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Asthma management in Southampton schools

At least 10% of children have asthma. As they spend a large proportion of their day in school, it is important that teachers and other members of school staff have some knowledge of the condition (Lee et al., 1983). School staff may be asked to supervise inhaler administration, decide whether extra medication is required in acute attacks, or decide whether an asthmatic child is fit to do games.

A study of 76 Southampton primary school teachers looked at their knowledge of asthma and its management, and their anxiety about having asthmatic children in school (Brookes et al, 1992).

89% were unhappy about their asthma knowledge.

64% were actually concerned about having asthmatic children in their class.

84% stated that they had had no formal instruction on correct inhaler technique.

86% stated that they would like more information about asthma, the majority of these saying that they thought this should be supplied by the school health service.

Training the trainers

Following this study, the Group for Asthma Management and Education in Southampton schools (GAMES) was set up to address some of these issues. School nurses were identified as the most appropriate professionals to provide asthma information for school staff, and GAMES arranged training days for the nurses.

At the training day, nurses were given information on the ætiology of asthma, trigger factors, and the presentation and treatment of asthma. There are many different inhalers (both relievers and preventers) available, and a selection of these was provided in a practical session on inhaler technique.

School nurses' knowledge was tested before and after the training session.

27% of participants felt before the session that they had sufficient knowledge about asthma to be able to instruct other school staff, and following the session this had increased to **92%**.

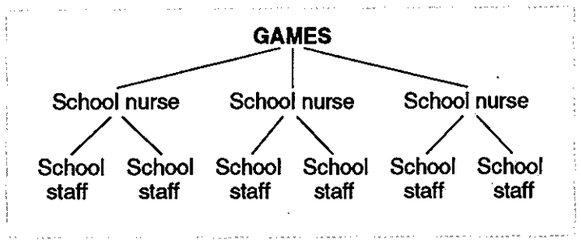
23–69% felt able to demonstrate a variety of inhaler techniques (for example diskhaler, turbohaler, metered dose inhaler) before the course, and this increased to **100%** for all inhalers following the practical session.

38% felt able to recognise signs of a severe asthmatic attack before the course, this figure rising to **100%** following the course.

Equipping the schools

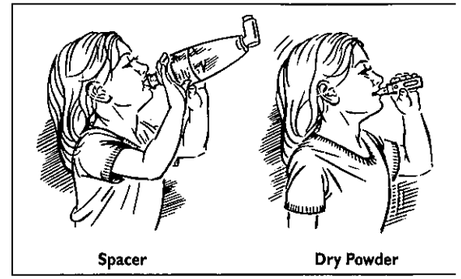
Following the training day, the newly-trained school nurses held training sessions at their schools, so 'cascading' their knowledge to other school staff (Fig. 1). The aim was that school staff should be able to recognise and manage an acute wheezy episode. Five posters produced by GAMES were also given to each school to be displayed. These posters were a useful educa-

Fig. 1. The asthma education cascade model.



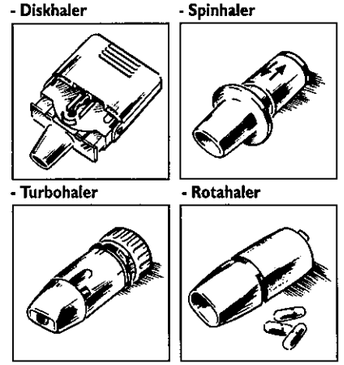
Taking Asthma
Medicine

Listed below are the 4 key ways of taking treatment.
Always STAND and look up to take treatment. Shake aerosol inhalers and wait 30 seconds between firing each puff of aerosol.



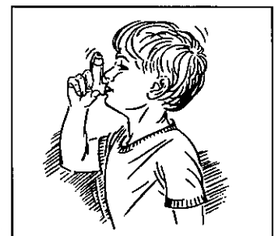
- Aerosol inhaler and spacer: (e.g. Nebuhaler, Volumatic, Fisonair)
  - Bite around the spacer mouthpiece with good lip seal.
  - Young child (under 5) and in asthma attack - 1 puff of medicine then 4 deep breaths in and out. Repeat for 2nd puff of medicine.
  - Older child - 1 puff of medicine; 1 deep steady breath in; hold breath for 10 seconds; breathe out then breathe in again and hold for 10 seconds. Repeat for 2nd puff of medicine.

- Dry powder inhalers:
  - Load the device.
  - Breathe out gently, place inhaler in mouth and breathe in steadily and deeply.
  - Hold breath for 10 seconds then breathe out gently.
    May need second breath to clear all the powder.

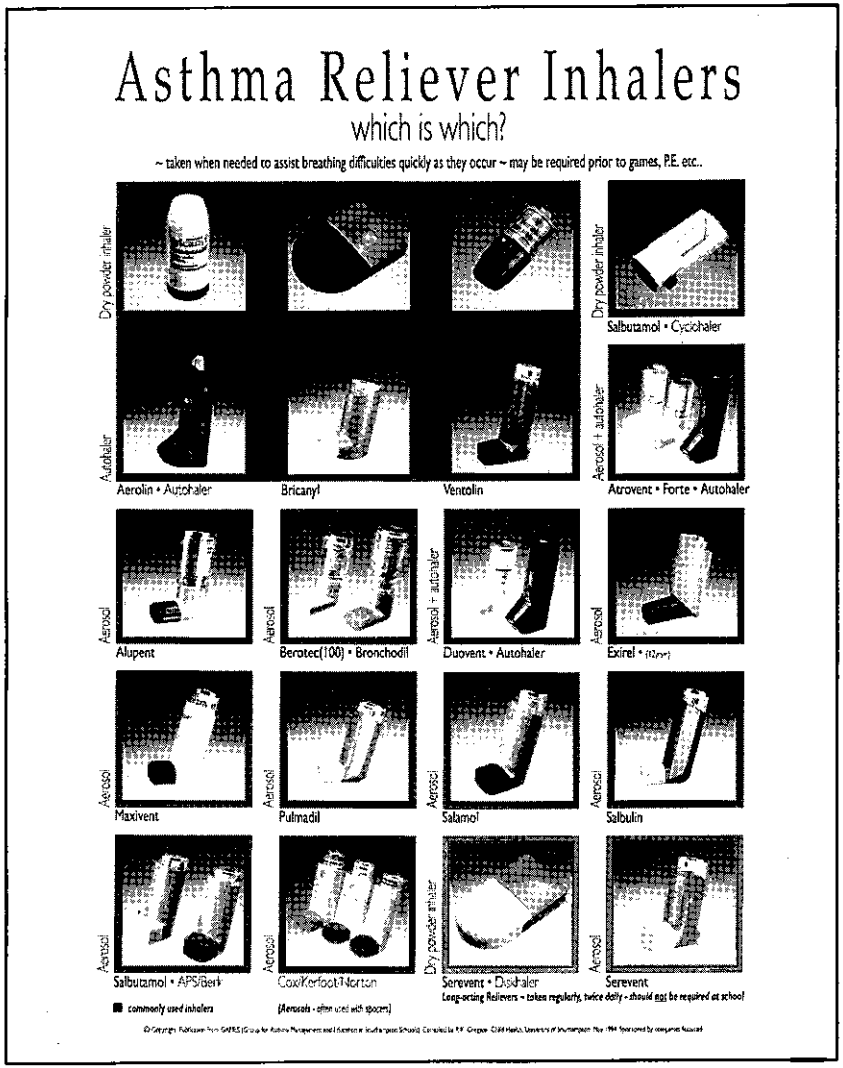


- Aerosol inhaler alone:
  - Breathe out gently, place inhaler in mouth and press the canister as you start to breathe in, deeply and steadily.
  - Hold breath for 10 seconds and repeat for 2nd puff.

- Self triggering inhaler (Autohaler):
  - Push spring lever up.
  - Breathe out gently, place inhaler in mouth and breathe in steadily and deeply. Continue to breathe in after canister has triggered.
  - Hold breath for 10 seconds, then lower spring lever.
    After 60 seconds, repeat for 2nd puff.
    Remember to wash the spacers in warm, soapy water and leave them to dry.
    For loading the devices refer to the product inserts.



Publication from GAMES - Group for Asthma Management and Education in Southampton Schools.
Compiled by R.K. Gregson, Child Health, University of Southampton. Sponsored by Astra Pharmaceuticals Ltd.



Previous page and above: some of the coloured laminated posters produced by GAMES for use in schools.

tional resource, and depicted:

1. A protocol for managing an acute wheezing episode.
2. The role of relievers and preventers.
3. The correct technique for inhaler use.
4. Colour photographs of reliever inhalers.
5. Colour photographs of preventer inhalers.

Each school was issued with a reliever inhaler (ventolin) and a reservoir spacer, for the emergency treatment of an acute wheezing episode. To allay any concerns, Professor Warner wrote to head teachers emphasising that treatment with the emergency spacer and reliever inhaler could be safely administered to any child believed to be having an asthma attack.

Improving knowledge

Through the activities of GAMES we can demonstrate that we have improved school nurses' knowledge of asthma and its management. The school nurses have been busy training school staff, and we are currently evaluating the impact of this strategy. We hope to demonstrate an increase in knowledge and a decrease in the level of anxiety in school staff with regard to the management of asthmatic attacks in schoolchildren.

Most state schools seem to have responded positively to the actions of GAMES. A school nurse was also independently employed by GAMES to visit all private schools, holding a teaching session on asthma and providing each school with posters, an inhaler, and a spacer. Of the 15 private schools visited, the response to the GAMES programme was 'very good' in 13. The other two schools were uncertain about the implementation of a new asthma policy, but we hope that they will reconsider this in the future.

It is important to continue the GAMES initiative. New school nurses will require training, and 'trained' school nurses will need updating. Schools require regular input to maintain their knowledge and to educate new members of staff. By working with GAMES, we hope that school nurses and school staff can together ensure a happier, healthier school life for asthmatic children.

References

1. Lee, D. A. et al (1983), Prevalence and spectrum of asthma in childhood. *British Medical Journal*, 286, 1256–8.
2. Brookes, J. & Jones, K. (1992), Schoolteachers' perceptions and knowledge of asthma in primary schoolchildren. *British Journal of General Practice*, 42, 504–7.