Administration of Bronchodilators Based on Astma score

No registrations found.

Ethical review	Positive opinion
Status	Other
Health condition type	-
Study type	Interventional

Summary

ID

NL-OMON29161

Source
NTR

Brief title
ABBA

Health condition

Asthma

Sponsors and support

Primary sponsor: Martini Hospital Groningen, The Netherlands
Source(s) of monetary or material Support: Martini Hospital Groningen

Intervention

Outcome measures

Primary outcome

Difference in admission time for children with acute asthma who are treated according to the current nurse-driven pathway or the new pathway with adjusted treatment thresholds for patients who need supplemental oxygen.

Secondary outcome

-number of bronchodilator adminstrations per patient,
-the number of deviations from the pathway; administration of bronchodilators when not indicated or when bronchodilators were indicated but not administered.
-number or assessments by attending physician
-number of patients excluded because they needed treatment with intravenous albuterol
-number of re-admission within one week
-association between heart rate and the total CAS en individual items of CAS
-difference between groups in administration of intravenous magensiumsulphate
-difference between groups in transfer to pediatric intensive care unit

Study description

Background summary

The administration of bronchodilators for acute asthma is based on serial assessments of the patient's respiratory status. In daily practice, this may result in variability and/or delay in the decision-making process to wean or intensify bronchodilator administration. We aim to improve the quality of care by standardizing inpatient asthma care and reduce the length of stay. We developed an asthma score that does not require auscultation of the lungs. This innovative asthma score was adapted from the physical findings in pediatric asthma scores validated previously. We recently demonstrated that this childhood asthma score (CAS) could accurately predict the bronchodilator nebulization requirement compared to the routine clinical judgment of the attending physician to administer bronchodilators. Subsequently, we conducted a study to implement a nurse-driven clinical pathway based on our innovative asthma score. This pathway included standardized respiratory assessments and a protocol for the nursing staff to administer bronchodilators without a specific order from the physician. Length of stay was significantly reduced compared to the historical standard practice. Patient safety was not compromised.
The results of our previous study encourage us to further evaluate and adapt the pathway for patients who need supplemental oxygen. In this randomised study, length of stay and safety for patients who need supplemental oxygen treated according to the current pathway will be compared to a pathway with adjusted treatment thresholds.

Study objective

A clinical pathway with adjusted treatment thresholds for patients who need supplemental oxygen will reduce the number of unnecessary bronchodilator administrations.

Study design

Length of hospital admission will be determined by obtaining date and time of admission and discharge from the electronic record form
Asthma scores are calculated by a validated Excel software algorithm and automatically registered in an Excel database.

All relevant data for the secondary outcomes will be obtained from the electronic record form one week after discharge to be able to register readmissions for acute asthma

Intervention

The intervention comprises adjusted treatment thresholds for patients with acute asthma who need supplemental oxygen.

Contacts

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Eligibility criteria

Inclusion criteria

-children 2-18 years of age admitted for acute asthma
-treatment for acute asthma according to current dutch guideline
-supplemental oxygen use, low flow or high flow

Exclusion criteria

-severe acute asthma for which intravenous albuterol is indicated
-unstable heart disease
-cystic fbrosis or other chronich or congenital lung disease
-any neurological disease
-any muscular disease

Study design

Design

Study type:	Interventional
Intervention model:	Parallel
Allocation:	Randomized controlled trial
Masking:	Open (masking not used)
Control:	Active

Recruitment

NL

Recruitment status:	Other
Start date (anticipated):	01-09-2021
Enrollment:	130
Type:	Unknown

IPD sharing statement

Plan to share IPD: Undecided

Plan description
N/A

Ethics review

Positive opinion

Date:	23-07-2021
Application type:	First submission

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
NTR-new	NL9745
Other	METC UMCG : METc 2021/179

Study results

Summary results
N/A