SMASHING in adolescents: Self-Management of Asthma Supported by Hospitals, Information and communication technology, Nurses and General practitioners

Submission date	Recruitment status No longer recruiting	Prospectively registered		
28/12/2006		☐ Protocol		
Registration date	Overall study status	Statistical analysis plan		
28/12/2006	Completed	[X] Results		
Last Edited 22/05/2013	Condition category Respiratory	[] Individual participant data		

Plain English summary of protocol

Not provided at time of registration

Contact information

Type(s)

Scientific

Contact name

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Contact details

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Additional identifiers

Protocol serial number N/A

Study information

Scientific Title

Acronym

SMASHING

Study objectives

A self-management programme guided by doctors and a specialist asthma nurse through information and communication technology will improve asthma related quality of life in a cost-effective way.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Approval received from the local ethics committee (Commissie Medische Ethiek) on the 7th August 2006 (reference number: P06.110).

Study design

Randomised, controlled, parallel group, multicentre trial

Primary study design

Interventional

Study type(s)

Treatment

Health condition(s) or problem(s) studied

Asthma

Interventions

Please note that as of 06/02/2008 the anticipated end date of this trial was extended to 30/05/2009. The previous end date of this trial was 30/06/2008.

Information and Communication Technology (ICT)-supported care:

- 1. Asthma self-management education in small groups (two sessions per group) by trained asthma specialist nurse:
- a. Discussion of ACQ and ATAQ data in order to assess present situation and electronic asthma action plan
- b. Review medication devices technique and adherence
- c. Plan next doctor visits as needed
- 2. Monitoring asthma control by lung

function and ACQ (input via website or SMS [text messaging]) with electronic data processing and feedback through computer via webpages with graphical presentation of data for patient and nurse

- 3. Virtual consulting room with asthma nurse via email and private messaging
- 4. Social support within a private chatbox and/or internet support group
- 5. Automated sending of reminders via email and/or SMS

Control group: usual care:

According to the Dutch General Practitioner (GP) guidelines, patients are invited to visit their

general practitioner every three months in order to titrate medication to the lowest level that is needed to maintain control. This frequency can be lowered to one to two visits per year once control of asthma has been achieved. Thirty percent of general practices have nurse practitioners providing self-management education. Patients are referred to a pediatrician /pediatric pulmonologist if sufficient control is not achieved within three months. Exacerbations of asthma are treated by either pediatrician and general practitioner:

- 1. Advise to visit to general practitioner or pediatrician to assess present situation
- 2. Review medication devices technique and adherence
- 3. Issue and explain paper asthma action plan, monitoring of lung function with Piko-1 spirometer
- 4. Plan next doctor visits as needed

Intervention Type

Other

Phase

Not Applicable

Primary outcome(s)

Health related quality of life as measured by the Pediatric Asthma Quality of Life Questionnaire (PAQLQ).

Key secondary outcome(s))

- 1. Asthma control
- 2. Symptom free days
- 3. Exacerbations
- 4. Health care utilisation
- 5. Absence of work/school
- 6. Lung function
- 7. Exhaled nitric oxide
- 8. Medication use
- 9. Self-reported asthma management behaviour
- 10. Side effects

Completion date

30/05/2009

Eligibility

Key inclusion criteria

- 1. Age 12 to 17 years
- 2. Doctors diagnosis of asthma
- 3. Mild to severe persistent asthma (patients who need inhaled corticosteroids as controller medication)
- 4. At least one asthma control problem (Asthma Therapy Assessment Questionnaire [ATAQ] score more than or equal to one or Asthma Control Questionnaire [ACQ] more than or equal to one)
- 5. Able to communicate in the Dutch language

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Child

Lower age limit

12 years

Upper age limit

17 years

Sex

Not Specified

Key exclusion criteria

Patients requiring oral corticosteroids as controller medication and patients with relevant comorbidity will be excluded.

Date of first enrolment

15/12/2006

Date of final enrolment

30/05/2009

Locations

Countries of recruitment

Netherlands

Study participating centre Department of Medical Decision Making, J10-86 Leiden Netherlands

Netherland 2300 RC

Sponsor information

Organisation

Leiden University Medical Center (LUMC) (Netherlands)

ROR

https://ror.org/05xvt9f17

Funder(s)

Funder type

Research organisation

Funder Name

Astmafonds (Netherlands)

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary

Not provided at time of registration

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	01/12/2012		Yes	No
Study website	Study website	11/11/2025	11/11/2025	No	Yes