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Background

- Antibiotic resistant infections responsible for ~23,000 deaths; 2 million infections
- Most antibiotic prescribing occurs in the outpatient setting; 49 million/yr
- 34 million prescriptions for acute respiratory illness; 29% are unnecessary
- Previous data has shown that:
 - Prescribing increases 1.5-23 times when a provider perceives a parent wants an antibiotic^{2,3}
 - Parents actually desire a diagnosis & care plan; not an antibiotic⁴

Objective

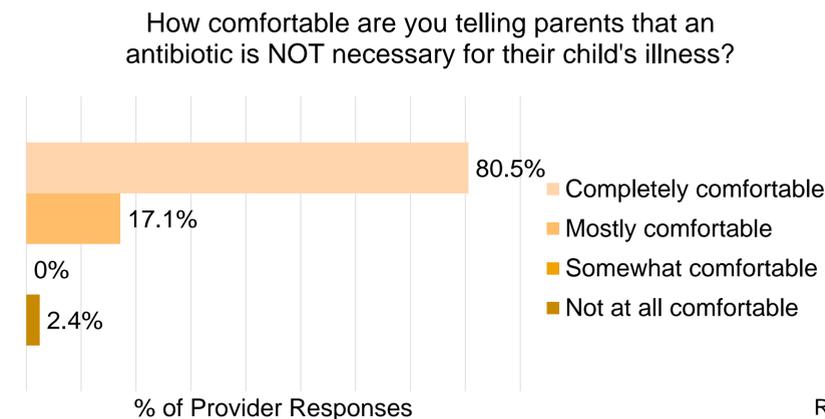
- We sought to examine:
- providers' beliefs about parent's desire for an antibiotic, comfort level in providing antibiotic education, concerns about parental disagreement and
 - parent's desire for an antibiotic for their child.

Methods

- Providers (N= 41) and Parents (N=1249) were prospectively enrolled in an RCT comparing two interventions to improve appropriate antibiotic prescribing.¹
- Provider demographics included: sex, type, years of practice
- At baseline, Providers rated their beliefs on:
 - Parents desire at baseline for antibiotics for child with viral illness
 - Comfort level providing antibiotic education
 - Concern about parental disagreement for antibiotic necessity
- Parent inclusion criteria: Child aged 1-5 years with respiratory symptoms (e.g. cough, congestion) being seen by enrolled provider
- Parent demographics included: age, sex, education level, race/ethnicity, child age
- Parents rated desire for antibiotics on a visual analog scale (1-100) with the center defined as neutral
- Scores were classified as low ≤ 39, neutral 40-59, high ≥ 60

| Table 1. Provider and Parent Demographics | Provider N= 41 (%) | Parent N =1249 (%) |
|---|--------------------|--------------------|
| Female Gender | 32 (78%) | 1046 (84%) |
| Provider Type | | |
| MD/DO | 27 (66%) | -- |
| Advanced Practice Nurse (APN) | 14 (34%) | -- |
| Years of Practice (median, IQR) | 8 (4,14) | -- |
| Clinic Enrolled | | |
| Private Practice | 10 (24%) | 1014 (81%) |
| Academic Institution | 31 (75%) | 235 (68%) |
| Parent Age (median, IQR) | -- | 31 (27,36) |
| Education Level | | |
| ≥ Undergraduate Degree | -- | 481 (39%) |
| Race/Ethnicity | | |
| White | -- | 973 (78%) |
| Hispanic/Latino | -- | 240 (19%) |
| Black/African American | -- | 158 (13%) |

Figure 1. Provider Comfort Providing Antibiotic Education



Results

Figure 2. Provider Belief of Parental Desire

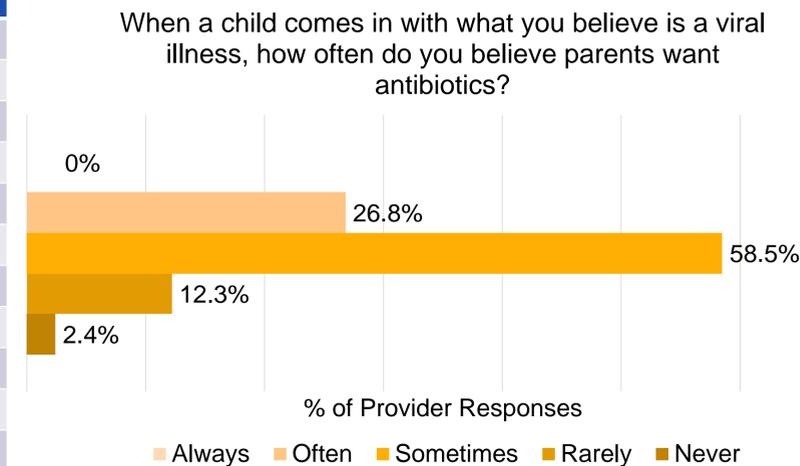
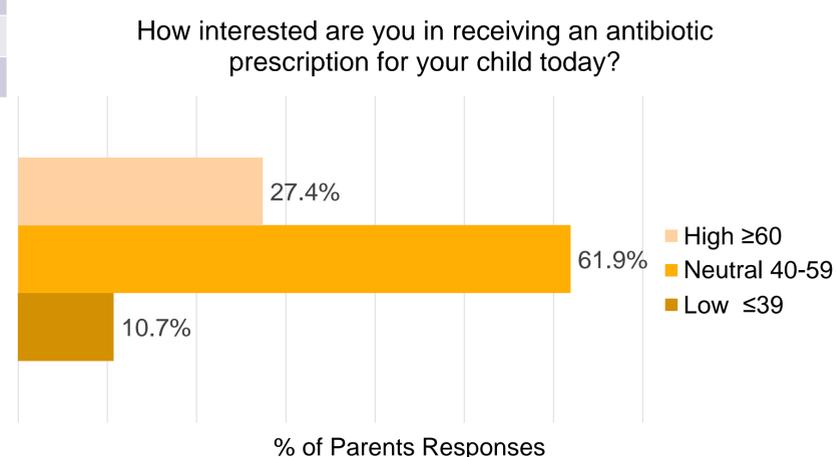
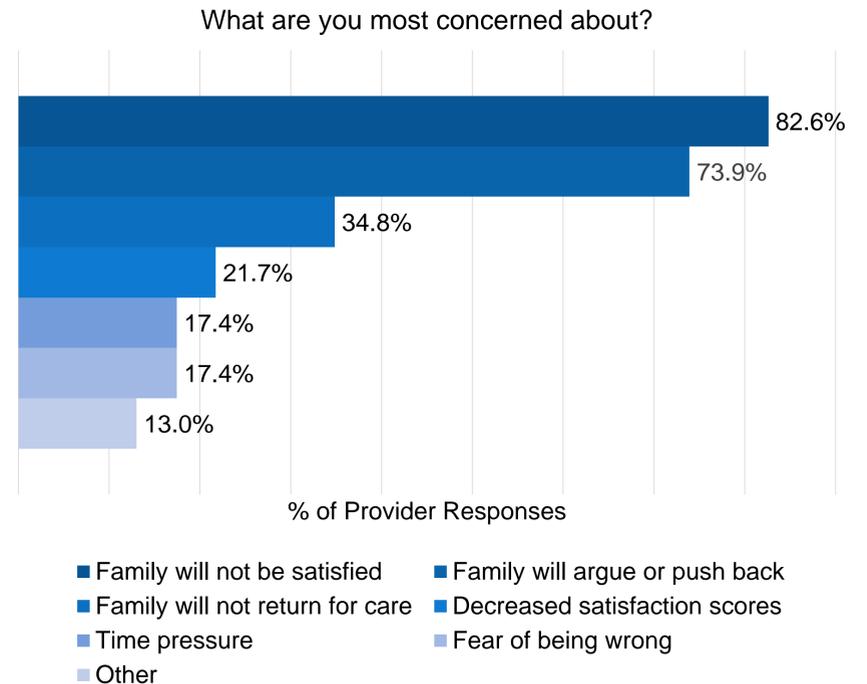


Figure 3. Parental desire for an Antibiotic



- 23 (56%) providers had concern that parents will disagree when told that an antibiotic is not necessary for the child's illness.

Figure 4. Provider Concern for Parental Disagreement



Discussion

- Nearly ¾ of parents have neutral or low desire for antibiotics
- Providers perception of parental desire are lower than previous reports & closer to what parents actually report
- Despite high comfort level in providing antibiotic education, more than half of providers anticipate conflict when telling a parent that an antibiotic is not necessary

References: 1. Goggin, et al., *BMJ Open*. 2018. 2. Mangione Smith, et al., *Pediatrics*. 1999. 3. McKay, et al. *AAC*. 2016. 4. Mangione Smith, et al *Ann Fam Med*. 2015.

Acknowledgments: Support for this study is provided by the Patient Centered Outcomes Research Institute CDR-1507-31759 Communication and Dissemination award. All statements in this report, including its findings and conclusions, are solely those of the authors and do not necessarily represent the views of the Patient-Centered Outcomes Research Institute (PCORI), its Board of Governors or Methodology Committee.