# IDWeek 2026 in review

Alison Smith, Preston Kramer

TASP/CSiM November 3rd 2026

# The real highlights!



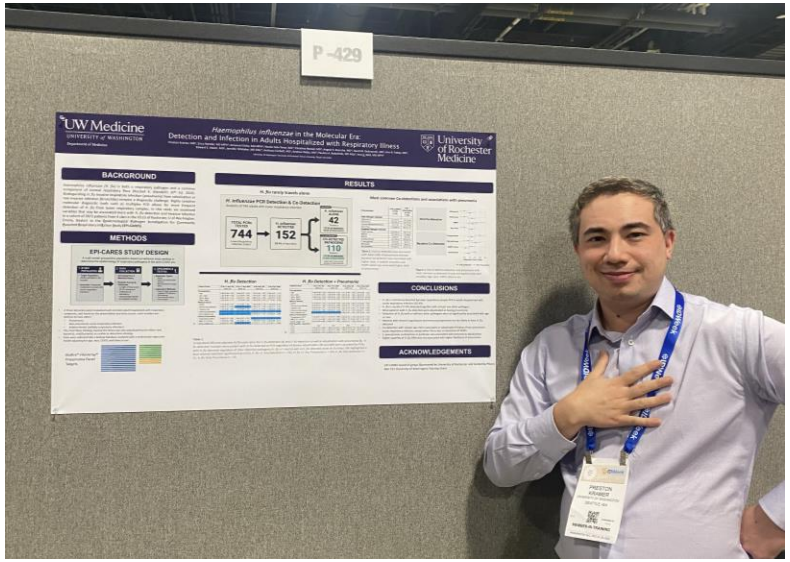





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# Roadmap

**Alison:**

1. Diagnostic stewardship in the STI clinic?
2. How much emphasis to place on a pre-print? (REMAP CAP)
3. A  practice-changing RCT in a rural hospital network (SABEDITO)
4. A global approach to antifungal resistance - and development
5. Tackling the environmental impacts of our work

**Preston:**

1. Advances in Hepatitis B (and D) treatment
2. The new procalcitonin?!

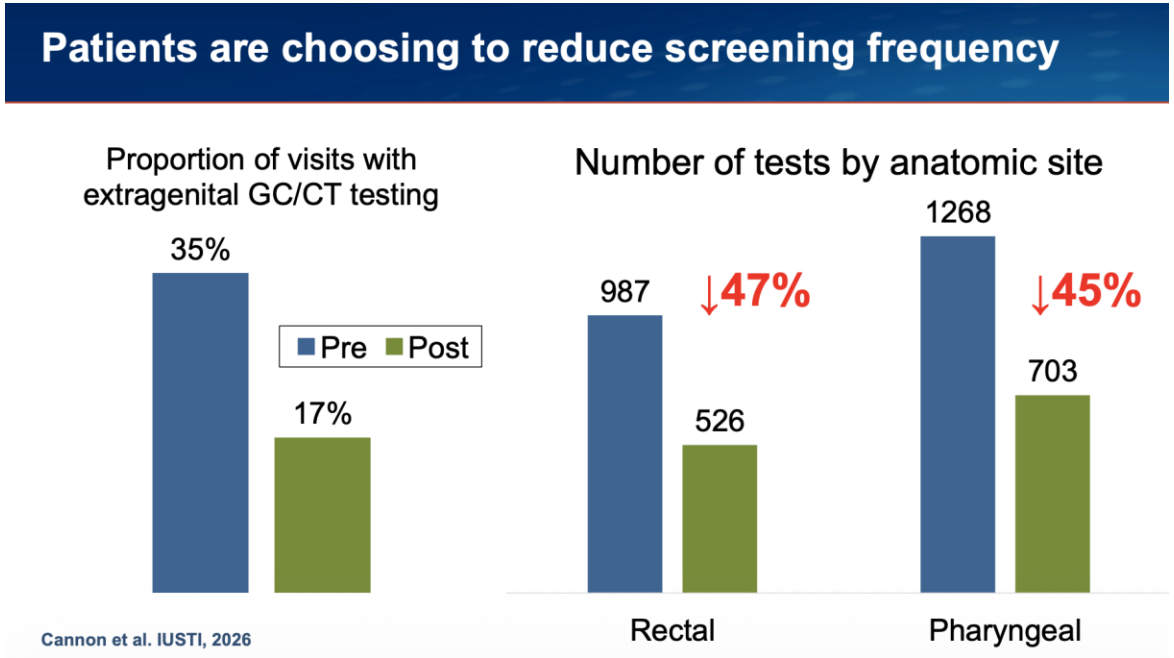
# Friendly Debates in STI's: Should we change the guidelines for routine STI screening in MSM?

Tim Menza, MD, PhD - UW/PHKC

- Frequent screening may detect asymptomatic infections that spontaneously clear, that are not viable, and/or do not cause complications
- Frequent screening is costly and leads to unnecessary antibiotic exposure
- Less frequent screening in the context of PrEP [and doxyPEP] may be more efficient, is likely safe, and opens up capacity for other sexual health services

**Bringing a diagnostic stewardship approach to STI screening:**
patients decide when they're at high risk?

Jury's out, but the audience was convinced



# How much emphasis to place on a (potentially) practice-changing pre-print?

REMAP-CAP: Oseltamivir in the Critically Ill **Paul Sax, MD - “What’s hot in ID”**

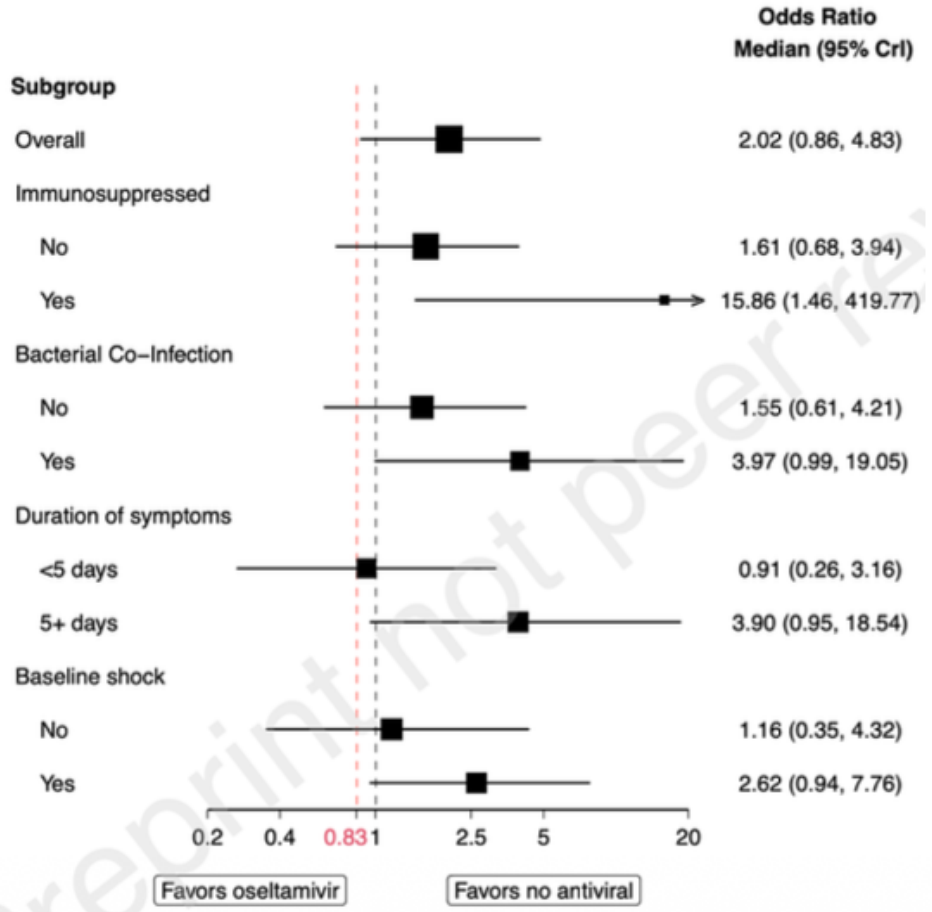
# How much emphasis to place on a (potentially) practice-changing pre-print?

## REMAP-CAP: Oseltamivir in the Critically Ill

**Paul Sax, MD - "What's hot in ID"**

Open label trial of no antiviral vs oseltamivir x 5 days vs oseltamivir x 10 days

- n = 442; median duration of symptoms 5 days




Pre-print not peer reviewed



Murthy S, et al. Lancet 2026 *pre-print.*

# How much emphasis to place on a (potentially) practice-changing pre-print?

## REMAP-CAP: So Many Questions!

**Paul Sax, MD - "What's hot in ID"**

Would there be benefit if initiated promptly?

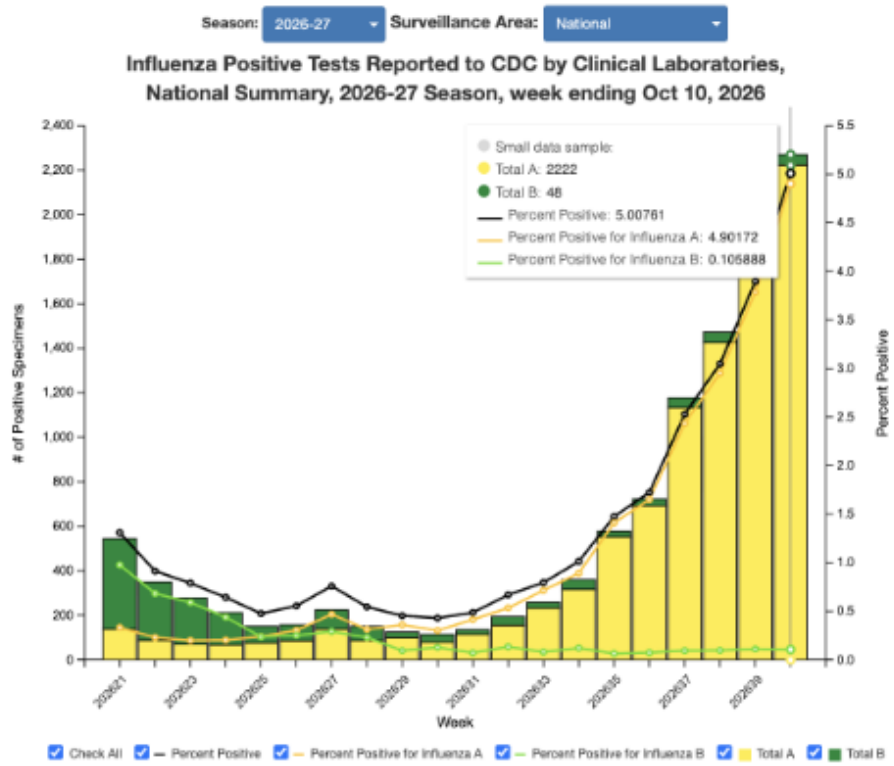
What about peramivir? Or baloxavir? Or combination therapy?

Will the peer-reviewed paper be substantially different?

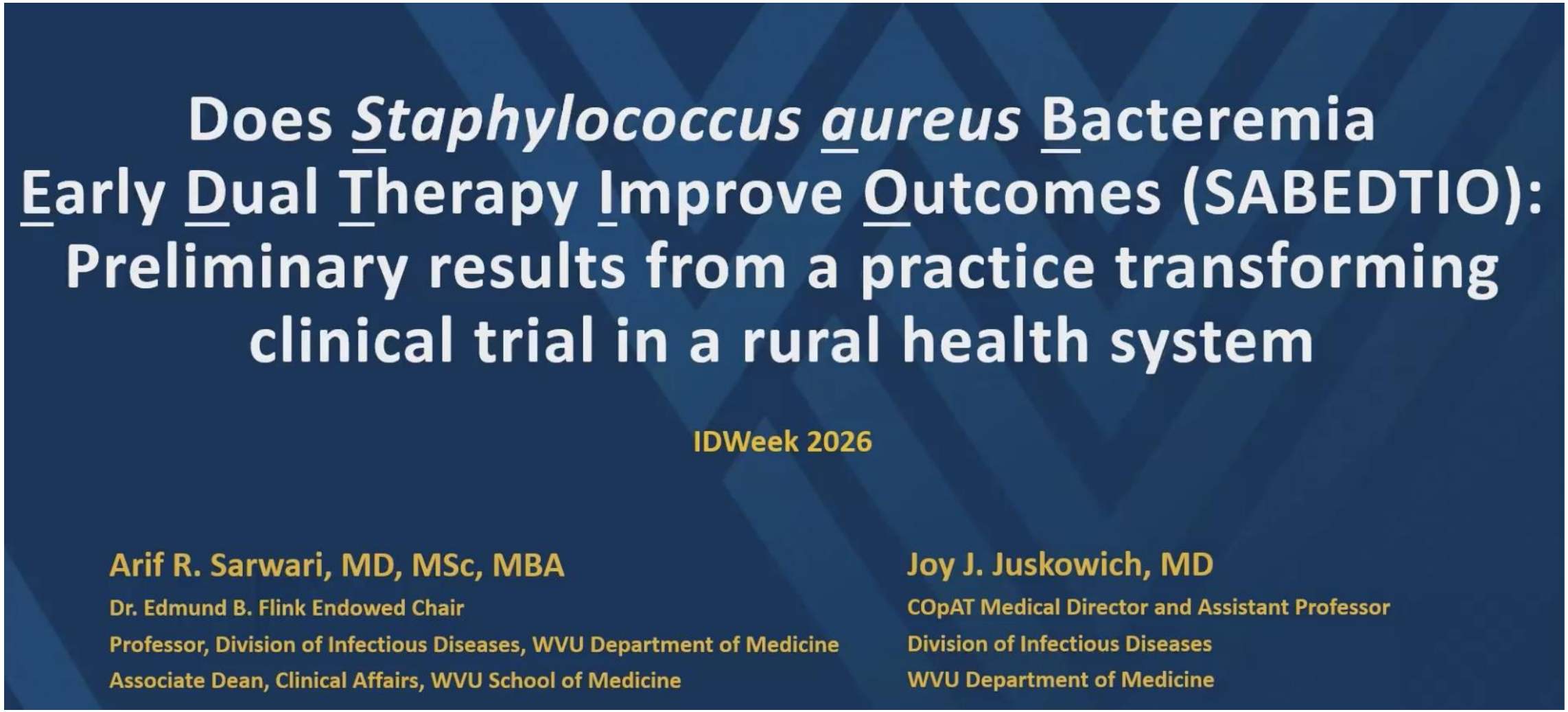
In the meantime, what should we do <u>this</u> flu season, *which has already started?*

Perspective from New Zealand, courtesy Dr. Tom Hills:

***Since June, our guidelines now say "antivirals are not recommended" for critically ill patients.***



# **SABEDTIO trial** [Late-breaking abstract: antimicrobials]

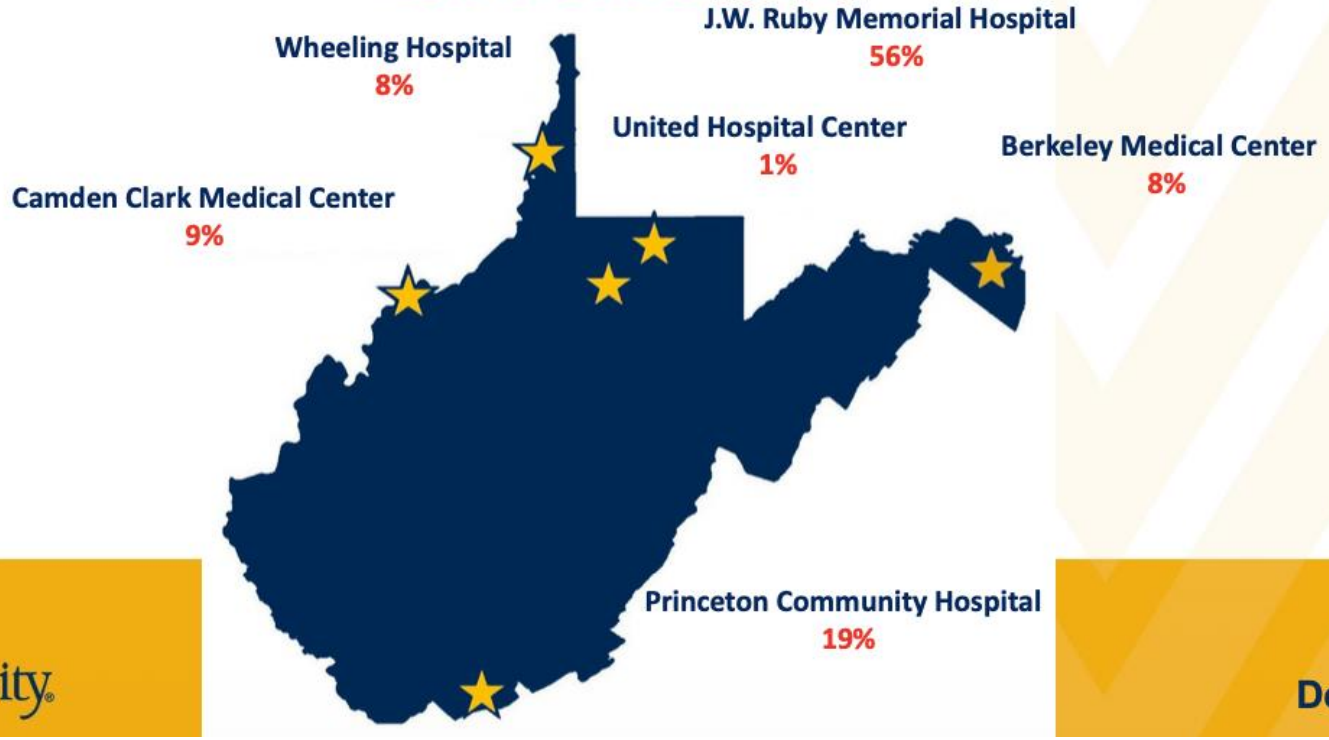


# SABEDTIO trial

Does **dual therapy** up front improve outcomes in *Staph aureus* bacteremia?

## Investigator-initiated, open-label, pragmatic, practice transforming, randomized controlled trial across 6 WVU Medicine Hospitals

235 of 300 enrolled

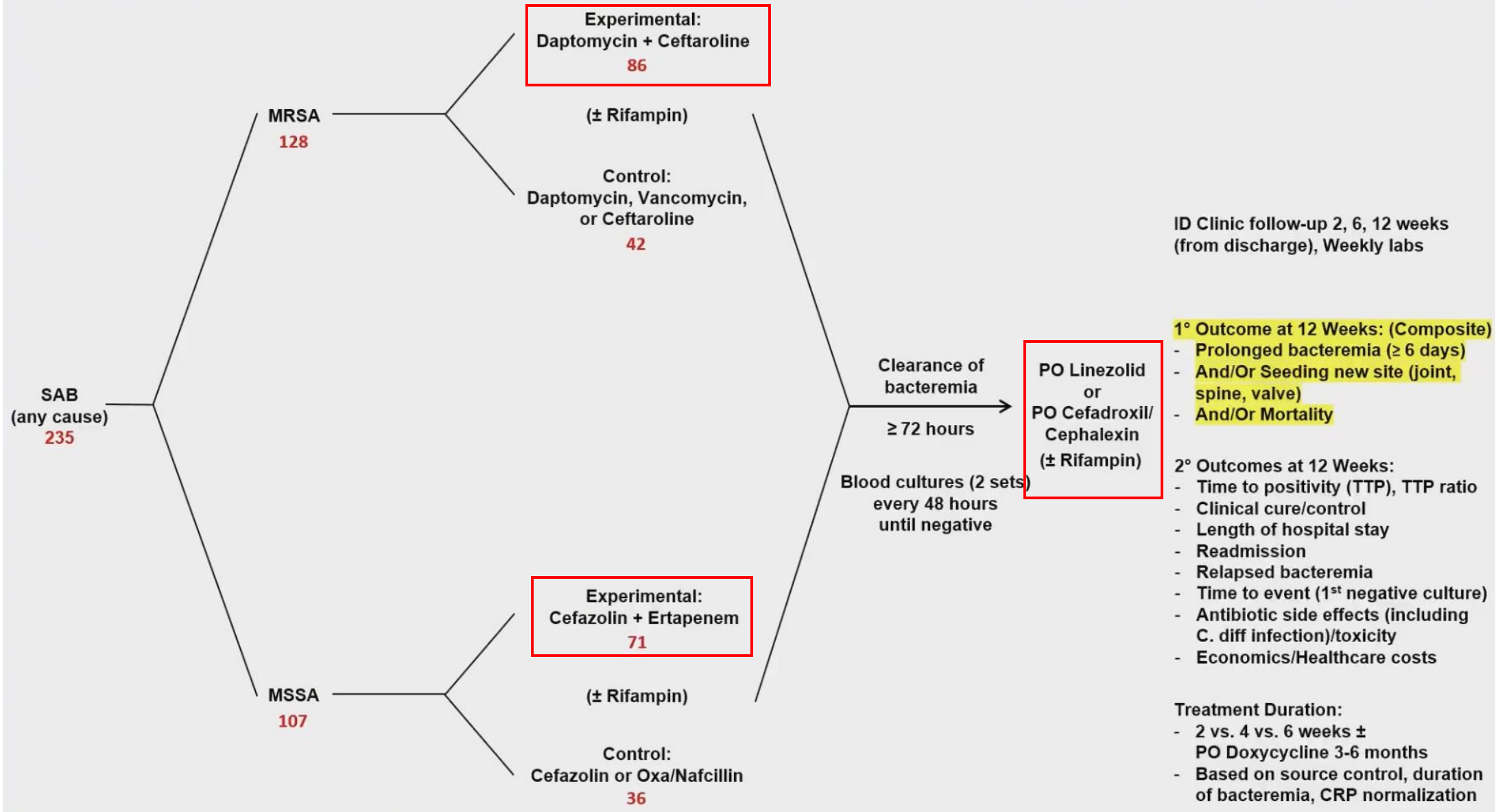



WestVirginiaUniversity.

Department of Medicine

# SABEDTIO trial

Does **dual therapy** up front improve outcomes in *Staph aureus* bacteremia?



# SABEDTIO trial

Investigator-initiated, open-label, pragmatic, practice transforming, randomized controlled trial across 6 WVU Medicine Hospitals

| | Total N= 193 | Experimental n= 128 | Control n= 65 | P-value* |
|---|---|---|---|---|
| **Infection Site** | | | | |
| Endovascular, n (%) | 57 (30) | 37 (29) | 20 (31) | NS |
| Bone and Joint, n (%) | 87 (45) | 56 (44) | 31 (48) | NS |
| Skin and soft tissue, n (%) | 38 (20) | 25 (20) | 13 (20) | NS |
| Pulmonary, n (%) | 25 (13) | 15 (12) | 10 (15) | 0.47 |
| Gastrointestinal, n (%) | 1 (1) | 1 (1) | 0 (0) | NS |
| Genitourinary, n (%) | 12 (6) | 9 (7) | 3 (5) | NS |
| Other, n (%) | 6 (3) | 6 (5) | 0 (0) | 0.1 |
| **MRSA**, n (%)** | 106 (55) | 74 (58) | 32 (49) | 0.26 |
| **Intervention for Source Control, n (%)** | 108 (56) | 71 (55) | 37 (57) | NS |
| Full, n (%) | 67 (35) | 45 (35) | 22 (34) | |
| Partial, n (%) | 41 (21) | 26 (20) | 15 (23) | |
| **PO Antibiotic Transition ≤ 72 Hrs, n (%)** | 168 (87) | 110 (86) | 58 (89) | NS |

*>0.5= NS

**Methicillin-resistant *S. aureus* (rest Methicillin-susceptible *S. aureus*, MSSA)

# SABEDTIO trial

Investigator-initiated, open-label, pragmatic, practice transforming, randomized controlled trial across 6 WVU Medicine Hospitals

## Primary Outcomes in SABEDTIO Patients who Completed the Trial (by 7/31/2026)

| | Total N= 152 | Experimental n= 101 | Control n= 51 | P-value* |
|---|---|---|---|---|
| **Primary** | | | | |
| **Mortality, n (%)** | 30 (20) | 20 (20) | 10 (20) | NS |
| **Prolonged Bacteremia, n (%)** | 14 (9) | 6 (6) | 8 (16) | p≤ 0.05 |
| **Seeding of a New Site, n (%)** | 1 (1) | 0 (0) | 1 (2) | NS |
| **Composite Primary Outcome** | 45 in 41 (27%) patients** | 26 in 26 (26%) patients | 19 in 15 (29%) patients** | NS |

*>0.5= NS

**Four of the deaths were in patients with prolonged bacteremia (3) and seeding of a new site (1), all *Control* arm

## Proportion prolonged SAB

- Experimental MSSA 3% (2/71)
- Control MSSA 8% (3/36)
- Experimental MRSA 9% (8/86)
- Control MRSA 17% (7/42)

# SABEDTIO trial

Investigator-initiated, open-label, pragmatic, practice transforming, randomized controlled trial across 6 WVU Medicine Hospitals

- They witnessed practice changes within their hospital network during the trial period
  - increased comfort with transition to PO and with shorter courses
- **To mitigate toxicity, they started implementing therapeutic drug monitoring for linezolid**

**Principles:**

Avoid more than 4 wks linezolid

Use 600 mg BID or 600 mg daily dosing for patient convenience

TDM at 1-2 wks to allow for earlier dose reduction

TDM at SS and after dose reduction to verify linezolid level in range 2-8 mcg/mL

Discontinue if symptomatic toxicity (N/V, etc.)

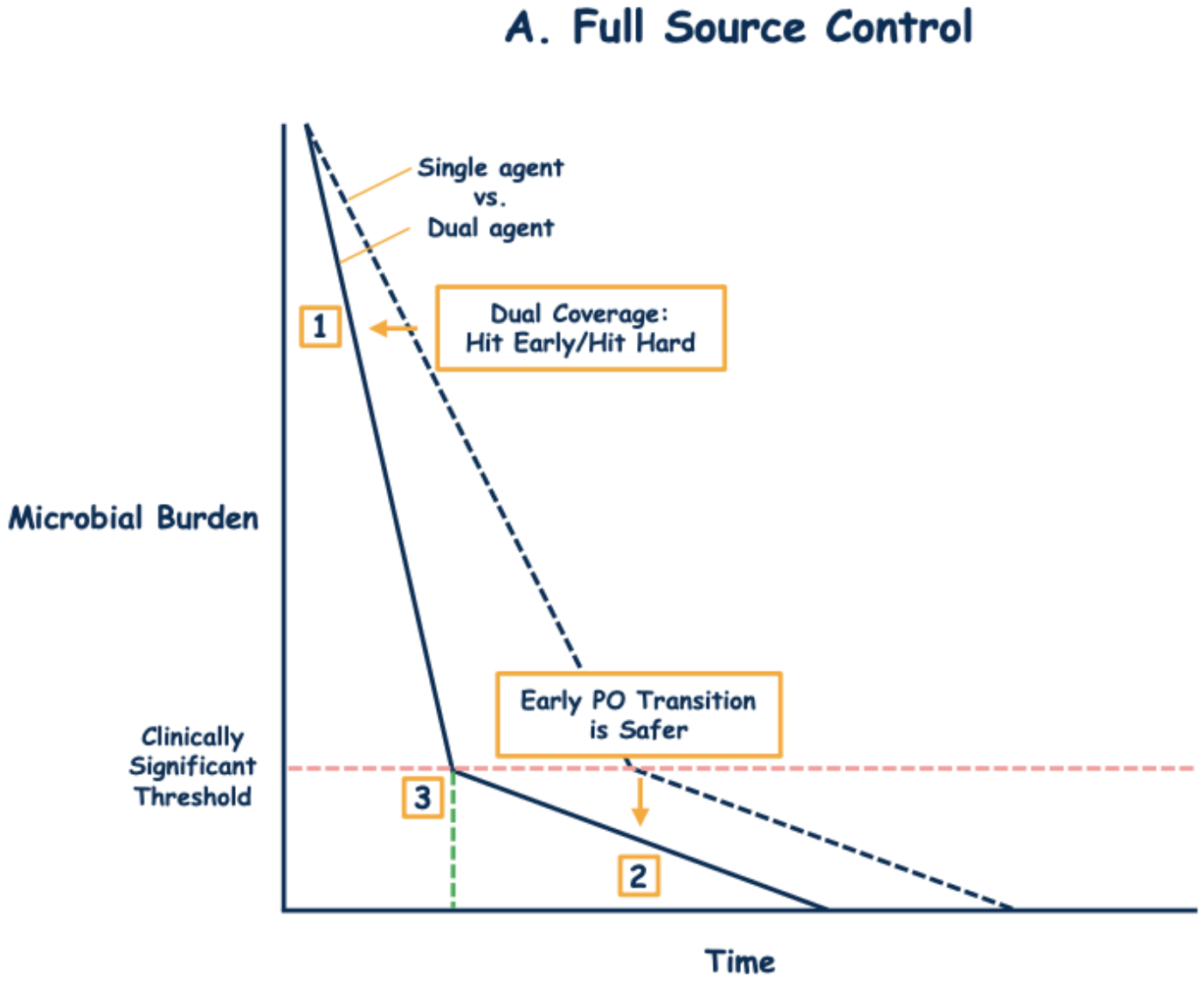
| Age (yrs) | Renal Function (Creatinine Clearance) > 60 | 30-60 | < 30/ESRD |
|---|---|---|---|
| ≤ 50 | 4/0 | 4/0; TDM 1-2 wks | 0/4; TDM SS |
| 51-60 | 4/0 | 4/0; TDM 1-2 wks | 0/4; TDM 1-2 wks |
| 61-70 | 2/2; TDM 1 wk | 2/2; TDM 1 wk | 0/4; TDM 1-2 wks |
| 71-80 | 1/3; TDM SS | 1/3; TDM SS | 0/4; TDM 1-2 wks |
| ≥ 81 | <---------- | 0/4; TDM SS | ----------> |

Increased Linezolid Toxicity mitigated

- 1st 50 patients: 10/28 = 36%
- 2nd 50 patients: 8/23 = 35% (Patient 94 first planned dose reduction)
- 3rd 50 patients: 2/32 = 6%
- 4th 50 patients: 4/26 = 15% (Patient 178 first TDM Protocol)

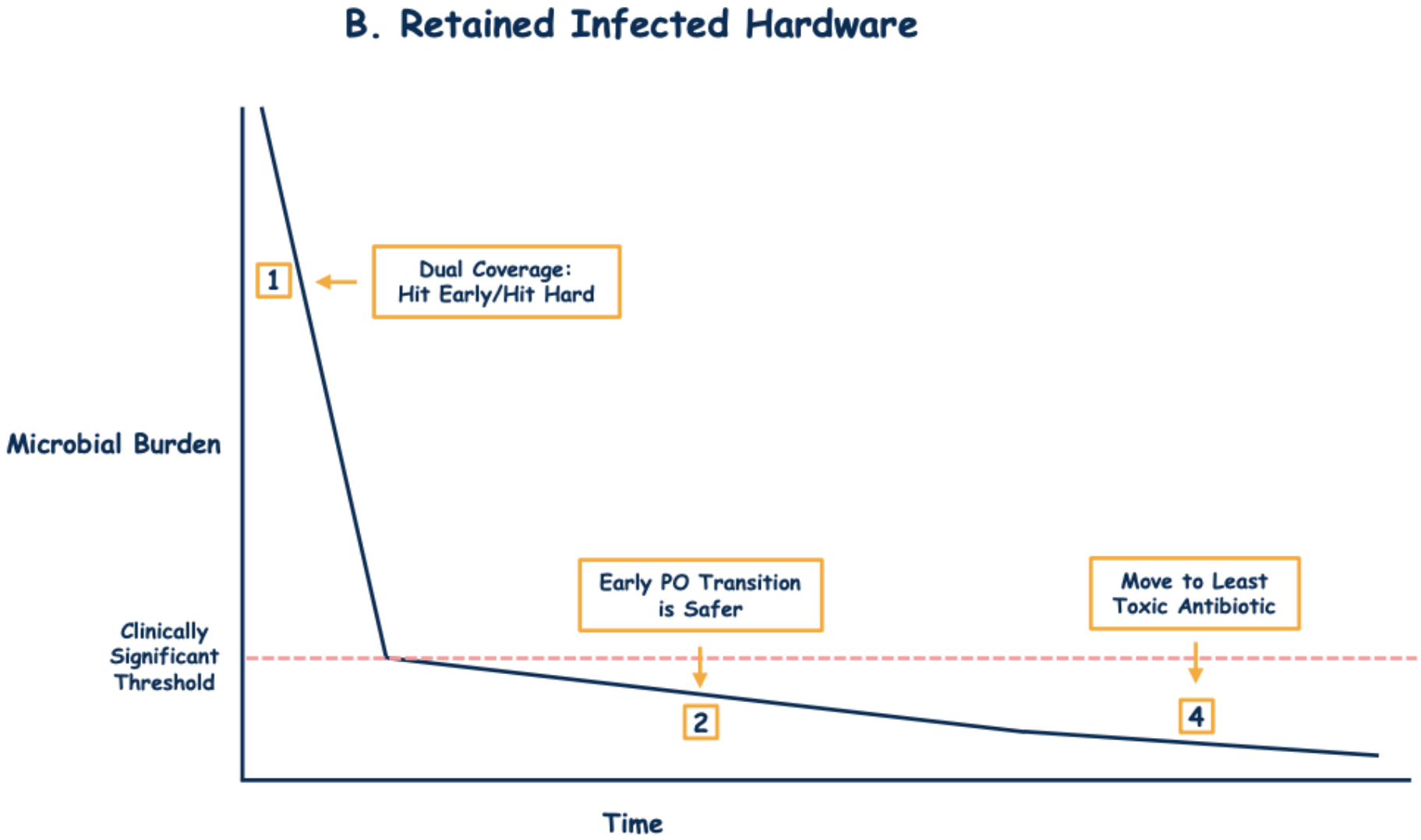
# SABEDTIO trial

Investigator-initiated, open-label, pragmatic, practice transforming, randomized controlled trial across 6 WVU Medicine Hospitals



# SABEDTIO trial

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# What's New in the Global Antimicrobial Resistance Landscape?

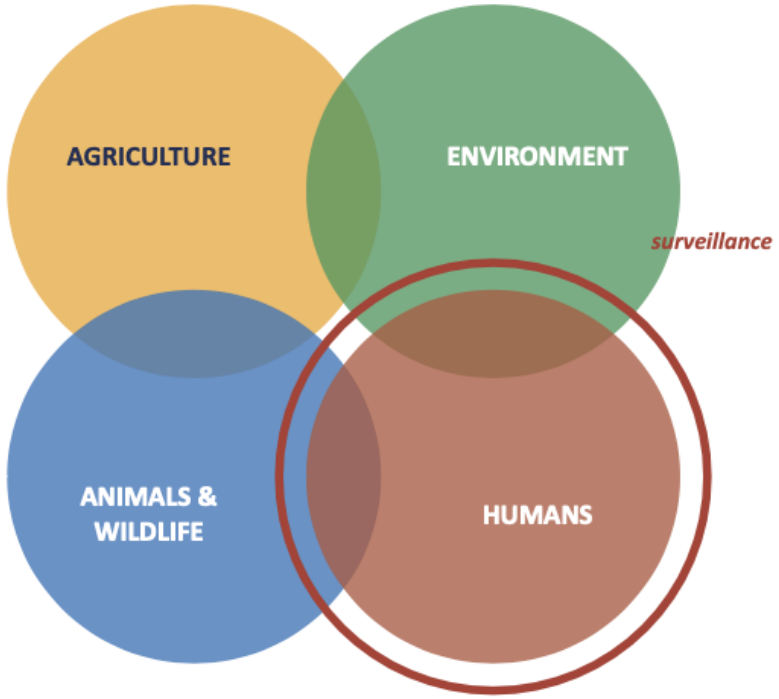
## A One Health Approach to Antifungal Resistance

**Aline Zakhem, MD**
American Univ. of Beirut

### One selective pressure. Four compartments.

- **Azoles are used in all four.**
- **Fungi move between all four.**
- **Surveillance operates mainly in one.**

*Healthcare sits inside the human compartment — the setting where C. auris is amplified.*



# What's New in the Global Antimicrobial Resistance Landscape?

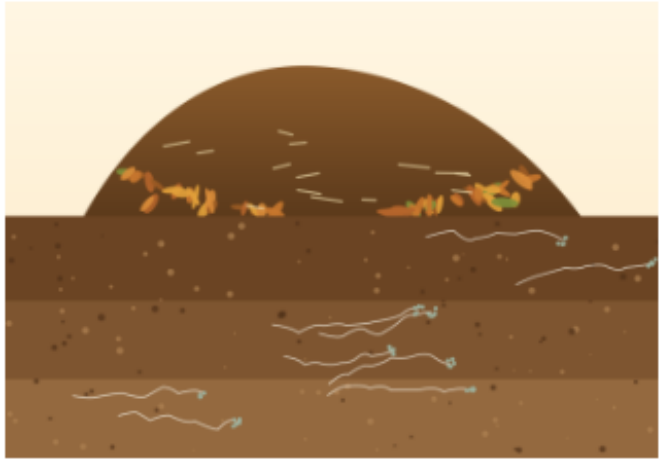
## A One Health Approach to Antifungal Resistance

**Aline Zakhem, MD**
American Univ. of Beirut

### AGRICULTURE IS THE LARGER AZOLE USER

- Azoles are the most widely used fungicide class
- DMI fungicides: tebuconazole, difenoconazole, propiconazole, epoxiconazole
- In agricultural use since the 1970s

*Aerial application drifts ≥75 m; propiconazole persists in soil ~300 days; run-off carries sub-MIC concentrations into water.*



1. Azole residue at sub-inhibitory concentration
2. A substrate where A. fumigatus multiplies — decaying plant matter, compost
3. Time

### PATIENT-ASSOCIATED

*single point mutations, no tandem repeat*

**G54 · P216 · M220 · G448**

### ENVIRONMENT-ASSOCIATED

*promoter tandem repeat , overexpression, point mutation*

**$TR_{34}$/L98H  $TR_{46}$/Y121F/T289A**

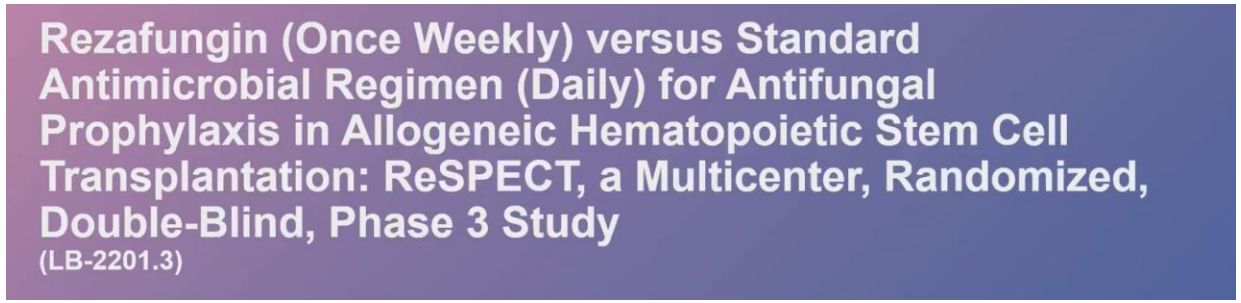
# What's New in the Global Antimicrobial Treatment Landscape?

**OASIS trial**: Olorofim vs amphotericin for patients who can't receive azoles. N = 151; International enrollment, mostly heme/onc patients.

- non-inferiority
- no concerns for safety signals

OASIS
Olorofim ASpergillus Infection Study

**Rezafungin** trialed for antifungal prophylaxis in HSCT patients




**New antifungals in the pipeline:**

- **Turletricin-** weekly IV infusion with mechanism similar to amphotericin B
- **EL777**- inhaled delivery, similar to amphotericin B

# The Plastics Pandemic

Megan Wolff, PhD, MPH - **PSNAP**

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

## Microplastics and Nanoplastics in Atheromas and Cardiovascular Events

R. Marfella, F. Prattichizzo, C. Sardu, G. Fulgenzi, L. Graciotti, T. Spadoni, N. D'Onofrio, L. Scisciola, R. La Grotta, C. Frigé, V. Pellegrini, M. Municinò,

N Engl J Med 2024;390:900-10.
DOI: 10.1056/NEJMoa2309822
*Copyright © 2024 Massachusetts Medical Society.*

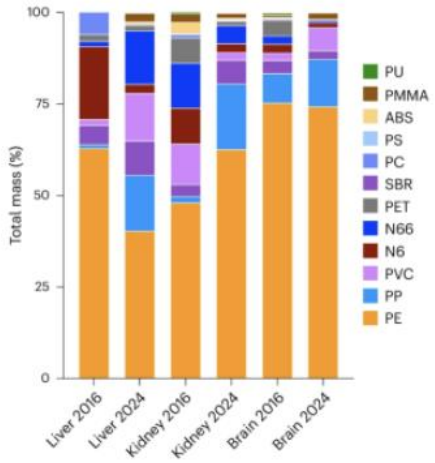


nature medicine

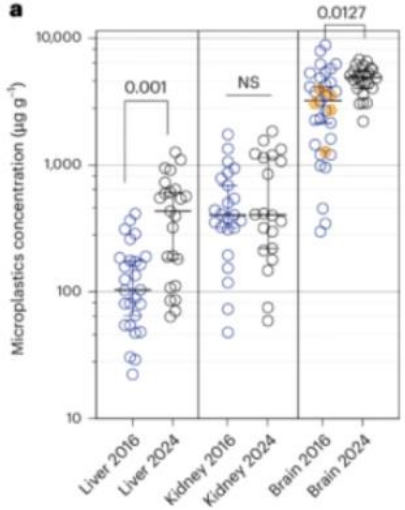
Brief Communication https://doi.org/10.1038/s41591-024-03453-1

## Bioaccumulation of microplastics in decedent human brains






- Over a dozen plastic resins were identified




- "MNPs are **selectively accumulated** into the human brain."

# The Plastics Pandemic

Pamela Lee, MD (UCLA)

Highlighting a new tool: **EcoRxChoice.com**



# The Plastics Pandemic

Pamela Lee, MD (UCLA)

Highlighting a new tool: **EcoRxChoice.com**




https://ecorxchoice.com

# The Plastics Pandemic

Pamela Lee, MD (UCLA)

Highlighting a new tool: **EcoRxChoice.com**

**Ciprofloxacin • IV • 400mg**
Every 8 hours (q8h) for 7 days
**3560.5g waste**

**Ciprofloxacin • PO • 750mg** Most eco-friendly
Every 12 hours (q12h) for 7 days
**154.0g waste**

Difference is 3406g plastic waste
One plastic water bottle = 10g
→ A 7-day course of IV ciprofloxacin creates **340 plastic water bottles** of waste more than a PO course.



# The Plastics Pandemic

Pamela Lee, MD (UCLA)

## ”Low-hanging Fruit” projects linking IP & sustainability

- Optimize non-sterile glove use via glove stewardship campaigns
- Opportunity to improve hand hygiene

Using gloves wisely: rethinking glove use for health, safety, and environmental sustainability

M. Lauren Lalakea MD, FACS, DCM[1,*], Radhika Sheth MBBS[2*], Elizabeth Cerceo MD, DCM, FACP, FHM, FEFIM[3], Yvonne Huckleberry PharmD, FCCM, BCPS[4], Preeti Jaggi MD[5], Vidya Mony DO, FIDSA, FSHEA[6] and Elizabeth Monsees PhD, RN, CIC, AL-CIP, FAPIC, FSHEA, FAAN[7]




Moretti K et al. R I Med J (2013). 2021;104(9):34–37.

- For more ideas:

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

Shreya M. Doshi MBBS[1,2], Pamela Lee MD[3], Saul Hymes MD[4], Judith A. Guzman-Cottrill DO[5] and Preeti Jaggi MD[6]

& always remember – count the savings along with the waste averted!!

- Throw the right waste in the right bin
- Non-hazardous waste in biohazardous bins increases cost & emissions

# The Plastics Pandemic

Pamela Lee, MD (UCLA)



Practical Step #3: Look for local healthcare myths that may increase plastic use

# Part 2 - Preston Kramer!

- Big advances in Hepatitis B (and D) treatment
- MeMed BV: The new procalcitonin?

# Advances in Hepatitis B (and D) Treatment

**BLUF:**

- A new drug (bepirovirsen) added to current therapy significantly increases likelihood of "functional cure" in chronic HBV (and is now FDA approved)
- Another new drug (bulevirtide) is effective for treatment of hepatitis D infection

HIBSAGO (bepirovirsen)

HEPCLUDEX®
bulevirtide-gmod 8.5mg for injection

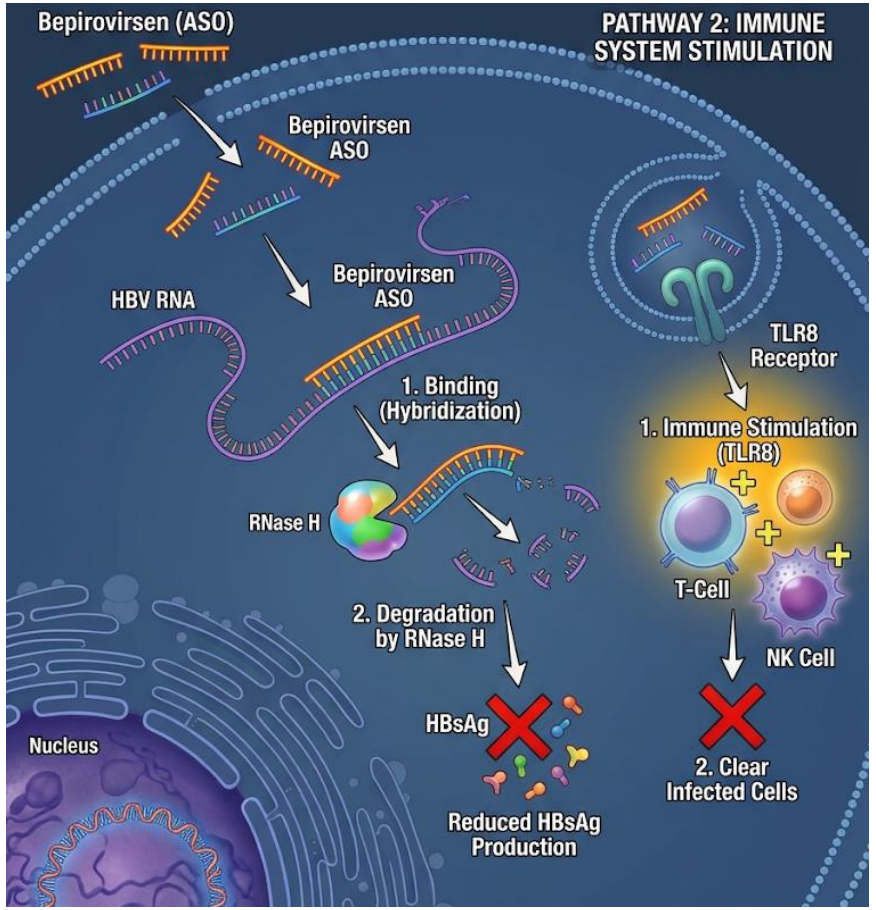
# Treatment of Chronic Hepatitis B

- Goal of treatment: Prevention of cirrhosis, HCC, and transmission
- Options: **Entecavir**, **tenofovir**, PEG-interferon alpha-2a (rarely used)
- Is hepatitis B "curable"?
- "Functional cure" = undetectable HBsAg + undetectable HBV DNA for at least 6 months
- Functional cure is **rare** (~2% after 10 years on antivirals[1])

1. *Hsu YC et al. J Infect Dis. 2021 Dec 1;224(11):1890-1899*

# What is  Bepirovirsen?

- Anti-sense oligonucleotide
- Suppresses ALL HBV transcripts
- Also stimulates innate immune response (TLR-8)



# Does Bepirovirsen Work??

- 2 RCTs: B-Well 1 and 2[1]
- Patients:
  - Chronic HBV
  - No cirrhosis
  - On at least 6 months of NA therapy
  - HBV DNA <90, **HBsAg 100-3000**, ALT < 2x ULN
- Intervention: 6 months of bepirovirsen (SC injection) vs. Placebo in addition to their NA
- NA therapy alone continued for another 6 months
- NA therapy stopped at 1 year in people who achieved undetectable HBV DNA and HBsAg
- Response determined at 72 weeks (1.5 years)

1. *Hou J et al. N Engl J Med. 2026 Jun 25;394(24):2395-2406.*

# Results

- Rate of functional cure in NA only group: **0%**
- Rate of functional cure in NA+bepirovirsen group: **20%** and **19%**
- Rate of functional cure in NA + bepirovirsen group with HBsAg <1000: **25%** and **28%**
- FDA Approved 10/20!



# Hepatitis D Virus

- Defective virus: requires presence of HBV to replicate
- ~4.5% of people with HBV have HDV co-infection[1]
- HDV+HBV = faster progression to cirrhosis and higher risk of HCC
- Treatment indicated for people with elevated ALT and detectable HDV RNA
- Prior treatment option: PEG-interferon alpha-2a weekly for 1 year
  - Tons of side-effects
  - Contraindicated in decompensated cirrhosis
  - Effective in ~30% of cases[2]


1. *Global hepatitis report 2024: action for access in low- and middle-income countries. World Health Organization*
2. *Abdrakhman A et al. Antiviral Res. 2021;185:104995.*

# Bulevertide

- Peptide that blocks the NTCP receptor (for both HDV and HBV)
- FDA approved in May
- MYR 301RCT[1]: 2 mg vs. 10 mg vs. placebo
- HDV RNA undetectable at 1 year in **12%**, **20%**, and **0%**
- HDV RNA undetectable at 3 years in **29%** and **50%** (placebo not included)
- Only **20%** remained undetectable 2 years after stopping treatment
- Well-tolerated but unclear how long to continue

1. *Wedemeyer H et al. N Engl J Med. 2023;389(1):22*

# MeMed BV: The new procalcitonin?

- **BLUF:**

MeMed BV does appear to perform better than procalcitonin at distinguishing viral from bacterial infection but still too early to know how impactful it will be.

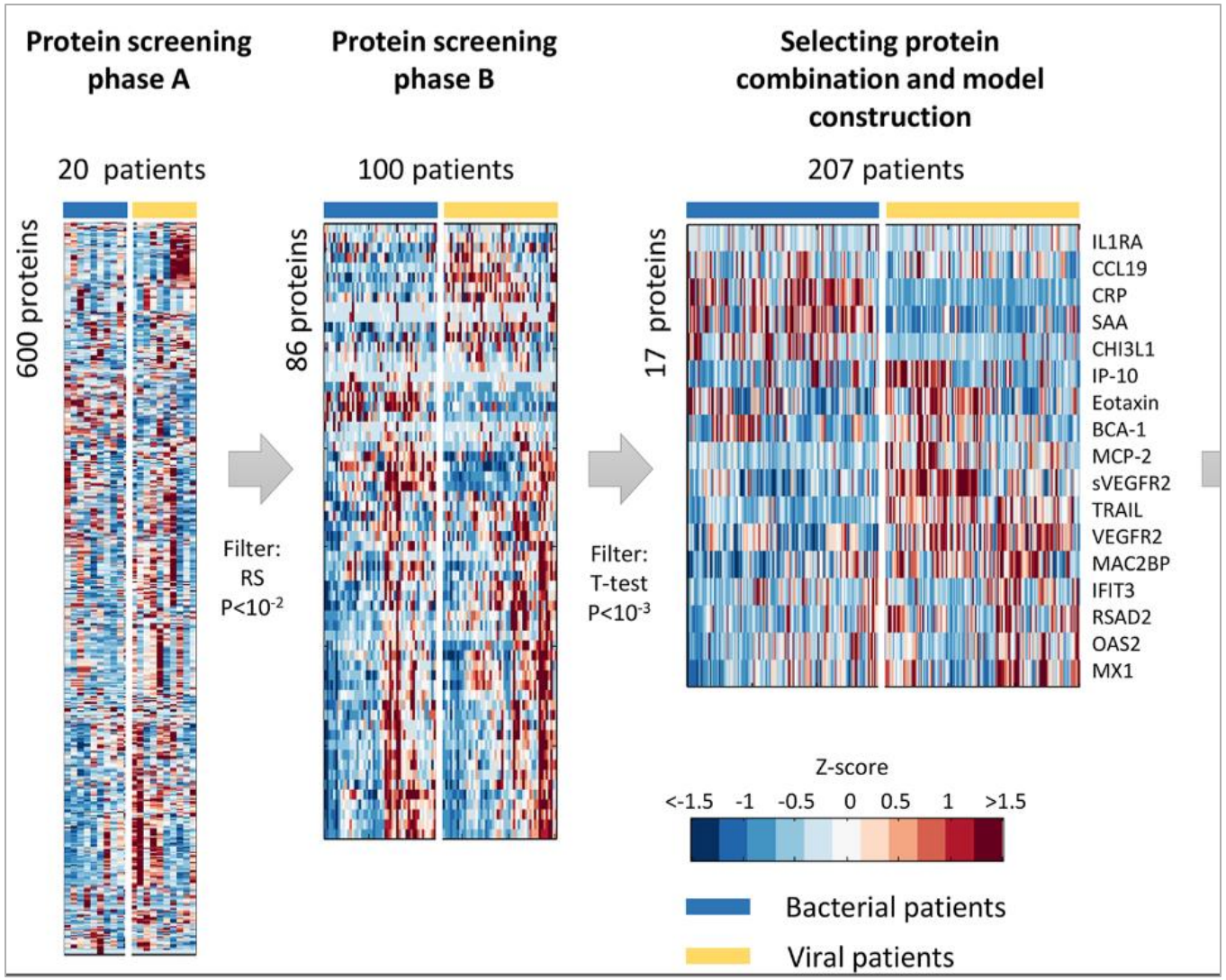


# MeMed BV Initial Study

- Pediatric and adult patients with suspected infection were recruited across Israeli hospitals
- Immunocompromised, active malignancy, chronic viral infection (HIV, HCV, etc) excluded
- 765 patients had a diagnosis established (by 3 physician panel)
- Blood was sampled and 600 proteins screened
- 600 proteins narrowed down to 3 (TRAIL, IP-10, CRP)
- Levels were combined into an algorithm that results in a score
- 0-34 = viral, 35-65 = equivocal, 90-100 = bacterial

*Oved K et al. PLoS ONE 10(3): e0120012.*

# MeMed BV Initial Study



# MeMed BV Intial Study

- AUC 0.95 distinguishing bacterial from viral
- AUC 0.96 distinguishing infectious from non-infectious
- Consistent across age, pathogen, clinical syndrome, comorbidities
- Not affected by colonization (e.g. *H. flu* in the lung)

# MeMed BV Clinical Studies

- 2017 Prospective Cohort Study[2] (AutoPilot-Dx):
  - Sensitivity of 93.7% and specificity of 94.2%
- 2017 Prospective Double-Blind Study[3] (OPPORTUNITY):
  - Sensitivity 86.7% and Specificity 91.1
  - Only 14% of infections were bacterial
- 2026 Pediatric Meta-analysis[1] (12 studies, >6000 children):
  - Sensitivity of 89–98%, NPV of 98-99% (for bacterial infection)


1. *Aljohany AH et al. BMC Pediatr (2026).* https://doi.org/10.1186/s12887-026-07725-2
2. *Papan C et al. Clin Microbiol Infect. 2022 May;28(5):723-730.*
3. *Van Houten CB et al. Lancet Infect Dis. 2017 Apr;17(4):431-440.*

# What about Adults?

- Prospective study of 415 adults with LRTI symptoms in the ED[1]:
  - Sensitivity 98% Specificity 88% and NPV 98.8%
  - Indeterminate cases and equivocal BV results were excluded
- Prospective study of 1016 patients (57% adults) with suspected infection[2]:
  - AUC of MMBV: 0.9-0.98, AUC of PCT: 0.7-0.77


1. *Halabi S et al. Clin Microbiol Infect. 2023 Sep;29(9):1159-1165.*
2. *Allan C et al. Clin Infect Dis. 2025 Apr 30;80(4):735-743.*

# Caveats

- Almost entirely studied in ED/UC patients, mostly LRT symptoms
- More extensively studied in children
- **NO gold standard**
- No mortality or stewardship data (yet)
- Unclear if it performs well for atypical bacterial (Mycoplasma)
- Requires a proprietary machine/cartridges