Introduction
- Pulmonary Nontuberculous Mycobacterial (NTM) Disease is being diagnosed more frequently
- M. abscessus is an important cause of this disease
- M. abscessus typically displays in-vitro resistance to most oral antibiotics, with the exception of clofazimine and macrolides
- Treatment involves multiple parenteral and oral antibiotics based upon susceptibility testing
- The optimal dosing and duration of such therapies is not well-defined

Methods
- Electronically surveyed members of the Infectious Diseases Society of America Emerging Infections Network (EIN)
- The survey was sent to 1,172 ID physicians who practice adult infectious diseases with questions regarding M. abscessus and clofazimine
- A separate shorter survey was sent to ID physicians who practice pediatric infectious diseases with questions regarding M. abscessus and clofazimine

Results from adult ID physicians: M. abscessus
- 202 (39%) reported treating at least one M. abscessus case over the last 5 years
- 104 (51%) reported their laboratories failed to isolate colonies beyond M. chelonae-abscessus complex
- 136 (66%) were pulmonary M. abscessus infections
- Physicians reported a variety of first-line therapy was used for pulmonary M. abscessus, including parenteral amikacin (73%), imipenem (69%), and cefoxitin (80%)
- Only 36 (18%) and 45 (22%) had used clofazimine or inhaled amikacin respectively
- 138 (78%) repeated sputum cultures after initiating therapy, but the timing was variable
- 45 (33%) were not sure what change in culture results would be considered sufficient to discontinue therapy
- 53 (36%) reported relapse of at least 50% of patients after discontinuation of therapy for pulmonary M. abscessus

Results: Clofazimine
- Adult ID physicians have preferred to dose clofazimine at either 50 or 100 mg once daily
- In the past 5 years, 434 (84%) of respondents did not try to obtain clofazimine
- 60 (12%) were successful in obtaining clofazimine on at least one occasion
- 26 (5%) wanted to use clofazimine but were not able to obtain it

Conclusions
- Adult ID physicians in the US believe M. abscessus and M. avium complex incidence is increasing
- Pediatric ID physicians in the US commonly treat pulmonary M. abscessus in cystic fibrosis patients
- Parenteral antibiotics instead of inhaled or oral antibiotics are commonly used to treat pulmonary M. abscessus
- A high percentage of treating physicians relied on parenteral amikacin, imipenem, and cefoxitin
- A small percentage used clofazimine or inhaled amikacin
- At least one half of physicians are not provided information on subspecies of M. abscessus on culture reports, which has important implications for therapy given the subspecies difference resistance profiles
- Clofazimine is more commonly used to treat NTM rather than M. tuberculosis or M. leprae among adult ID physicians in the US
- Clofazimine is more commonly used by adult ID physicians than pediatric ID physicians

Future areas of research
- We are currently performing an expanded case series to learn more about the treatment of M. abscessus
- With specific questions regarding resistance profiles which antibiotics are selected outcomes of therapy side effects/toxicities associated with therapy
- We will perform a second case series to learn more about how clofazimine is utilized with particular attention to side effects and toxicities associated with therapy.

References