



SHEA

The Society for Healthcare
Epidemiology of America

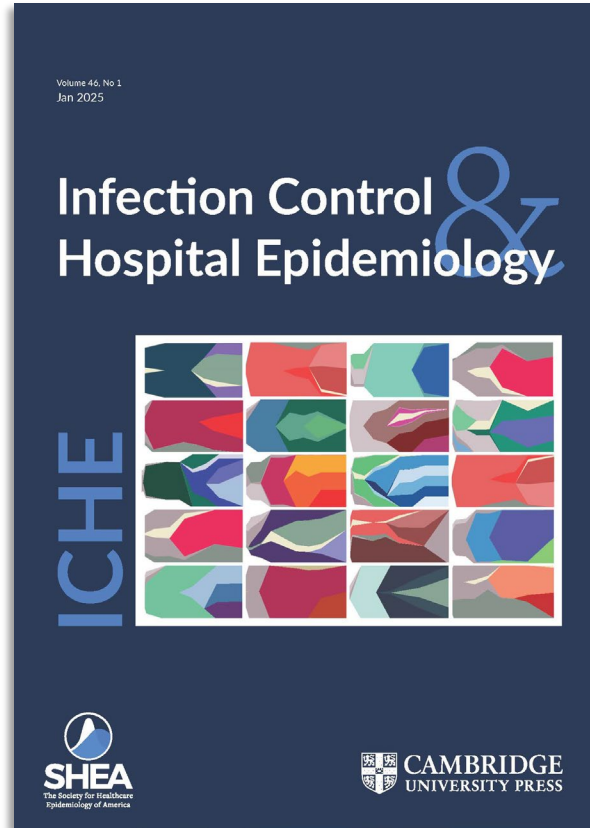
SAFE HEALTHCARE FOR ALL



Music:

www.bensound.com

ICHE Journal



Infection Control & Hospital Epidemiology publishes scientifically authoritative, clinically applicable, peer-reviewed research on control and evaluation of the transmission of pathogens in healthcare institutions and on the use of epidemiological principles and methods to evaluate and improve the delivery of care. Major topics covered include infection control practices, surveillance, antimicrobial stewardship, cost-benefit analyses, resource use, occupational health, and regulatory issues.

www.cambridge.org/iche



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ASHE JOURNAL



High quality articles across the full spectrum of antimicrobial stewardship and healthcare epidemiology.

Exceptional author experience through constructive peer review, competitive turnaround times, immediate online publication, a streamlined production process, and social media promotion.

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TUNE IN TO SHEA'S PODCASTS



AVAILABLE ON:



Online ID Fellows Course

Primer on Healthcare Epidemiology, Infection Control & Antimicrobial Stewardship



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Course/Webinar Series

Advancing Healthcare Sustainability in Infection Prevention

This three-part educational program explores the intersection of infection prevention and sustainability in healthcare, focusing on strategies to reduce environmental impact while maintaining patient safety.

June 06 | 1:30 pm ET

Understanding Healthcare Sustainability Metrics & Measurements

June 17 | 1:00 pm ET

Greening the OR

July 28 | 1:30 pm ET

Reusable Gowns as Part of Climate-Smart Healthcare

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SHEA Online Education Center

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to explore SHEA's
online education!



ELEARNING COURSES

NEW! [Penicillin Allergy Management:
Removing Barriers to Optimal Antibiotic
Prescribing](#)

This course highlights the importance of penicillin allergy evaluation in improving antibiotic prescribing. Learn to take allergy histories, assess risk, perform testing, and safely remove low-risk labels.

NEW! [Healthcare Leadership Communication:
Navigating Policy, Media, & Social Influence](#)

This course equips healthcare professionals with key skills in leadership, media communication, policy influence, and social media strategies to advance their careers and amplify their impact.

WEBINARS

[Infection Control Practices for Vector Mediated
Gene Therapy in Healthcare Settings](#)

June 26, 2025 | 3:30 – 4:30 pm ET

This webinar will provide an overview of the vector mediated gene therapy, its associated infection risk, infection control practices to mitigate the risk of contamination and transmission, and the role of institutional oversight committees.

[Educating Medical Students on Antimicrobial
Stewardship \(*ON-DEMAND*\)](#)

This program prepares future medical professionals to tackle antimicrobial resistance with effective stewardship tools and strategies.

 **IDWeek**

Oct. 19-22 | Atlanta, Georgia





**SHEA
SPRING**

2026

Save the Date

APRIL 7 - APRIL 10
CHICAGO, IL

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SHEA Webinar

Town Hall 2025

Housekeeping



- Technical difficulties? Visit: <https://support.zoom.us>
- Webinar recording, PowerPoint presentation, and references available on learningce.shea-online.org
- Streaming Live on SHEA's Facebook page
- Zoom Polling, Q&A & Chat



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June Town Hall Panelists:



Dr. Marci Drees
ChristianaCare



Dr. Trish Perl
UT Southwestern Medical Center



Dr. Matthew Linam
Emory University



Dr. Erica Shenoy
Mass General Brigham

Invited Panelist:



Preeti Jaggi, MD

*Professor of Pediatrics at Emory University
Medical director of Antimicrobial Stewardship
Children's Healthcare of Atlanta*

SHEA Town Hall
June Literature Review
IP and Sustainability Edition

SHEA Spring 2024 Abstract

Presentation Type:

Poster Presentation - Oral Presentation

Subject Category: Infection prevention and environmental sustainability
Perspectives and Awareness of Environmental Sustainability in the Infection Prevention and Control Community Nationally






Abarna Pearl, Beth Israel Deaconess Medical Center; Dana Pepe, Beth Israel Deaconess Medical Center and Preeti Mehrotra, Beth Israel Deaconess Medical Center

- An online **survey, composed of ten questions** related to environmental sustainability in IPC,
- Emailed to members of the **SHEA Research Network**
- Forty-two completed the survey
- Thirty (71.4%) were from academic medical centers, 5 (11.9%) were from VA medical centers and 7 (16.7%) were from community hospitals

- **Only 42.9% considered environmental sustainability concerns important or very important when making IPC decisions.**
- Fifteen (34.9%) had an environmental sustainability committee at their institution and of these, 8 had an established relationship with the IPC department.
- **The most common techniques to promote sustainability were**
 - Water/energy conservation (59.5%),
 - Reusable PPE (52.4%)
 - Leadership in Energy and Environmental Design (LEED) certification (47.6%).
- **Efforts they would support at their institution**
 - 28.6% would eliminate single-use endoscopes
 - 33% would avoid ethylene oxide for sterilization
- **Safety was one of the key concerns** in deciding whether to support environmental sustainability measures

Review

Ten sustainable steps infectious diseases professionals can take to mitigate the climate crisis

Shreya M. Doshi MBBS^{1,2} , Pamela Lee MD³ , Saul Hymes MD⁴ , Judith A. Guzman-Cottrill DO⁵  and Preeti Jaggi MD⁶ 

- Let's start by throwing the right waste into the right bin
- Follow “smart” transmission-based isolation (and de-isolation) precautions
- Stop wasting so many medical supplies
- Reduce transportation emissions from patient care, infection prevention, and stewardship work
- Attend a medical meeting or plan an interview... virtually
- Decrease pharmaceutical waste
- Petition your healthcare system for more climate action
- Promote better food options and decrease food waste in healthcare
- Model and discuss the environmental and other benefits of diagnostic stewardship (not just ID tests!)
- Keep up your good work, and now start measuring the environmental benefits

Greening Infection Prevention and Control: Multifaceted Approaches to a Sustainable Future

Open Forum Infectious Diseases

PERSPECTIVES

Pamela S. Lee,^{1,✉} Irene Frantzis,^{2,3} and Shira R. Abeles⁴

Table 1. Proposed Pathways for Enacting Sustainable Change in IP&C and Select Barriers to These Pathways

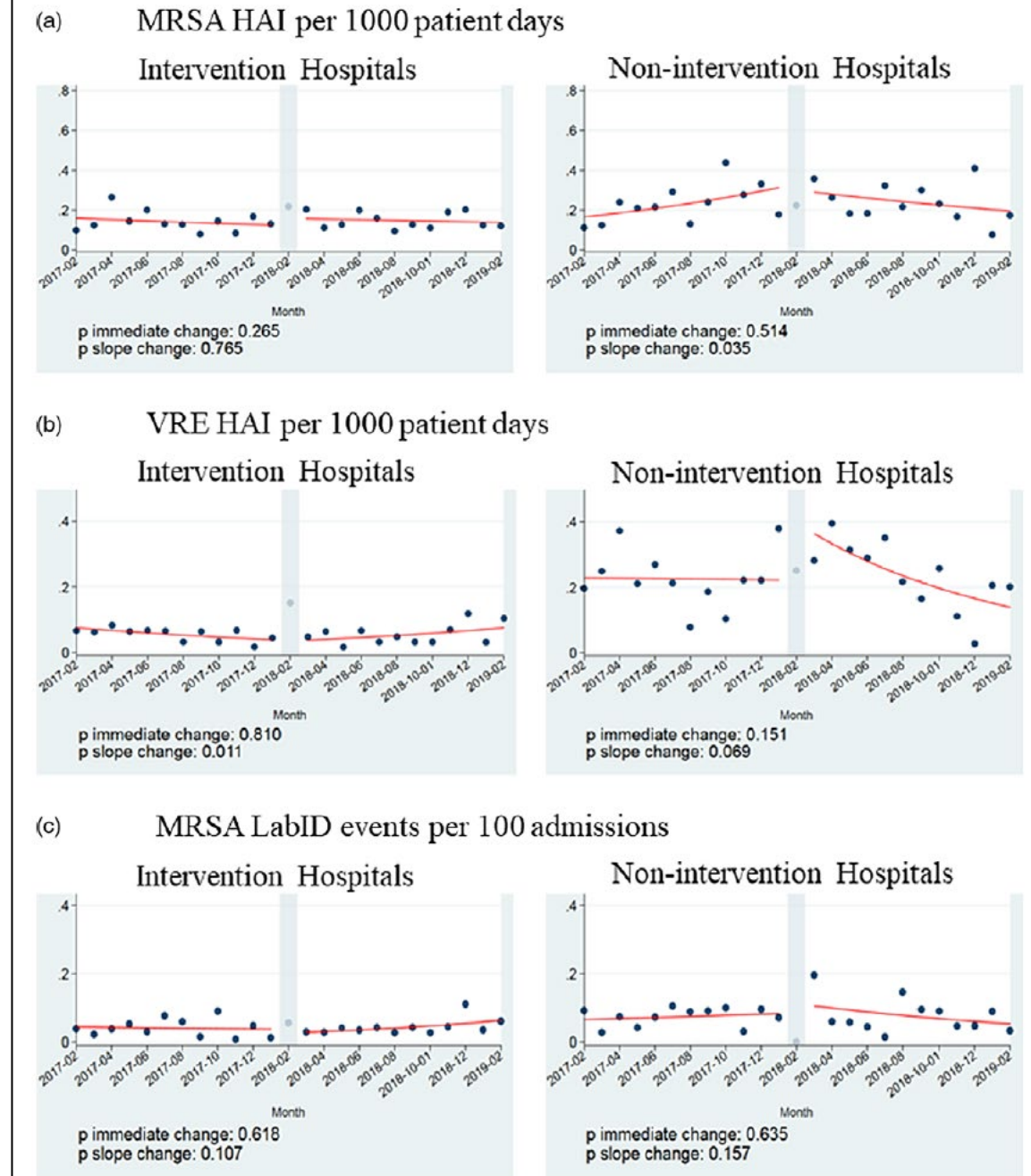
Scope of Care	Opportunity for Sustainable Change	Barriers to Sustainable Change
Direct patient care	Individualized risk assessment for transmission-based precautions	<ul style="list-style-type: none">• Facility-level buy-in• Regulatory oversight• Clinician awareness
	Diagnostic stewardship	
Health care infrastructure	Environmental controls in procedure and operating rooms	<ul style="list-style-type: none">• Health care facility capacity for environmental controls• Availability of adequate sterile reprocessing facilities• Space for storing devices• Staffing for reprocessing
	Increasing local use of reusable devices and PPE	
Health care ecosystem	Optimizing waste management	<ul style="list-style-type: none">• Improper waste sorting• Restrictive instructions for use• Product availability• Regulatory oversight
	Increasing widespread availability of reusable devices/PPE	
	Minimizing non-evidence-based and resource-wasteful practices	

Abbreviations: IP&C, infection prevention and control; PPE, personal protective equipment.

Discontinuing MRSA and VRE contact precautions: Defining hospital characteristics and infection prevention practices predicting safe de-escalation

Elise M. Martin MD, MS^{1,2}, Bonnie Colaianne MSN, RN, CNL, CIC, FAPIC³, Christine Bridge MHMS, MBA³, Andrew Bilderback MS³, Colleen Tanner MSN, RN⁴, Suzanne Wagester MSN, RN³, Mohamed Yassin MD^{2,5}, Raymond Pontzer MD⁶ and Graham M. Snyder MD, SM^{1,2}

- **Interrupted time-series analysis in 15 acute care hospitals**
 - 12 intervention, 3 non-intervention
- **Removal of contact precautions for MRSA and VRE**
- 12 months of pre- and post data
- **HAI rates were compared**
- Selected baseline hospital characteristics and infection prevention practices were correlated with HAI rate changes, stratified by hospital.
 - Number of beds, percent ICU beds, percent private room
 - chlorhexidine gluconate (CHG) bathing, hand hygiene adherence, and use of ultraviolet (UV) disinfection.
- **Mix of tertiary and community hospitals**
- **All successful hospitals had low baseline rates of MRSA and VRE HAI, and high hand-hygiene adherence**

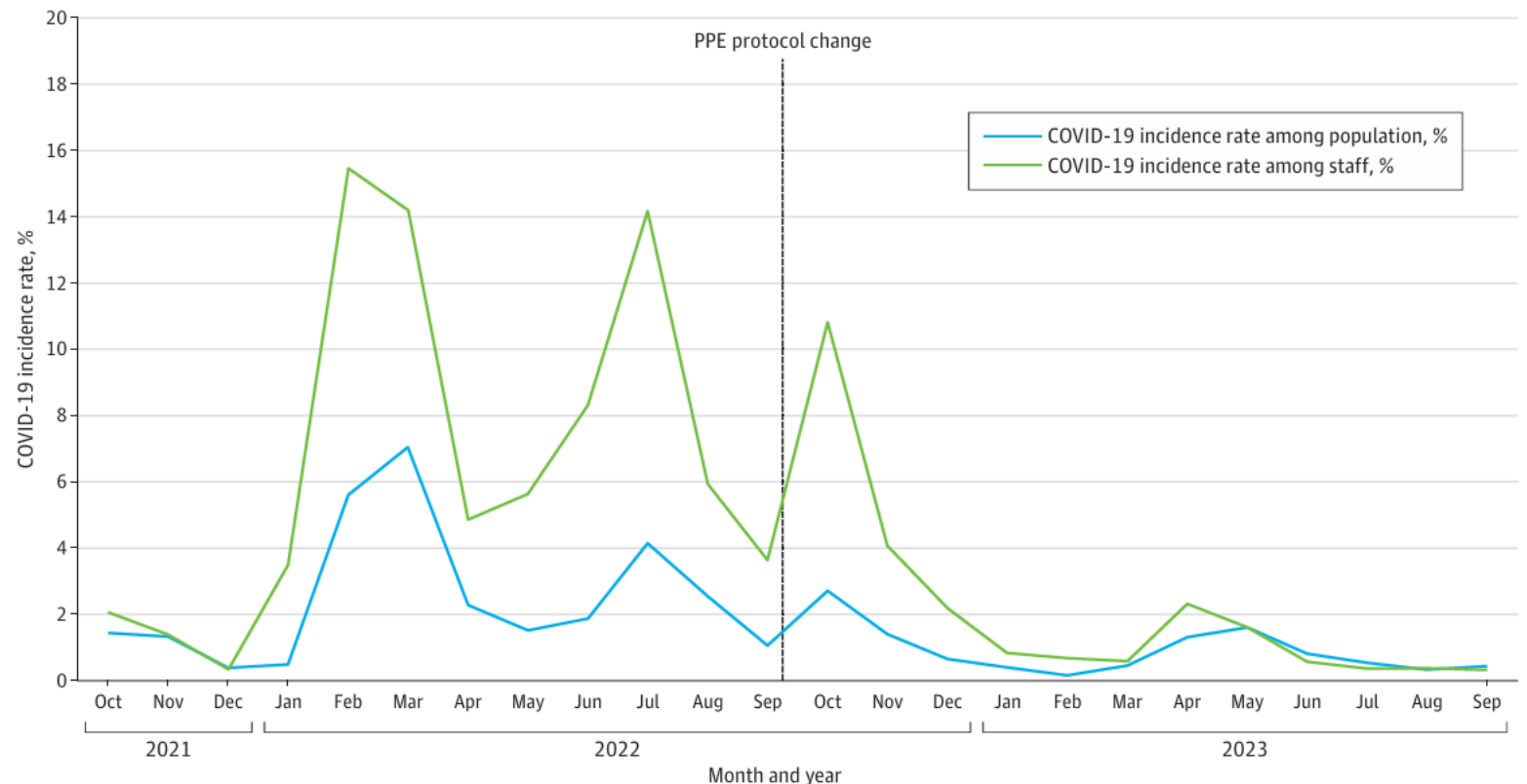


Plastic Waste and COVID-19 Incidence Among Hospital Staff After Deescalation in PPE Use

Stephanie Sutjipto, MBBS, MRCP; Aung Hein Aung, MBBS, MPH; Margaret M. L. Soon, BHSN, MPH, PhD; Chen Jing, BSN, MBA; Brenda S. P. Ang, MBBS, MPH; Sapna P. Sadarangani, MBBS, MSc; Kai Wei Chong, BBM; Oon Tek Ng, MBBS, MRCP, MPH, PhD; Kalisvar Marimuthu, MBBS, MRCP, MSc; Wei Yen Lim, MBBS, MPH, PhD; Angela Chow, MBBS, MMedPH, MS, PhD; Shawn Vasoo, MBBS, MRCP, FRCPath

- September 2023, the Singapore **PPE recommendations for COVID-19**
 - Gown, gloves, eye protection
 - **N-95 alone**
- **Retrospective QI study of impact**
 - Healthcare worker COVID-19 incidence
 - Changes in gown use, cost
- **No change in HCW COVID-19 incidence**
- Over 440,000 gowns saved
- \$333,000 USD saved
- 66,000kg reduced plastic waste
- 398,681.46kg CO2 equivalent

Figure 2. Monthly Rates of COVID-19 in the Community and Among Staff, 12 Months Before and After the Change in the National Personal Protective Equipment (PPE) Protocol



Reducing Glove Overuse in Outpatient Specialty Clinics: Cost Reduction and Environmental Benefit

- **Goal to reduce unnecessary glove use** in ENT, Plastic Surgery/Burn clinics
- **Main intervention: education on appropriate hand hygiene and glove use**
- Evaluated glove use per month and per patient visit
- Measured impact on cost, waste and environment

Results:

- Overall, **27% reduction in gloves per visit**
- **56,628 fewer gloves/year**
- **180 kg of waste/year**, and **\$3,003.17 /year**
- **Reduced CO2 emission** equivalent to 3766–4519 miles driven



You don't have to wear gloves when...



Table 1. Glove use pre- and post-intervention

Clinic	Pre-intervention			Post-intervention			% reduction, Glove/visit
	Box/mo	Glove/mo	Glove/visit	Box/mo	Glove/mo	Glove/visit	
OHNS	17.6	5280	8.4	13.33	4000	6.4	24%
PSB	31.8	9540	12.8	20.33	6100	9.4	27%
Combined	49.4	14,820	10.8	33.67	10,100	7.9	27%

All glove numbers represent individual gloves rather than glove pairs. Abbreviations: mo, month; OHNS, Otolaryngology – Head and Neck Surgery; PSB, plastic surgery/burn.

Table 2. Staff and provider feedback

Barriers/concerns: Concerns for personal and patient safety

“It felt scary at first.”

“I was worried about safety and exposure to patients’ germs.”

“Maybe patients will be concerned about safety if we aren’t using gloves.”

“Not wearing gloves might spread infections to patients.”

Motivating factors: Waste, environment, better education about hand hygiene

“We make so much waste, and we want to do what we can to reduce it.”

“We are worried about climate change and our planet and want to do what we can to help.”

“After understanding guidelines for hand hygiene and gloves it was easier to follow them.”

Benefits:

“I never knew how many gloves we used at our hospital!”

“It feels good to be more mindful about glove use to reduce waste.”

“I like that we are setting a sustainability example for other clinics.”

Reducing waste, better hand hygiene adherence, patient relationship

“I am so much better about doing hand hygiene now, at the beginning, during, and at the end of the visit.”

“Not wearing gloves shows that I am not afraid to touch the patient, and that I accept them.”

Tips for other HCWs

“I feel like there is a benefit to returning to human touch.”

“Stop and think: do I need gloves for this?”

“I like to sanitize my hands right in front of the patient. In fact, I tell them to give me just a minute, while I sanitize my hands, so they hear me, and see me doing it. That way they know I care about their safety.”

Sustainabil-

Preeti Jaggi, M.D.
Professor of Pediatrics, Children's
Healthcare of Atlanta, Emory
University

<https://sustainabil-id.com>

Diagnostic stewardship



Antibiotic stewardship



Infection Prevention



Cost/FTE



Environmental stewardship
also..are you kidding me?



Why care about the environment

- Infection prevention is not just for the index patient
- Antibiotic stewardship helps more than the index patient
- Do we only care about one public health harm (e.g, only infections)
- Climate change increases risk of infections

W	Waste
E	Energy
A	Anesthetic gasses, Agriculture/Food
C	Chemicals, Pharmaceuticals, and Medical supplies
T	Transportation



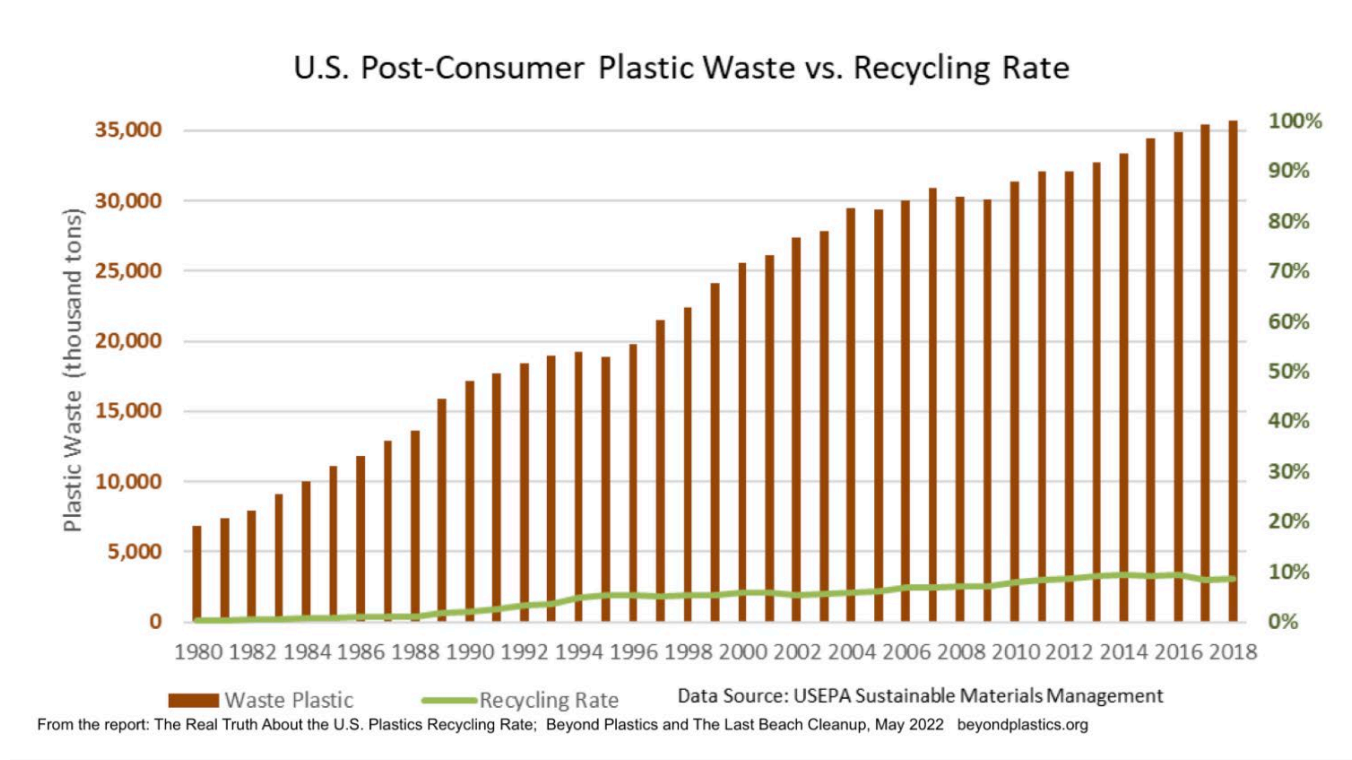
**Waste: Throw Away
Where is “Away”?**



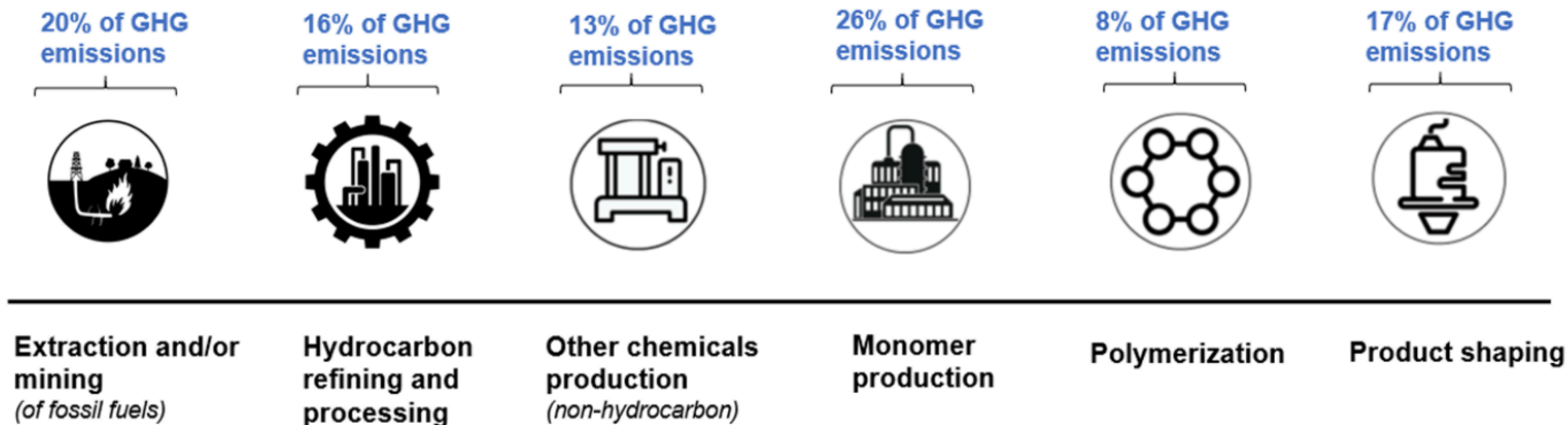
Plastics are derived from fossil fuels (>95%)

Other Problems with Plastic

- Most of it is not recycled
- US healthcare facilities waste 14,000 tons per day
- Packaging is the single largest source
- Concern that this is in our tissues, endocrine disruption



Share of emissions from different phases of production



From: Karali, Khanna, Shah 2024 <https://www.osti.gov/biblio/2336721>

Amount of Fossil Fuel required...

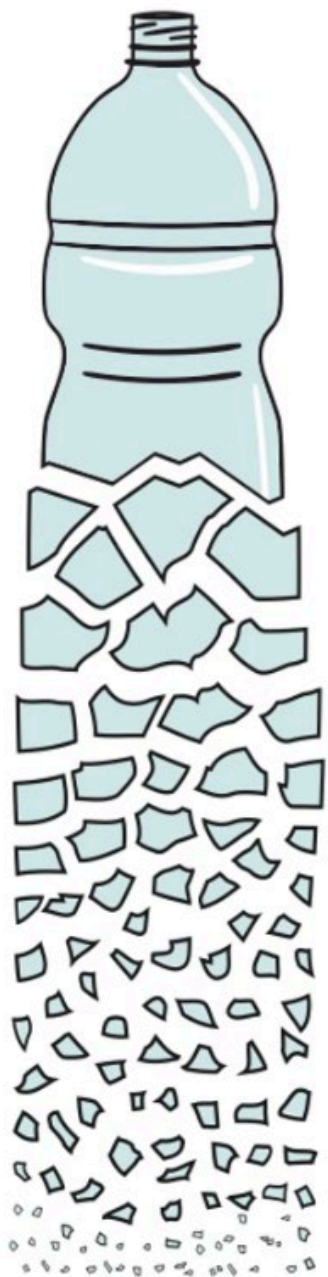


To make a plastic bottle.



To transport it to market.

Images by Houston Diaz



PLASTIC WASTE

PLASTIC
BREAKDOWN

MACROPLASTICS
>5mm



MICROPLASTICS
5mm-0.1µm



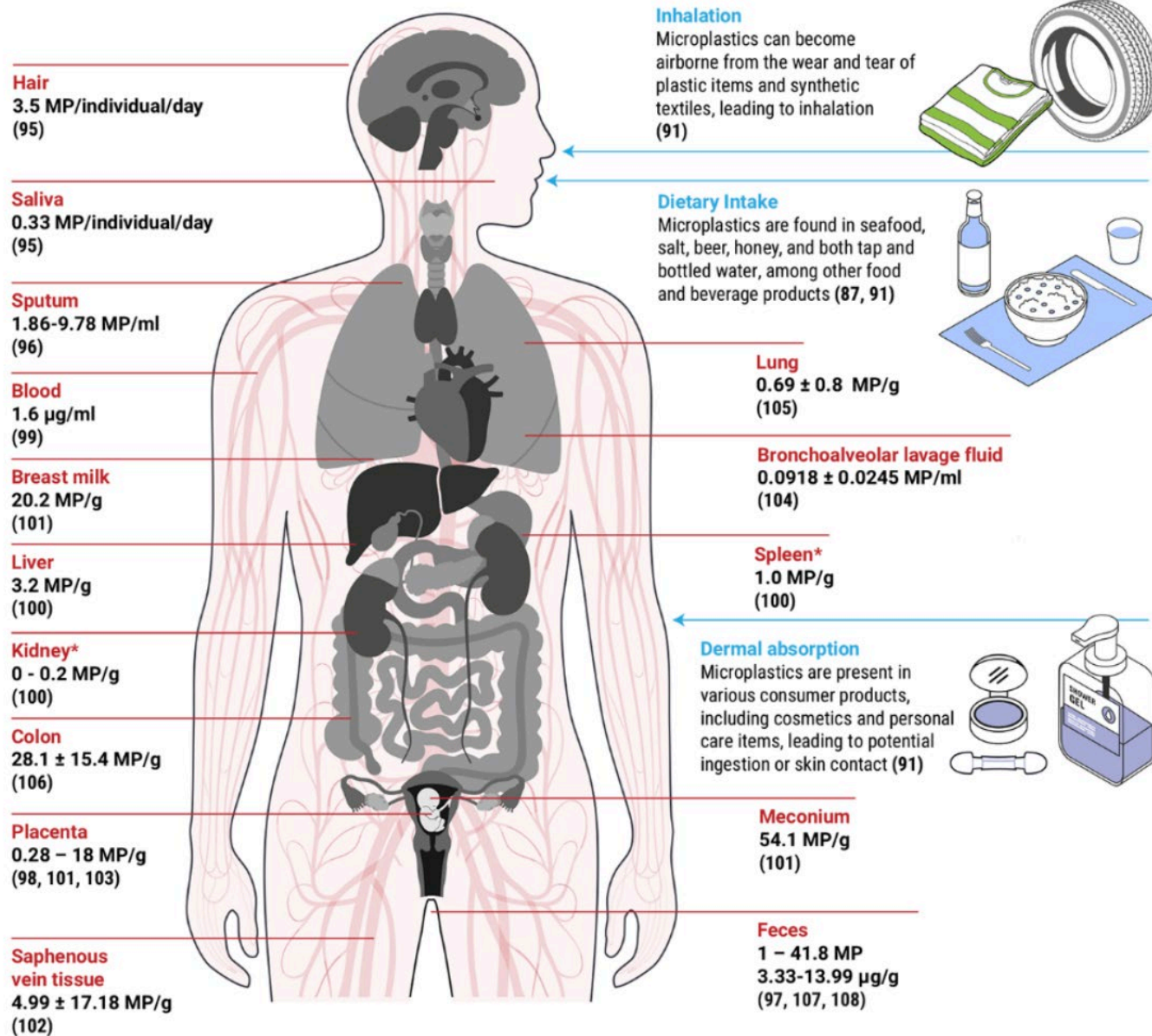
NANOPLASTICS
<0.1µm

Plastics break down into small particles

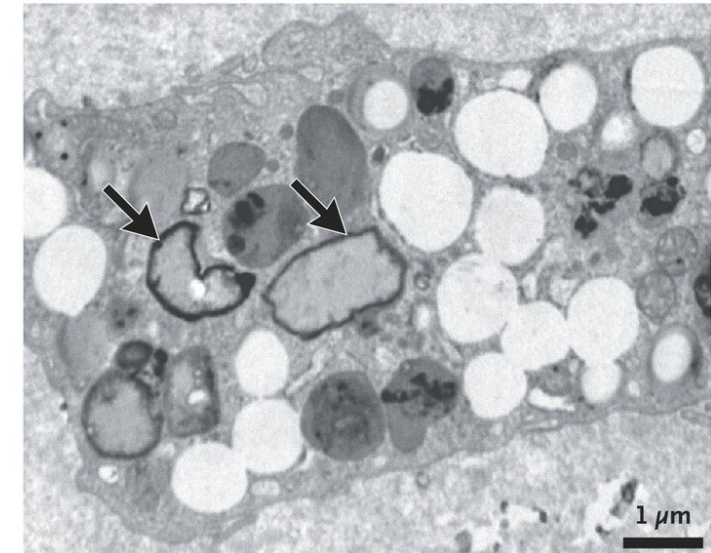
Term “microplastics” coined 2004

Microplastic leakage to the environment could rise by 1.5 to 2.5 times by 2040

Microplastics in the human body



- Higher concentrations of microplastic in the lungs of smokers compared to non-smokers
- Patients with excised carotid artery plaques containing micronanoplastics had higher risks of MI, stroke death at 34 months after f/u than those who did not



R. C. Thompson *et al.*, *Science*, 2024
 Marfella *et al.* *NEJM*, 2024

Stewardship

Using resources wisely



"The thoughtless playing with penicillin [leads to] infection with the penicillin-resistant organism."

- **Sir Alexander Fleming**, 1945

Sustainability

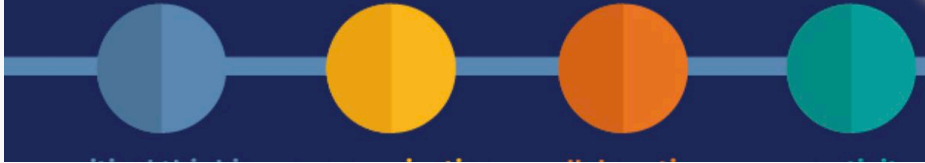
Preserving resources for the future



"Make your decisions on behalf of the seven generations coming, so that they may enjoy what you have today."

-**Oren Lyons**,
Onondaga Nation

CONNECTING THE DOTS



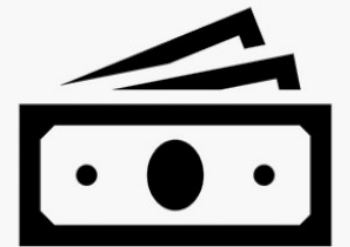
Sustainable
Healthcare
Value

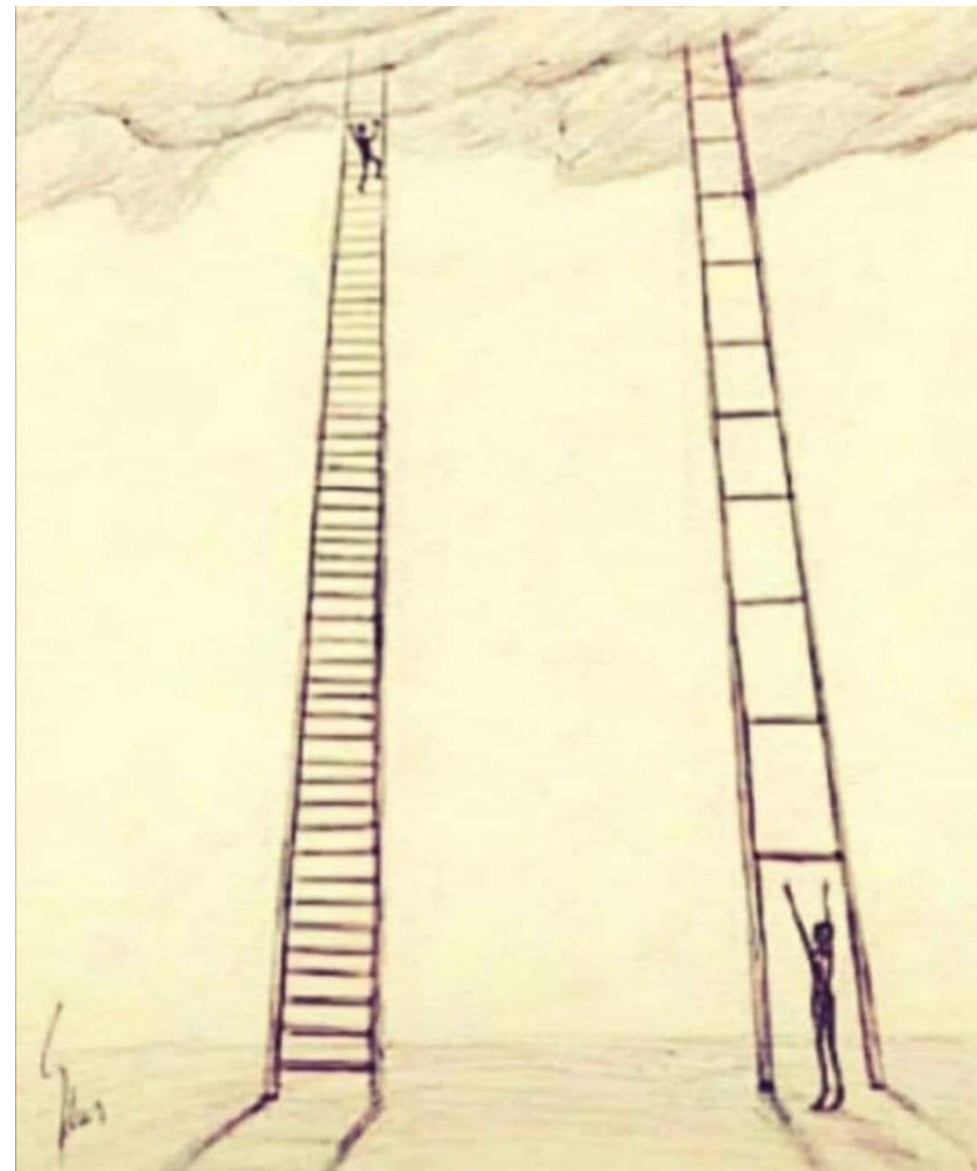
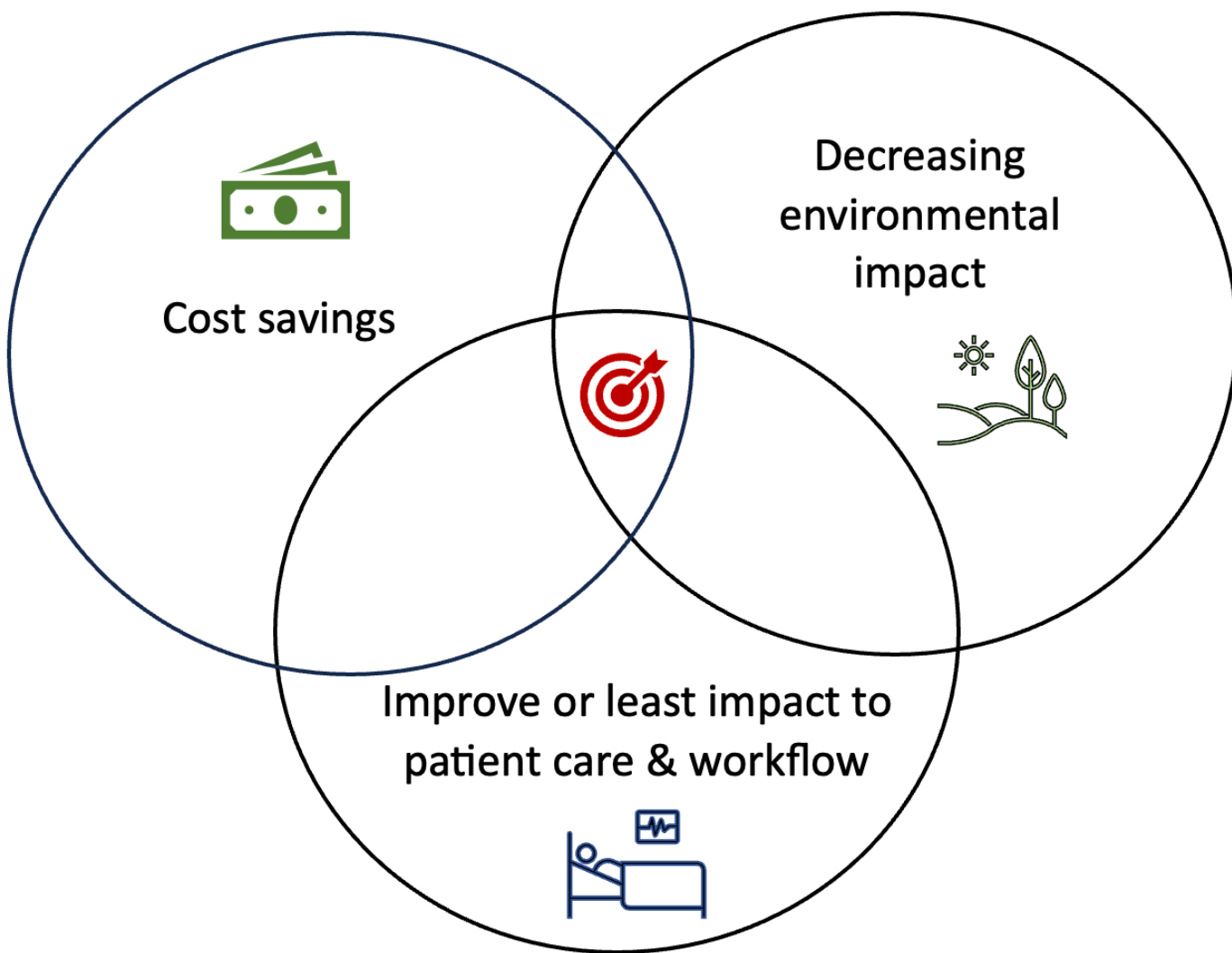
=

Best

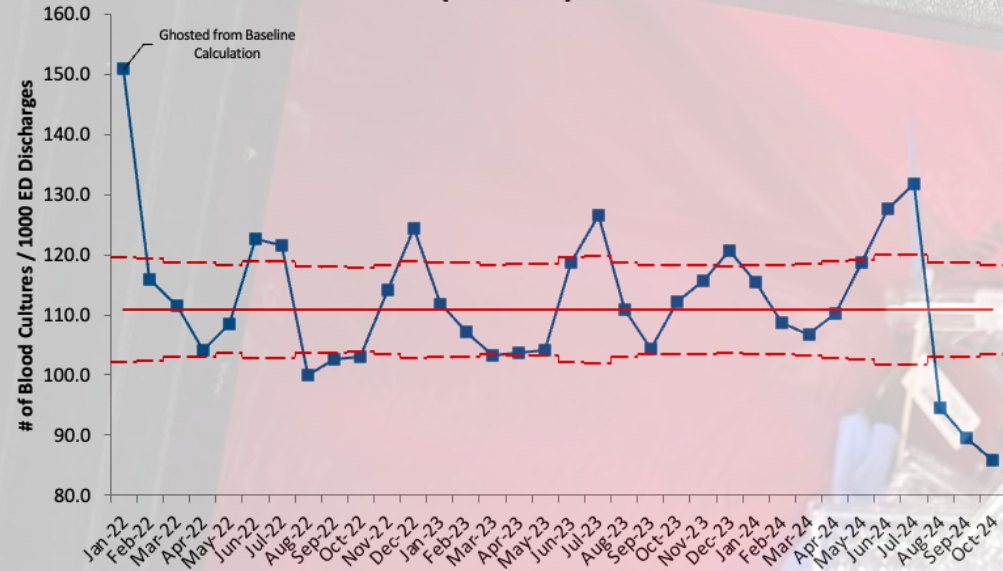


Least





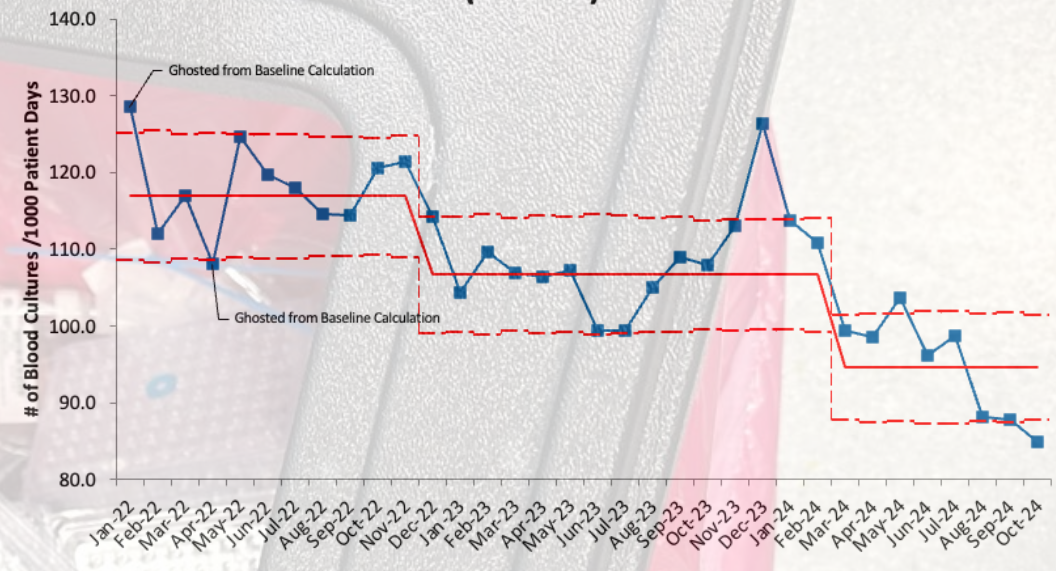
System Blood Culture Count - ED Discharges
(u Chart)



Baseline: Feb 2022 - Dec 2022

Center Line: 110.9

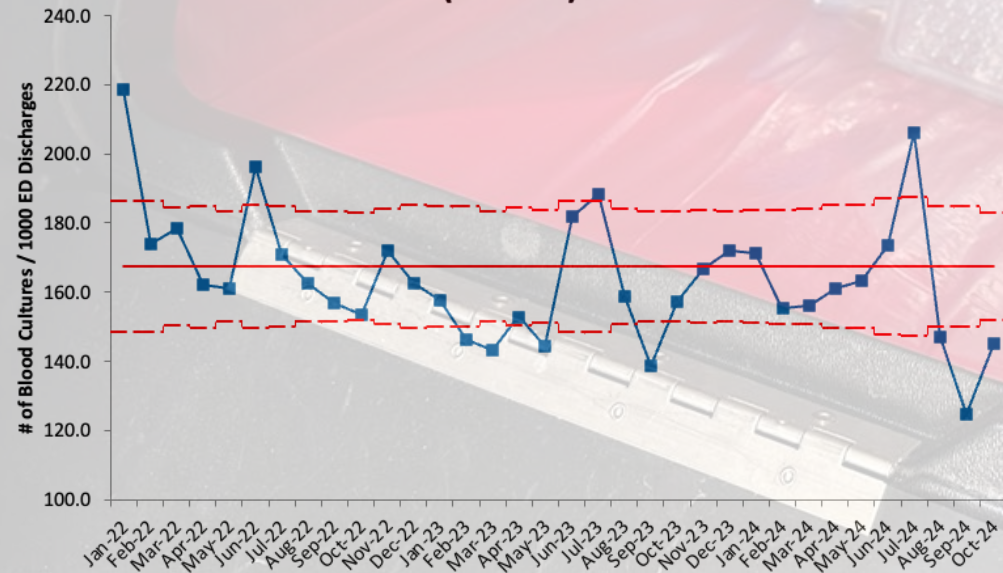
System Blood Culture Count - Patient Days
(u Chart)



Baseline: Mar 2024 - Oct 2024

Center Line: 94.6

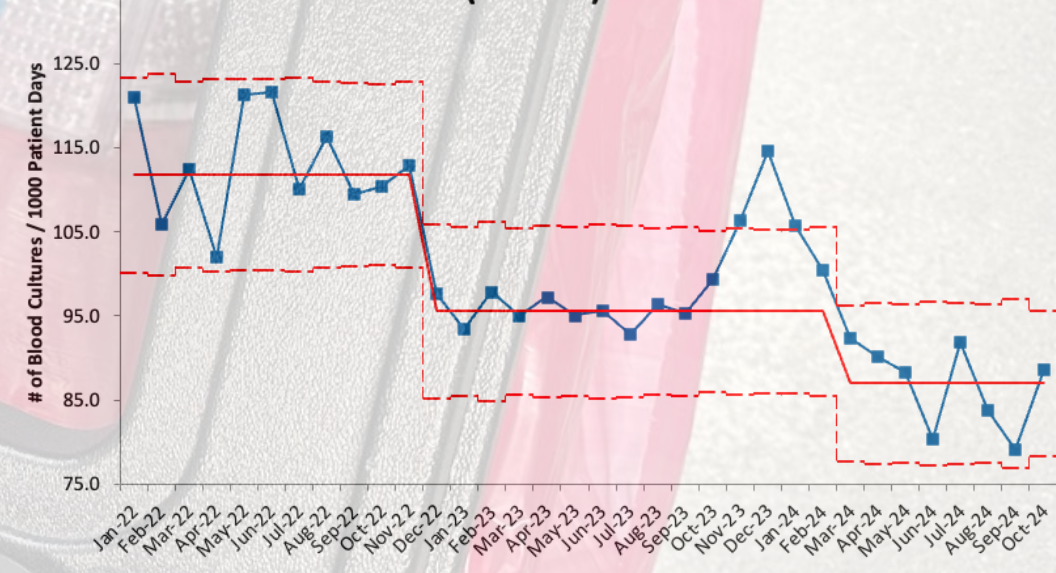
AMBH Blood Culture Count - ED Discharges
(u Chart)



Baseline: Feb 2022 - Dec 2022

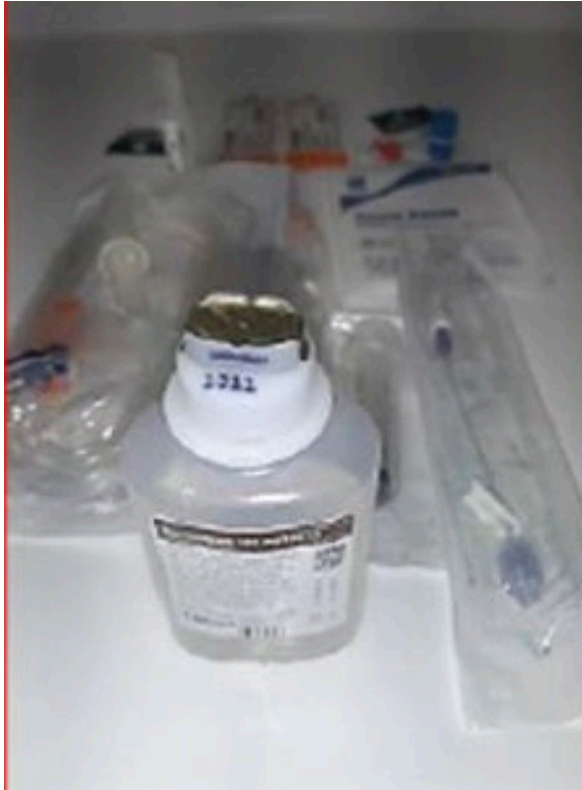
Center Line: 167.5

AMBH Blood Culture Count - Patient Days
(u Chart)



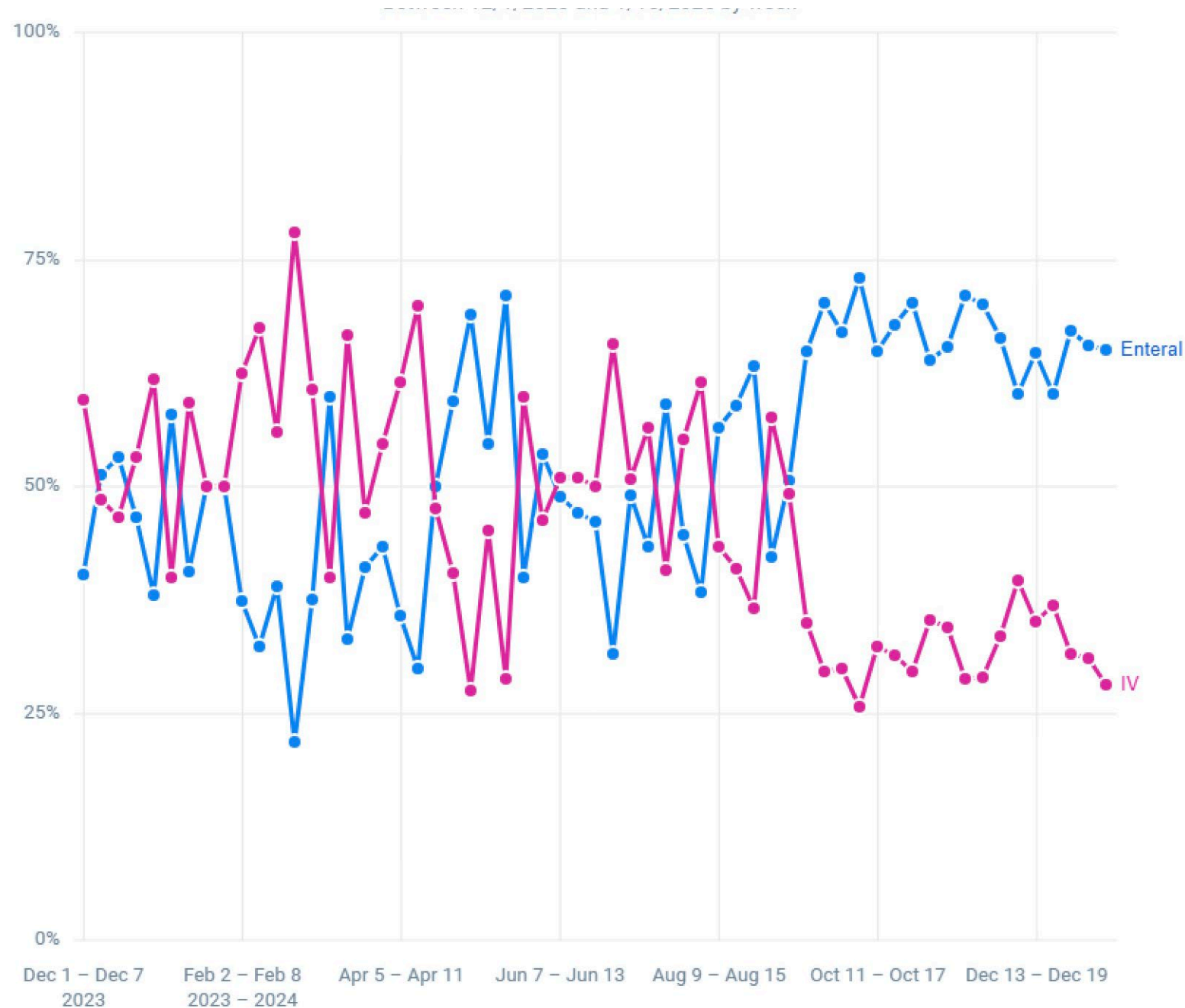
Baseline: Dec 2022 - July 2023

Center Line: 87



IV to po conversion

Ampicillin vs. Amoxicillin for CAP





Can we decrease this plastic safely?

What if we
changed from
oral LIQUID
motrin, tylenol
or amoxicillin to
chewable tabs
for 2 years and
above?

59.6% (n=53,135) of acetaminophen,
68.4% (n=50,656) of ibuprofen, and
59.6% (n=8,652) amoxicillin doses were
given in a liquid

If above were tablets, a total 382kg of
plastic waste, equivalent to 1,185kg of
CO_{2e} would be saved.

Cost of time & wholesale drug cost is
equivocal,
Saves 9-22K/yr

Once daily ceftriaxone

Four doses ampicillin

Pharmacy Prep time



Nursing Time



Plastic syringes to administer



Plastic flush



EVS workload



Potential harms

PIVIE? CLABSI increased?



Doubt is unpleasant. But certainty is absurd.
-Voltaire

ASP: Over treatment vs Undertreatment

IP: Environmental Harm vs. Infection Prevention

Medical Directors of Sustainability

How many MDS/CDS are there?

- 21 MDS in the U.S.
- 2 MDS in Canada

What is the dedicated capacity for MDS/CDS?

- Range from 0.075 to 0.6 FTE



*Are you concerned about climate change? Want to do something about it? Want to be a climate **HERO**?*



ID/Climate-HERO Track

Healthcare **E**fficiency and **R**esource **O**ptimizer

Healthcare delivery contributes to 8.5% of the US greenhouse gasses. In this infectious diseases (ID) track, you will learn: ID medicine and how to apply ID science (e.g., antimicrobial stewardship & infection prevention) with environmental sustainability to improve clinical care, planetary health, & save time and \$ for systems

About EyeSustain

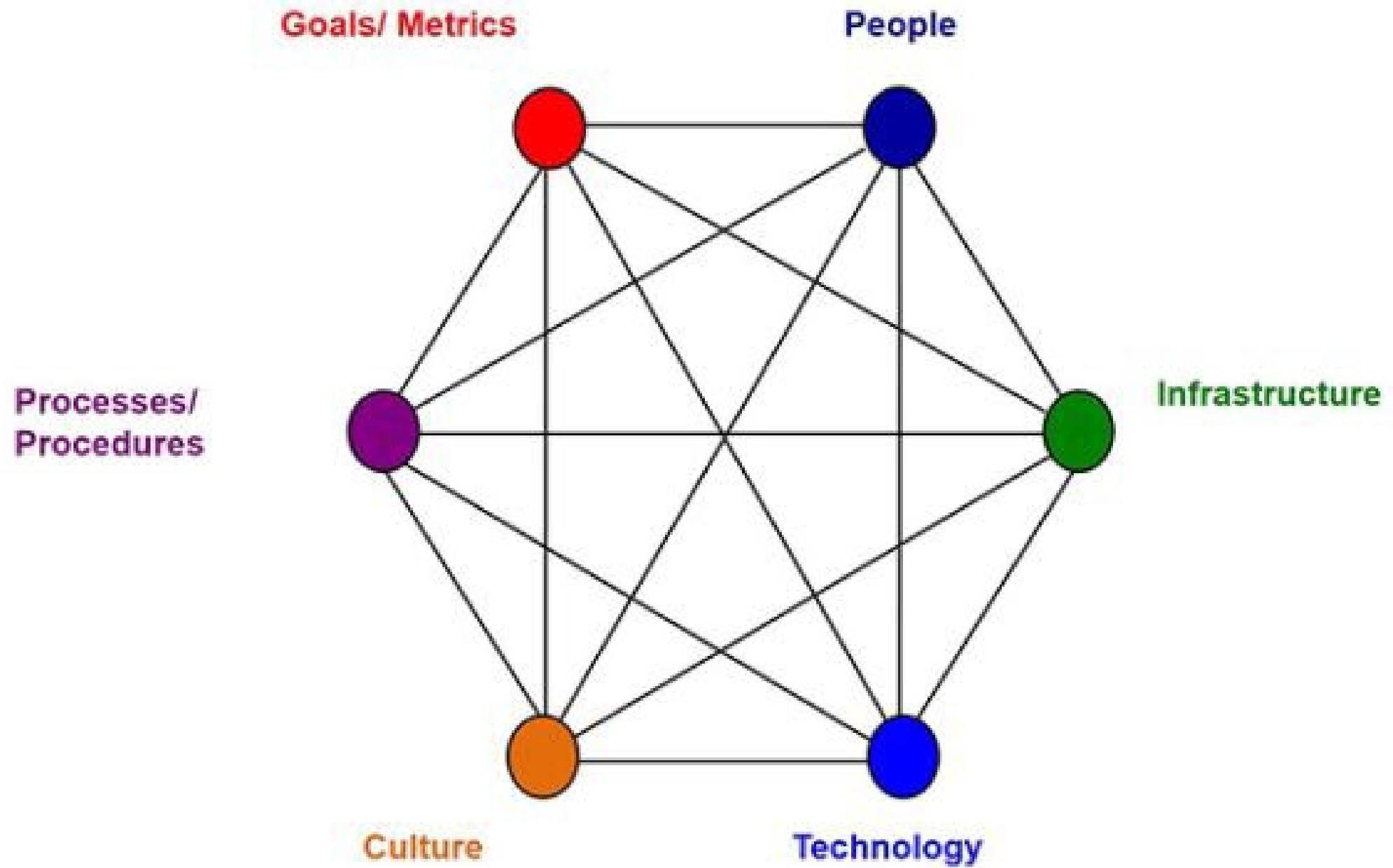
EyeSustain is a global coalition of eye societies, organizations, and ophthalmologists collaborating to make ophthalmic care and surgery more sustainable



Our Mission

- Engage, network, and educate our global ophthalmic community about more sustainable practices
- Support research and innovative solutions that reduce ophthalmology's environmental impact
- Collaborate with industry to reduce our carbon footprint and surgical waste
- Collaborate with other medical specialties to reduce the carbon footprint of our healthcare system
- Support advocacy and education about the public health impact of climate change

[MEET OUR LEADERSHIP](#)





CleanMed 2025

May 6-8 | Atlanta, Georgia

The Westin Peachtree Plaza, Atlanta

REGISTER NOW

Some products.. Would you consider??



Would you consider the following changes?





Preeti.jaggi@emory.edu



Climate Action. Just do it.



Course/Webinar Series

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