KPBM
Korean Society for Patient Blood Management

THE CHALLENGES OF PBM IMPLEMENTAION IN THE REAL WORLD

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OVERVIEW

- Defining change (PBM) and barriers to implementation
- The aim/goals of new programs
- What are the (REAL) barriers
- Are the implementation challenges generalizable?
  - Are all barriers to implementations the same?
- Can these barriers be overcome and If so, how?

Change comes from outside

There is nothing permanent except change
***Heraclitus*, Greek philosopher, 500 BCE**

A wise man adapts himself to circumstances, as water shapes itself to the vessel that contains it.
–Chinese Proverb

Implementation is how we react to it!

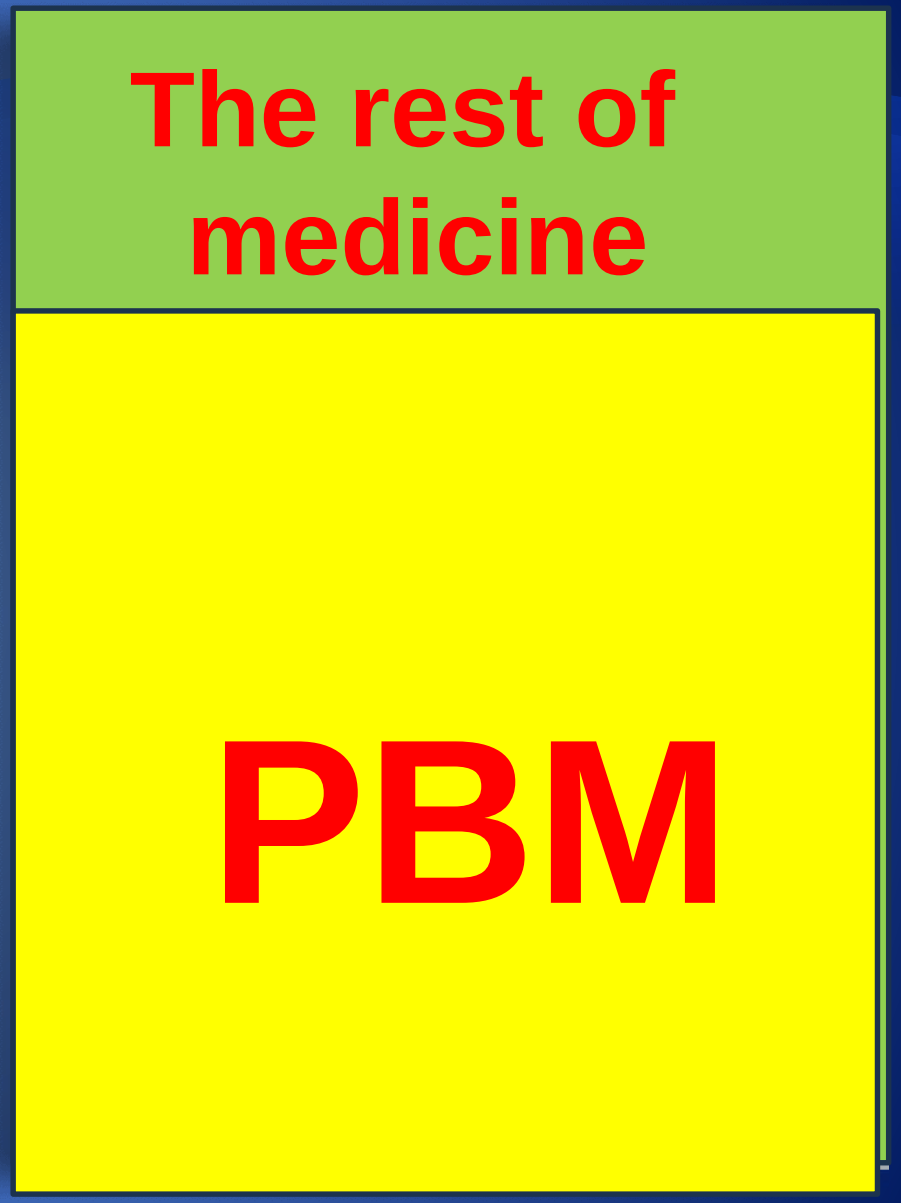
DISRUPTION?

Only if someone notices

How do we work?
The Status Quo

- We collect information from the past
- We incorporate it to the present, thinking it will shape the future
- Bound by the present that continues into the future – no change
- Single direction undisturbed by change
- Change represents a new direction
- Disturbs the status-quo
- Why do things differently?

The difference in what is important and for whom?
This is how we see the world – mostly from our vantage point



Unrelated examples do others struggle as we do?

Challenges in implementing antimicrobial stewardship (AMS) in organ transplant centers in India

Abdul Ghafur[1] Nitin Bansal[2]

"Real World Pressure"

- The Society for Healthcare Epidemiology of America (SHEA) defines *Anti-microbial Stewardship(AMS)*as "coordinated interventions designed to improve and measure the appropriate use of antimicrobials by promoting the selection of the optimal antimicrobial drug regimen, dose, and duration of therapy and route of administration."
- The goal: Tackling antibiotic resistance – Negative patient outcome
- 2012, Chennai Declaration on antibiotic resistance AMR
  - The declaration was a call for a national policy and was intended to be a practical and achievable plan.

Transplant Infectious Disease 2022

Challenges in implementing antimicrobial stewardship (AMS) in organ transplant centers in India

Abdul Ghafur[1] Nitin Bansal[2]

- The ask – policy changes that will translate into clinical actions
  - Including no OTC antibiotics
  - Colistin restriction in poultry
- By 2017 – terms used to describe progress:
  - Snail's pace
  - Still in primitive stage
  - Loss of momentum
- There were some large academic hospitals with excellent AMS

Why Can't Change in Medicine be Accelerated or Should it ?

Unintended consequences can be detrimental
Insufficient conclusive data
Controversies
Resources

CULTURE!
TRADITION!

CORE Elements of Stewardship

- Hospital leadership (Admin and Clinical) commitment
- Leadership accountability (Taking responsibility)
- Pharmacy/medication expertise – Evidence Based AB use
- Action
- Tracking – data collection -KPI
- Data analysis and reporting – Department/individual performance
- Education

US CDC and DHHS

The Challenges – our mantra!

- Getting the needed response from leadership - commitment
  - Cost of blood
  - Risks of blood
  - Risks of anemia
  - Limited benefits of blood transfusion
  - Understanding PBM
    - Treating a disease (the patient), not a number
    - Improved clinical outcomes at lower resource utilization
    - Blood isn't plentiful, PBM takes the pressure off
    - Real world experience

DO we really know what they hear?

The Challenges

- **Leadership** accountability
  - **WHO** declaration on **PBM**
  - Professional organizations approach to PBM
  - Support those departments that join early

The Challenges

- **Expertise** – not easy to find
  - Identifying clinical champions
  - Identifying outside resources
  - Look at other established centers for expert help
  - Sending champions to learn more

The Challenges

- **Action** – identify the 'low lying fruit' where the first effort of PBM is implemented
- **Data collection** on blood use, adherence to PBM and other KPI
- Creating a timely 'report card' both for individuals and departments
- **Aggressive** education program

Patient Blood Management Bundles to Facilitate Implementation

Patrick Meybohm [a,*], Toby Richards [b], James Isbister [c], Axel Hofmann [d], Aryeh Shander [e], Lawrence Tim Goodnough [f], Manuel Muñoz [g], Hans Gombotz [h], Christian Friedrich Weber [a], Suma Choorapoikayil [a], Donat R. Spahn [i], Kai Zacharowski [a]

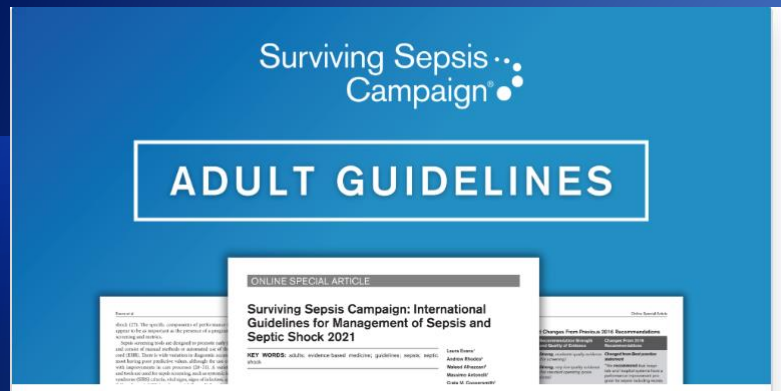
Despite the demonstrated benefits of PBM, many barriers limit translation of PBM guidelines into clinical practice worldwide, particularly due to lack of knowledge, lack of interdisciplinary commitment, lack of resources, and general concerns.
Strategies for overcoming the hurdles often include the use of multimodal "care bundles" and specific designed measures according to local conditions. Therefore, the PBM "bundles" approach, which incorporates individual, low-threshold stepwise selection of the most feasible measures, depending on local cultural conditions, may serve as a new concept of "how to implement PBM."

TMR 2017

Block 1: PBM Project Management
Involvement of Key PBM Stakeholders
Undergraduate and Postgraduate Education
Local Standard Operating Procedures/Protocols
Block 2: First Strategy—Manage Patient's Anemia
Preoperative Management of Anemia (Subgroup of Surgical Patients)
Optimizing Cardiovascular and Pulmonary Function to Improve Tolerance of Anemia
Management of Anemia in Hospitalized Patients and/or After Surgery
Block 3: Second Strategy—Optimizing Coagulopathy
Preoperative Management of Coagulopathy
Hemostasis Management in Hospitalized Patients
Block 4: Third Strategy—Interdisciplinary Blood Conservation Modalities
Reduction of Diagnostic-Associated Blood Loss
Reduction of Surgery-Related Blood Loss (Subgroup of Surgical Patients)
Block 5: Fourth Strategy—Optimal Blood Use With Patient-Centered Decision Making
Patient-Centered Decision Making
Block 6: PBM-Related Metrics, Patient's Outcome, Benchmark
Patient Blood Management–Related Metrics
Patient's Outcome
Benchmarking
Program Budget for PBM
Hospital Audit for PBM
Hospital Accreditation for PBM

Block 1: General PBM project management	
Involvement of key PBM stakeholders [role]	
PBM coordinator with protected time [central role for communication, networking, education, documentation, and benchmarking]	0 ☐ 1 ☐ 2 ☐
Hospital board of directors (eg, chief medical officer, chief executive officer, chief nursing officer) [support; official directive]	0 ☐ 1 ☐ 2 ☐
Surgeons (eg, orthopedic/trauma, cardiac, vascular, visceral, trauma, urology, neurosurgery) [interdisciplinary consensus]	0 ☐ 1 ☐ 2 ☐
Anesthesiologists/intensive care specialists [central role for perioperative care]	0 ☐ 1 ☐ 2 ☐
Transfusion medicine specialists/transfusion committee [prevention of blood wastage, optimal blood use, changes in donor blood management]	0 ☐ 1 ☐ 2 ☐
Internists/gastroenterologists/hematologists/cardiologists/nephrologists [anemia management, optimal blood use]	0 ☐ 1 ☐ 2 ☐
General practitioners/family doctors [determine the necessity for elective surgery, assign patients to a hospital, preoperative anemia management]	0 ☐ 1 ☐ 2 ☐
Patient's representative [need to be informed about the different alternatives to treat anemia/create awareness]	0 ☐ 1 ☐ 2 ☐
Pediatrics [mainly refers to blood conservation strategies]	0 ☐ 1 ☐ 2 ☐
Central laboratory/laboratory scientists [smaller blood collecting tubes]	0 ☐ 1 ☐ 2 ☐
Pharmacists/purchasing department [introduction of new drugs for the management of anemia and coagulopathy]	0 ☐ 1 ☐ 2 ☐
Information technology department [sampling of routine data and key performance metrics]	0 ☐ 1 ☐ 2 ☐
Finance department [finance experience for program budget plan, initial project costs; hospital-wide cost savings]	0 ☐ 1 ☐ 2 ☐
Quality management [project management experience; PBM as a fixed part of a quality improvement initiative]	0 ☐ 1 ☐ 2 ☐
Public affairs [dissemination channels/marketing of the PBM project (eg, via journals/Intranet/e-mails/posters/roll-ups/press conferences)]	0 ☐ 1 ☐ 2 ☐
Undergraduate and postgraduate education	
Undergraduate education (nursing school/medical school)	0 ☐ 1 ☐ 2 ☐
Postgraduate education of physicians/clinicians (lectures, workshops; initial and once a year)	0 ☐ 1 ☐ 2 ☐
Postgraduate education of nurses (intensive care unit, normal ward; initial and once a year)	0 ☐ 1 ☐ 2 ☐
Certificate (eg, by online E-learning courses)—to enhance PBM education and knowledge transfer	0 ☐ 1 ☐ 2 ☐
Local standard operating procedures/protocols	
Standard operating procedures for PBM	
Anemia management	0 ☐ 1 ☐ 2 ☐
Coagulation management	0 ☐ 1 ☐ 2 ☐
Blood conservation	0 ☐ 1 ☐ 2 ☐
Optimal blood use/transfusion of blood products (list of index procedures for "type and screen" or "type and crossmatch (and supply)")	0 ☐ 1 ☐ 2 ☐
Massive hemorrhage protocols (including such as damage controlled surgery, arterial embolization, hemotherapy algorithm)	
Massive hemorrhage (in general)	0 ☐ 1 ☐ 2 ☐
Postpartum hemorrhage	0 ☐ 1 ☐ 2 ☐
Trauma associated hemorrhage	0 ☐ 1 ☐ 2 ☐
Cardiac surgery associated hemorrhage	0 ☐ 1 ☐ 2 ☐

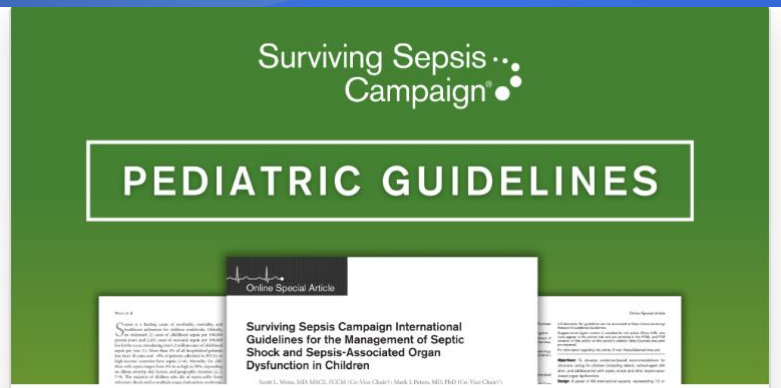
Surviving Sepsis Campaign



CLINICAL

Surviving Sepsis Campaign Adult Guidelines

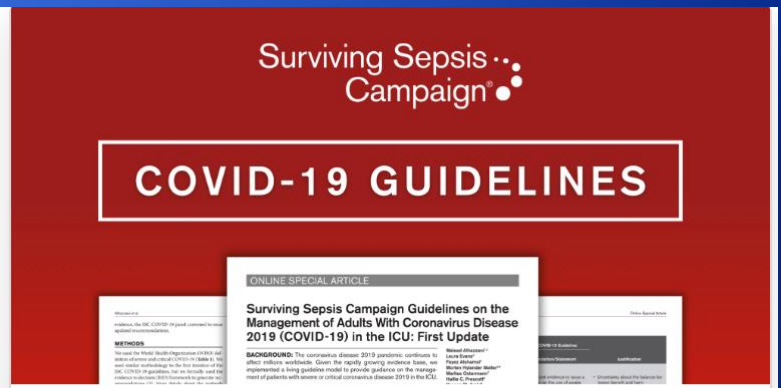
Review guidance for clinicians caring for adult patients with sepsis or septic shock.



GUIDELINE

Surviving Sepsis Campaign Pediatric Guidelines

Review guidance for clinicians caring for pediatric patients with sepsis or septic shock.



CLINICAL

Surviving Sepsis Campaign COVID-19 Guidelines

Review guidelines on the management of critically ill adults with COVID-19.

SCCM

The Surviving Sepsis Campaign Bundle: 2018 Update

Mitchell M. Levy, MD, MCCM[1]; Laura E. Evans, MD, MSc, FCCM[2];
Andrew Rhodes, MBBS, FRCA, FRCP, FFICM, MD (res)[3]

CCM 2018

ORIGINAL ARTICLE

Epidemiology, Management, and Outcomes of Sepsis in ICUs among Countries of Differing National Wealth across Asia

Andrew Li[1,2], Lowell Ling[3], Hanyu Qin[4], Yaseen M. Arabi[5], Sheila Nainan Myatra[6], Moritoki Egi[7], Je Hyeong Kim[8], Mohd Basri Mat Nor[9], Do Ngoc Son[10], Wen-Feng Fang[11,12], Bambang Wahyuprajitno[13], Madiha Hashmi[14], Mohammad Omar Faruq[15], Boonsong Patjanasoontorn[16], Maher Jaffer Al Bahrani[17], Babu Raja Shrestha[18], Ujma Shrestha[18], Khalid Mahmood Khan Nafees[19], Kyi Kyi Sann[20], Jose Emmanuel M. Palo[21], Naranpurev Mendsaikhan[22], Aidos Konkayev[23,24], Khamsay Detleuxay[25], Yiong Huak Chan[26], Bin Du[4], Jigeeshu Vasishtha Divatia[6], Younsuck Koh[27], Charles D. Gomersall[3], and Jason Phua[1,28]; on behalf of the MOSAICS II Study Group; for the Asian Critical Care Clinical Trials Group

Am J Resp and Crit Care Med 2022

	All (*n* = *4,980*)	Low- to Lower-Middle-Income Countries/Regions (*n* = *1,561*)	Upper-Middle-Income Countries/Regions (*n* = *1,890*)	High-Income Countries/Regions (*n* = *1,529*)	*P* Value
Completion of elements within 1 h, *n* (%)*					
Antibiotics	2,343 (47.0)	883 (56.6)	911 (48.2)	549 (35.9)	<0.001
Blood cultures	2,244 (45.1)	789 (50.5)	784 (41.5)	671 (43.9)	<0.001
Lactate measurement	2,455 (49.3)	734 (47.0)	950 (50.3)	771 (50.4)	0.094
Full bundle	1,072 (21.5)	406 (26.0)	418 (22.1)	248 (16.2)	<0.001
Completion of elements within 3 h, *n* (%)*					
Antibiotics	3,562 (71.5)	1,220 (78.2)	1,313 (69.5)	1,029 (67.3)	<0.001
Blood cultures	2,876 (57.8)	947 (60.7)	972 (51.4)	957 (62.6)	<0.001
Lactate measurement	2,994 (60.1)	863 (55.3)	1,162 (61.5)	969 (63.4)	<0.001
Full bundle	1,822 (36.6)	613 (39.3)	620 (32.8)	589 (38.5)	0.001
Time to completion, min, median (IQR)†					
Antibiotics	60 (30–150)	49 (25–110)	60 (25–158)	90 (37–180)	<0.001
Blood cultures	43 (15–148)	34 (15–104)	44 (15–203)	54 (19–152)	<0.001
Lactate measurement	32 (11–120)	30 (11–75)	36 (10–148)	33 (12–133)	0.008

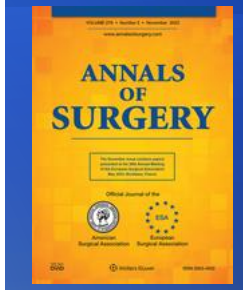
system.

PBM is a concept, not one treatment

Multimodal Patient Blood Management Program Based on a Three-pillar Strategy

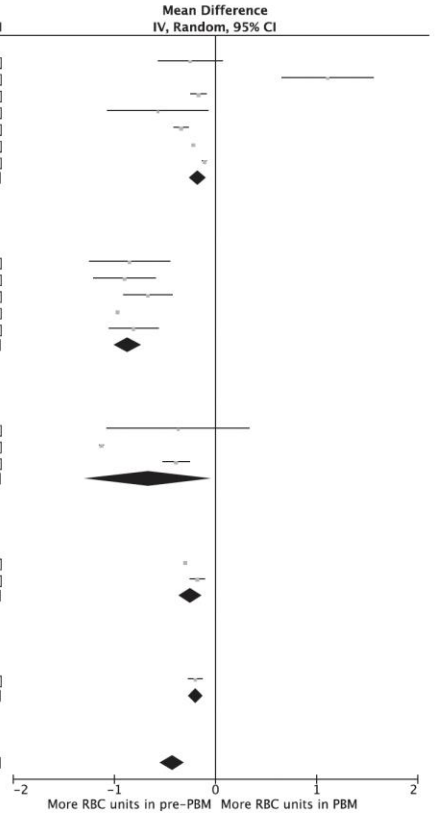
A Systematic Review and Meta-analysis

Friederike C. Althoff, Holger Neb, MD,* Eva Herrmann, PhD,† Kevin M. Trentino,‡ Lee Vernich,§ Christoph Füllenbach, PhD,* John Freedman, MD,¶ Jonathan H. Waters, MD,|| Shannon Farmer, MD,**†† ichael F. Leahy, MD,‡‡ Kai Zacharowski, MD, PhD,* Patrick Meybohm, MD,* and Suma Choorapoikayil, PhD**



Number of units of allogeneic RBC per patient

Study or Subgroup	PBM Mean	PBM SD	PBM Total	Control (pre-PBM) Mean	Control (pre-PBM) SD	Control (pre-PBM) Total	Weight	Mean Difference IV, Random, 95% CI
Orthopedic surgery								
So-Osmann 2014	0.36	1.1	190	0.61	1.6	127	4.6%	−0.25 [−0.57, 0.07]
Kopanidis 2016	3.16	2.04	100	2.05	1.1	100	3.4%	1.11 [0.66, 1.56]
Freedman 2008	0.34	0.83	1127	0.51	1.04	1089	6.7%	−0.17 [−0.25, −0.09]
Ma 2014	0.24	0.83	33	0.81	1.28	37	3.1%	−0.57 [−1.07, −0.07]
Theusinger 2014	0.34	1.25	6721	0.68	1.68	2150	6.7%	−0.34 [−0.42, −0.26]
Meybohm 2016	1.24	0.16	16298	1.46	0.16	12633	6.9%	−0.22 [−0.22, −0.22]
Leahy 2017	0.16	0.75	11942	0.27	1.02	10304	6.9%	−0.11 [−0.13, −0.09]
Subtotal (95% CI)			**36411**			**26440**	**38.3%**	**−0.18 [−0.26, −0.09]**
Heterogeneity: $Tau^2 = 0.01$; $Chi^2 = 125.65$, df = 6 ($P < 0.00001$); $I^2 = 95\%$								
Test for overall effect: $Z = 4.14$ ($P < 0.0001$)								
Cardiac surgery								
Freedman 2008	1.16	2.03	275	2.01	2.7	274	3.8%	−0.85 [−1.25, −0.45]
Brevig 2009	0.53	1.82	479	1.43	3.08	530	4.7%	−0.90 [−1.21, −0.59]
Gross 2015	0.61	1.57	2275	1.28	2.34	387	5.4%	−0.67 [−0.91, −0.43]
Meybohm 2016	3.68	0.46	7904	4.65	0.46	5630	6.9%	−0.97 [−0.99, −0.95]
Leahy 2017	0.65	2.15	1431	1.46	3.67	1096	5.3%	−0.81 [−1.05, −0.57]
Subtotal (95% CI)			**12364**			**7917**	**26.1%**	**−0.87 [−1.00, −0.74]**
Heterogeneity: $Tau^2 = 0.01$; $Chi^2 = 8.02$, df = 4 ($P = 0.09$); $I^2 = 50\%$								
Test for overall effect: $Z = 12.91$ ($P < 0.00001$)								
Vascular surgery								
Freedman 2008	1.75	3.82	232	2.12	4.39	287	2.0%	−0.37 [−1.08, 0.34]
Meybohm 2016	3.77	0.52	5823	4.9	0.53	4377	6.9%	−1.13 [−1.15, −1.11]
Leahy 2017	0.38	1.51	1870	0.77	2.43	1760	6.4%	−0.39 [−0.52, −0.26]
Subtotal (95% CI)			**7925**			**6424**	**15.2%**	**−0.66 [−1.29, −0.04]**
Heterogeneity: $Tau^2 = 0.27$; $Chi^2 = 121.12$, df = 2 ($P < 0.00001$); $I^2 = 98\%$								
Test for overall effect: $Z = 2.08$ ($P = 0.04$)								
General surgery								
Meybohm 2016	2.09	0.16	13694	2.39	0.16	9164	6.9%	−0.30 [−0.30, −0.30]
Leahy 2017	0.31	1.59	5437	0.49	2.17	4512	6.7%	−0.18 [−0.26, −0.10]
Subtotal (95% CI)			**19131**			**13676**	**13.6%**	**−0.25 [−0.36, −0.13]**
Heterogeneity: $Tau^2 = 0.01$; $Chi^2 = 9.52$, df = 1 ($P = 0.002$); $I^2 = 89\%$								
Test for overall effect: $Z = 4.13$ ($P < 0.0001$)								
Other fields								
Meybohm 2016	1.5	4.8	49856	1.7	5.6	36513	6.7%	−0.20 [−0.27, −0.13]
Subtotal (95% CI)			**49856**			**36513**	**6.7%**	**−0.20 [−0.27, −0.13]**
Heterogeneity: Not applicable								
Test for overall effect: $Z = 5.50$ ($P < 0.00001$)								
Total (95% CI)			**125687**			**90970**	**100.0%**	**−0.43 [−0.54, −0.31]**
Heterogeneity: $Tau^2 = 0.05$; $Chi^2 = 15280.28$, df = 17 ($P < 0.00001$); $I^2 = 100\%$								
Test for overall effect: $Z = 7.08$ ($P < 0.00001$)								
Test for subgroup differences: $Chi^2 = 88.79$, df = 4 ($P < 0.00001$), $I^2 = 95.5\%$								

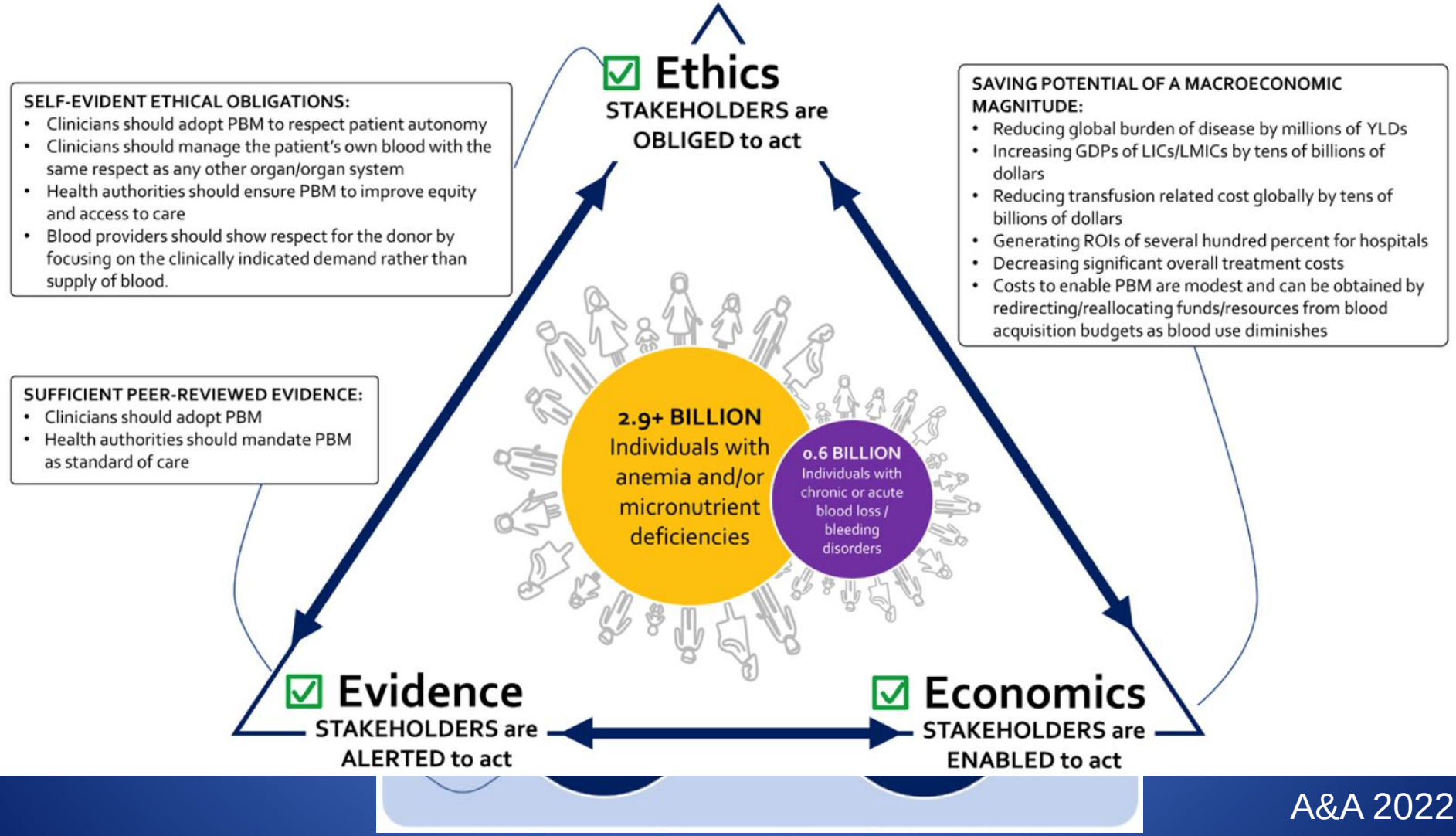


- 17 studies
- 235.779 patients
- 39% fewer were transfused
- Shorter hospital stay
- Fewer complications
- Increased survival

2019

Patient Blood Management: Improving Outcomes for Millions While Saving Billions. What Is Holding It Up?

Axel Hofmann, Dr rer medic, ME,*† Aryeh Shander, MD,‡§‖¶ Neil Blumberg, MD,#
Jeffrey M. Hamdorf, MD, PhD,* James P. Isbister, MB,** and Irwin Gross, MD††



What about PBM?

Making patient blood management the new norm(al) as experienced by implementors in diverse countries

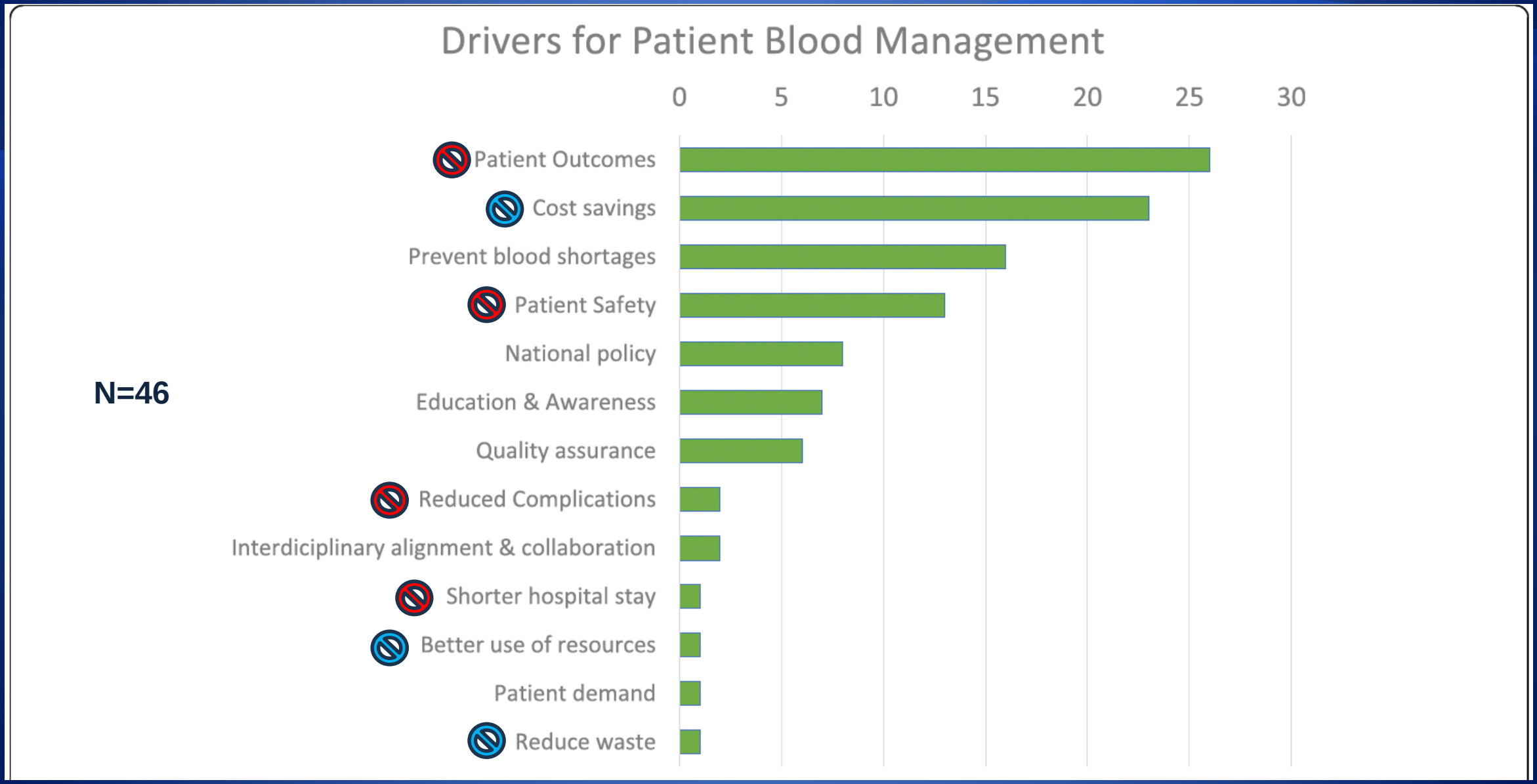
Axel Hofmann[1,2†], Donat R. Spahn[1†], Anke-Peggy Holtorf[3,4*†] and PBM Implementation Group

Despite evidence that PBM improves patient outcome at lower costs
"PBM is not yet adopted broadly"

Survey of PBM implementor across multiple countries:
Asia, Latin America, Australia, Central and Eastern Europe, Middle East and Africa

BMC Health Service Research 2021

What is (are) the main driver for PBM?



N=46

Rating of barriers 1 – 4

N= 35

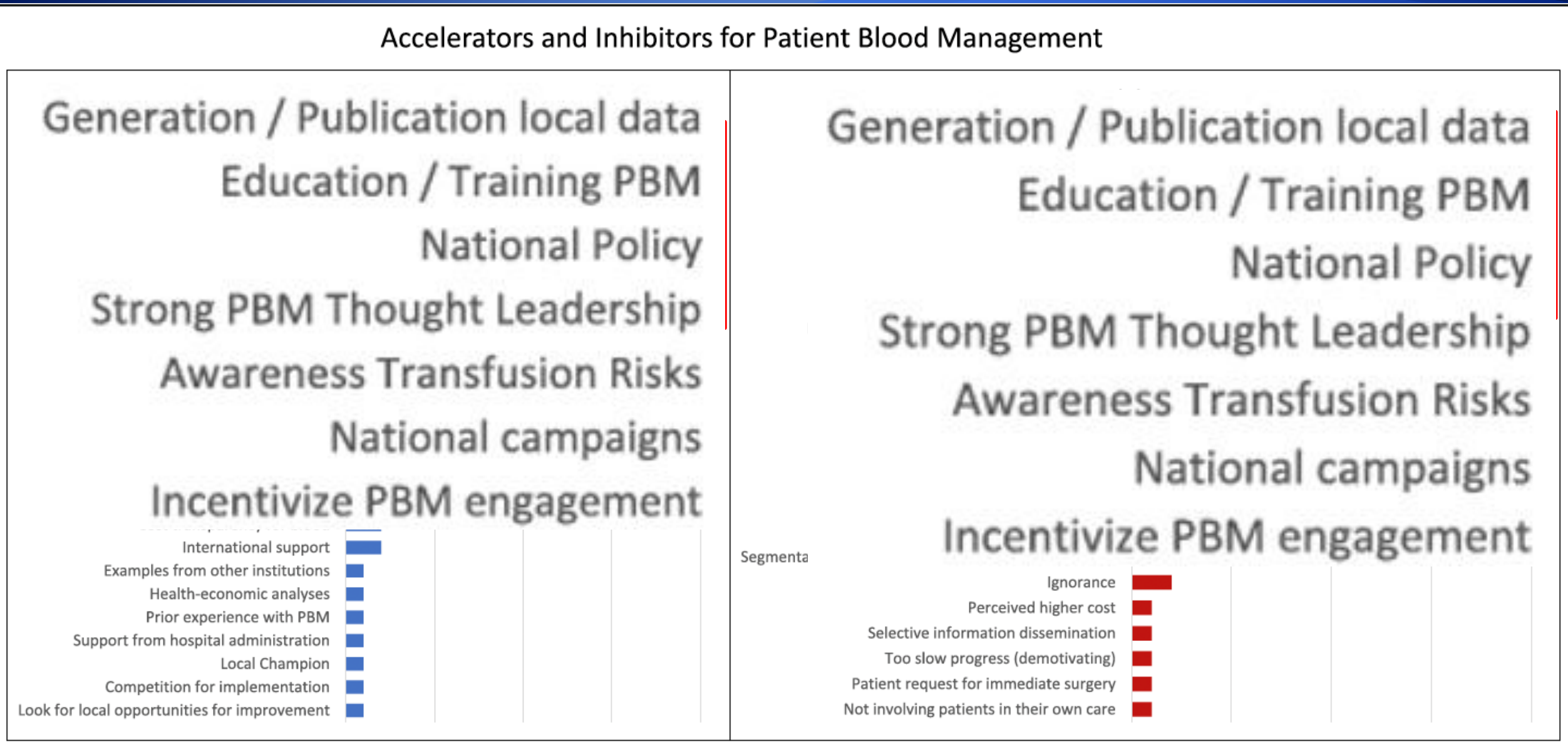
Barriers	Austral	udi Arabia	Sth Africa	Sth Korea	Switzerland	Turkey	Average	STDev
Change of work practice	1.	3.0	3.5	2.5	3.0	3.3	3.1	0.74
Collaboration / communication	4.	3.3	3.0	2.8	2.0	3.0	3.0	0.69
No / limited PBM experience	3.	3.3	3.3	3.3	4.0	2.5	2.9	0.52
Process / Feasibility	3.	2.5	3.0	3.3	3.0	2.2	2.8	0.44
Strong belief in transfusion	0.	2.8	3.0	3.8	3.0	3.0	2.7	1.06
Number of staholders	1.	2.8	2.0	1.5	2.0	3.7	2.3	1.05
Cost	0.	1.8	2.0	2.5	2.0	1.5	2.2	0.85
Sustainability	2.	2.3	1.0	1.8	3.0	2.0	1.7	0.87
'Competition' w. other interventions	0.	1.8	2.0	1.8	2.0	1.7	1.3	0.64

Barriers
Change of work practice
Collaboration / communication
No / limited PBM experience
Process / Feasibility
Strong belief in transfusion
Number of staholders
Cost
Sustainability
'Competition' w. other interventions

Red 3 or higher
White 2.01 – 2.99
Green 2 or lower

Overall: Change in work practice
Collaboration
Limited expertise
Feasibility
Strong belief in transfusion

Accelerators and Inhibitors N=46



EXISTING PBM RELATED DOCUMENTS

- PBM Guidelines, National Blood Authority, Australia
- Supporting PBM in EU: A practical implementation guide for hospitals
- Standards for a Patient Blood Management Program (PBM Standards)
- SABM
- Blood utilization and PBM, Canada
- Organizations/societies on PBM:
  - SABM (Society of the Advancement of PBM), Network for the Advancement of Patient Blood Management, Haemostasis and Thrombosis, KSPBM, ASPBM The International Foundation for PBM and more

Impact of Implementing a Perioperative Patient Blood Management Program

INTERVENTION

Optimize Pre-Op Hemoglobin

Blood Sparing Techniques

Standardize Transfusion Protocols

IMPLEMENTATION

OUTCOMES

Decrease Need for Transfusions

1.2 → 1.0

(avg. # of transfusions/patient)

No Increase in Post-Op Complications

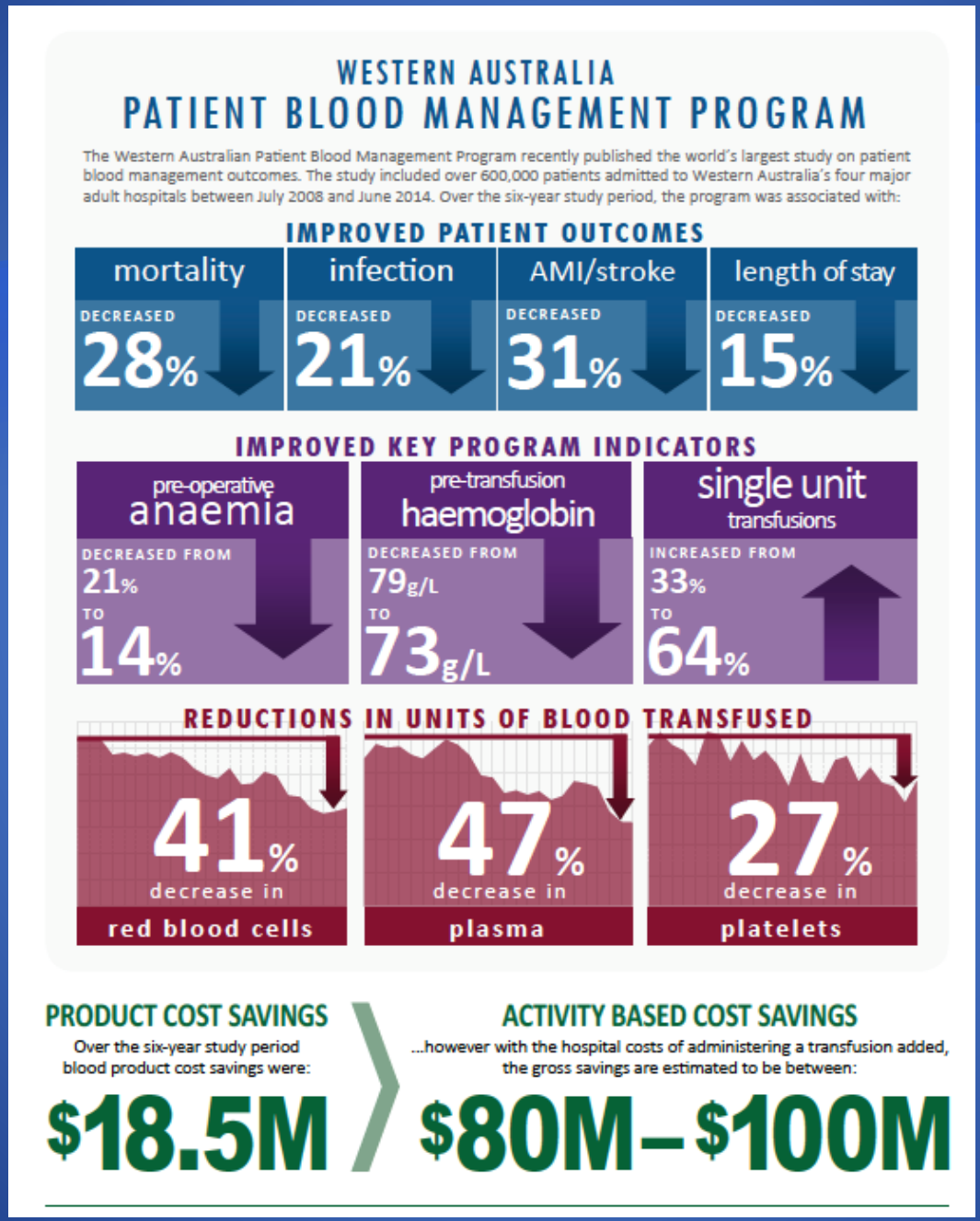
6.4% → 6.2%

(% patients w/ a complication)

Meybohm et al. *Ann Surg.* Aug 2016.

ANNALS OF SURGERY
A Monthly Review of Surgical Science Since 1885

Funded implementation



SPECIAL ARTICLE

Improving Patient Blood Management Programs: An Implementation Science Approach

Sherri Ozawa, MSN,*†‡ Joshua Ozawa-Morriello, BSN,§ Seth Perelman, MD,‖ Elora Thorpe, MSN,* Rebecca Rock, RN,¶ and Bronwyn L. Pearse, PhD#**

STEP 1: BUILD/IMPROVE PBM INSTITUTIONAL GOVERNANCE STRUCTURE, IDENTIFY GOALS, AND NEED FOR CHANGE

Governance but cannot be "top heavy"

STEP 2: ADAPTING THE EVIDENCE AND GUIDELINE RECOMMENDATIONS TO THE LOCAL DEPARTMENT/INSTITUTION

Identify champions and stakeholders

STEP 3: IDENTIFYING AND OVERCOMING BARRIERS TO IMPLEMENTING PBM

Barriers can be social, cultural, environmental or organizational

STEP 4: IMPLEMENTING THE CHANGE

A phased approach

STEP 5: MONITORING THE IMPLEMENTATION PROCESS

Any measure of progress – knowledge to skill

STEP 6: EVALUATING OUTCOMES

Any reporting mechanism on clinical and financial data

STEP 7: SUSTAINING

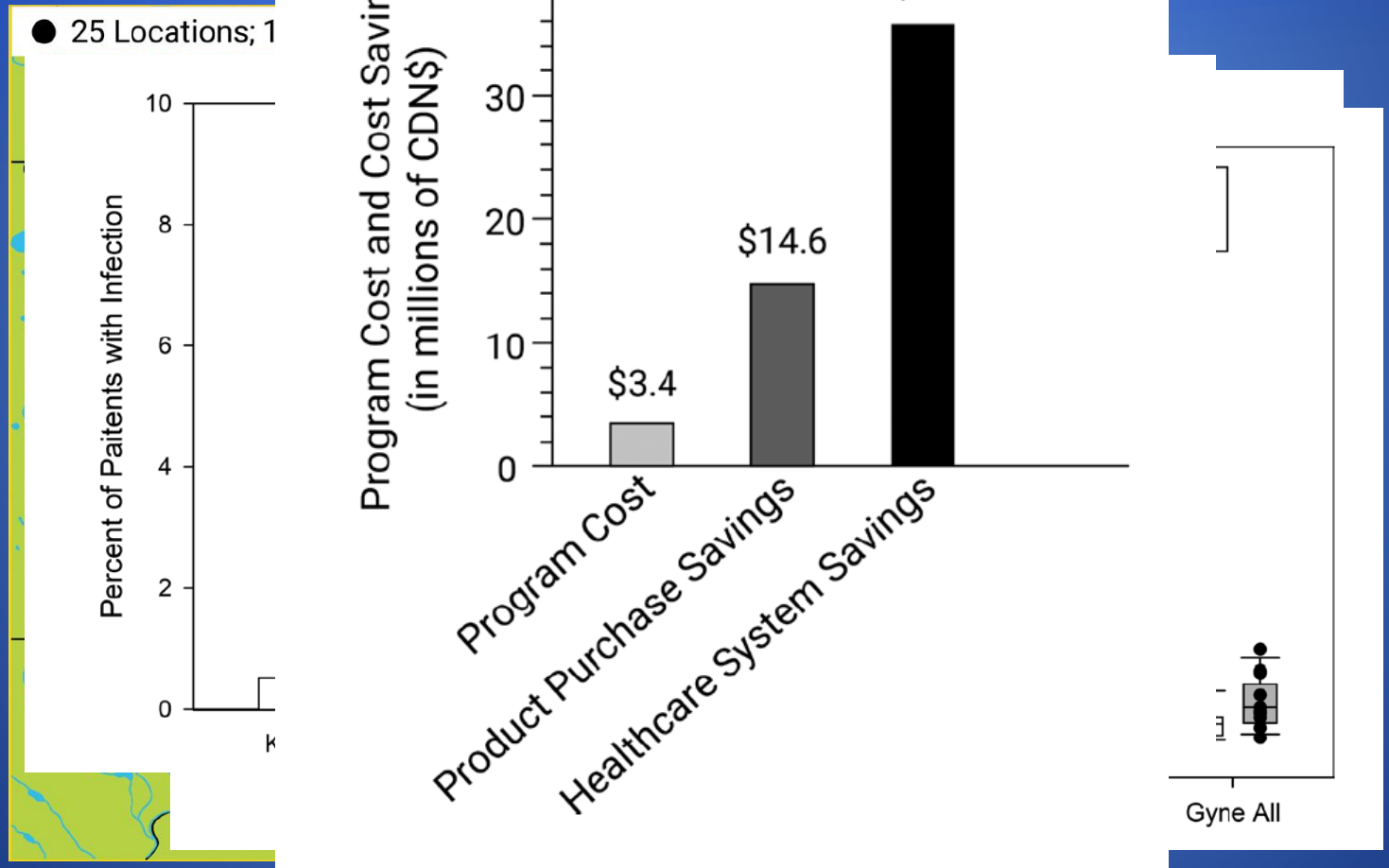
Embedding a culture and "hardwiring" it

A&A 2023

ONTraC: A 20-Year History of a Successfully Coordinated Provincewide Patient Blood Management Program: Lessons Learned and Goals Achieved

Katerina Pavenski, MD.*†‡ Alanna Howell. RN.*§ C. David Mazer. MD.‖¶#
Gregory M. T. Hare, MD

Funded implementation



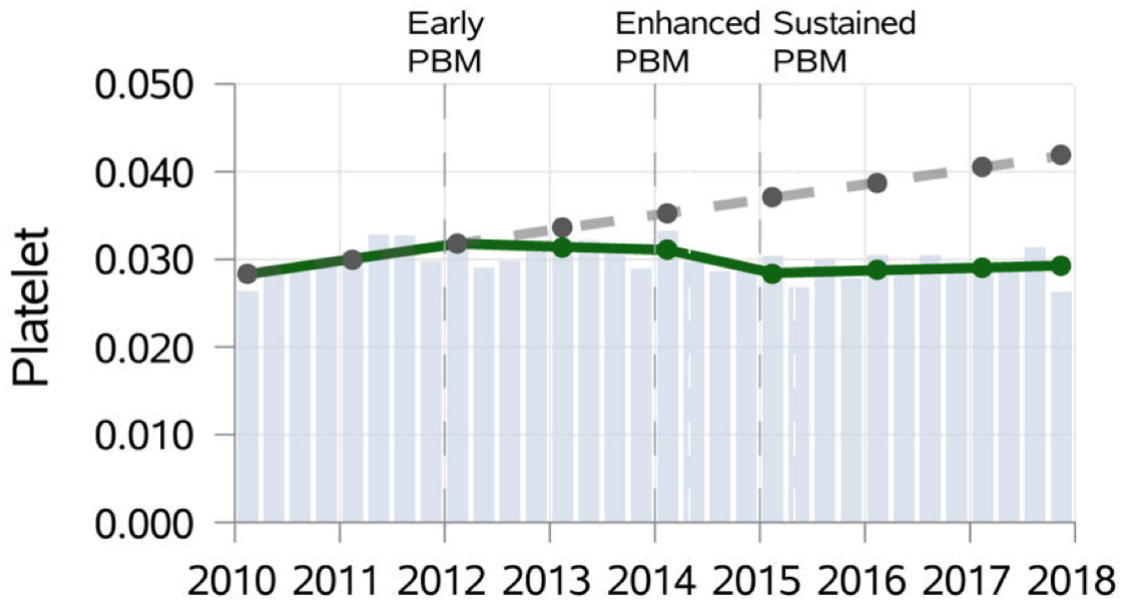
A&A 2022

Implementation of a comprehensive patient blood management program for hospitalized patients at a large United States medical center

Matthew A. Warner, MD[1,2], Phillip J. Schulte, PhD[3], Andrew C. Hanson, MS[3], Nageswar R. Madde, MS[2], Jennifer M. Burt, RN[2], Andrew A. Higgins, RN[2], Nicole M. Andrijasevic, RRT[4], Justin D. Kreuter, MD[5], Eapen K. Jacob, MD[5], James R. Stubbs, MD[5], Daryl J. Kor, MD[1,2]

[1]Division of Critical Care Medicine, Department of Anesthesiology and Perioperative Medicine, Mayo Clinic, Rochester, MN

Supported implementation



2010-2017
N - 400,998
Decrease LOS
Decrease AE
Over $7M saved

Mayo Clin Pro 2021

Implementation Recommendations

1. Understand your institution's culture
2. Get leadership endorsement and participation
    1. Administrators, physicians and nurses
    2. Identify leaders as "champions"
    3. Seek reasonable resources
3. Start small – one service line
4. Collect data early
5. Construct an educational program that also raises awareness
    1. Addresses each service line's concerns
    2. Specific scenarios
6. Feedback via collected data to show progress

Helpful tools

WHO 2021

WHO 2025

EDITORIAL

Change Delayed is Change Denied: The Challenge of Patient Blood Management Implementation

Irwin Gross, MD,[1] Linda Shore-Lesserson, MD,[2] and Shannon L. Farmer, DHSc[1,3]

From implementation to “hard wiring”

The challenge of sustaining the change!

A&A 2025

When does implementation morph to ADOPTION?
Are they the same?

ORIGINAL CLINICAL RESEARCH REPORT

Changes in Practices After Implementation of a Patient Blood Management Program in French Surgical Departments: The National Multicenter Observational PERIOPES Study

Sigismond Lasocki, MD, PhD,* Anissa Belbachir, MD,† Paul-Michel Mertes, MD, PhD,‡ Eric Le Pelley, MD,§ Laetitia Bosch, MD,‖ Clémence Bezault, MD,¶ Samia Belarbia, DVM,# and Xavier Capdevila, MD, PhD**

Increased anemia detection/management
HLOS – decreased
Transfusion – decreased
Only in “mature” program

Still “too many patients with Preoperative anemia remained untreated

RESULTS. A total of 1618 patients (ASA physical status III and IV, 38% in the first period and 45% in the second period) were included in expert (N = 454) or pilot (N = 1164) centers during the first period (January 2017–August 2022) and 1542 (N = 440 and N = 1102, respectively) during the second period (January 2020–February 2023). After implementation of the PBM program, the rate of preoperative anemia treatment increased (odds ratio, 2.37; 95% confidence interval [CI], 1.20–4.74; *P* = .0136) and length of hospital stay in days decreased (estimate, −0.11; 95% CI, −0.21 to −0.02; *P* = .0186). Transfusion rate significantly decreased only in expert centers (odds ratio, 0.17; 95% CI, 0.03–0.88; *P* = .0354).

CONCLUSIONS. PBM practices in various surgical specialties improved significantly after the implementation of a PBM program. However, too many patients with preoperative anemia remained untreated. (Anesth Analg 2025;140:453–64)

A&A 2025

SUMMARY

- Defining change (PBM) and barriers to implementation
- The aim/goals of new programs
- What are the barriers
- Are the implementation challenges generalizable?
- Can these barriers be overcome, when and how?

CONCLUSION

- Change in medicine is an evolution, not a revolution and never **complete**
- Getting rid of the "old" vs. changing it, will confirm adoption
- Lagging adoption in an "implemented" institution is normal but frustrating – No one emphasizes that implementing is a long road uphill with many bumps
- Arm yourself with patience and resilience!
- Never give up, never surrender!

KPBM
Korean Society for Patient Blood Management

THANK YOU