

Technology to support asthma management

The aim of this questionnaire is gathering information that will be used as the basis to create a technological solution to support the asthma management process.

You have been chosen to answer this questionnaire because you take care (or have taken care) of a person with asthma. The questions have to be answered regarding your personal experience in dealing with this condition. The estimated time to answer the questionnaire is 10 – 15 minutes.

If you take care (or have taken care) of more than one person with asthma, please choose the experience you have had with one of them in order to answer the questionnaire, or answer the questionnaire several times.

The collected data will be used for research purposes. It will not be used for commercial purposes. No personal data nor sensitive data is collected.

This research is being carried out by the Research Group on Development of Intelligent Environments (<http://ie.cs.mdx.ac.uk>) of Middlesex University. If you have any query, please contact us at asthma.technology@gmail.com.

* Required

Classifying information

1. How much time have you been taking care (or did you take care) of the person with asthma? *

2. Indicate the gender of the person with asthma you take (or took) care of. *

Mark only one oval.

- ☐ Female
- ☐ Male
- ☐ Prefer not to say
- ☐ Other: _____

3. How old is/was the person with asthma you take/took care of? *

Please, specify the age in years.

4. What is the severity of his/her asthma? *

Mark only one oval.

- ☐ Mild
- ☐ Moderate
- ☐ Severe
- ☐ I do not know.

5. Which are his/her triggers? *

Answer as many as that applies to you.

Check all that apply.

- ☐ A cold
- ☐ Flu
- ☐ Dust
- ☐ House dust mites
- ☐ Animals fur/feathers
- ☐ Cockroaches
- ☐ Mould
- ☐ Fungi
- ☐ Cigarette smoke
- ☐ Open fires
- ☐ Carpets
- ☐ Furniture
- ☐ Products used for decoration
- ☐ Poor indoor ventilation
- ☐ Damp (humid) weather
- ☐ Dry weather
- ☐ Cold weather
- ☐ Hot weather
- ☐ Sudden temperature changes
- ☐ Air pollution
- ☐ Pollen
- ☐ Alcoholic drinks
- ☐ Strong emotions
- ☐ Stress or anxiety
- ☐ Exercise
- ☐ Cleaning products
- ☐ Food
- ☐ Other: _____

6. Which are his/her symptoms? **Check all that apply.*

- ☐ Wheezing
- ☐ Coughing
- ☐ Tightness in the chest
- ☐ Shortness of breath
- ☐ Being too breathless to eat, speak or sleep
- ☐ Breathing faster
- ☐ Rapid heartbeat
- ☐ Drowsiness
- ☐ Confusion
- ☐ Dizziness
- ☐ Blue lips or fingers
- ☐ Fainting
- ☐ Nose feels scratchy
- ☐ Throat feels scratchy
- ☐ Other: _____

Mobile application to support asthma management**7. Which are the physiological indicators you think a mobile application supporting asthma management should track? ***

Answer as many as that applies to you.

Check all that apply.

- ☐ Heart rate
- ☐ Breathing rate
- ☐ Sweat level
- ☐ Oxygen level
- ☐ Wheezing
- ☐ Weight
- ☐ Other: _____

8. Which are the indoor environmental indicators you think a mobile application supporting asthma management should track? *

Answer as many as that applies to you.

Check all that apply.

- ☐ Temperature
- ☐ Humidity
- ☐ Dust level
- ☐ Dust mites
- ☐ Mould
- ☐ Air pollution
- ☐ Other: _____

9. Which are the outdoor environmental indicators you think a mobile application supporting asthma management should track? *

Answer as many as that applies to you.

Check all that apply.

- ☐ Temperature
- ☐ Humidity
- ☐ Dust
- ☐ Dust mites
- ☐ Mould
- ☐ Air pollution
- ☐ Pollen level
- ☐ Other: _____

10. Besides the person with asthma, who should be able to access and check the information collected by this mobile application supporting the management of his/her asthma? *

Answer as many as that applies to you.

Check all that apply.

- ☐ Parents
- ☐ Spouse or partner
- ☐ Patient's doctor
- ☐ Patient's nurse
- ☐ Groups doing research on asthma
- ☐ Only the patient
- ☐ Other: _____

11. Rate the following features/services/functions of a mobile application according to its importance in supporting the asthma management process of a person with asthma? *

0 for non-important and 5 for the most important.

Mark only one oval per row.

	0	1	2	3	4	5
Alerts regarding patient's triggers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Alerts regarding patient's symptoms	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Notifying patient's next of kin in case of emergency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Generating reports about the development of patient's triggers and symptoms	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing instructions about how to act in case of emergency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Display a map showing emergency centres near to patient's location	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reminders to take medication	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. What other features/services/functions do you think a mobile application supporting the asthma management process should have? Please, specify its importance (1-5). *

If you think there are no other features/services/functions, please type "No".

13. Which people/institutions should receive notifications from this mobile application? *

Answer as many as that applies to you

Check all that apply.

- ☐ Parents
- ☐ Spouse or partner
- ☐ Patient's doctor
- ☐ Patient's nurse
- ☐ Emergency Department
- ☐ Other: _____

14. In case of an asthma attack or an imminent respiratory arrest, who do you think the person you take/took care of should contact? How should they be contacted? *

Answer as many as that applies to you

Check all that apply.

	I do not want to contact this person	SMS	Other messaging service (WhatsApp, Facebook Messenger, Telegram, etc.)	Notification (Alert) on the phone of the person to contact	Other
Parents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spouse or partner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Son or daughter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Roommate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. Who else should be contacted in case of an asthma attack or an imminent respiratory arrest? How should they be contacted? *

If you do not want to contact someone else, please type "No".

16. In case of an asthma attack or an imminent respiratory arrest, what information should be sent to the people to contact? *

Answer as many as that applies to you
Check all that apply.

- ☐ Location
- ☐ Details of the emergency
- ☐ Contact information
- ☐ I do not want to contact anyone.
- ☐ Other: _____

Other questions**17. How do you think that people involved in the asthma management process (including people with asthma, carers, health care professionals) would benefit from using a mobile application offering these functions/services? ***

If you think these people would not benefit from using this type of mobile application, please state it and explain why.

18. Which negative effects do you think a mobile application offering these functions/services may bring? *

If you think there are no negative effects, please state it.

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