UWTASP tele-antimicrobial stewardship program | echo

November 4, 2025

IDWeek Highlights

Zahra Kassamali Escobar
Chloe Bryson-Cahn

Project ECHO

Disclosures

Today's speakers have no financial relationships with an ineligible company relevant to this presentation to disclose.

None of the planners have relevant financial relationship(s) to disclose with ineligible companies whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients

All relevant financial relationships have been mitigated

Session: Influential Publications in Health Care Epidemiology, Antimicrobial Stewardship & Public Health

468 - Influential Publications In Antimicrobial Stewardship

Tuesday, October 21, 2025 2:40 PM - 3:05 PM CDT Location: B405-B407

Speaker(s)

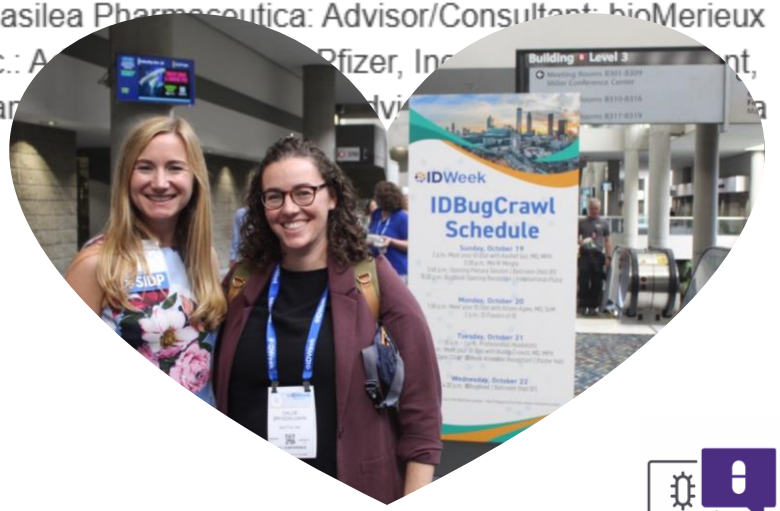
Erin K. McCreary, PharmD (she/her/hers)

Director of Infectious Diseases Improvement and Clinical Research Innovation
University of Pittsburgh Medical Center
Pittsburgh, PA, United States

Slides

Disclosure(s):

Erin K. McCreary, PharmD: AbbVie Inc: Advisor/Consultant, Honoraria; Basilea Pharmaceutica: Advisor/Consultant; bioMerieux Inc.: Honoraria; Invivyd, Inc.: Advisor/Consultant; Merck and Company, Inc.: A Pfizer, Inc nt, Honoraria; Shionogi Pharmacovigilance Center Co., Ltd.: Advisor/Consultan



Patient-reported perceptions, experiences and preferences around intravenous and oral antibiotics for the treatment of Staphylococcus aureus bacteremia

How do patients feel about oral vs intravenous antibiotics?

88% of patients thought oral antibiotics were more convenient. IV associated with loss of independence, disruption to routine, inability to care for others.

71% preferred oral route (convenience, independence, ease of daily living, improved social interactions)

Found managing IV therapy "stressful", "frightening", "annoying"

Oral therapy associated with regained freedom, return to work, sense of normalcy

29% preferred IV therapy: dislike pill burden, concern about adherence, perceived efficacy around IV

35% expressed heightened anxiety with IV therapy

53% reported sleep disturbances with IV therapy

65% perceived IV therapy as "faster", "stronger", and more effective. Despite this, acknowledged no difference in clinical status and noted similar improvement on IV or oral.

Walls G, et al. CID. 2025.

Slide from Erin McCreary
IDWeek 2025

262 – C. difficile Management Dilemmas: Monoclonals, Biotherapeutics or Antimicrobials? When and How?

Kevin W. Garey, PharmD, MS, FIDSA

Professor and Chair

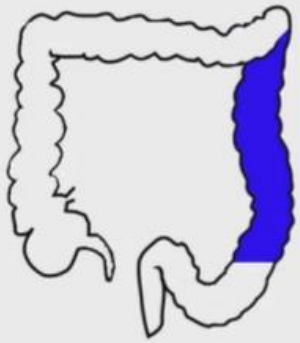
UNIVERSITY of HOUSTON | COLLEGE OF PHARMACY

Houston, Texas USA

IDWeek
Oct. 19-22, 2025 | Atlanta, GA

CDIFFerently: What's new in the diagnosis and treatment of *C. difficile?*

Therapeutic Goals for *C. difficile* Infection (CDI)



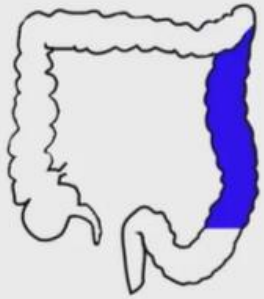
Essential:	Correct dysbiosis	Kill the organism	Adaptive immunity
Optional but nice:	Safe and convenient	Also affects toxins and spores	Short vs. long-term

Adamu BO, Lawley TD. *Curr Opin Microbiol.* 2013;16:596-601.

Slide from Kevin Garey
IDWeek 2025

CDIFFERently: What's new in the diagnosis and treatment of *C. difficile?*

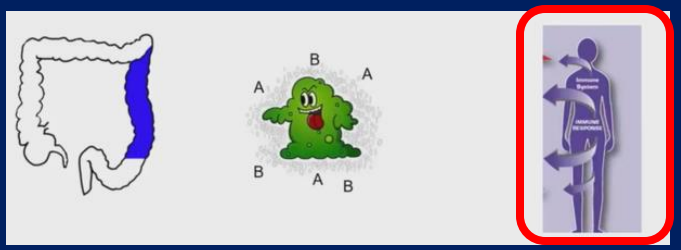
These therapeutic goals can then be translated to CDI Treatments (and today's objectives)



Current: Probiotics/FMT **Rebyota/Vowst** Use narrow-spectrum antibiotics	~~Metronidazole~~ **Vancomycin** **Fidaxomicin** **Tetracyclines**	IVIG **Bezlotoxumab**
Future: VE303	**Ibezapolstat**	**Toxoid vaccines (PF-06425090)** **Toxin B monoclonal antibody(AZD5148)**

Slide from Kevin Garey
IDWeek 2025

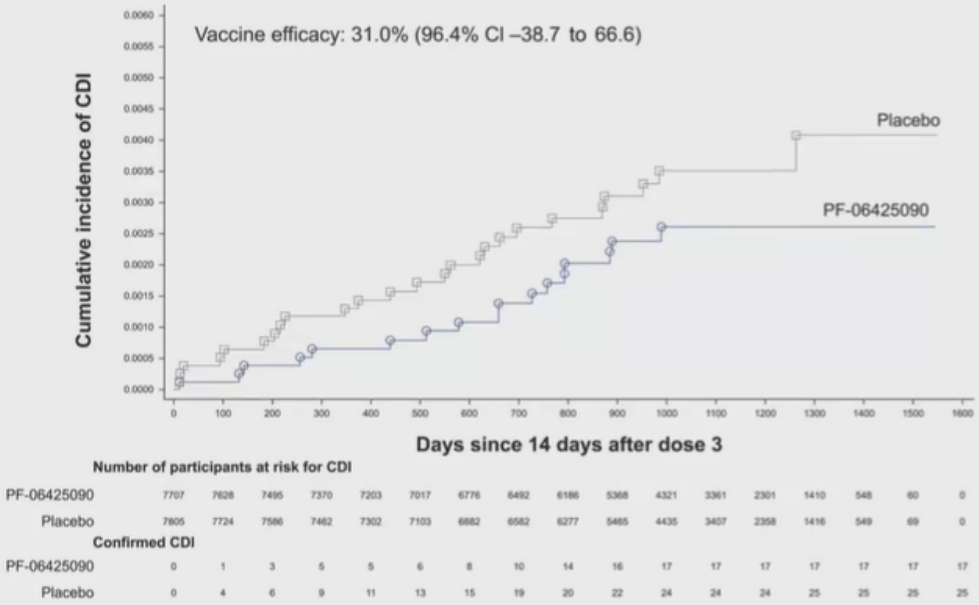
Adaptive Immunity: C.Diff vaccine Phase III RCT



Clover: CLOstridium difficile Vaccine Efficacy tRial: Phase III RCT detoxified toxin A/B vaccine in adults 50+ years

PF-06425090

Primary endpoint not met



Recommended review, open access New Engl J Med

CLINICAL IMPLICATIONS OF BASIC RESEARCH

Vaccinating against *Clostridioides difficile* Infection

Vincent B. Young, M.D., Ph.D.[1,2]

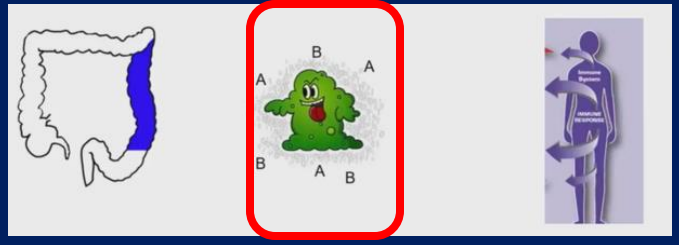
Enrolled: 17,535. Primary CDI cases: 42

→ underpowered study

Donskey et al. Clin Infec Dis 2024
Young et al. NEJM 2025

Slide from Kevin Garey
IDWeek 2025

Kill the Organism



Guideline Recommendations for Initial *C difficile* Infection

ACG

- Vancomycin or fidaxomicin
  - Metronidazole alternate in low risk

IDSA Infectious Diseases Society of Americ

- Fidaxomicin preferred over vancomycin
  - Metronidazole if above are unavailable

ESCMID

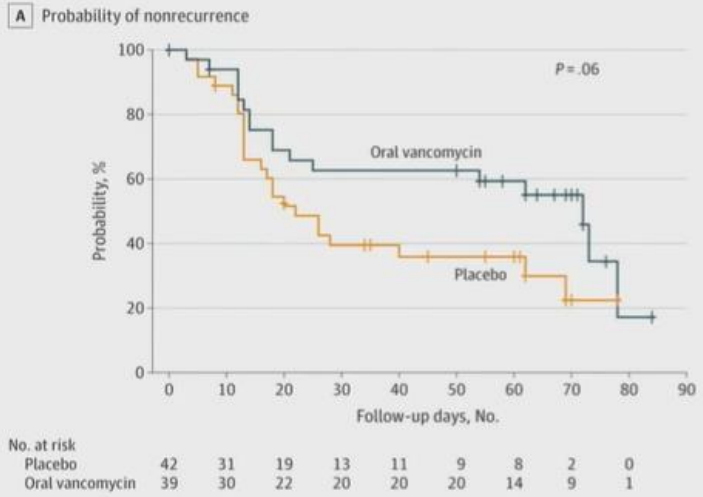
- Fidaxomicin preferred over vancomycin
  - Metronidazole if above are unavailable
  - Focus on recurrence high risk

*High risk of recurrence: age >65 yr + ≥1 of the following: healthcare-associated CDI, hospitalization in the last 3 mo, concomitant antibiotics, PPIs (and prior CDI).

Slide from Kevin Garey
IDWeek 2025

VAN secondary prophylaxis delays but doesn't prevent rCDI and increases VRE

- 4 centers in Midwest USA, 2018-23
- 81 participants with CDI in the last 180 days
- Receiving non-CDI-indicated systemic antibiotics
- Randomized to vanco 125 mg once daily or placebo during concomitant antibiotics + 5 additional days



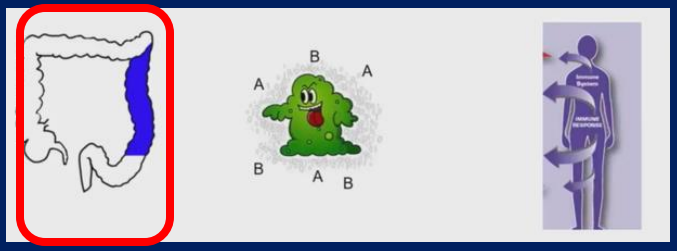
	Day 56 (Week 8)		Day 80 (Week 11)
	CDI	VRE Stool Carriage	CDI
VAN (n=39)	44%	50%	80%
Placebo (n=42)	57%	24%	80%
P value	NS	0.048	NS

Keating et al. JAMA Netw Open 2025

Oral vancomycin did slow down the recurrence of C.diff. But at the end of the day, everybody arrived at the same spot. There was an equal amount of recurrences, whether you received placebo or vancomycin. So is the delay in recurrence worth it?

Slide from Kevin Garey
IDWeek 2025

Pay attention to stopping vanco prior to LBPs



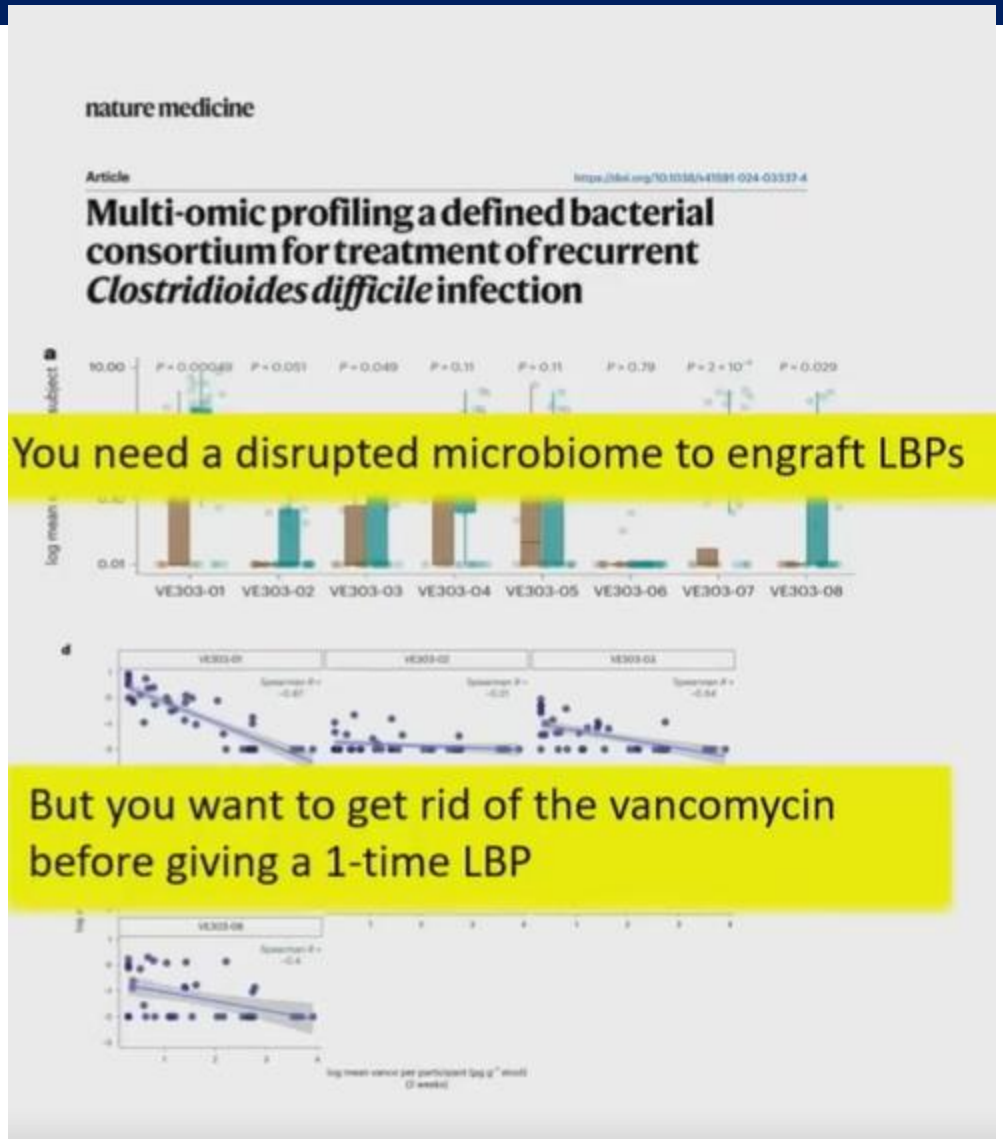


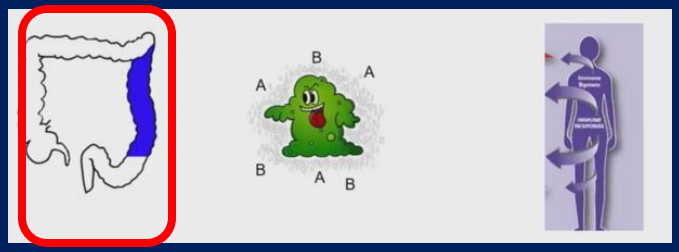
Table 1: FDA-approved LBPs

	RBX2660 Rebyota	SER-109 Vowst
Route	Enema	PO
Antibiotic washout	24-72h	2-4 days

Louie et al. JAMA 2023
Menon et al Nat Med 2025

Slide from Kevin Garey
IDWeek 2025

Live Biotherapeutics (LBPs) Collateral benefits?



JAMA Network | Open

RCT: Quality of Life Among Patients with Recurrent *C difficile* Treated With Investigational Oral Microbiome Therapeutic SER-109: Secondary Analysis of a Randomized Clinical Trial

POPULATION

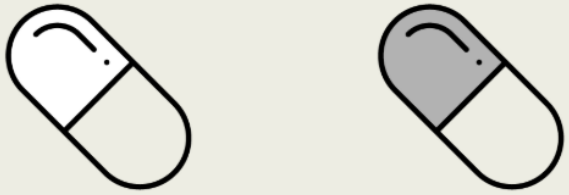
73 Men, 109 Women

Adults with ≥3 episodes of *Clostridioides difficile* infection, inclusive of the qualifying episode

Mean (SD) age, 65.5 (16.5) y

INTERVENTION

182 Patients randomized

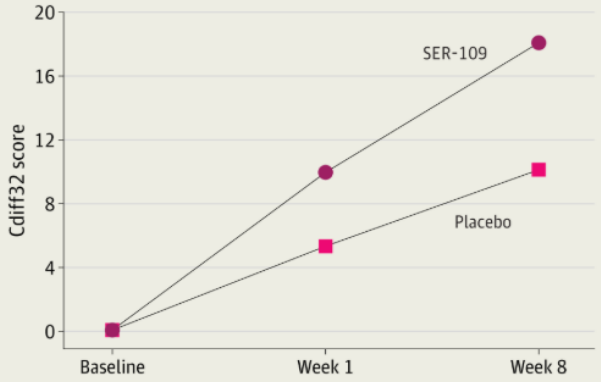


89 SER-109
4 oral capsules (~3×10^7 spore colony-forming units) administered once daily for 3 consecutive days

93 Placebo
4 oral capsules administered once daily for 3 consecutive days

FINDINGS

Compared to placebo, SER-109 treated patients had significantly greater improvements in total and physical domain and subdomain scores as early as week 1, with continued improvements by week 8



Change in total CDiff32 (Wk 1: +9.9; Wk 8: +18.0)

Wk 1: +5.3; Wk 8: +10.1; $P = .02$ and $P = .03$ group difference

SETTINGS / LOCATIONS

56 Sites in the US and Canada

PRIMARY OUTCOME

Exploratory analysis of physical, mental, and social well-being via the *Clostridioides difficile* Quality of Life Survey (Cdiff32) at baseline, weeks 1 and 8. Total and domain scores (0 [worst]-100 [best]) were recorded

Garey KW, Jo J, Gonzales-Luna AJ, et al. Assessment of quality of life among patients with recurrent *Clostridioides difficile* infection treated with investigational oral microbiome therapeutic SER-109: secondary analysis of a randomized clinical trial. *JAMA Netw Open*. 2023;6(1):e2253570. doi:10.1001/jamanetworkopen.2022.53570


PLACEBO
A
Recurrence (n = 37)
Nonrecurrence (n = 56)
Cdiff32 score (mean change from baseline)
30
20
10
0
-10
P = .48
P <.001
P = .18
P <.001
P = .05
P <.001
P = .61
P <.001
P = .56
P <.001
P = .33
P <.001
P = .18
P <.001
P = .19
P <.001
P <.001
P <.001
P <.001
P <.001
P <.001
P =.005
P <.001
Total
Physical
Physical general
Physical specific
Mental
Mental anxiety future
Mental anxiety current
Social relationship
SER-109
B
Recurrence (n = 11)
Nonrecurrence (n = 78)
Cdiff32 score (mean change from baseline)
30
20
10
0
-10
P = .06
P = .28
P <.001
P = .45
P = .18
P <.001
P = .89
P = .06
P <.001
P = .24
P = .47
P <.001
P = .02
P = .71
P <.001
P = .03
P = .86
P <.001
P = .02
P = .66
P <.001
P = .23
P = .22
P <.001
Total
Physical
Physical general
Physical specific
Mental
Mental anxiety future
Mental anxiety current
Social relationship

1 - AI's Role in Health Care Epidemiology Surveillance

Ask Question

100 / 100 Pts

BM

Barbara MacDonald

Vote

(she/her/hers)

0 pts

How can AI assist with health equity disparities caused by EHR "discount plans" inflicted on rural health facilities because that's all they can afford? Currently, rural health is a second class citizen when it comes to EHR power.

nd the Policy

les VA

eillance

AI and CLABSI review

SUMMARIZATION: COMING SOON TO AN INFECTION PREVENTION PROGRAM NEAR YOU

- 11 Site National Phase 0 pilot
- 110 CLABSI cases, 110 non-CLABSI cases
- Facility randomly assigned cases to review from another facility
- Cases reviewed in 3 ways: Expert alone, AI-alone, AI-Augmented/Assisted
- Accuracy compared to facility reported determination
- AI-Augmented with highest accuracy and associated with time savings and high satisfaction
  - 85% still felt that additional chart review to verify output was necessary
- Not a fully automated or scalable system

Type of review	Overall agreement	Positive percent agreement	Negative percent agreement	% cases with disagreement due to errors in facility reporting	Overall agreement adjudicated determination
AI-alone	83.6% (75.4 - 90.0)	82.7% (74.3 - 89.3)	84.5% (76.4 - 90.7)	38.9% (23.1 - 56.5)	90.0% (85.3 – 93.6)
AI-assist expert	**83.6% (75.3 - 90.0)**	**76.4% (67.3 - 83.9)**	**90.9% (83.9 - 95.6)**	**58.3% (40.7 - 74.4)**	**93.2% (89.0 – 96.1)**
Expert-alone	78.2% (69.3 - 85.5)	69.0% (55.4 - 80.5)	88.5% (76.6 - 95.6)	45.8% (25.6 - 67.2)	88.2% (80.1 – 93.6)

Slide: Westyn Branch-Elliman

LLM at Stanford

ChatGPT	CLABSI	Not CLABSI
Yes	18	5
No	2	15

N=40

11 misclassifications

Sensitivity: 0.90
Specificity: 0.75

Rodriguez-Nava G et al.
Infect Control Hosp Epidemiol. 2024 Oct 30;46(3):1-4.

Stanford MEDICINE

Also a VA CAUTI project: 95% sensitive, 76% specific
And Spain SSI project: 100% sensitive, 54% specific

Slide: Jorge Salinas

Beyond the 101: Pondering Perplexing Prescribing Issues

Can We Use Ceftriaxone Susceptibility to Interpret Susceptibility to Third-Generation Oral Cephalosporins?

Pranita D. Tamma, MD, MHS
University of Pennsylvania Perelman School of Medicine
Professor, Pediatrics

Suggested Oral β-Lactam Dosing for GN-BSI

Oral β-lactam	Suggested Dose	Approximate Bioavailability	Approximate Protein binding
Amoxicillin	1000 mg PO q8h	70-90%	18%
Amoxicillin-clavulanate	875 mg (amoxicillin) PO q8h	70-90% (amoxicillin)	18% amoxicillin 25% clavulanate
Cephalexin	1000 mg PO q6h	>90%	10%
Cefadroxil	1000 mg PO q12h	>90%	20%
Cefdinir	Not recommended	25%	60-70%
Cefixime	Not recommended	40%	65%
Cefpodoxime	400 mg PO q12h	37-52%	21-33%
Cefuroxime	1000 mg PO q12h	50%	50%

Source: Heil K, et al. 2021 Oct 11;8(10):ofab434. GOAT Trial Infectious Diseases Pharmacist consensus.

Slide: Pranita Tamma

My Thoughts on Oral Cephalosporins for GN-BSI

- Unclear if reasonable to use cefazolin susceptibility as a surrogate for oral cephalexin susceptibility (until additional data available)
- Reasonable to use ceftriaxone susceptibility as a surrogate for oral second and third generation cephalosporin susceptibility (until additional data available)
- Since oral cephalosporins are typically initiated after some clinical improvement observed, after bacterial burden likely reduced, (and people are not neutropenic mice):
  - A trade-off between maintaining robust serum concentrations and improved quality of life may be acceptable, at least until more robust data available
  - Use high dosages administered at frequent intervals
  - Probably best to avoid cefdinir and cefixime
  - Use cephalexin with caution, unless more clinical data suggest otherwise

Slide: Pranita Tamma

Rapid Fire

349 - Impact of a Cefazolin for All Campaign on Perioperative Antibiotic Prophylaxis in Patients with a Penicillin Allergy Label

Table 2: Outcomes

	Pre-intervention N=2236 (%)	Post-intervention N=345 (%)	P-value
Guideline-concordant antibiotic	1256 (56.2)	310 (89.9)	<0.001
Surgical site infection	56 (2.5)	7 (2.0)	0.71
Readmission within 30 days	135 (6.0)	24 (7.0)	0.47
Received diphenhydramine within 24 hours	2 (0.1)	1 (0.3)	0.35

Katherine Shihadeh, PharmD
Denver Health

Rapid Fire

295 - Home Decolonization to Decrease UTI, Graft Failure, and Death After Renal Transplantation (PROTEKT: PROTEction after Kidney Transplant): A Pragmatic Quality Improvement Study

Quasi-experimental study: kidney transplant recipients did 2% CHD bathing of incision site and perineum x 3 months

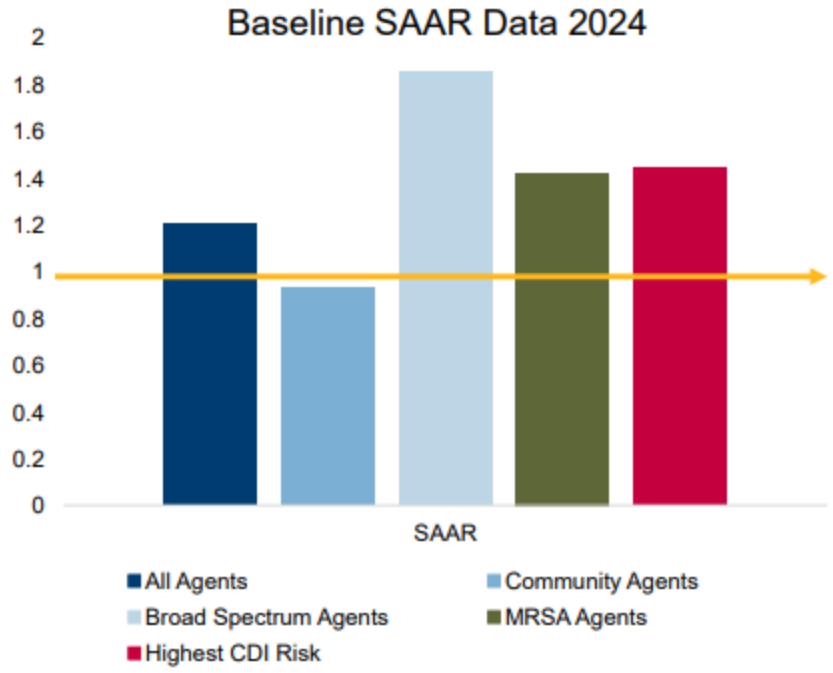
Table 2. Outcomes

	Study Total	PROTEKT		P-Value
		Non-Participant	Participant	
Total (n)	517	423	94	
Surgical Site Infections	21 (4.1%)	18 (4.2%)	3 (3.2%)	0.632
Positive Urine Culture (%)	165 (31.9%)	147 (34.8%)	18 (19.2%)	0.004
Graft Failure within 6 months (%)	12 (2.3%)	12 (2.8%)	0 (0%)	0.009
Death within 6 months (%)	28 (5.4%)	26 (6.2%)	2 (2.1%)	0.119

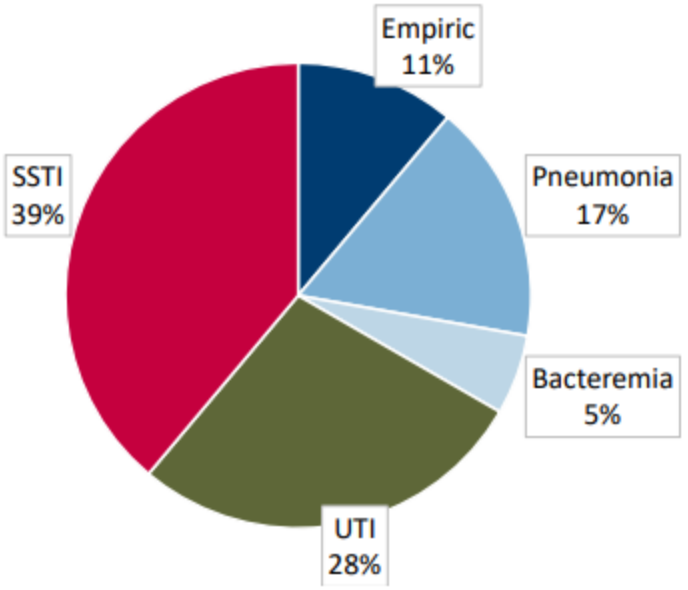
Hannah Nam, MD
UC Irvine

Rapid Fire

379 - Reduction in Cefepime Usage After Inclusion of SAAR Metric on the Inpatient Provider Scorecard



- Duration of therapy 1 [1-3] days

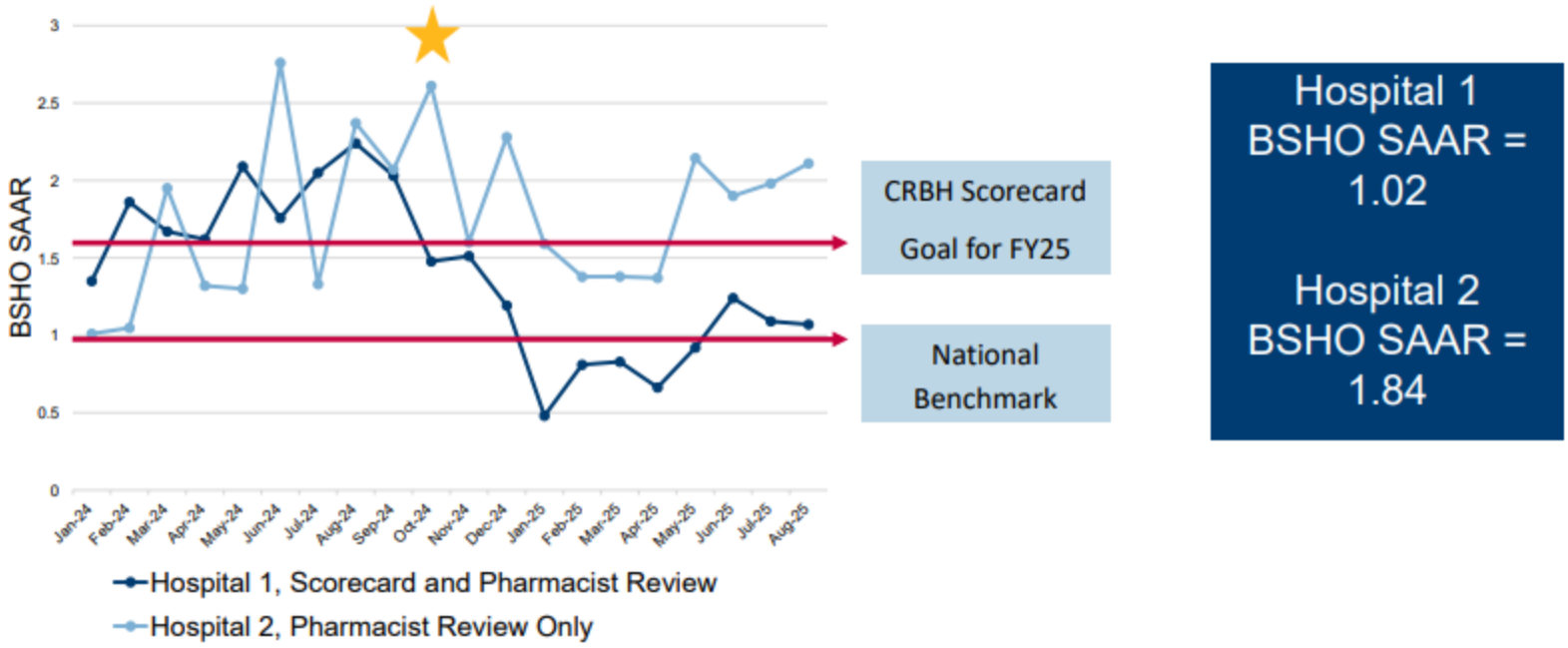


Lauren McDaniel, PharmD
Carilion Clinic – 25 bed hospital!

379 - Reduction in Cefepime Usage After Inclusion of SAAR Metric on the Inpatient Provider Scorecard

Providers received monthly scorecards (with financial incentives)

Compared with Other Critical Access Hospital



Hospital 1
BSHO SAAR = 1.02

Hospital 2
BSHO SAAR = 1.84

Lauren McDaniel, PharmD
Carilion Clinic – 25 bed hospital!