Hand Hygiene in Danish Kindergartens
Denmark

**Background**

**RATIONALE**

Illness among children in day care centres is between two to 7 times as frequent as among children being taken care of in private homes. Smaller children have on average 6-8 episodes of acute infections per year. Illness is more frequent among small children and decreases from the ages of two to four. Children age 6 months to 2 years have on average 23.7 sick-days and children age 2 to 6 years have on average 10 sick-days.

**Target audience**

Kindergarten-children from 0 to 6 years

**Sectors involved**

Two: Parents and community, Education

**Project duration**

6 months (2 months for each period)

**Population reached**

475 children

**CONTRIBUTION OF EACH SECTOR**

Participation in the program and follow up afterwards.

**Description of action/objectives**

The programme consisted of an intervention study on intensified hygiene with frequent hand washing and educational components. Main objectives of this programme were to:

- evaluate the effects of intensified hygiene with frequent hand washing and several educational procedures in day care centres;
- increase knowledge about hygiene among staff;
- motivate children through practical learning exercises to develop hand hygiene habits; and
- inform parents about hand-hygiene.

**Planning and Implementation**

**MECHANISMS USED**

- The study was a prospective, controlled trial carried out in eight day-care centres in a community in Odense municipality. A total of 475 children age 0-6 years olds were included.

**DESCRIPTION OF ACTION/IMPLEMENTATION**

The action was carried out in 3 phases: i) observation period, ii) intervention period and iii) evaluation period. In the intervention period, written material was provided with information about hygiene, airing, being outdoors, and intensive hygienic guidelines in cases of diarrhoea, other ailments such as the common cold and eye infections was given out. Staff was instructed on proper hand hygiene by practical training with a fluorescent material. Children were trained in a 1 hour-session with information on and discussions about bacteria, illness and when to practice hand-hygiene. Hand hygiene practice was conducted in small groups of children. A fairytale about a princess that would not wash her hands was told, and the book distributed. Songs were taught and rhymes and riddles performed. Children in all age groups received a T-shirt with the logo “Clean hands - yes please”. Parents received a folder with information on infections and hand-hygiene practises and were encouraged to sing and speak with the children based on the fairy tale book, songs and riddles. During the evaluation period, the effects of the intervention were measured as the difference in sick-days between the control and the intervention group.

**Evaluation/ Impact**

The overall intervention on hand-hygiene had a positive effect on reduction of sickness in children attending day-care centres. Better hand hygiene can reduce morbidity and absence among children attending day-care centres. Eye infections and diarrhoea were reduced as a result of this intervention.

**SUSTAINABILITY**

Educational instruction on proper hand hygiene practices are a sustainable way of reaching children and staff and parent support is key to maintaining the better habits.

**TRANSFERABILITY**

The success of the project resulted in a lot of media attention, and contributed to an increased focus on hand hygiene in a large number of day-care centres. The message about hand hygiene is transferable, simple and easy to comply with and disseminate. It can be used in kindergartens all over the world.
Lessons learned

KEY FACTORS LEADING TO SUCCESS

- The project was well grounded in educational theory as well as theories on disease prevention and health promotion. The fact that the intervention was broad, and approached children, staff and parents in the same campaign was perceived as a contributor to its success. The dialogue with children was based on a cultural understanding of children’s emotional and motor development. Children cherish fairy tales and identify with the persons in the fairy tales. By organising theatre performances and involving children in washing and singing, children were very engaged.

CHALLENGES DURING PLANNING/IMPLEMENTATION

- The success of the campaign resulted from the trust and collaboration between the health visitors and the project partners at the outset of the project.
- Initially, some representatives of potential day-care institutions that were to be involved in the project thought it was an attempt to cut costs or stated that hygiene was not a problem and that children were seldom ill.

IMPORTANT ASPECTS TO BE CONSIDERED FOR FUTURE PLANNING

- The two project managers propose that staff sick days are registered to assess whether the intervention also had an influence on adult illness. They also recommend that staff observe whether there is a reduction of cases of impetigo.
- There is some evidence that space available per child in day-care centres is correlated to the rate of absence caused by diseases.
- On a related environmental health issue, a recent intervention study in a number of Danish kindergartens revealed that removing top soil with lead and replacing that with clean soil reduced the amount of lead measured on children before and after the application of the new soil. One can speculate, that a combination of removal of leaded soil and of proper hand hygiene plays a role also in preventing lead contamination of children.

ADVICE TO COUNTRIES THAT WANT TO DO SOMETHING SIMILAR

- The methods are easy and simple, but it is important to establish a good relationship with the kindergartens before starting.
- The two project managers have made themselves available for further queries related to this project.

HELPFUL TOOLS

Technical assistance, an international consultant.

Contacts

Name: 1) Vibeke Stage  
2) Mette Ladegaard  
Address: 1) Godthåbsgade 56  
5000 Odense C, DK-Denmark  
2) Langelinie 30, 5230 Odense M  
Tel.: 1) +45 66 114 228  
2) +45 66193414  
Fax: +45 3920 8010 (NIPH)  
E-mail: 1) VST@ odense.dk  
2) MBL@ odense.dk  
URL: http://www.si-folkesundhed.dk/default_ny.asp