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Improving Antibiotic Durations for Skin and Soft Tissue Infections in Pediatric Urgent Care Clinics

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Improving Antibiotic Durations for Skin and Soft Tissue Infections in Pediatric Urgent Care Clinics

PAS 2022

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Disclosure

Megan Hamner-Has documented no financial relationships to disclose or Conflicts of Interest (COIs) to resolve

Background

- >50% of antibiotic prescriptions in US are inappropriate¹
- ~36% of pediatric outpatient prescriptions exceed recommended durations²
- >75% of patients receive inappropriately long durations for skin and soft tissue infections (SSTIs)³
- SSTIs are an important target for antimicrobial stewardship programs

Objective

- AIM: to increase the percentage of patients receiving 5-7 days of oral antibiotics for SSTIs from 58% to 75% by December 31, 2021, in pediatric urgent care clinics

Methods

- Multidisciplinary team
- Provider survey
- Cause-and-effect analysis and driver diagrams
- Data report
- Measures
 - Process: percentage of prescriptions from SSTI folder
 - Balancing: number of patients returning to UCCs for SSTI within 14 days

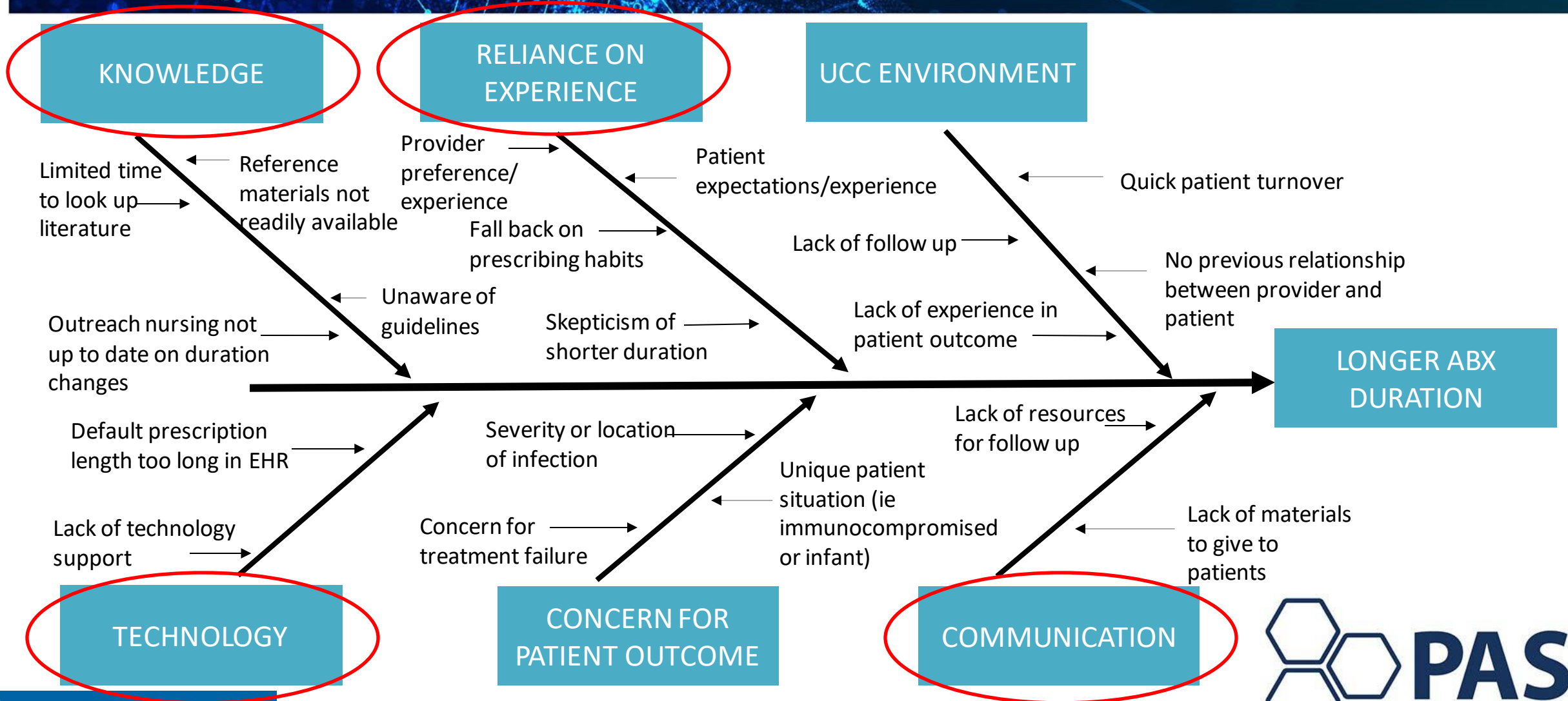
Methods

Duration of oral antibiotics for:	Provider Responses n=27					
	<5 days	5 days	7 days	10 days	Varies	No antibiotics
Impetigo	0 (0%)	5 (19%)	16 (59%)	3 (11%)	2 (7%)	1 (4%)
Folliculitis	0 (0%)	1 (4%)	16 (59%)	3 (11%)	1 (4%)	6 (22%)
Cellulitis	0 (0%)	1 (4%)	17 (63%)	8 (30%)	1 (4%)	0 (0%)
Erysipelas	0 (0%)	0 (0%)	12 (44%)	14 (52%)	1 (4%)	0 (0%)
Abscesses	0 (0%)	1 (4%)	9 (33%)	12 (44%)	5 (19%)	0 (0%)
Paronychia	0 (0%)	8 (30%)	8 (30%)	4 (15%)	4 (15%)	3 (11%)
Animal bite prophylaxis	11 (41%)	14 (52%)	1 (4%)	1 (4%)	0 (0%)	0 (0%)

Methods

Comfort with:	Provider Responses n=27				
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5 days of antibiotics for cellulitis	6 (22%)	8 (30%)	8 (30%)	4 (15%)	1 (4%)
5 days of antibiotics for erysipelas	3 (11%)	7 (26%)	10 (37%)	5 (19%)	2 (7%)
5 days of antibiotics for abscesses	5 (19%)	7 (26%)	7 (26%)	7 (26%)	1 (4%)
7 days of antibiotics for impetigo	12 (44%)	11 (41%)	3 (11%)	1 (4%)	0 (0%)
No antibiotics for folliculitis	7 (26%)	9 (33%)	10 (37%)	0 (0%)	1 (4%)
No antibiotics for paronychia	4 (15%)	8 (30%)	11 (41%)	4 (15%)	0 (0%)
3-5 days of antibiotics for animal bite prophylaxis	21(78%)	5 (19%)	1 (4%)	0 (0%)	0 (0%)

Methods



Methods

AIM STATEMENT

PRIMARY DRIVERS

SECONDARY DRIVERS

Increase the percentage of patients with SSTIs receiving 5-7-days of oral antibiotics from 58% to 75% by December 31st, 2021

Technology Tools

Provider Education

Staff Engagement

Patient and Family Experience

Update EHR durations for specific antibiotics

Update and standardize SSTI prescription folder

Create a SSTI treatment algorithm

Provide educational update on current SSTI treatment recommendations

Provide intermittent project updates

Huddle reminders

Standardize patient discharge instructions

Patient information sheet

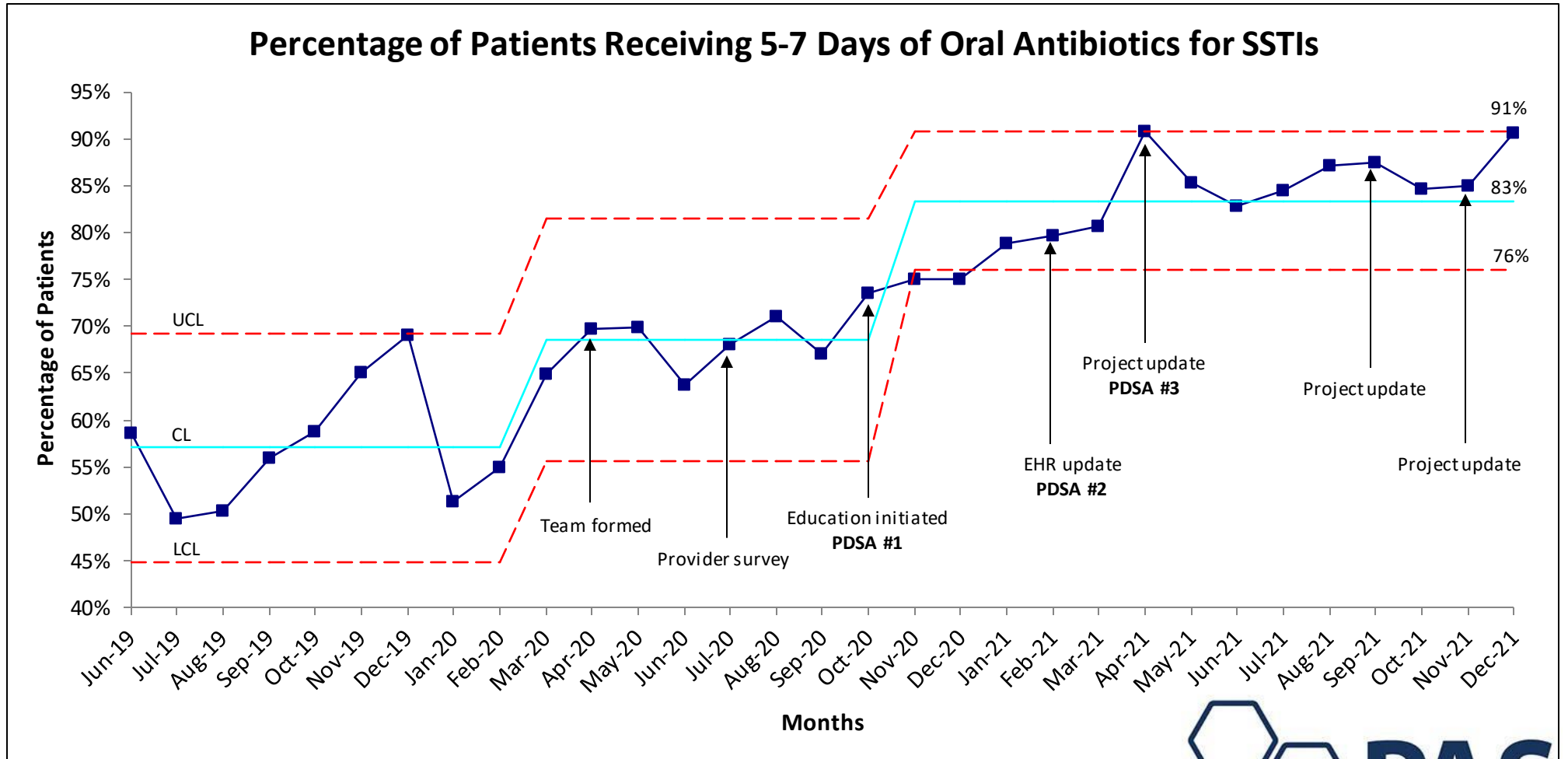
★ - Implemented during project

Interventions

- Plan-Do-Study-Act (PDSA) Cycle 1
 - Provider education
- PDSA Cycle 2
 - Electronic health record modifications
- PDSA Cycle 3
 - Intermittent project updates

Results

- Baseline- 58%
- New baseline- 83%
- No increase in balancing measure



Discussion

- Impact
 - Development of evidence-based treatment algorithm
- Limitations
 - Generalizability
 - Strong antimicrobial stewardship presence
 - Retrospective data review
 - COVID-19
- Further evidence of stewardship interventions improving high value care

Conclusions

- Successful increase in percentage of patients receiving 5-7 days of oral antibiotics for SSTIs from a baseline of 58% to 83%
- Achievement sustained with no increase in balancing measure
- Successful collaboration offers opportunity for expansion
- Improving antibiotic prescription durations is a low-hanging fruit for decreasing inappropriate use

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- Mentor: Rana El Feghaly, MD, MSCI
- CMH UCCs physicians, APRNs, and RNs

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