Antimicrobial stewardship in the ambulatory setting: Success in family medicine

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Background

At least 30% of outpatient antibiotic prescriptions are considered unnecessary, and inappropriate prescribing of antibiotics, including the use of broad-spectrum agents, is the most important modifiable risk factor for antibiotic resistance.

We sought improvement in broad-spectrum antibiotic prescribing (BSAP%) by family medicine clinicians, as shown possible previously among pediatric clinicians, using recommended approaches for outpatient antibiotic stewardship.

Project design

• Three aRTI measures were built within EpicCare® for guideline-concordant care for viral URI in children 3 months-18 years of age (no antibiotic), acute bacterial sinusitis (ABS) in children 1-18 years of age (first-line treatment with amoxicillin or amoxicillin-clavulanate), and acute otitis media (AOM) in children 6-months-12 years of age (first-line treatment with amoxicillin).

• Among 100 family medicine clinics, we randomized 39 clinics at <83% for the URI measure into intervention (22 clinics in 13 practices) and comparator (17 clinics in 13 practices) groups.

• Monthly performance was measured for a 19-month baseline, January 2014-July 2015, an educational run-in period, August-October 2015, and a 21-month intervention period, November 2015-July 2017, for the three aRTI measures, BSAP%, and total antibiotic utilization (total # antibiotics/total # illness encounters) for all children seen in family medicine clinics for illness encounters.

• Targets were: <8% for viral URI and >75% for ABS and AOM.

Outcomes

• Three aRTI measures were built within EpicCare® for guideline-concordant care for viral URI in children 3 months-18 years of age (no antibiotic), acute bacterial sinusitis (ABS) in children 1-18 years of age (first-line treatment with amoxicillin or amoxicillin-clavulanate), and acute otitis media (AOM) in children 6-months-12 years of age (first-line treatment with amoxicillin).

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Aim

To reduce BSAP% by 5% by 18 months and compare clinician-specific with clinic-specific feedback

Changes made

All 39 clinics (intervention and comparators) received a multifaceted intervention

• An in-person educational meeting with the lead clinician and clinic administrator for academic detailing including: baseline clinic performance, measure definition and guidelines along with a tip sheet about how to improve performance, a new care pathway for ABS, and an after-visit summary smartphone (UIAntibiotics) for families with Q & A about antibiotic use and side effects

• Monthly clinic-level (clinic-specific) feedback comparing all Family Medicine clinics

22 intervention clinics also received

• Monthly peer comparison (clinician-specific) feedback

Outcomes

Appropriate treatment of children ≤18 years of age for three aRTIs, comparing baseline (January 2014-July 2015) and intervention (November 2015 – July 2017)

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<thead>
<tr>
<th>Intervention</th>
<th>Comparator</th>
<th>Baseline Clinic</th>
<th>Intervention Clinic</th>
<th>Intervention period</th>
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<tr>
<td>Intervention Clinic BSAP%</td>
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References