Appendix B. Sample Email and Provider Scorecards
Email Sent to Providers, Phase I (2018)

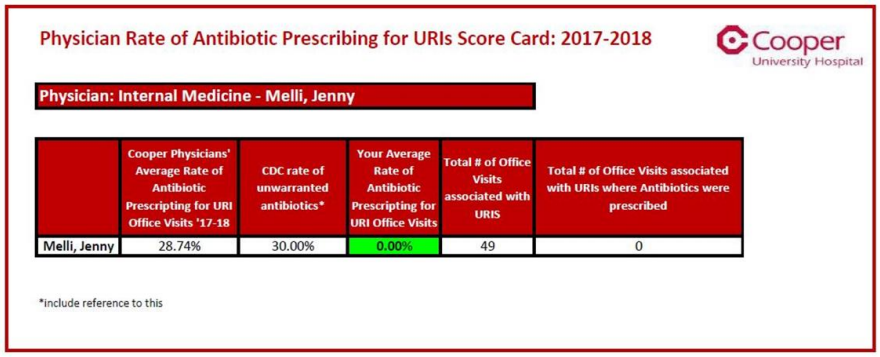
Hello Dr. Smith

We are designing and implementing a QI project to reduce unwarranted antibiotic prescribing in the outpatient setting.

As you may already be aware, data from a 2016 JAMA study indicate that at least 30% of antibiotics prescribed in the US are unnecessary. The study looked specifically at antibiotic use in doctors' offices and emergency departments throughout the US and found that most of the unnecessary antibiotics are prescribed for respiratory conditions caused by viruses – including common colds, viral sore throats, bronchitis, and sinus and ear infections – which do not respond to antibiotics. These 47 million excess prescriptions each year put patients at needless risk for allergic reactions, Clostridium difficile, and antibiotic resistance.

We collected data from diagnosis codes for URIs including tonsillitis, sinusitus, and pharyngitis.

Your data is as follows:



Physician Rate of Antibiotic Prescribing for URIs Score Card: 2017-2018

Cooper University Hospital

Physician: Internal Medicine - Melli, Jenny

	Cooper Physicians' Average Rate of Antibiotic Prescripting for URI Office Visits '17-18	CDC rate of unwarranted antibiotics*	Your Average Rate of Antibiotic Prescripting for URI Office Visits	Total # of Office Visits associated with URIS	Total # of Office Visits associated with URIs where Antibiotics were prescribed
Melli, Jenny	28.74%	30.00%	0.00%	49	0

*include reference to this

We recognize there are other pressures on providers including patient pressure to prescribe and patient satisfaction scores. Our goal is to draw attention and perhaps to encourage you to think twice before writing for an antibiotic in a patient that will likely not benefit from it, and could cause future harm both for individuals and society at large.

We have provided four resources from the CDC Antibiotic Awareness week to facilitate patient and physician education that we suggest posting in your office during the winter months.

1. Indications for Antibiotics in common diagnoses
2. Antibiotic Side Effects
3. Bacterial vs. Viral Causes
4. CDC Viral RX for Supportive Measures to be given to patients

We appreciate all you do for our patients!

Sincerely,
The Internal Medicine Residency Cohort 1
QI Leaders: Marlena Klein, Diana Zackey
PGY3: Mona Domadia, Cynthia Kroll, Michael Piazza Niharika Sathe
PGY2: Ayo Balogun, Gina Ferrero
PGY1: Sang Kim, Kyle Marden, Jessica Richmond, Miriam Zander

Dr. Jenny Melli, MD. Antimicrobial Stewardship Physician Champion
Dr. Dana Byrne, MD. Antimicrobial Stewardship Program Director
Lucia Rose, PharmD. Antimicrobial Stewardship Lead Pharmacist

Email Sent to Providers, Phase II (2019)

Dear Cooper Primary Care Providers,

We are implementing a quality improvement intervention to reduce unnecessary antibiotic prescribing in the outpatient setting. We are working in collaboration with the Antimicrobial Stewardship Director, Dr. Dana Byrne. We are providing you with data on your own and your colleagues' antibiotic prescribing habits in November 2019.

Our results from last year
This project is a continuation of a project from last year that increased provider awareness of prescribing patterns in an effort to decrease excessive antibiotics prescribed for upper respiratory infections. Last year's intervention resulted in a **10.19%** decrease for all antibiotics prescribed for viral bronchitis and a **5.18%** decrease in antibiotic prescribing for all URI-related diagnoses which do not require antibiotic treatment. These positive results were presented at the GME Quality and Safety Improvement Conference at Cooper University Hospital as well as a poster presentation at the Infectious Disease Society of America (IDSA) Conference in Washington D.C. in October 2019.

What is changing this year
Last year we distributed individual reports with your personal percentage of antibiotics prescribed for office visits with URI-associated diagnosis codes (pharyngitis, tonsillitis, sinusitis, bronchitis, bronchiolitis, and influenza). This year, we are providing you with your personal percentage for the same diagnosis codes, as well as your office site percentage compared to all other outpatient sites. In an effort to be more transparent, our aim is to provide you with data in a format similar to the Diabetes Transparency report. **Please see the attached excel spreadsheet for that data.**

In addition, we will be sending out a quick survey at the end of the flu season to determine the effectiveness of the interventions and seeking feedback on how the project can improve going forward.

Antimicrobial stewardship
A 2016 JAMA study determined that in the United States between 2010-2011 there were over 154 million antibiotic prescriptions written in the ambulatory care setting, which accounted for approximately 80% of all antibiotic use. The study also found that an estimated 30% of antibiotics prescribed in the US are unnecessary. Through inappropriate antibiotic prescriptions, we risk increasing antibiotic resistance, adverse effects, allergic reactions, and clostridium difficile infections. The study suggests that most of the inappropriate antibiotic prescriptions are prescribed for viral illnesses such as viral pharyngitis, bronchitis, sinus infections, ear infections, and the common cold.

Thus, our goal for this project is to decrease the overall prescription rate for outpatient URI visits by 30%. In the 2017-2018 flu season, our prescription rate was 41%.

Our goal, then, is to reduce this to 29% over the intervention time. In the data attached, we have provided the goal prescription rate for each office site that would help reach this target.

Why this is still an important project

Joint Commission has now mandated that all ambulatory clinics and urgent cares have a stewardship program and action plan in place, starting 1/1/2020. Predictions have been made that eventually discretionary antibiotic prescribing as a quality measure will one day be linked to CMS billing.

We acknowledge that as physicians, there are additional factors that contribute to prescribing antibiotics such as patient relationships and patient satisfaction. We hope this project will empower you to carefully consider your antibiotic prescribing for presumed viral infections and we have provided some resources below to share with your patients to assist you in achieving your goals.

There are sociobehavioral strategies shown in studies to enhance satisfaction among visits where antibiotics are not prescribed.

1. Always string negative feedback with positive feedback. I.e. if you tell a patient that they don't need antibiotics for a viral illness, also say "good news is that you should feel better in a week and there are some remedies to help your symptoms in the meantime."
2. Always provide a contingency plan. Patient perception of being denied antibiotics can be that the physician doesn't care. In addition to providing reasoning as to why an antibiotic is unnecessary (see below), also provide a plan for when to call back if symptoms aren't better with contact information.

Resources for you and to share with your patients

For more information, we would like to refer you to these excellent resources from the CDC's website.

For physician reference:
Antibiotic resistance
Indications for Antibiotics in common diagnoses

Patient handouts:
CDC Viral RX for Supportive Measures to be given to patients
Viruses or Bacteria? What's making you sick?
Antibiotics aren't always the answer
Improving Antibiotic Use

We would like to acknowledge the physicians, NPs and offices who made the biggest change last year!

(*Names of physicians and offices were included in the original email but have been omitted here for privacy*)

We appreciate all you do for our patients! Please let us know if you have further questions or concerns.

Sincerely,

Dr. Dana Byrne, MD, MSCE. Antimicrobial Stewardship Program Director
Dr. Jenny Melli, MD. Antimicrobial Stewardship Ambulatory Physician Champion
Dr. Daniel J Hyman, DO. Head, Division of General Internal Medicine
Dr. Bennett S. Shenker, MD, MS, MSPH, FAAFP. Chief and Chair, Family and Community Medicine
Lucia Rose, PharmD. Antimicrobial Stewardship Lead Pharmacist
Alexandra Hanretty, PharmD, Antimicrobial Stewardship Pharmacist

Internal Medicine Residency Cohort 1
- QI Leaders: Mimi Zander, Sang Hoon Kim
- PGY3: Marlena Klein, Diana Zackey, Amy Scholl, Ayo Balogun, Gina Ferrero
- PGY2: Jessica Richmond, Robert Wetzel
- PGY1: Matthew Nelson, Vittorio Terrigno