Methods: A retrospective review of 1140 patients that underwent endoscopic sinus surgery at the University of Washington Medical Center from 2010 – 2017. Patients who had multiple intraoperative sinus cultures obtained were included in the analysis (231 patients).

Results & Interpretation: Of the 231 patients with multiple sinus cultures, 39.4% demonstrated differences in pathogens between sinus cultures. Of these, change in post-operative antibiotics due to culture results occurred in about one-third. The second culture provided unique information used to guide antibiotic treatment in only 5.2% of patients investigated.

Conclusions and Future Directions: Multiple sinus cultures taken from phenotypically distinct mucopurulence demonstrate distinct pathogens approximately 40% of the time. A single culture is typically sufficient for obtaining necessary culture information if desired to guide antibiotic therapy.