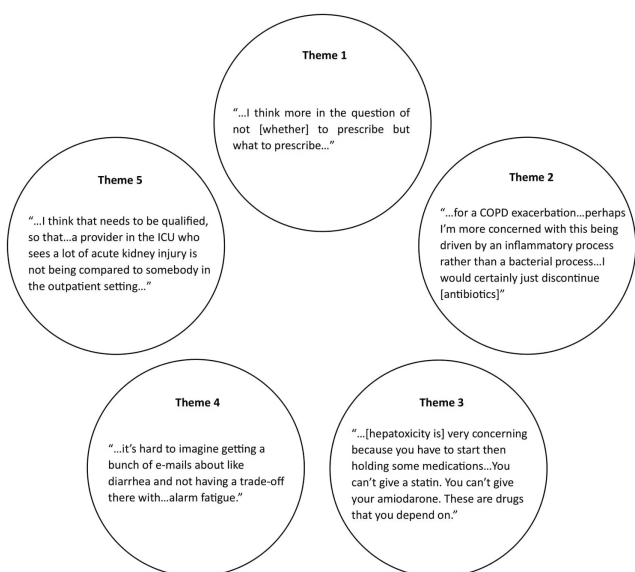
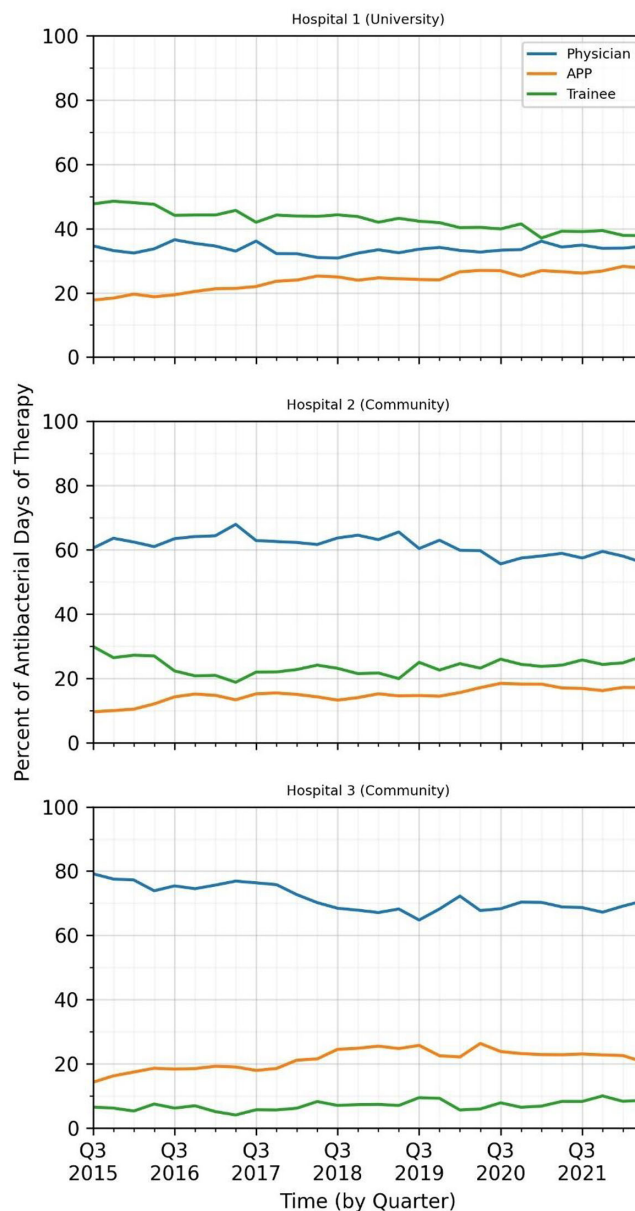


Figure. Exemplary Quotes by Theme



Percent of antibacterial days of therapy by provider type and hospital

July 2015 through June 2022



sought to understand how clinicians account for ABX-AEs when prescribing and their preferences for ABX-AE feedback. **Methods:** We conducted 1-hour virtual focus groups with 3–5 physicians or advance practice practitioners (APPs) per session at Johns Hopkins Hospital. Participants discussed the role of ABX-AEs in antibiotic decision making and feedback preferences. Participants evaluated prespecified categorization (mildly, moderately, or very concerning) of several ABX-AEs. Focus groups were recorded and transcribed. Transcripts were coded inductively by 2 independent reviewers; discrepancies were resolved by consensus. Codes were used to conduct thematic analysis. **Results:** Overall, 3 focus groups were conducted with 12 participants: 41.6% were house staff, 16.7% were attending physicians, and 41.6% were APPs. Most were female (91.6%) and were white (41.7%) or Asian (41.7%). Clinicians generally agreed with the prespecified categorizations of ABX-AEs based on degree of clinical concern (Table). We identified 5 themes: (1) The risk of ABX-AE is considered during initial prescribing but influences agent selection more than the decision to prescribe antibiotics. (2) The occurrence of an ABX-AE leads to assessment of need for continued antibiotic therapy. (3) The impact of an ABX-AE on other management decisions is as important as the direct harm of the ABX-AE when assessing severity. (4) Feedback must be curated to prevent clinicians from being overwhelmed with data. (5) Clinicians will be more receptive to feedback regarding ABX-AEs if feedback is contextualized (Fig.). **Conclusions:** The themes identified and assessment of ABX-AEs of greatest clinical concern may help inform the development of effective ABX-AE feedback methods to improve antibiotic safety.

**Disclosures:** None

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### Presentation Type:

Poster Presentation - Poster Presentation

**Subject Category:** Antibiotic Stewardship

**Teams in transition: Increasing role of advanced practice providers in inpatient antimicrobial use**

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**Background:** Antimicrobial stewardship strategies must be tailored to effectively engage prescribers with distinct training, experiences, and career paths. Advanced practice providers (APPs) have taken on increasing roles as primary team members in acute-care hospitals, but the impact of this practice shift on antimicrobial prescribing is unknown. We describe

Table 1. Change in Rate of Antimicrobial Use by Agent Category, 3 Hospitals, July 2015–June 2022

Agent group	Rate of change in DOT/1000 days present per Quarter	Rate Ratio comparing Q28 vs. Q1
Antibacterial	0.9931 (0.9917–0.9945)	0.8296 (0.7981–0.8624)
Antiviral	1.0121 (1.0045–1.0198)	1.3835 (1.1283–1.6964)
Antifungal	1.0014 (0.9988–1.0040)	1.0386 (0.9693–1.1130)
Protected	0.9933 (0.9895–0.9971)	0.8334 (0.7519–0.9236)

Note: DOT=days of therapy. Q=quarter. Longitudinal estimates from generalized estimating equations negative binomial regression based on quarterly measures of DOT with offset of 1000 days present.

longitudinal trends in antimicrobial days of therapy (DOT) by attributed provider type in 3 hospitals. **Methods:** We performed a retrospective time-series analysis of antimicrobial use for the 7-year period of July 2015–June 2022 to investigate the changes by provider type at 3 hospitals: a major university hospital and 2 community hospitals. DOT, antibacterial, and

Table 2: Days of Therapy (DOT) by Provider Type Across 3 Hospitals and 28 Quarters (July 2015-June 2022)

	DOT (%), Quarter 1			DOT (%), Quarter 28			Change in % of DOT for APPs Q1 vs Q28
	Physician	Trainee	APP	Physician	Trainee	APP	
Antibacterials							
Hospital 1 (University)	18008 (35)	24813 (48)	9236 (18)	17661 (34)	19363 (38)	14216 (28)	+10%
Hospital 2 (Community)	6184 (61)	3058 (30)	978 (10)	5559 (56)	2675 (27)	1699 (17)	+7%
Hospital 3 (Community)	6627 (79)	549 (7)	1195 (14)	7020 (71)	860 (9)	2046 (21)	+7%
Antifungals							
Hospital 1 (University)	2373 (35)	3296 (49)	1630 (24)	1875 (22)	2504 (29)	2919 (35)	+11%
Hospital 2 (Community)	203 (61)	114 (34)	14 (4)	190 (60)	62 (20)	60 (19)	+15%
Hospital 3 (Community)	324 (74)	61 (14)	52 (12)	367 (67)	48 (9)	130 (24)	+12%
Antivirals							
Hospital 1 (University)	2788 (39)	2709 (38)	1636 (23)	2707 (26)	3558 (35)	3969 (39)	+16%
Hospital 2 (Community)	112 (60)	63 (34)	10 (5)	269 (75)	70 (19)	20 (5)	0%
Hospital 3 (Community)	171 (85)	3 (2)	26 (13)	524 (82)	21 (3)	95 (15)	+2%
Protected							
Hospital 1 (University)	4450 (38)	4681 (39)	2719 (23)	2758 (26)	3600 (33)	4434 (41)	+15%
Hospital 2 (Community)	272 (56)	174 (36)	42 (9)	432 (66)	113 (17)	112 (17)	+8%
Hospital 3 (Community)	396 (79)	58 (11)	46 (9)	448 (80)	17 (3)	93 (17)	+8%

Note: DOT=days of therapy, APP=advanced practice provider, Q=quarter

Table 3. Change in Percent of Days of Therapy by Hospital and Provider-Type

	Odds Ratio of Quarterly Change in Percent of DOT (Trainee vs. Physician)	Odds Ratio of Quarterly Change in Percent DOT (APP vs. Physician)
<b>Antibacterials</b>		
Hospital 1 (University)	0.991 (0.991-0.992)	1.015 (1.014-1.015)
Hospital 2 (Community)	1.005 (1.004-1.006)	1.020 (1.019-1.021)
Hospital 3 (Community)	1.020 (1.018-1.022)	1.017 (1.016-1.019)
<b>Antifungals</b>		
Hospital 1 (University)	1.014 (1.013-1.016)	1.033 (1.032-1.034)
Hospital 2 (Community)	0.993 (0.987-0.998)	1.030 (1.023-1.038)
Hospital 3 (Community)	1.016 (1.008-1.023)	1.029 (1.023-1.034)
<b>Antivirals</b>		
Hospital 1 (University)	1.018 (1.017-1.020)	1.039 (1.038-1.041)
Hospital 2 (Community)	0.980 (0.974-0.986)	1.016 (1.008-1.025)
Hospital 3 (Community)	1.049 (1.034-1.065)	1.009 (1.003-1.015)
<b>Protected</b>		
Hospital 1 (University)	1.018 (1.017-1.019)	1.038 (1.037-1.039)
Hospital 2 (Community)	0.994 (0.990-0.998)	1.027 (1.021-1.033)
Hospital 3 (Community)	1.018 (1.008-1.028)	1.042 (1.036-1.048)

Note: DOT=days of therapy. Multinomial logistic regression model used provider group category physician as the referent category.

antifungal agent groups were defined using National Healthcare Safety Network methods. We included anti-influenza and antiherpesvirus agents in the antiviral group. We defined protected agents as those targeted by hospital antimicrobial stewardship policy (eg, requiring preauthorization). Provider type was defined by electronic health record user profiles in 3 categories: physician, trainees (residents, fellows and medical students), and APPs (nurse practitioners, physician assistants, and nurse anesthetists). We evaluated DOT per 1,000 days present over time by agent group to assess quarterly rate trends. Then, we calculated the percentage of total DOT by provider group. We used multinomial logistic regression to measure changes in percentage DOT across the clinician groups over time using physicians as the referent. **Results:** Across hospitals and provider groups, we observed an overall decrease in use rates for antibacterial and protected agents (17% each) and increased use rates for antiviral agents (38%) and antifungal agents (4%) (Table 1). Baseline distribution of DOT by provider group and change in distribution over time varied by hospital and agent group (Fig. and Table 2). The largest increases in percentage DOT attributed to APPs compared with physicians occurred in the university hospital with the following average increases per quarter: 1.5% for

antibacterials, 3.9% for antivirals, 3.3% for antifungals, and 3.8% for protected agents (Table 3). Community hospitals had higher initial percentage DOT attributed to physicians, but both hospitals experienced increased percentage DOT attributed to APPs. Percentage DOT attributed to trainees varied significantly across agent groups and hospitals. **Conclusions:** Hospitals had differing baseline patterns of DOT attributed to provider groups, but all experienced increases in DOT attributed to APPs. APPs have increasing involvement in antimicrobial use decisions and should be engaged in future antimicrobial stewardship initiatives.

**Disclosures:** None

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## Presentation Type:

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**Handshake stewardship on adult acute-care surgical services**

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**Background:** Handshake stewardship is a variation of prospective audit and feedback that entails the individual review of patient charts by a physician–pharmacist collaborative team followed by in-person feedback to primary teams to communicate recommendations regarding optimal antibiotic use. Handshake stewardship has been shown to have durable effects in reducing antimicrobial use in children’s hospitals, but data regarding this intervention in adult hospitals are scarce. In particular, no data are available regarding the impact of this type of stewardship intervention on adult surgical units. We examined the effect of a handshake stewardship intervention at a large academic medical center on adult trauma and acute- and critical-care surgery (ACCS) units. **Methods:** The antimicrobial stewardship program (ASP) at Barnes-Jewish Hospital launched a handshake stewardship intervention targeting surgical floor teams in January 2022. These teams included the ACCS teams and a number of other surgical services. The intervention consisted of once weekly reviews and in-person rounds with the surgical floor teams along with the establishment of a 7 day per week “hotline” in which the surgical teams could contact an ID physician or pharmacist with questions regarding antibiotic use. Patients with formal ID consultations were not reviewed. Recommendations were tracked including the type, the antibiotic targeted, and recommendation acceptance or rejection. Descriptive statistics were performed to analyze these results. At the end of 12 months, antibiotic use in the floors covered by the ACCS teams were pulled from the NHSN AU module to perform an interrupted time-series analysis 12 months before and after the intervention. **Results:** Overall, 3,127 charts were reviewed during the intervention period and 637 recommendations were made to all the surgical teams. Opportunities for antibiotic use optimization were identified in ~20% of antibiotic orders. The overall recommendation acceptance rate was 71%. In the ACCS units, 272 interventions were recommended, with an acceptance rate of 67%. The most frequent recommendations were for antibiotic discontinuation (37%), antibiotic de-escalation (17%), shortening duration (12%), and broadening coverage

