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

Submission date
09/01/2006

Recruitment status
No longer recruiting

Registration date
09/01/2006

Overall study status
Completed

Last Edited
16/09/2013

Condition category
Respiratory

[_] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol
Not provided at time of registration

Contact information

Type(s)
Scientific

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Additional identifiers

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

Primary study design
Interventional

Study design
Randomised controlled trial

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?
Results article	results	21/07/2009		Yes	No
Results article	results	10/06/2010		Yes	No
Results article	results	01/06/2011		Yes	No
Results article	results	12/09/2013		Yes	No