

**Presentation Type:**

Poster Presentation - Poster Presentation

**Subject Category:** Antibiotic Stewardship

**Perceptions on Penicillin Allergy Labels among Nurses and Prescribers in Three Pediatric Urgent Care Sites**

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**Background:** National guidelines recommend penicillins (PCN) as first-line treatment for many common pediatric infections in the outpatient setting. Although less than 1% of the United States population has a true, IgE-mediated PCN-allergy, approximately 10% of patients are labeled with a PCN-allergy. Accurate adverse drug reaction (ADR) documentation plays an important role in this over-labeling. We have previously shown that nurses feel assessment and documentation of PCN-allergies are critical to their role. However, additional evidence purports nurse hesitancy to interrogate allergy accuracy or reclassify parent’s response to side effect. Our objective was to explore frontline clinicians’ confidence in assessing, documenting, and responding to PCN-allergy labels. **Methods:** To expose barriers and prioritize improvement ideas for a multidisciplinary quality improvement (QI) project aimed to improve PCN-allergy labeling in our pediatric urgent care clinics, we deployed this investigator-developed survey to prescribers and nurses. It’s comprised of 14-questions scored on a 5-point Likert scale (4 demographic, 4 PCN/safety, 3 allergy types, 4 allergy documentations, 3 treatment options), and 1 optional free-text. We used descriptive statistics to compare survey responses between prescribers and nurses and evaluated free text comments for themes. **Results:** Eighty-seven clinicians across 3 sites participated, with a response rate of 35%, with variation by sites (25.3% to 41.4%). Forty-one percent of (n=36) responders have been in practice >15 years and 40.2% (n=35) have worked at our hospital > 15 years (Table 1). Overall, perceived knowledge of PCN-allergies and safety was favorable (Table 2). Prescribers reported higher confidence with: 1) perceiving many patients who believe they are allergic to PCN can safely take PCN (prescribers median=5 [IQR: 4, 5] vs. nurses median=4 [4,4], p = 0.003); and 2) perceiving that time pressures influenced their ability to reconcile allergies and side effects (prescribers

Agreement related to PCN allergy and safety	Prescribers (n=40)		Nurses (N=46)		Significance P value
	Answered*	Median [IQR]	Answered*	Median [IQR]	
I am confident in my ability to identify delayed reactions to antibiotics based on timing of symptoms after ingestion of the antibiotic.	40	4 [3, 4]	46	3 [3, 4]	0.416
Many patients who think they are allergic to PCN can safely take PCN.	39	5 [4, 5]	46	4 [4, 4]	0.003
I am knowledgeable about the risks of avoiding PCN in patients that have a documented PCN allergy.	39	4 [4, 5]	45	4 [3, 4]	0.056
I can distinguish between common pediatric conditions that are often misinterpreted as a PCN allergy (i.e., viral rash, vomiting/diarrhea).	40	4 [3, 4]	47	4 [3, 4]	0.880
I am aware that PCN allergy sensitivities can change over time.	40	4 [3, 75, 4]	47	4 [4, 4, 5]	0.160
I am able to identify factors associated with true allergic reactions.	40	4 [4, 4]	45	4 [4, 4]	0.980
I am aware of the types of PCN antibiotic allergy challenges that Children’s Mercy offers.	40	3 [2, 4]	45	3 [2, 4]	0.987
I feel confident in my ability to appropriately document an adverse drug reaction (ADR) in the EMR, even when a parent describes side effects.	40	4 [3, 4]	46	4 [3, 25, 5]	0.010
My documentation of ADRs influences future antibiotic prescribing.	40	4 [4, 5]	44	4 [4, 5]	0.356
Time pressures (e.g., patient flow) influence my ability to reconcile between allergy and side effect.	39	4 [3, 4]	45	3 [2, 4]	0.001
Perceived parent expectations influence my ability to reconcile between allergy and side effect.	40	4 [3, 75, 4]	44	4 [3, 4]	0.529
I feel confident continuing to administer or prescribe an antibiotic in the setting of a reported ADR.	40	3 [2, 4]	44	3 [2, 4]	0.409
I feel confident in my ability to talk with families about antibiotic side effects and reactions.	40	4 [3, 4]	46	4 [3, 4]	0.033
Additional education would be beneficial in helping me talk with families on the relationship between PCN allergies and treatment.	39	5 [4, 5]	47	4 [4, 5]	0.487

Note: 1-Strongly disagree; 2-Disagree; 3-Neutral; 4-Agree; 5-Strong agree  
\* Selected a response other than “I don’t know”

median=4 [4, 5] vs. nurses median=3 [2, 4], p = 0.001). Both prescribers and nurses reported lower confidence in continuing to administer or prescribe an antibiotic in the setting of a reported ADR. Thirteen respondents (15%) provided comments with specific requests for additional family education and practice guidance, including the referral process to subspecialty clinics for PCN-allergy testing. **Conclusions:** Our survey results identified barriers to accurate PCN-allergy labels, including knowledge on documentation, time pressures, hesitancy to challenge parent report, and uncertainty on referral process for PCN-allergy testing. This survey will inform future drivers for our QI. Opportunities include electronic medical record refinement, improving referrals to PCN-allergy de-labeling clinics, and the development of scripted education to guide family discussions.

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**Budget Impact Analysis for the Spread and Financial Sustainability of Videoconference Antimicrobial Stewardship Programs**

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**Background:** In rural areas, antimicrobial stewardship programs often have limited access to infectious disease (ID) expertise. Videoconference Antimicrobial Stewardship Teams (VASTs) pair rural Veterans Affairs (VA) medical centers with an ID expert to discuss treatment of patients with concerns for infection. In a pilot study, VASTs were effective at improving antimicrobial use. Here, we evaluated 12-month operating costs for staffing for 3 VASTs. **Methods:** We used the following data to describe 12 months of clinical encounters for 3 VASTs operating from January 2022 – March 2023: the number of VAST sessions completed and clinical encounters; Current Procedural Terminology (CPT) codes associated with clinical encounters; session attendees (by role) and the time spent (percent effort) on VAST-related activities. The annual operating cost was based on the annual salaries and percent effort of VAST attendees. We used these

Respondent characteristics	Prescribers (n=40)		Nurses (n=47)	
	Respondents	Percent	Respondents	Percent
<b>Role</b>				
Advanced Practice Nurse	7	17.5%	-	-
Physician	33	82.5%	-	-
Nurse Manager/Director	-	-	5	10.6%
Staff Nurse	-	-	42	89.4%
<b>Urgent Care</b>				
Blue Valley	13	32.50%	14	29.80%
North	11	27.50%	11	23.40%
East	14	35.00%	22	46.80%
Missing	2	5.00%	0	0.00%
<b>Graduated with my last clinical degree</b>				
Less than 1 year ago	0	0.00%	1	2.13%
1-5 years ago	5	12.50%	8	17.02%
6-10 years ago	10	25.00%	10	21.28%
11-15 years ago	9	22.50%	7	14.89%
More than 15 years ago	16	40.00%	20	42.55%
Missing	0	0%	1	2.13%
<b>Worked at Children’s Mercy</b>				
Less than 5 years	9	22.50%	10	21.28%
5-10 years	10	25.00%	12	25.53%
11-15 years	7	17.50%	3	6.38%
More than 15 years	14	35.00%	21	44.68%
Missing	0	0%	1	2.13%