

# Self-Management of Asthma Supported by Hospitals, Information and communication technology, Nurses and General practitioners (SMASHING in adults)

<b>Submission date</b> 09/01/2006	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered
		<input type="checkbox"/> Protocol
<b>Registration date</b> 09/01/2006	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan
		<input checked="" type="checkbox"/> Results
<b>Last Edited</b> 16/09/2013	<b>Condition category</b> Respiratory	<input type="checkbox"/> 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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## Additional identifiers

### Protocol serial number

N/A

# Study information

## Scientific Title

## Acronym

SMASHING in adults

## 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)

Not provided at time of registration

## Study design

Randomised controlled trial

## Primary study design

Interventional

## Study type(s)

Quality of life

## Health condition(s) or problem(s) studied

Asthma

## Interventions

A 12-month intervention period where the patients receive either usual care or ICT-supported care guided by a specialised asthma nurse and doctor.

Care strategies:

### 1. Usual care

According to the Dutch GP guidelines, patients are invited to visit their general practitioner every 3 months in order to titrate medication to the lowest level that is needed to maintain control. This frequency can be lowered to 1-2 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 chest physician if sufficient control is not achieved within 3 months. Exacerbations of asthma are treated by either chest physician and general practitioner.

### 1. Advise to visit to general practitioner or specialist 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

## 2. ICT-supported care

1. Weekly monitoring of asthma control questionnaire (ACQ) and lung function through webpages and/or SMS with feedback
2. At least 6 weeks daily monitoring of lung function and symptoms with electronic feedback through webpages and/or SMS
3. Asthma self-management education in small groups (2x) by trained asthma specialist nurse (see below):
  - i. Discussion of ACQ data in order to assess present situation and electronic asthma action plan
  - ii. Review medication devices technique and adherence
  - iii. Plan next doctor visits as needed
4. Virtual consulting room with asthma nurse via private messaging
5. Social support within a private chatbox and/or internet support group
6. Automated sending of reminders via email and/or SMS
7. Monitoring asthma control by lung function and ACQ with electronic data processing and feedback through computer via webpages with graphical presentation of data for patient and nurse

## Intervention Type

Other

## Phase

Not Specified

## Primary outcome(s)

1. Asthma related quality of life
2. Measurement instrument: asthma quality of life questionnaire (AQLQ)
3. Evaluation at baseline, after 3 months and after 12 months

## 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. Side effects

## Completion date

01/03/2008

## Eligibility

### Key inclusion criteria

1. 250 patients with mild persistent to moderate asthma (prevalent cases)
2. Age 18-50 years
3. Doctor's diagnosis of asthma
4. Asthma severity step 2-3, patients who need inhaled corticosteroids as controller medication

- (at least 3 months in the past year)
5. PC with internet connection available
  6. Able to communicate in the Dutch language

**Participant type(s)**

Patient

**Healthy volunteers allowed**

No

**Age group**

Adult

**Lower age limit**

18 years

**Upper age limit**

50 years

**Sex**

All

**Key exclusion criteria**

1. Patients with intermittent asthma
2. Patients with severe asthma
3. Use of oral glucocorticosteroids as controller medication
4. Serious co-morbidity interfering with asthma or treatment of asthma
5. No PC or no internet connection
6. Not able to communicate in the Dutch language

**Date of first enrolment**

01/01/2006

**Date of final enrolment**

01/03/2008

**Locations****Countries of recruitment**

Netherlands

**Study participating centre**

Leiden University Medical Center

Leiden

Netherlands

2300 RC

# Sponsor information

## Organisation

Leiden University Medical Center (LUMC) (Netherlands)

## ROR

<https://ror.org/05xvt9f17>

# Funder(s)

## Funder type

Research council

## Funder Name

Netherlands Organisation for Health Research and Development (ZonMw)

## Alternative Name(s)

Netherlands Organisation for Health Research and Development

## Funding Body Type

Private sector organisation

## Funding Body Subtype

Other non-profit organizations

## Location

Netherlands

## Funder Name

Netherlands Asthma Foundation

# 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?
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<a href="#">Results article</a>	results	21/07/2009	Yes	No
<a href="#">Results article</a>	results	10/06/2010	Yes	No
<a href="#">Results article</a>	results	01/06/2011	Yes	No
<a href="#">Results article</a>	results	12/09/2013	Yes	No