

BACKGROUND

- Acute bronchiolitis (AB) represents one of the most frustrating care conundrums in pediatrics.
- The mainstay of treatment for this illness is supportive care, as no therapy has proven to be particularly useful.
- Although evidence-based guidelines recommend primarily supportive care, many unnecessary treatments persist, contributing to a quality problem of overtreatment.
- However, standardizing treatment requires multifaceted approach, which is still a challenge.



OBJECTIVE

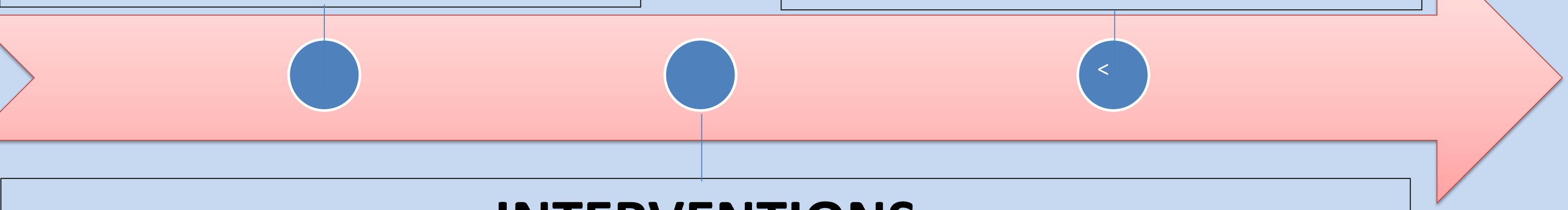
- To implement and assess a quality improvement (QI) initiative to reduce the overuse of unnecessary treatments in infants with AB in Primary Care (PC) settings and the referral Pediatric Emergency Department (ED).

PATIENTS & METHODS

- QI initiative during two bronchiolitis seasons

PRE-INTERVENTION
October-Mars 2016-17

POST-INTERVENTION
October-Mars 2017-18



INTERVENTIONS

- Distribution evidenced-based protocol
- Informative posters
- Badges with the slogan “Bronchiolitis, less is more”
- Sessions to discuss barriers to apply what is known
- Weekly report to pediatricians with personal and global data on the prescription of bronchodilators



- PRIMARY OUTCOME: infants receiving salbutamol.
- SECONDARY OUTCOMES: infants receiving epinephrine, antibiotics and corticosteroids.
- CONTROL MEASURES: ED visits and hospitalization in infants, triage level, length of stay in the ED, Pediatric Intensive Care Unit admission and unscheduled returns with admission within 72 h.
- The data were collected from the computerized medical record.

- The study was approved by the local Ethics Committee.
- The study won the research grant from the Spanish Society of Pediatric Emergency Medicine in 2018.
- No other external funding was secured.



RESULTS

USE OF PHARMACOTHERAPIES IN THE ED	PRE-INTERVENTION PERIOD (n =1021)	POST-INTERVENTION PERIOD (n =855)	P
SALBUTAMOL	13.8% (95% CI, 11.8-16)	9.1% (95% CI, 7.3-11.2)	<0.01
EPINEPHRINE	10.4% (95% CI, 8.6-12.4)	9% (95% CI, 7.2-11.1)	n.s.
ANTIBIOTICS	2.4% (95% CI; 1.6- 3.5)	3.1% (95% CI; 2.1- 4.5)	n.s.
CORTICOSTEROIDS	<1%	<1%	n.s.

USE OF PHARMACOTHERAPIES IN PRIMARY CARE	PRE-INTERVENTION PERIOD (n= 658)	POST-INTERVENTION PERIOD (n= 471)	P
SALBUTAMOL	38.3% (95% CI, 34.6-42.0)	15.9% (95% CI, 13-19.5)	<0.01
CORTICOSTEROIDS	12.9% (95% CI, 10.5-15.7)	3.6% (95% CI, 2.2-5.7)	<0.01
ANTIBIOTICS	29.6% (95% CI; 26.2 - 33)	9.5% (95% CI; 7.2- 12.5)	<0.01
EPINEPHRINE	<1%	<1%	n.s.

- No significant variations were noted related to control measures.

CONCLUSIONS

- Using a QI initiative, we safely decreased the use of unnecessary treatments in infants with AB.
- Collaboration between PC units and ED appears as an important context factor for successful improvement.