ISRCTN18284682 https://doi.org/10.1186/ISRCTN18284682

# School-based asthma programme

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| **Submission date**<br>20/10/2023 | **Recruitment status**<br>No longer recruiting | [X] Prospectively registered<br>[_] Protocol<br>[_] Statistical analysis plan<br>[_] Results<br>[_] Individual participant data<br>[_] Record updated in last year |
| **Registration date**<br>23/10/2023 | **Overall study status**<br>Completed | |
| **Last Edited**<br>09/04/2025 | **Condition category**<br>Other | |

## Plain English summary of protocol

Background and study aims
One out of every eleven kids in Malaysia has asthma, and asthma symptoms or attacks can happen at any time. The World Health Organization (WHO) suggests that it's crucial to support children with asthma and give school staff training on how to help during asthma emergencies. A review by Cochrane found that school staff who got asthma training followed asthma guidelines better and were more prepared to assist students with asthma. This is important because following a school asthma plan and helping children with asthma can reduce health problems and even save lives.

We discovered that school staff don't know much about asthma and are often unprepared to assist students, especially in asthma emergencies. To help kids with asthma at school, we created the CuT-AsthMa program and introduced a plan for how to handle asthma in schools to the staff. The program for school staff includes basic asthma education and first aid training for asthma emergencies. In our feasibility study, we received positive feedback from the school staff and a good level of participation. So, we want to see how effective this program is when it's implemented in government primary schools in the Klang District, Malaysia.

Who can participate?
This is a pilot cluster randomised controlled trial comparing a school-based asthma training programme versus a general health education among school staff in government primary schools in Klang District, Malaysia.

What does the study involve?
We will randomize four schools out of 23 primary schools under Klang District Education Office. Two schools will be in the control group while the other two will be in the intervention group. The control group will be receiving a general health education sessions. The intervention group will be receiving a school-based asthma training programme. The duration of the entire research will be 12 months.

The session for the school-based asthma training programme with the school staff will last about 2 hours. After delivering the programme, we will use a mixed-methods approach to measure the study outcomes. Quantitative method for outcomes 1-4, and qualitative method for outcomes 2-4. The study outcomes are:
1. Asthma knowledge of government primary school staff

2. Feasibility of implementing the programme among school staff and healthcare professionals
3. Feasibility of conducting a cluster randomised controlled trial in government primary schools
4. Usability of the programme among school staff and healthcare professionals.

What are the possible benefits and risks of participating?
A possible benefit of this study is that school staff will learn about asthma, which may improve their general knowledge. There are no foreseeable risks in participating in this study.

Where is the study run from?
1. Universiti Malaya (Malaysia)
2. University of Edinburgh (UK)

When is the study starting and how long is it expected to run for?
July 2022 to June 2026

Who is funding the study?
This research was funded by the UK National Institute for Health and Care Research (NIHR) (Global Health Research Unit on Respiratory Health (RESPIRE); 16/136/109 and NIHR132826) via the University of Edinburgh in the United Kingdom.

Who is the main contact?
Dr Siti Nurkamilla Ramdzan, sitinurkamilla@um.edu.my

# Contact information

### Type(s)
Public, Scientific, Principal investigator

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# Additional identifiers

### Protocol serial number
AC22181

# Study information

### Scientific Title

Revitalising Asthma Care and Treatment (ReACT) School-based asthma programme versus general health programme to improve asthma knowledge among primary school teachers in Malaysia: A cluster randomised controlled trial.

## Acronym
ReACT School

## Study objectives
School staff's who receive a school-based asthma training program (intervention group) will improve their knowledge on asthma compared to school staff who receive a general health education session.

## Ethics approval required
Ethics approval required

## Ethics approval(s)
Approved 06/10/2023, Medical Research and Ethics Committee (MREC) (National Institutes of Health (NIH) Block A, Level 2, No 1, Jalan Setia Murni U13/52, Seksyen U13, Setia Alam, Shah Alam, 40170, Malaysia; +60 3-3362 8398; mrecsec@nih.gov.my), ref: NMRR ID-23-02544-O1O

## Primary study design
Interventional

## Study design
Pilot cluster randomized controlled trial

## Study type(s)
Prevention

## Health condition(s) or problem(s) studied
Improving asthma knowledge of government primary school staff

## Interventions
This is a pilot cluster randomised controlled trial comparing a school-based asthma training programme versus a general health education among school staff in government primary schools in Klang District, Malaysia.
The randomisation is at the school level and will be done using a computer generated system which will allocate 2 schools to intervention and 2 schools to control.

Intervention
All school staff in the intervention schools will be invited to participate in this study. Participants will receive a 2-hour training session on a school-based asthma training programme which include the provision of asthma education and training of first aid asthma care using a generic school asthma action plan.
The participants will be followed up at 1,3, 6 and 12 months.

Control
All school staff in the control schools will be invited to participate in this study. Participants will receive a 2-hour training session on general health education such as personal hygiene, prevention of infectious control and safety in school.
The participants will be followed up at 1,3, 6 and 12 months.

### Intervention Type
Behavioural

### Primary outcome(s)
Asthma knowledge using the Newcastle Asthma Knowledge Questionnaire at baseline, 1,3, 6 and 12 months.

### Key secondary outcome(s)
1. Evaluation of the reaction to the teaching using a questionnaire survey with a Likert scale 1-5 (1=very poor, 5=very good) will be carried out to explore the acceptability and feasibility of the programme measure within 1-month post receiving intervention or control
2. Evaluation of the learning using focus group discussions will be used to gain further insights into the impact of the training, the participants' confidence and how helpful they perceive the training in supporting asthma of children at schools at 1-month and 12-months post-intervention or control
3. Evaluation of behaviour using a survey form to collect past experiences of supporting the care of children with asthma at baseline, 1-month, 3-months and 12-months

### Completion date
30/06/2026

## Eligibility

### Key inclusion criteria
Inclusion criteria for cluster:
1. Government primary school
2. The number of school staff in the school is between 50-100 (considering 20% non-participation and 5% attrition rate, as well as resources available)
3. Schools within the catchment area of the Klang school health service
4. Schools willing to participate in the study

Inclusion criteria for participants:
1. All school staff at selected schools (intervention and control).
2. School staff (teachers, school administrator in-charge of health and other staff) with a role of caring for children.
3. School staff willing and able to provide written informed consent.

### Participant type(s)
Employee

### Healthy volunteers allowed
No

### Age group
Adult

### Lower age limit
18 Years

### Upper age limit

70 Years

### Sex
All

### Key exclusion criteria
Exclusion criteria for cluster
1.- Schools that do not want to participate in the study
2. Vernacular schools (these schools are conducted in different languages other than the national language e.g. Mandarin or Tamil) are excluded due potential language barriers
3. Schools unwilling or unable to provide consent.

### Date of first enrolment
02/01/2024

### Date of final enrolment
31/12/2024

## Locations

### Countries of recruitment
Malaysia

### Study participating centre
**Sekolah Kebangsaan Klang**
Jalan Dato' Hamzah
Klang
Malaysia
41000

### Study participating centre
**SEKOLAH KEBANGSAAN TELOK GADONG**
JALAN YADI 41250 KLANG
KLANG
Malaysia
41250

### Study participating centre
**SEKOLAH KEBANGSAAN TELOK MENEGON**
BATU 3, JALAN KOTA RAJA 41000 KLANG
KLANG
Malaysia
41000

Study participating centre
SEKOLAH KEBANGSAAN BATU BELAH
JALAN RANTAU PANJANG 42100 KLANG
KLANG
Malaysia
42100

Study participating centre
SEKOLAH KEBANGSAAN KG RAJA UDA
JALAN KENANGA, KG RAJA UDA 42000 PELABUHAN KLANG
PELABUHAN KLANG
Malaysia
42000

Study participating centre
SEKOLAH KEBANGSAAN PANDAMARAN JAYA
JALAN 12, PANDAMARAN JAYA 42000 PELABUHAN KLANG
PELABUHAN KLANG
Malaysia
42000

Study participating centre
SEKOLAH KEBANGSAAN KG JOHAN SETIA
JALAN JOHAN SETIA OFF JALAN LANGAT 41200 KLANG
KLANG
Malaysia
41200

Study participating centre
SEKOLAH KEBANGSAAN KG PENDAMAR
KAMPUNG PENDAMAR
KLANG
Malaysia
41200

Study participating centre
SEKOLAH KEBANGSAAN TELOK GONG
KG NELAYAN, TELOK GONG 42000 PELABUHAN KLANG

PELABUHAN KLANG
Malaysia
42000

Study participating centre
SEKOLAH KEBANGSAAN TAMAN KLANG JAYA
JALAN SERULING 56, OFF JALAN LANGAT 41200 KLANG
KLANG
Malaysia
41200

Study participating centre
SEKOLAH KEBANGSAAN TELOK PULAI
TAMAN BERTEK 41100 KLANG
KLANG
Malaysia
41100

Study participating centre
SEKOLAH KEBANGSAAN PELABUHAN UTARA
BANDAR BARU SULTAN SULEIMAN 42000 PELABUHAN KLANG
PELABUHAN KLANG
Malaysia
42000

Study participating centre
SEKOLAH KEBANGSAAN ABDUL SAMAT
BATU 11, JALAN KAPAR 42200 KAPAR
KAPAR
Malaysia
42200

Study participating centre
SEKOLAH KEBANGSAAN KAMPUNG IDAMAN
JALAN IDAMAN 17 42000 PELABUHAN KLANG
PELABUHAN KLANG
Malaysia
42000

Study participating centre
SEKOLAH KEBANGSAAN TAMAN KLANG UTAMA
JALAN HAJI SIRAT 42100 KLANG
KLANG
Malaysia
42100

Study participating centre
SEKOLAH KEBANGSAAN KAMPUNG JAWA
JALAN KOTA RAJA, KAMPUNG JAWA 41000 KLANG
KLANG
Malaysia
41000

Study participating centre
SEKOLAH KEBANGSAAN BUKIT TINGGI
BANDAR BUKIT TINGGI 41200 KLANG
KLANG
Malaysia
41200

Study participating centre
SEKOLAH KEBANGSAAN MERU (2)
JALAN PAIP, PEKAN MERU 41050 KLANG
KLANG
Malaysia
41050

Study participating centre
SEKOLAH KEBANGSAAN SUNGAI KAPAR INDAH
JLN SUNGAI KAPAR INDAH 6, TMN SUNGAI KAPAR INDAH 42200 KAPAR, KLANG
KLANG
Malaysia
42200

Study participating centre
SEKOLAH KEBANGSAAN KOTA KEMUNING
JALAN ANGGERIK ARANDA 31/8, KOTA KEMUNING 40460 SHAH ALAM
HAH ALAM
Malaysia
40460 S

**Study participating centre**
**SEKOLAH KEBANGSAAN KAMPUNG JAWA 2**
JALAN KOTA RAJA 41000 KLANG
KLANG
Malaysia
41000

**Study participating centre**
**SEKOLAH KEBANGSAAN METHODIST**
JALAN ORKID 42000 PELABUHAN KLANG
PELABUHAN KLANG
Malaysia
42000

**Study participating centre**
**SEKOLAH KEBANGSAAN PEREMPUAN METHODIST**
JALAN RAYA BARAT 41000 KLANG
KLANG
Malaysia
41000

**Study participating centre**
**BUKIT KUDA HEALTH CLINIC**
Jalan Batu Tiga Lama, Kawasan 15, 41300 Klang, Selangor
KLANG
Malaysia
41300

**Study participating centre**
**Bandar Botanik Health Clinic**
Jalan Langat, Bandar Botanik, 41200 Klang, Selangor
Klang
Malaysia
41200

# Sponsor information

**Organisation**
University of Edinburgh

**ROR**
https://ror.org/01nrxwf90

# Funder(s)

**Funder type**
Government

**Funder Name**
National Institute for Health and Care Research

**Alternative Name(s)**
National Institute for Health Research, NIHR Research, NIHRresearch, NIHR - National Institute for Health Research, NIHR (The National Institute for Health and Care Research), NIHR

**Funding Body Type**
Government organisation

**Funding Body Subtype**
National government

**Location**
United Kingdom

# Results and Publications

**Individual participant data (IPD) sharing plan**
The datasets generated during and/or analyzed during the current study will be stored in the publicly available repository at the University of Edinburgh (DataVault or DataShare) and Universiti Malaya (https://researchdata.um.edu.my/)

**IPD sharing plan summary**
Stored in publicly available repository

**Study outputs**

| Output type | Details | Date created | Date added | Peer reviewed? | Patient-facing? |
|---|---|---|---|---|---|
| Study website | Study website | 11/11/2025 | 11/11/2025 | No | Yes |