UCSF School of Pharmacy

Assessing Appropriateness of Antibiotic Prescribing at an Outpatient Primary Care Clinic

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Background

- In 2011, approximately 273 million antibiotic prescriptions were written in US ambulatory care settings, of which 50% were from primary care clinics. [1]
- Previously published studies have reported common infections that resulted in antibiotic misuse such as acute exacerbation of chronic obstructive pulmonary disease (AECOPD), urinary tract infections (UTI), and upper respiratory tract infections (URTI). [2-3]
- Antibiotic stewardship efforts have taken on increasing importance due to the risks associated with the inappropriate use of antibiotics.

1.Centers for Disease Control. Outpatient Antibiotic Prescriptions — United States, 2011 | Community | Antibiotic Use | CDC. Published March 14, 2019. Accessed June 7, 2020.
2.Shively NR, Buehrle DJ, Clancy CJ, Decker BK. Prevalence of Inappropriate Antibiotic Prescribing in Primary Care Clinics within a Veterans Affairs Health Care System. *Antimicrobial Agents and Chemotherapy* Jul 2018, 62 (8) e00337-18; DOI: 10.1128/AAC.00337-18.
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Introduction

Kaweah Delta Health Care District (KDHCD) is a level 3 trauma center with a robust inpatient antimicrobial stewardship service.

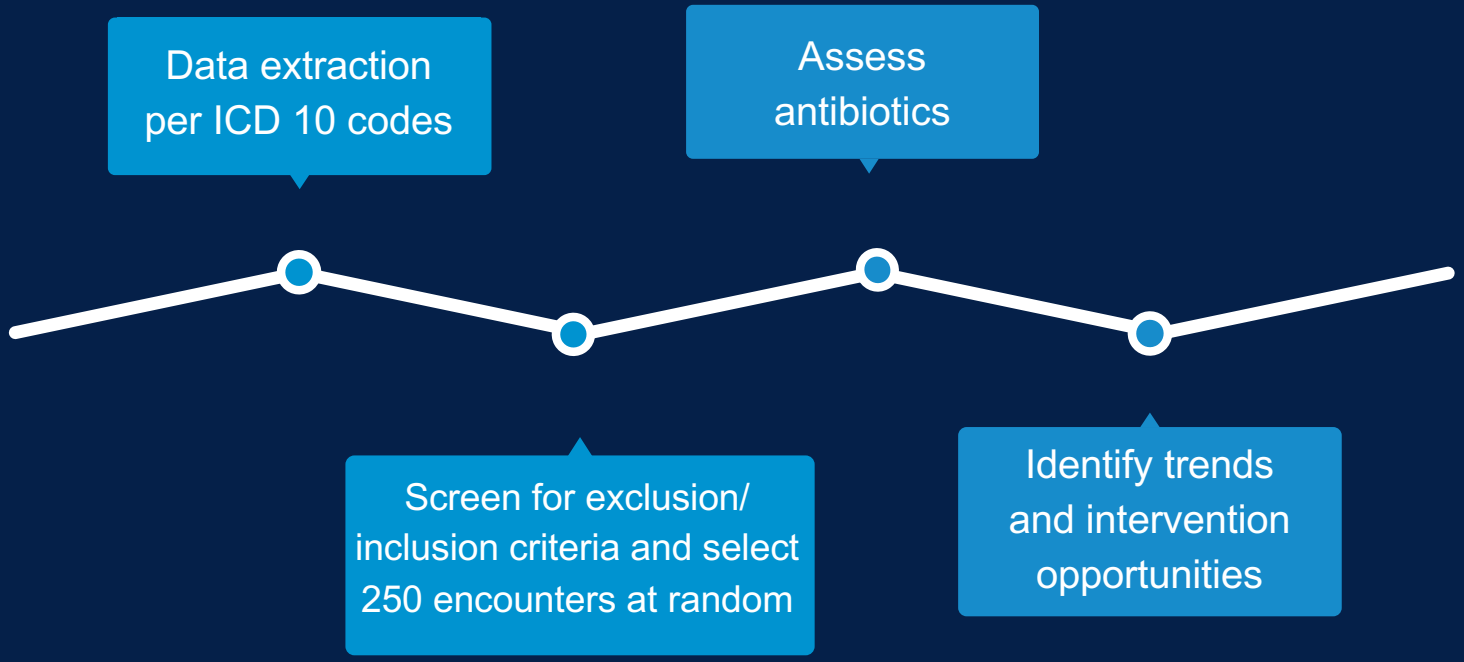
- Sequoia Health & Wellness Centers (SHWC) is an outpatient, academic primary care clinic within KDHCD that opened in 2014.
- SHWC is staffed by 21 family medicine residents and faculty physicians and one pharmacist.
- Currently, there is no baseline data available to evaluate appropriateness of antibiotic prescribing per clinical guidelines at SHWC.

Purpose

- To evaluate antibiotic prescribing trends and reasons for antibiotic use at SHWC
- To identify potential opportunities for interventions for antibiotic stewardship

Study Design

Timeline of Project



Study Population

Inclusion Criteria

- Adults 18-89 years old assigned to a primary care physician at SHWC
- Had an office visit during 1/1/2019-12/31/2019
- Initial prescriptions of oral antibiotics per disease state

Exclusion Criteria

- Antibiotics for recurrent infections or prophylaxis
- Immunosuppressed adults

Endpoints

Primary

- Determine rates of compliance with guideline recommended antibiotic therapy for AECOPD, acute uncomplicated cystitis, and upper respiratory tract infections

Secondary

- Identify opportunities to optimize antibiotic drug selection, drug dose, or duration of therapy

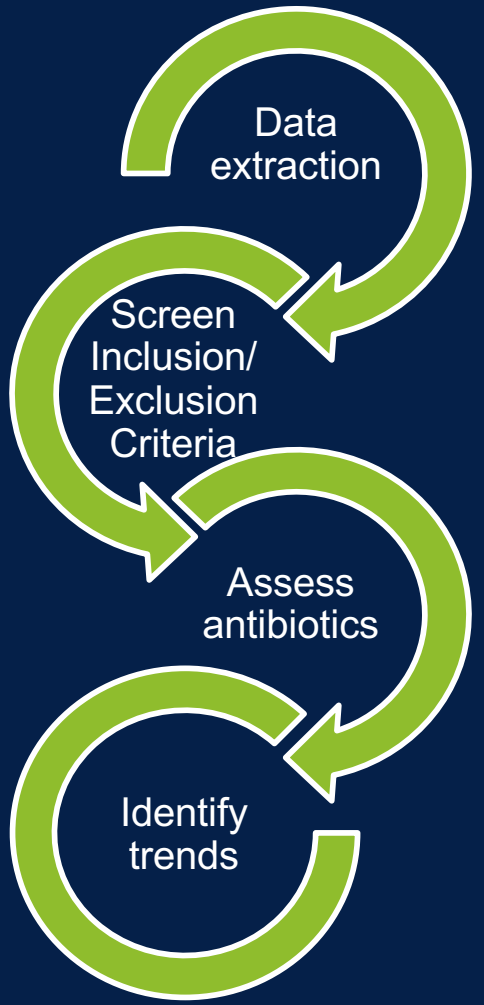
Methods

Observational, retrospective chart review

Patient Information
- Medical Record Number
- Financial Encounter Number
- Diagnosis (10th revision of the International Classification of Disease and Related Health Problems Codes)

Assessment of Antibiotic
- Per current clinical guidelines: drug, dose, duration
- Patient specific factors (e.g. renal and hepatic function)

Statistics
- Descriptive statistics
- Chi-squared test to analyze nominal data



Methods

INDICATIONS	CLINICAL GUIDELINES/REFERENCES
AECOPD	• 2020 Global Strategy for the Diagnosis, Management, and Prevention of COPD • Management of infection in exacerbations of COPD *(UpToDate)* • Management of Acute Exacerbations/Chronic Stable Disease *(AFP)* [a]
Acute Uncomplicated cystitis	• Diagnosis and Treatment of Acute Uncomplicated Cystitis*(AFP)* • International Clinical Practice Guidelines for Treatment of Acute Uncomplicated Cystitis and Pyelonephritis in Women: 2010 Update by IDSA and European Society for Microbiology/Infectious Diseases • Acute simple cystitis in women *(UpToDate)*
Acute rhinosinusitis	• Clinical Practice Guideline for Acute Bacterial Rhinosinusitis in Children and Adults • Uncomplicated acute sinusitis and rhinosinusitis in adults*(UpToDate)*
Acute pharyngitis	• Clinical Practice Guideline for the Diagnosis and Management of Group A Streptococcal Pharyngitis: 2012 Update by IDSA[b]
Acute bronchitis	• Acute Bronchitis *(AFP)*

AFP[a]: American Family Physician **IDSA[b]:** Infectious Diseases Society of America

Anticipated Results

- Data collection ongoing
- Baseline antibiotic prescribing trends at SHWC
- Common disease states for which antibiotics are prescribed
- Opportunities for antibiotic stewardship

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Thank You!