



Antibiotic Stewardship in the Outpatient Dialysis Setting

Engaging Providers in New York to Track and Improve Antibiotic Prescribing Patterns

IPRO is working with up to **81** providers at a group of **13** end stage renal disease (ESRD) facilities in New York (Atlantic Dialysis) to implement an antimicrobial stewardship program that will impact approximately **2,128** patients.

The Problem

Research demonstrates that inappropriate antibiotic exposure leads to development of multi-drug resistant organisms, increasing morbidity and mortality, particularly for the end stage renal disease (ESRD) population.¹ In response, IPRO engaged in a study to explore antibiotic prescribing practices for ESRD and non-ESRD patients across New York State. The study established a baseline understanding of prescribing patterns and informed the application of evidence-based recommendations to decrease inappropriate antibiotic use and promote antibiotic stewardship with recruited providers.

The Approach

In 2016, IPRO's Quality Improvement Network (QIN) and ESRD staff partnered on an approach to address the implementation of an antibiotic stewardship program in outpatient ESRD facilities in New York State. Atlantic Dialysis Management Services (Atlantic Dialysis), a 13-facility group in New York City and Long Island, was recruited to participate in the program, with the goal of developing and implementing antimicrobial stewardship in this unique patient population/setting.

Antibiotic stewardship is defined as "coordinated interventions designed to improve and measure the appropriate use of [antibiotic] agents by promoting the selection of the optimal [antibiotic] drug regimen including dosing, duration of therapy, and route of administration."²

As a cross-task activity between IPRO's AQIN and ESRD Networks, along with a multi-disciplinary advisory group of experts and key stakeholders, IPRO is implementing the following activities through January 2019:

- 1. Leadership Commitment:** Gain commitment of 100% of the leaders of recruited ESRD facilities to implement at least one activity related to antibiotic stewardship (AS);
- 2. Action:** Implement at least one task or activity that may lead to improved antibiotic usage and prescribing practice;
- 3. Track and Report:** Report results from implementation of one or more quality improvement activities related to antibiotic prescribing practice; measure and report whether the activity contributed to a desired outcome; and/or develop and implement a tracking tool for antibiotic usage in a recruited ESRD or ASC facility that does not currently have one; and



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4. Education: Utilize current educational materials available for AS outpatient settings and provide feedback on effectiveness, efficacy or potential modifications necessary for improvement and/or implementation of AS in the ESRD setting.

Interventions

The following antibiotic stewardship improvement activities have been implemented to date:

- Conducted a provider knowledge survey for Atlantic Dialysis providers to determine potential antibiotic stewardship targets and interest in education activities;
- Developed a Medicare Part D and Part B report on oral antibiotic prescribing patterns by infection type for patients with ESRD in NYS;
- Produced an antibiotic stewardship education slide deck to be used by patient leaders to educate dialysis facility technicians; and
- Created a report of oral antibiotic prescribing patterns, by facility (or facility group, if shared providers), to identify potential targets for an antibiotic stewardship action plan.

IPRO ANTIBIOTIC STEWARDSHIP RESOURCES DEVELOPED FOR ESRD AND OUTPATIENT SETTINGS

- Environmental Scan of Part D Antibiotic Prescribing by NYS County 2015, 2016, 2017 – Heat Map
- Environmental Scan of Part D Antibiotic Prescribing by NYS County for Specific Infections (acute bronchitis, acute sinusitis, cellulitis, cystitis) 2015, 2016, 2017
- Patient Education Video “Your Role in Using an Antibiotic - Be a Partner in Your Healthcare”
- Cellulitis Pocket Guide
- YouTube Video “How to Read and Interpret an Antibiogram”
- YouTube Video “Myths of Penicillin Allergy”
- ESRD Patient Education Slide Deck “The Patient’s Role in Antibiotic Stewardship”

References:

1. D’Agata, E. (2013). Antimicrobial use and stewardship programs among dialysis centers. *Seminars in Dialysis*, 26(4), 457-464.
2. Fishman, N. (2012). Policy statement on Antimicrobial Stewardship by the Society for Healthcare Epidemiology of America (SHEA), the Infectious Diseases Society of America (IDSA), and the Pediatric Diseases Society (PIDS). *Infection Control and Hospital Epidemiology*, 33: 322-7.

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