

# 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 have been diagnosed 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.

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](mailto:asthma.technology@gmail.com).

\* Required

## Classifying information

### 1. Age \*

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### 2. Gender \*

*Mark only one oval.*

- Female
- Male
- Prefer not to say
- Other: \_\_\_\_\_

### 3. When were you diagnosed with asthma? \*

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### 4. What is the severity of your asthma? \*

*Mark only one oval.*

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

**5. Which are your 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 your 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 the management of your asthma 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 the management of your asthma 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 the management of your asthma 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 you, who should be able to access and check the information collected by this mobile application supporting the management of your 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 me
- 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"/> |
| Alerts regarding patient's symptoms   | <input type="radio"/> |
| Notifying patient's next of kin in case of emergency                        | <input type="radio"/> |
| Generating reports about the development of patient's triggers and symptoms | <input type="radio"/> |
| Providing instructions about how to act in case of emergency                | <input type="radio"/> |
| Display a map showing emergency centres near to patient's location          | <input type="radio"/> |
| Reminders to take medication  | <input type="radio"/> |

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

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

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**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
- Your doctor
- Your nurse
- Emergency Department
- Other: \_\_\_\_\_

**14. In case of an asthma attack or an imminent respiratory arrest, who would you like to contact? How would you like to contact them? \***

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 would you like to contact in case of an asthma attack or an imminent respiratory arrest? How would you like to contact them? \***

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

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**16. In case of an asthma attack or an imminent respiratory arrest, what information would you like to send 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.

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**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 type "No".

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