



Perceived Antimicrobial Stewardship Roles of Pharmacists and Residents in US Intensive Care Units

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BACKGROUND

- Antimicrobial stewardship programs (ASPs) were developed as a way of addressing antibiotic resistance by promoting the judicious use of antibiotics.
- Pharmacist and resident perspectives of their own role within antimicrobial stewardship is relatively unknown.
- An **ethnographic study of hospital ASPs and intensive care units (ICU)** was conducted to understand the perceptions and attitudes surrounding pharmacists and resident roles relative to stewardship.

OBJECTIVES

- To explore and understand
 - the relationship between antibiotic prescribing in the intensive care unit (ICU).
 - the perceptions and attitudes surrounding pharmacist and resident roles as described by themselves.
- To understand how pharmacists and residents believe they contribute to the effectiveness of ASPs.

METHODS

- Ethnographic research done at a teaching hospital in Cleveland, OH between June and August 2021.
 - **>518 minutes of semi-structured in-depth interviews** with intensive care pharmacists (N=5), residents (N=6), and an advanced practice nurse
- Data transcriptions were analyzed using thematic coding aided by NVivo qualitative analysis software.

RESULTS

- Pharmacists in the ICU understand their contributing role as **“cost containment”** and **“decreased mortality”** and believe that they “should have an input” in antibiotic prescription decision making.
- Residents expressed being involved in **“conversation,”** but that physicians were better suited to make decisions due to the residents’ limited experience, acknowledging that they **“don’t know everything.”**
- However, both groups felt limited by physicians in their final decision making power and instead see their input as **“mentioning”** or something that they **“recommend.”**

RESULTS

Table 1. Key Themes and Perceived Roles in Intensive Care

Limited autonomy	Recognized importance
“So, it’s kind of a system that they have during rounds, and then when we get to that issue where I have an issue, I would just mention it then...During rounds they know that I should have an input...If they go fast ‘cause they’re in a rush, I’ll usually [say] “Hey! Hey! Can we talk about this?” (Pharmacist 3)	“...The relationship and the rapport that you have with the [ICU] team...they appreciate having you [a pharmacist] there and appreciate the help because...sometimes it’s not something that’s in their specialty, but they might need help with the other things.” (ICU Pharmacist 2)
“The [ICU] teams are pretty receptive to me when I recommend...but sometimes you get people that are more receptive than others.” (ICU Pharmacist 4)	“As a pharmacist, I have a lot of impact...There’s a lot of responsibility, and a pharmacist’s role in this, kind of, environment is established not just cost containment but decreased mortality. There’s increased safety when you have a pharmacist in rounds.” (ICU Pharmacist 3)
“If we’re changing it [antibiotics], then...the orders would be putting it in at that time based on what the discussion is with the attending...realistically, just whatever the attending says.” (ICU Resident 1)	“It becomes a little more of a conversation between the admitting resident who’s actually going to take care of the patient and the attending intensive care physician in terms of what we need to order, the timing of ordering it.” (ICU Resident 6)
“So that’s always been a pattern of broad-spectrum antibiotics, narrow after sensitivities have come back and then figure out the stop dates...I think it’s pretty reasonable...obviously, as resident I don’t know everything, but I can’t think of a better way to do it.” (ICU Resident 5)	“Someone’s been on vanc[omycin] and Zosyn for like a long time and every day on rounds, we have to discuss it if it’s appropriate to keep going on with antibiotics.... we talk to our pharmacy pharmacist.” (ICU Resident 5)

CONCLUSIONS

- Ethnographic interrogation found that pharmacists understand their high value within ASP teams, and have an increased awareness and knowledge of antimicrobials and proper antimicrobial use that can aid in antimicrobial prescription decisions.
- Providing pharmacists and residents with greater autonomy in making final antibiotic prescription decisions, as physicians in ASP teams are given, might improve ASP effectiveness.