



Don't Sweat the Small Stuff: Solutions for Large Scale Stewardship Obstacles

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Objectives

List challenges faced, and solutions found during implementation an ambulatory outpatient antimicrobial stewardship program.

Background

- Acute respiratory infections (URIs) are the leading cause of unnecessary antibiotic prescribing^{1,2}
- In an effort to support outpatient stewardship endeavors, the CDC endorses the MITIGATE toolkit to reduce inappropriate antibiotic prescribing for viral respiratory infections in emergency and urgent care settings

Figure 1: MITIGATE (Multifaceted Intervention to Improve Prescribing for Acute Respiratory Infection for Adult and Children in Emergency Department and Urgent Care Settings)⁴



4. May L, Yadav K, Gaona S, et al. MITIGATE Antimicrobial Stewardship Toolkit. 2018. Retrieved from: http://www.shea-online.org/images/priority_topics/MITIGATE_TOOLKIT_final.pdf.

Methods

Design:

Multi-site retrospective observational study:

- Valley Medical Center: Sept 2019-Mar 2020
- University of Washington: Jan 2019-Feb 2020

Patients were identified through included ICD-10 diagnosis codes included in the MITIGATE toolkit (Table 1)

Primary outcome:

Identify challenges using the MITIGATE toolkit as well as solutions to improve implementation

Methods cont.

Table 1: MITIGATE ICD-10 codes*

ICD-10	Included	ICD-10	Excluded (not all inclusive)
H65*	Nonsuppurative otitis media	H60*	Otitis externa
J00*	Acute nasopharyngitis	H66*	Suppurative and unspecified otitis media
J040*	Laryngitis	J01*	Sinusitis
J042*	Laryngotracheitis	H10*	Conjunctivitis
J043*	Supraglottitis	J02*	Pharyngitis
J050*	Croup	J03*	Tonsillitis
J06*	Acute URI of multiple or unspecified sites	J051*	Epiglottitis
J09*	Influenza	J12*	Chronic sinusitis
J12*	Viral pneumonia	J41*	Chronic bronchitis specified as mucopurulent
J203*	Bronchitis coxsackievirus	J42*	Chronic bronchitis NOS
J204*	Bronchitis parainfluenza	J43*	Emphysema
J205*	Bronchitis RSV	J44*	COPD
J206*	Bronchitis rhinovirus	J47*	Bronchiectasis
J207*	Bronchitis echovirus	J80*	ARDS
J208*	Bronchitis other specified organisms	J15*	Bacterial pneumonia NOS
J209*	Unspecified bronchitis	J16*	Bacterial due to other infectious pneumonia
J21*	Bronchiolitis	J18*	Pneumonia of unspecified location
J22*	Lower RTI unspecified	J13*/J14*	<i>Streptococcus pneumoniae</i> or H flu pneumonia
J30*	Vasomotor and allergic rhinitis	J84*	Interstitial lung disease
J31*	Chronic rhinitis, nasopharyngitis, and pharyngitis	K50*	Crohn's
J40*	Bronchitis NOS	K51*	Ulcerative colitis
J45*	Asthma	Z21*	HIV

*This study was reviewed by the University of Washington Institutional Review Board
**Not all inclusive - Total included ICD-10 codes: 24; excluded: 190

Results

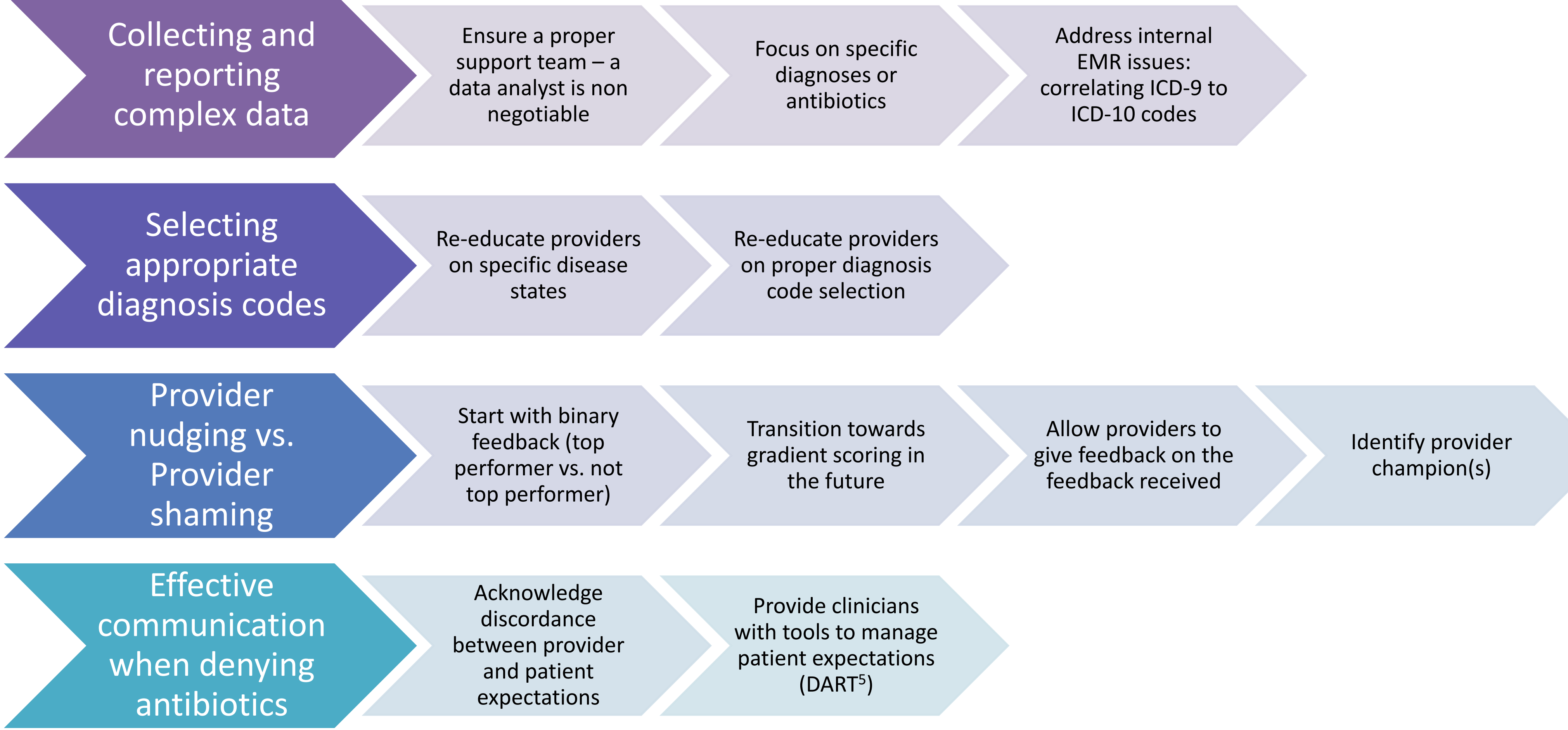
Primary outcome:

We identified and addressed four challenges (Figure 2):

- Collecting and reporting complex data
- Accurate charting in the Electronic Medical Record
- Nudging vs. shaming providers
- Maintaining positive patient-provider relationships when denying antibiotics

Results cont.

Figure 2: Challenges and solutions



Conclusions

- Resources such as the MITIGATE toolkit are helpful to implement standardized data driven stewardship interventions.
- Challenges with implementing this large stewardship intervention included:
 - Complex data build
 - Errors with diagnostic coding
 - Providing constructive feedback while also maintaining positive relationships
 - Providing prescribers with tools to effectively communicate with patients when denying antibiotics

Disclosure

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References

- Fleming-Dutra K, Hersh A, Shapiro D, et al. Prevalence of Inappropriate Antibiotic Prescriptions Among US Ambulatory Care Visits, 2010-2011. *Jama*. 2016; 315(17):1864-1873.
- The Centers for Disease Control and Prevention (CDC, 2018). 2018 Update: Antibiotic Use in the United States. Progress and Opportunities. Retrieved from: <https://www.cdc.gov/antibiotic-use/stewardship-report/pdf/stewardship-report-2018-508.pdf>.
- The Joint Commission. R3 Report 23: Antimicrobial stewardship in ambulatory health care. Retrieved from: https://www.jointcommission.org/standards_information/r3_report.aspx.
- May L, Yadav K, Gaona S, et al. MITIGATE Antimicrobial Stewardship Toolkit. 2018. Retrieved from: http://www.shea-online.org/images/priority_topics/MITIGATE_TOOLKIT_final.pdf.
- Dialogue Around Respiratory Illness Treatment. Interactive Medical Training Resources website. <https://www.uwimtr.org/dart/>.