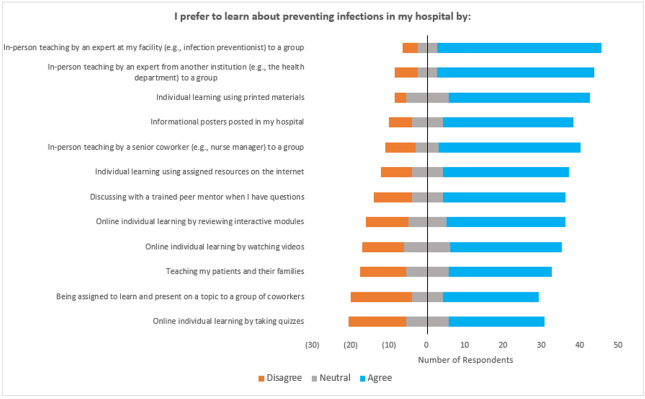
Figure 3. Preferred Learning Styles Among Frontline Healthcare Workers in Two Long-Term Acute Care Hospitals



to effective C. auris prevention among frontline healthcare workers in 2 LTACHs. While staff members successfully identified most prevention strategies for C. auris, they may benefit from enhanced education and training programs that support multiple learning styles.

Antimicrobial Stewardship & Healthcare Epidemiology 2025;5(Suppl. S2):s27–s28

doi:10.1017/ash.2025.226

Presentation Type:
Oral Presentation
Subject Category: Medical Informatics

From Abstract to Article: Publication Rates of Abstracts Presented at the SHEA Spring Conference 2018 and 2021

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Background: Conferences play a crucial role in the early dissemination of significant research to peers and experts within the same field. They provide a platform for receiving feedback, fostering collaborations, and refining groundbreaking findings, which can eventually be developed into full articles for publication in peer-reviewed journals. The transition of presented abstracts to full research journal publications is a key metric for evaluating research productivity, quality, and dissemination. Despite this, there is limited data on the proportion of abstracts that are ultimately published as full articles in peer-reviewed journals. **Method:** All abstracts (351) presented at the SHEA Spring Conference in 2018 and 2021 were indexed and cataloged from the 2018 online archive and the 2021 Antimicrobial Stewardship & Healthcare Epidemiology journal supplement. We then manually searched the top 20 results of both Google Scholar and PubMed to determine the publication status of each abstract as of Jan 10, 2025. Publication status criteria included: matching at least three keywords between the abstract and any resulting manuscript, having at least one common author, and publication occurring after and inclusive of the year of abstract acceptance. Data was compiled into an Excel spreadsheet, categorizing abstracts as 'yes' or 'no' for publication. Publication rates were then calculated using Excel formulas based on these categorizations. Factors associated with publication were evaluated, and publication metrics were described. **Result:** All 351 abstracts were analyzed. Among these, 175 (49.9%) were published as full articles in peer-reviewed journals indexed in Google Scholar or PubMed. Abstracts presented in 2021 and those presented orally had higher publication rates, though the association was statistically nonsignificant (p = 0.06 and p = 0.66, respectively). Abstracts with authors from different institutions and those with more than six authors showed a statistically significant association with higher publication rates (p = 0.002 and p = 0.003, respectively). Infection Control & Hospital Epidemiology was the most common journal in which abstracts were ultimately published, accounting for 51 (29.1%) of the publications. The publication rates surpass those reported in most similar studies of

Variables (no.)	Published, No. (%)	Not published, No. (%)	Chi-square statistics	P value
Year of Presentation				
2018 (194)	88 (45.4)	106 (54.6)	X^2 (1, N = 351) = 3.5	.06
2021 (157)	87 (55.4)	70 (44.6)		
Overall (351) [a]	175 (49.9)	176 (50.1)		
Type of presentation				
Oral presentation (67)	35 (52.2)	32 (47.8)	X^2 (1, N = 351) = 0.18	.66
Poster presentation (284)	140 (49.3)	144 (50.7)		
Study design [b]				
Case series (6)	1 (16.7)	5 (83.3)	X^2 (3, N = 351) = 0.24	.24
Original article (326)	162 (49.7)	164 (50.3)		
SRMA (2)	1 (50)	1 (50)		
Other/not listed (17)	11 (64.7)	6 (35.3)		
Affiliation of authors [c]				
Same (124) [d]	46 (37.1)	78 (62.9)	X^2 (1, N = 194) = 9.5	**.002** [f]
Different (70) [e]	42 (60)	28 (40)		
Number of abstract authors				
Less than or equal to 6 (216)	94 (43.5)	122 (56.5)	X^2 (1, N = 351) = 9.02	**.003** [f]
More than 6 (135)	81 (60)	54 (40)		

Figure 1: Analytical comparison of variables among published and nonpublished abstracts from SHEA spring 2018 and 2021 conferences.

Abbreviations: SRMA, Systematic Review and Meta-Analysis
[a] Overall publications are not considered in the statistical analysis.
[b] All 4 study designs were evaluated together using the chi-squared test.
[c] Analysis was done only for 2018 abstracts; 2021 data was unavailable.
[d] All authors from the same institution.
[e] At least one author from a different institution.
[f] Statistically significant at p < 0.05

Variable	Number (%)*
Time to publication in months, mean ± SD (min-max)	
2018, n = 194	12.88 ± 9.4 (0-51) [a]
2021, n = 157	14.95 ± 11.7 (0-44) [a]
Overall, n = 351	13.91 ± 10.6 (0-51) [a]
Publication rate at the end of 1st year	
2018	49 (25.3)
2021	38 (24.2)
Publication rate at the end of 2nd year	
2018	83 (42.8)
2021	69 (43.9)
Publication rate at the end of 3rd year	
2018	86 (44.3)
2021	81 (51.6)
Publication rate at the end of 4th year	
2018	87 (44.8)
2021	87 (55.4)
Number of authors, mean ± SD (min-max)	
2018	
Presented abstract	6.08 ± 3.3 (1-25)
Published article	7.8 ± 3.6 (3-20)
2021	
Presented abstract	6.76 ± 4.2 (1-23)
Published article	9.16 ± 6.3 (1-37)
Mean Impact Factor of destination journal, mean ± SD (min-max)	
2018	4.88 ± 6.96 (1.4-63.5)
2021	4.22 ± 6.08 (0.44-53)
Authorship changes	
Consistent with abstracts [b]	34 (19.4)
Change in the first author	51 (29.1)
Change in number or order of authors	141 (80.6)
Top 5 destination journals for publication	
Infection Control & Hospital Epidemiology	51 (29.1)
American Journal of Infection Control	34 (19.4)
Antimicrobial Stewardship & Healthcare Epidemiology	16 (9.1)
Open Forum Infectious Diseases	10 (5.7)
Clinical Infectious Diseases	7 (4)

Figure 2: Description of resultant publications from SHEA spring 2018 and 2021 conferences.

Abbreviations: SD, standard deviation; min, minimum value, max, maximum value
*Data is represented as number (%) unless otherwise specified.
[a] The minimum number of months to publication is zero because some abstracts were published before the presentation. With the conference dates as the reference point, the time to publication for these abstracts is counted as zero months.
[b] The authorship number and order remained the same in the publication as in the abstract.

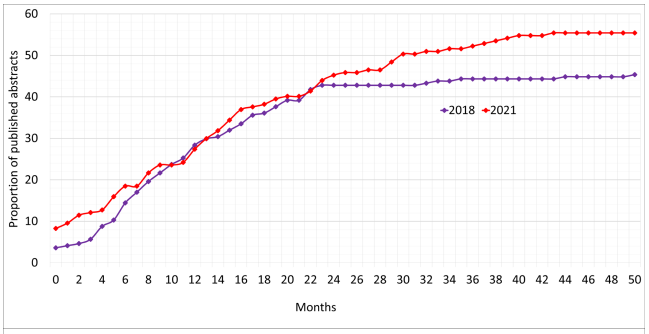

Figure 3: Proportion of abstracts published versus time to publication, SHEA spring 2018 and 2021 conferences

Study, first author, year	Specialty	Meeting and year evaluated	No. published/No. presented (%)
Johnson, 2022 [1]	Infectious Disease	ID Week 2017 & 2018	236/887 (26.6)
Rosmarakis, 2005 [2]	Infectious Disease & Microbiology	ICAAC 1999 & 2000	68/190 (36)
Amarilyo, 2013 [3]	Rheumatology	ACR/ARHP 2006	1270/2149 (59.1)
Fosbøl, 2012 [4]	Cardiology	AHA 2006 to 2008	3921/11365 (34.5)
Gandhi, 2016 [5]	Gastroenterology	ACG 2008	249/791 (31.5)
Baddam, 2018 [6]	Hematology	ASH 2011	327/685 (48)

Figure 4: Comparative studies analyzing abstracts published from infectious disease and various other specialty meetings

Abbreviations: ICAAC, Interscience Conference on Antimicrobial Agents and Chemotherapy; ACR/ARHP, American College of Rheumatology & Association of Rheumatology Health Professionals; AHA, American Heart Association; ACG, American College of Gastroenterology; ASH, American Society of Hematology

DOI
[1] 10.1093/ofid/ofac415
[2] 10.1096/fj.04-3140lfe
[3] 10.1002/acr.21864
[4] 10.1161/circulationaha.112.120535
[5] 10.1159/000450785
[6] 10.1002/ajh.24695

other internal medicine and subspecialty conferences, including IDWeek. **Conclusion:** Approximately half of the abstracts presented were subsequently published as full articles. Collaborative research, involving more authors and authors from different institutions, was associated with a higher publication rate. These findings highlight the strong academic impact of SHEA-presented research. Further research into the barriers to publication is warranted to improve the dissemination of conference abstracts.

Antimicrobial Stewardship & Healthcare Epidemiology 2025;5(Suppl. S2):s28–s29
doi:10.1017/ash.2025.227

Presentation Type:
Oral Presentation
Subject Category: Molecular Epidemiology
Real-time detection of Staphylococcus aureus transmission in hospitals

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Genomic surveillance of Staphylococcus aureus in hospitals usually focuses on clinical infections, missing transmissions from asymptomatic carriers and delaying detection and timely intervention. To address the issue, we performed whole-genome sequencing (WGS) on over 5,000 S. aureus isolates obtained from colonization screens at admission, in addition to standard clinical cultures, at two interconnected urban hospitals. By integrating genomic data with timestamped location information, we identified hundreds of transmissions missed by standard methods. However, nearly 70% of transmissions were detected during readmission after the index case had been discharged. This finding indicates that even with dense genomic sampling, real-time detection remains challenging due to asymptomatic carriage. Therefore, effective monitoring of nosocomial S. aureus transmission will likely require WGS and colonization sampling at both admission and discharge. The data also highlight patient- and strain-specific factors, including methicillin resistance, as predictors of S. aureus spread, which may enable cost-effective, targeted sequencing surveillance strategies.

Antimicrobial Stewardship & Healthcare Epidemiology 2025;5(Suppl. S2):s29
doi:10.1017/ash.2025.228

Presentation Type:
Oral Presentation
Subject Category: Molecular Epidemiology
Lessons from Implementing Wastewater-Based Epidemiological Monitoring in a Northern California Acute Care Hospital, June–July 2024

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Background: Wastewater-based epidemiology has demonstrated effectiveness in monitoring trends of viral infections at the city, state, and national levels. It captures data independent of testing intensity, providing a comprehensive biological sample of pathogens excreted in all secretions, that is unaffected by individual testing behaviors. Traditional healthcare-associated infection surveillance relies on case-based approaches, which can be resource-intensive, prone to misclassification, and may miss patients who are colonized. We aimed to evaluate the feasibility of implementing wastewater-based epidemiology in an acute care hospital for monitoring pathogens relevant to infection prevention and control. **Methods:** In this pilot study, we deployed a Teledyne ISCO 5800™ wastewater autosampler to collect weekly composite 1000 mL samples (15 mL every 151 minutes) from the final Stanford Hospital outflow point before wastewater merged with the community system. Wastewater samples were processed within 48 hours of collection. The solid phase was separated via centrifugation, followed by nucleic acid extraction employing silica-based purification techniques optimized for efficient inhibitor removal. Droplet digital PCR was conducted targeting pathogens previously validated by the WastewaterSCAN program (https://www.wastewaterscan.org/en/pathogens). We compared hospital wastewater nucleic acid concentrations with the number of positive tests/cultures at Stanford Hospital during the same period and with Wastewaterscan community wastewater data. **Results:** We collected three weekly composite samples: Jun 20–26, Jul 10–17, and Jul 18–25. Challenges included the location of the final outflow, and the autosampler's size (132 x 74 x 84 cm and 88.5 kg). The outflow point was situated in a high-traffic area for patients and staff, requiring barricades to ensure safety and prevent interference with sampling equipment. In terms of interpreting results, viral nucleic acid concentrations (e.g., influenza, SARS-CoV-2) appeared to parallel the number of clinical cases and were similar to community wastewater trends (Figure 1). Most antimicrobial resistance genes, including vanA (Figure 2) and carbapenemase genes (KPC, NDM, OXA-48, VIM) (Figure 3), showed limited alignment with clinical cases; however, mecA exhibited some alignment (Figure 2). Hospital wastewater had higher resistance gene concentrations than community wastewater from San Mateo County (Figure 4). **Conclusion:** Continuous collection of hospital wastewater proved challenging, mainly from logistical issues such as equipment size and access limitations. Clinical respiratory virus trends appeared to be reflected in wastewater data. However, trends for antimicrobial resistance genes may be influenced