

EDUCATION AND TRAINING **Dr. Me project: Teaching children self-care for self-limiting illnesses in primary schools**

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ABSTRACT

Introduction

With increasing demand on general practitioners (GPs) and emergency departments (EDs), patient empowerment for appropriate self-care and inspiring medical careers is vital to sustaining the NHS. Dr. Me trains doctors and medical students to teach primary school children how to self-care for common self-limiting illnesses.

Methods

Volunteers delivered 1-hour Dr. Me sessions in schools, covering workshops on vomiting and diarrhoea; sore throat and fever; and minor and head injuries. Six case scenarios were asked at the beginning and end of the session, and children decided whether to stay home, visit the GP or attend the ED. Responses before and after were compared. A feedback questionnaire gauged confidence in self-care and interest in medical careers.

Results

Dr. Me taught 216 children. Correct responses after the sessions improved by 16.3% ($p < 0.00001$). Vomiting scenarios improved from 48.1% to 68.8%, sore throat from 63.9% to 87.5%, and minor injuries from 84.7% to 89.4%. Feedback showed 93.3% felt more confident in self-care and 56.9% were more interested in medicine.

Discussion

Participating in the Dr. Me project can improve primary school children's knowledge in self-care and increase their confidence in managing self-limiting conditions. Dr. Me also increased children's interest in becoming doctors which can benefit widening participation activities.

KEYWORDS: Self-care, health promotion, widening participation, primary schools, general practice

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Introduction

With increasing demand on general practitioners (GPs) and emergency departments (EDs), patient empowerment for

appropriate self-care and inspiring medical careers is vital to sustaining the NHS.^{1,2}

The 'Dr. Me' project is a health promotion and widening participation programme which trains doctors and medical students to teach primary school children how to self-care for self-limiting conditions and when to access NHS resources. The programme is aligned to the national primary school 'health and wellbeing' curriculum and covers workshops on vomiting and diarrhoea; sore throat and fever; and minor and head injuries.³

Empowering patients to self-care and improving health literacy can increase confidence in managing minor illnesses at home, and potentially reduce the volume of patient contacts with medical professionals.^{4–6} By delivering patient education as a health promotion initiative in schools, children are given the opportunity to develop life-long self-care skills, attitudes and behaviours, which may support the sustainability of the future health service.^{7,8}

In addition, delivering these programmes in schools is an opportunity to widen participation by promoting medical careers through practical experience and meeting medical role models in person.^{9–11} By specifically targeting primary schools in areas of social deprivation, early career aspirations can be supported and reinforced, with the potential to improve future outcomes at medical school application.^{12,13}

The Dr. Me project is run on an unfunded basis and is free to schools. Using a 'pay it forward' model, volunteers who have undergone training and delivered successful Dr. Me school sessions are then trained to teach the following cohort to ensure sustainability of the project.

The Dr. Me project aims to both empower children in their own health and wellbeing as well as widen participation into medicine from disadvantaged schools.

Methods

Medical students and GP trainees underwent bespoke training courses to deliver the Dr. Me project.

Medical student training course

Volunteer medical students were trained on the medical student training course. The training course was designed to fit with the undergraduate timetable and included two 3-hour clinician-led training sessions held 2 weeks apart, followed by self-directed learning.

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The first training session focused on the challenges in the NHS, self-care and the appropriate use of NHS resources. The second session focused on clinical knowledge of the workshop topics and how to teach this in schools. Students were then given a Dr. Me resources pack and supported to design their own 12-minute workshop, before delivering the clinically-supervised sessions in local primary schools.

GP trainee training course

Volunteer GP trainees underwent the GP trainee training course, which involved a 1.5-hour training session designed to fit into the GP Vocational Training Scheme (GPVTS) teaching timetable. The training focused on the communication of self-care to children and how to teach clinical topics in schools. GP trainees were also given a Dr. Me resources pack to support them in designing their workshops.

Primary schools

Primary schools identified on the medical school's widening participation database were offered to sign-up for free Dr. Me sessions. Year 5 classes (school children aged 9 to 10 years old) were targeted due to the sessions' alignment with the national primary school 'health and wellbeing' curriculum, availability in their timetables and the lack of widening participation activities in this age group.

Dr. Me project

Trained doctor and medical student volunteers delivered the 1-hour Dr. Me session to Year 5 classes in groups of four to six, with a maximum class size of 30 children. The children were given 'Dr' name labels on arrival and were referred to as 'doctor' throughout the session.

The Dr. Me session opened with a game involving six case scenarios. The children were given the scenario and asked to decide whether they wanted to stay at home, visit the GP or go to the ED (Box 1). The number of children choosing each destination in each scenario was recorded on a pro forma.

Box 1. Dr. Me case scenarios

For the following scenarios, should you 'stay at home', 'visit the general practitioner' or 'go to the emergency department'?

- > You have a bit of a tummy ache and have vomited twice today, you have been drinking lots of water but have only managed to eat a little bit of food.
- > You have had a really sore throat for 3 days, you have been getting a high temperature and you can only drink a little bit of water.
- > You were running in the playground and fell over, you have a little bruise on your knee but you can still run around and play.
- > You have been vomiting six times a day for 5 days and you are not able to drink any water.
- > You have had a sore throat for 2 days, you can still eat all your food and you don't have a temperature.
- > You were jumping on the trampoline and fell off, landing on your arm, there is a big bump and it really hurts to move it.

Dr. Me Feedback Form

I hope you enjoyed your session with Dr. Me today! We would love your feedback!

Please circle your answers.

Did you find the session fun?	Yes	No
Do you feel that you know more about looking after yourself at home?	Yes	No
Do you now feel more interested in becoming a doctor?	Yes	No
Would you want to do a session like this again in future?	Yes	No

Fig 1. Dr. Me feedback questionnaire.

Following the case scenarios game, the children rotated through three 12-minute practical workshops on vomiting and diarrhoea; sore throat and fever; and minor and head injuries designed by the volunteers. The workshops are focused on learning the typical symptoms, suggested self-care management options, potential red flags for each condition and when to access further help. The session concluded by repeating the same case scenarios game to assess the children's learning after the workshops.

The children are also asked to complete a feedback questionnaire to evaluate enjoyment, confidence in self-care and interest in medical careers (Fig 1).

At the end of the session, the school children were reminded to always inform a responsible adult should they feel unwell. Letters were also sent home with the children following the session, detailing the aim and content of the Dr. Me project, and reminding parents and guardians of their responsibility for their child's health with signposting to appropriate resources.

Analysis

The responses to each case scenario were aggregated under the workshop topics. The correct results before and after teaching were compared, and the χ^2 test was applied to analyse the significance of the impact of the teaching.

Results

The Dr. Me project has trained 58 medical students and GP trainee volunteers, delivering 10 sessions in four London primary schools. The total number of school children taught was 216.

Overall correct responses from the children after the workshop teaching improved significantly by 16.3% across all case scenarios ($p < 0.00001$). The vomiting and diarrhoea scenarios improved from 48.1% to 68.8% ($p < 0.00001$); sore throat and fever scenarios improved from 63.9% to 87.5% ($p < 0.00001$); and minor and head injuries scenarios improved from 84.7% to 89.4% ($p < 0.05$; Fig 2).

The feedback questionnaire was completed by 209 children. Seven children either did not complete the questionnaire or left the session prior to giving feedback. Of those who responded, 98.6% stated they enjoyed the session and 94.3% would want to do a similar session again in future; 93.3% of children felt more confident about looking after themselves at home and 56.9% of children were more interested in becoming a doctor following the session (Fig 3).



Fig 2. Case scenarios results (n=216).

Discussion

The Dr. Me project has been shown to improve primary school children's knowledge of self-care for self-limiting conditions as a result of the teaching. In the diarrhoea and vomiting, and sore throat and fever case scenarios in particular, the children were significantly better able to determine whether they should stay at home, visit the GP or go to the ED. The minor and head injuries case scenarios had a higher rate of correct responses before teaching than either the other case scenarios, which may account for the smaller rise in correct answers after teaching. This may be due to greater prior exposure to managing minor injuries at home, leading to increased knowledge and confidence. The significant improvement in correct answers overall is also in keeping with the increased confidence reported in the feedback questionnaire.

These findings are consistent with existing evidence that patient education can improve confidence in managing self-limiting conditions and can be the first step towards reducing GP and ED attendances in future.⁴⁻⁶ In addition, it is possible that the children go home and discuss the messages taught in the Dr. Me sessions with their families. Alongside the letter with signposted resources sent to the parents and guardians, the Dr. Me session may provide a springboard for families to further explore ideas around self-care and appropriate use of NHS resources.

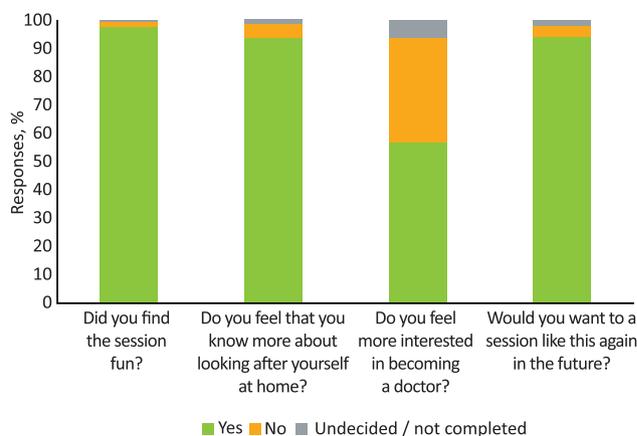


Fig 3. Feedback results (n=209).

With respect to widening participation, an increased proportion of children were more interested in becoming a doctor following the session. This may be due to being referred to as a doctor and behaving like a doctor throughout the session. By answering the clinical scenarios and learning practical skills (such as measuring temperatures or using a pen torch to look at each other's throats), the Dr. Me session is akin to a taster of work experience. The role modelling from the doctors and medical students providing the teaching may also have contributed to the increased interest in medical careers.

Furthermore, though Dr. Me primarily promotes the medical profession, it may also stimulate interest in other healthcare careers, such as nursing, pharmacy, allied healthcare and paramedic services, which are also much needed in the NHS.

Limitations

The Dr. Me project can successfully teach children how to self-care over the duration of the session, however the longer-term benefits of the project are more difficult to ascertain. To evaluate long-term behaviour change and the potential impact on GP and ED attendances would require a longitudinal study which accounts for numerous other confounding factors. This is similarly the case regarding the widening participation impact of the project and whether these children go on to choose medical careers. However, with respect to both health promotion and widening participation, the lifetime cumulative effect of additional messaging is likely to reinforce positive skills, attitudes and behaviours.

Next steps

The Dr. Me project aims to expand its reach into more medical schools and GPVTSs nationally through embedding the programme into undergraduate general practice curricula, widening participation student societies and postgraduate general practice training.

An online platform is also being developed to train Dr. Me leads at medical schools and GPVTSs, which will supplement the existing training packages.

Further research is already underway to review the impact that participating in the Dr. Me project has on medical students and their professional development, such as their confidence, communication and teaching skills, as well as their career choices. ■

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