings, *DHMH*
 - Russ Moy, Dave Long, *DHMH, State Chronic Hospitals*
 - Ed Hamburg, *MDE*

“Temperature Check” Initial Survey (n = 10)

- Survey elements
 - Organization type (e.g. academic, ambulatory, long-term, specialty, etc.)
 - Organization size (licensed beds)
 - Time working on RMW reduction
 - RMW statistics tracking
 - Metric to track RMW
 - % RMW of total waste
 - lbs of RMW/year
 - Current RMW efforts/Future RMW efforts
 - Best practice categories
 - Communication of waste management efforts
 - Resources for RMW
 - Challenges/barriers to reducing RMW
 - Driving priority behind the reduction of RMW
 - RWM treatment/disposal technologies
 - RMW disposal guaranteed contract

Next Steps

- Recurring meetings moving forward
- Assess survey results
- Create roadmap, website
- Schedule kickoff inviting all MD acute care and state hospitals
- Will model off of the Maryland Blood Wastage Collaborative:
 - Website
 - Participation agreements
 - Project charters
 - Defining metrics
 - Sharing best practices

KEY

Time to Impact (TTI) 1-3 Months 3-6 Months

Change 1 2 3 4

Health Impact

1. Infection Prevention

1A. Hand Hygiene / Antibiotic Stewardship Programs

Intervention: 100% antibiotic stewardship program
Impact: 4 3 2 1
Change in hand hygiene: 20% to 30%
Decrease in antibiotic use: 10% to 15%
Cost: Decrease in antibiotic use that translates into 1-2% of total savings goal for hospital (JHH)
Ease of Implementation:

1B. Hospital-Acquired Infection (HAI) Interventions

Intervention: Checklists, Surveillance, Education, Public Reporting
Impact: 4 3 2 1
Change in HAI rate: 10% to 15%
Cost: Decrease in HAI rate that translates into 1-2% of total savings goal for hospital (JHH)
Ease of Implementation:

2. Drop in Balloon Time (D2B)

Intervention: Review your methodology of what is D2B patient outcome
Impact: 4 3 2 1
Change in D2B rate: 10% to 15%
Cost: Decrease in D2B rate that translates into 1-2% of total savings goal for hospital (JHH)
Ease of Implementation:

3. Blood Wastage

Intervention: Development of a plan for reducing blood wastage
Impact: 4 3 2 1
Change in blood wastage: 10% to 15%
Cost: Decrease in blood wastage that translates into 1-2% of total savings goal for hospital (JHH)
Ease of Implementation:

TIME TO IMPACT 1-3 MONTHS 3-6 MONTHS

3. Blood Wastage

Intervention: Application of Lean Sigma Methodology to improve usage and storage of blood products

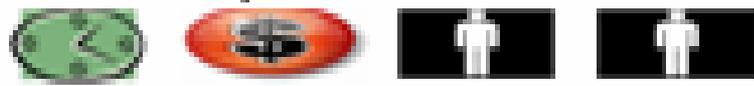
Impact:



Within first two years of project, JHH resulted in a savings of over 4,700 units of blood, which corresponds to a savings of \$900,000 for the hospital.

Cost: Purchase of coolers and temperature readers

Ease of Implementation:



Maryland Blood Wastage Collaborative

Work Group Members

- Co-Chairs: Page Gambill, American Red Cross
Donna Marquess, LifeBridge Health
- Members: Joan Boyd, JHH
Janice Hunt, UMM
Mary Mussman, DHMH
Lisa Shifflett, JHH
- Facilitator: I-Fong Sun, JHM



Inventory Visibility System

The need is constant. The gratification is instant. Give blood.™

LOGOUT

Search



[Available Blood Units](#) |
 [My Pending Claims](#) |
 [My Listed Units](#)

ADD A NEW UNIT >

[Home](#) > Blood Units

Welcome Jane Doe [VA - WASHINGTON DC] (Not Jane Doe?) or Sign Out

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Phasellus blandit fringilla elit, non consectetur odio. Sed quis neque arcu, quis porta libero. Ut non arcu justo. Etiam bibendum leo id leo ornare at consectetur ligula rhoncus. Sed leo, test.

Login successful.

Blood Units Available for Claim

This is a listing of all units that are available for claim and have not yet expired.

Product Type: |
 Blood Type: |
 CMV: |
 Irradiated: |
 GO

Type	Hospital	Expiration	Product	DIN	Type	CMV	Irr	
Apheresis Platelets	VIRGINIA HOSPITAL CTR	11/12/2010	12710 Platelets Pheresis LR (Single or Pt 1) Notes	78976	B-	No	No	Claim
Red Blood Cells	VA - WASHINGTON DC	11/17/2010	05761 AS-3 Red Blood Cells Pheresis LR/Irr Bag2	33333344	O+	Yes	Yes	
Red Blood Cells	VA - WASHINGTON DC	11/20/2010	04741 AS-3 Red Blood Cells Pheresis LR Bag1	3333335	AB-	No	No	
Red Blood Cells	VIRGINIA HOSPITAL CTR	11/21/2010	05710 AS-1 Red Blood Cells LR/Irr	111119	Rh-	No	Yes	Claim
Red Blood Cells	VIRGINIA HOSPITAL CTR	11/21/2010	05761 AS-3 Red Blood Cells Pheresis LR/Irr Bag2	111119	Rh-	No	Yes	Claim
Red Blood Cells	HOPKINS HEMAPHERESIS TRTMT CTR	11/25/2010	55555	5465464	O+	Yes	No	Claim
Red Blood Cells	VA - WASHINGTON DC	11/27/2010	04360 CPDA-1 Red Blood Cells LR	222225	O-	No	No	Remove
Red Blood Cells	HOPKINS HEMAPHERESIS TRTMT CTR	11/27/2010	4444444444444444444	54643.41	A+	Yes	No	Claim
Red Blood Cells	HOPKINS HEMAPHERESIS TRTMT CTR	11/27/2010	8888888888888888888	54643.41	A+	Yes	No	Claim
Red Blood Cells	HOPKINS HEMAPHERESIS TRTMT CTR	12/10/2010	04761 AS-3 Red Blood Cells Pheresis LR Bag2	88888	B+	Yes	No	Claim

Features:

- Post expiring inventory
- Claim posted inventory
- Acknowledge requested transfer

Spreading the Word

Poster for AABB October 2010 Conference



A Statewide Effort to Reduce Blood Wastage in Maryland

D Marquess, SHB, Baltimore, MD; E Harden, JHM, Baltimore, MD; I Sun, JHM, Baltimore, MD; P Gambill, ARC, Baltimore, MD; T Chang, JHM, Baltimore, MD.



Background

One Baltimore hospital with over 500 beds, has successfully applied Lean Sigma tools and methodology to reduce Red Blood Cells wastage throughout the hospital. To date, the project has resulted in savings of over \$2000 units of Red Blood Cells, which amounts to over \$1.2M worth of cost savings. Around the same time, the Governor of Maryland, Martin O'Malley, issued an executive order to create the Maryland Health Quality and Cost Council (MHQCC) to focus initiatives for improving health care in Maryland. Given the success of this urban hospital's journey to blood wastage, the Maryland Health Quality and Cost Council supported the mission of the Maryland Blood Wastage Collaborative with the ultimate goal of ensuring ample supplies of the precious commodity while cutting expenses associated with wasted blood products.

Under the guidance of the Council (L. Governor Anthony D. Sinner, Chair; Secretary John M. Colaneri, Vice-Chair; Nicole Shallege, Director), the Blood Wastage Collaborative was formed. It is structured by representation from both the hospital, as well as the blood supplier side. Previously, there was no regional network to benchmark an institution's wastage rates, to share best practices, or to communicate when a facility has a short-stocked unit that could be transferred to another facility that could use it. Developing a regional community, specifically the Maryland Blood Wastage Collaborative, would enable these potentially simple tools and exchanges to ultimately reduce blood wastage throughout the state of Maryland.

Estimate the percentage of blood waste at your institution that can be accounted for by each of the reasons listed below:

Reason	100%	75%	50%	25%	0%
Expired blood products	100%	75%	50%	25%	0%
Transfusion error	100%	75%	50%	25%	0%
Unnecessary transfusion	100%	75%	50%	25%	0%
Other	100%	75%	50%	25%	0%

In order to identify the blood components that would be the focus of this work group, an initial survey was conducted among 26 Maryland hospitals. The survey response rate was 50% among those hospitals, and the results revealed the three blood products directed at the highest rates were plasma, platelets, and autologous red cells.

Developing the Project Charters

Based on these survey results, a smaller core group was formed to develop the project charters that would become the primary focus of the collaborative. Project charters were created for both plasma and platelets with a goal to reduce wastage rates of each product across the state by 1% by July 1, 2010. The initial focus did not include autologous red cells as the group determined that this initiative would require extensive physician involvement.

Project Charter	Project Charter
<p>Project Name: Reducing Blood Wastage of Plasma</p> <p>Project Manager: [Name]</p> <p>Project Sponsor: [Name]</p> <p>Project Justification: [Text]</p> <p>Project Objectives: [List]</p> <p>Project Scope: [List]</p> <p>Project Risks: [List]</p> <p>Project Budget: [Table]</p>	<p>Project Name: Reducing Blood Wastage of Platelets</p> <p>Project Manager: [Name]</p> <p>Project Sponsor: [Name]</p> <p>Project Justification: [Text]</p> <p>Project Objectives: [List]</p> <p>Project Scope: [List]</p> <p>Project Risks: [List]</p> <p>Project Budget: [Table]</p>

Collecting Baseline Data

A template was developed by the core group in order to collect baseline data on each of the four included blood products: Allogenic and autologous red cells data was collected for potential use in future initiatives. The template was completed by each Maryland hospital with data from the previous 12 months.

Baseline Blood Utilization Template

Product	Unit	Wastage	Cost
Red Blood Cells	1000	1000	1000
Platelets	1000	1000	1000
Plasma	1000	1000	1000
Autologous Red Cells	1000	1000	1000

Gaining Commitment with the Pledge of Participation

The Hospital Pledge of Participation, signed by the Hospital Executive and the Blood Bank Leader of each organization, served to formally signify the organization's intent to actively participate in the collaborative. It also stated the specific commitments of both the hospital participant and the work group.



Building the Collaborative Website

The Collaborative created a website to serve the following functions:

1. Submit monthly data metrics for blood wastage
2. Share monthly feedback reports
3. Serve as a communication mechanism for best practice and project updates

Data Entry Capability

View Reports: Institution vs. State

Creating Customized Reports

Report options continue to expand as new monthly data is available in the database. Along with the initial "Institution vs. State" reports, hospital users can now select customized "hospital group" to compare their institution's wastage rate among other like facilities according to bed size, hospital location, specialized services, and. Best practices are also identified through the website and users can search among them according to categories.

View Report: Benchmarking

Search Best Practices

Conducting a Measurement System Analysis

A Measurement System Analysis (MSA) was conducted to ensure consistency in the measurement system among the participating facilities. Members were notified by email and then randomly selected to reflect a representative sample to participate in the MSA. The MSA identified one data metric with high variability among the participants: the denominator for total monthly plasma units. The collaborative members determined that operationally, these definitions would amount to minimal variability among participants and thus, rather than redefining the definition, it was modified to be subjective.

Measurement System Analysis (MSA) Results

Participant	MSA Score	MSA Status
Participant A	100%	Pass
Participant B	95%	Pass
Participant C	90%	Pass
Participant D	85%	Pass
Participant E	80%	Pass
Participant F	75%	Pass
Participant G	70%	Pass
Participant H	65%	Pass
Participant I	60%	Pass
Participant J	55%	Pass
Participant K	50%	Pass
Participant L	45%	Pass
Participant M	40%	Pass
Participant N	35%	Pass
Participant O	30%	Pass
Participant P	25%	Pass
Participant Q	20%	Pass
Participant R	15%	Pass
Participant S	10%	Pass
Participant T	5%	Pass
Participant U	0%	Pass
Participant V	0%	Pass
Participant W	0%	Pass
Participant X	0%	Pass
Participant Y	0%	Pass
Participant Z	0%	Pass

Monitoring Monthly Participation

Wastage data is entered into the database by the 15th of each month. Hospital participation is continuously monitored for both data entry and participation to periodic conference calls. The participation rate remains high at 80% in June 2010.

Monthly Participation Report

Month	Participation Rate
Jan 2010	80%
Feb 2010	80%
Mar 2010	80%
Apr 2010	80%
May 2010	80%
Jun 2010	80%

Next Steps - Creating the Inventory Visibility System (aka "Craig's List")

The collaborative decided that it would be helpful to have increased visibility of short-stocked products available at the hospital locations, focused on Allogenic products, due to the short shelf life. As a result, the American Red Cross is working on a website enhancement to allow customers to "post" these products. This will be piloted in the District of Columbia and Potomac Region. All current documentation of transfer would continue to be required; however, we expect this to expedite the communication process. It allows the blood order and participating hospitals to work in the most efficient manner to make blood available in emergent situations.

Inventory Visibility System (aka "Craig's List")

Product	Quantity	Status
Platelets	1000	Low
Plasma	1000	Low
Red Blood Cells	1000	Low
Autologous Red Cells	1000	Low

Conclusion



A statewide initiative is a successful means to reduce blood wastage and overall health care costs. When all hospitals participate and contribute accurate data, a State aggregate can be calculated and a benchmark developed. The Blood Wastage Collaborative has demonstrated that large numbers of blood products and dollars can be saved when data is collected, analyzed and shared back to the participants, and when best practices are shared and implemented across the State.

As of September 6, 2010 the collaborative's total units saved for plasma and platelets is 552 units, resulting to approximately \$200,160.00. The ultimate benefit of this effort is increased blood product availability and potential lives saved.

Total Savings for State: 12 Months

(*as of November 30, 2010)

- Platelets = 506 units
- Plasma = 257 units
- Allo Red = -189 units
- Auto/Dir Red = -132 units

Total Units Saved
= 763 units

- Platelets = (\$1,012,000)
- Plasma = (\$1,235,000)
- Allo Red = (\$45,331)
- Auto/Dir Red = (\$46,708)

Total \$s Saved
= \$270,875

•39* out of 44 hospitals
have submitted August data
= 89% participation rate

*Note: The Collaborative's focus has been on platelets and plasma based on the project charters. Thus, Allo Red and Auto/Dir Red Cells have been excluded in the calculations.

1st Anniversary

September 22, 2010



- Through the end of the CY2010
 - Retain Goal
 - Reduce the blood wastage RATE for plasma and platelets by 1%
 - Members will continue to submit wastage rates
- Collaborative Meeting: December 8, 2010
 - Reviewed current focus (i.e., plasma and platelets) and goal to determine whether to change, expand, retain Collaborative focus