



Environmental health and childcare: Examining practices and improving the environment



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Mission of WHEN

The Women's Health & Environmental Network (*WHEN*) is an environmental health organization dedicated to reducing toxic effects upon women and their families through education, research and direct action.

WHEN is Now!

Children's Environmental Health:

WHEN's *Out Of Harm's Way* teaches childcare professionals, housing programs and medical professionals about current research and practical steps to reduce harm in the home, school and childcare, where children spend their time sleeping, eating, playing and learning.



Factors that apply to children



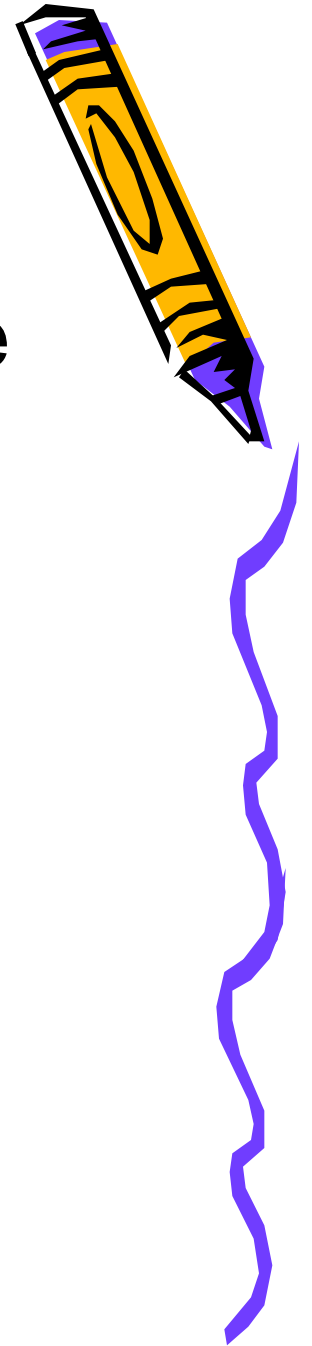
- Children are not little adults; develop differently than adults
- Children eat more food, drink more water
- Children play and stay “low” more hand to mouth, ground to mouth
- Estimated that nearly 12 million (17%) of children in US under 18 have one or more learning, developmental or behavioral disabilities

(Boyle, Decoufle, Yeargin-Allsopp, 1994; US Census)



Three Studies

- 1) Qualitative study at 12 Child Care Centers (CCC) looking at medical storage, administration and environmental issues
- 2) Survey at 15 CCC studying use of green cleaners and IPM
- 3) Pilot intervention at 6 CCC to educate child care providers and parents about green cleaners and IPM



Methods: 1) Qualitative Study

Subjects

- Purposively sampled
- Within each of the 12 planning analysis sections, the CCC were sorted by Keystone STARS Performance Standard rating. One from each section was purposively selected
- Director/administrator and teacher from each CCC were recruited; 24 individuals were interviewed.

Interviews and Procedures

- Face-to-face, semi-structured interviews at CCC with each participant lasting about one hour.
- Small incentive was offered

Analysis

- Interviews were audio-recorded and transcribed.
- Congruence was achieved through triangulation with 90% agreement among at least three coders



Jennifer H. Lofland, PharmD, MPH, PhD; Julie A. Becker, PhD, MPH; Christine W. Hartmann, MSS, PhD; Francine Hanley, MPH; Carla Thomas, MPH

Results: 1) Qualitative Study



- Practices and policies surrounding the storage and administration of medications are inconsistent within these CCC.
- Policies and practices need to be reexamined to standardize medication storage and administration.
- Administrators and teachers may benefit from additional communication and training.
- There were miscommunications between parents and child care providers within these CCC.
- Policies and procedures of the CCC need to be examined and interventions implemented to try to minimize or eliminate miscommunications.

***None of the CCC used green cleaners
or practiced IPM***



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Methods: 2) Environmental Safety in CCC Survey

Objective: To identify green cleaning and integrated pest management practices in child care centers (CCC)

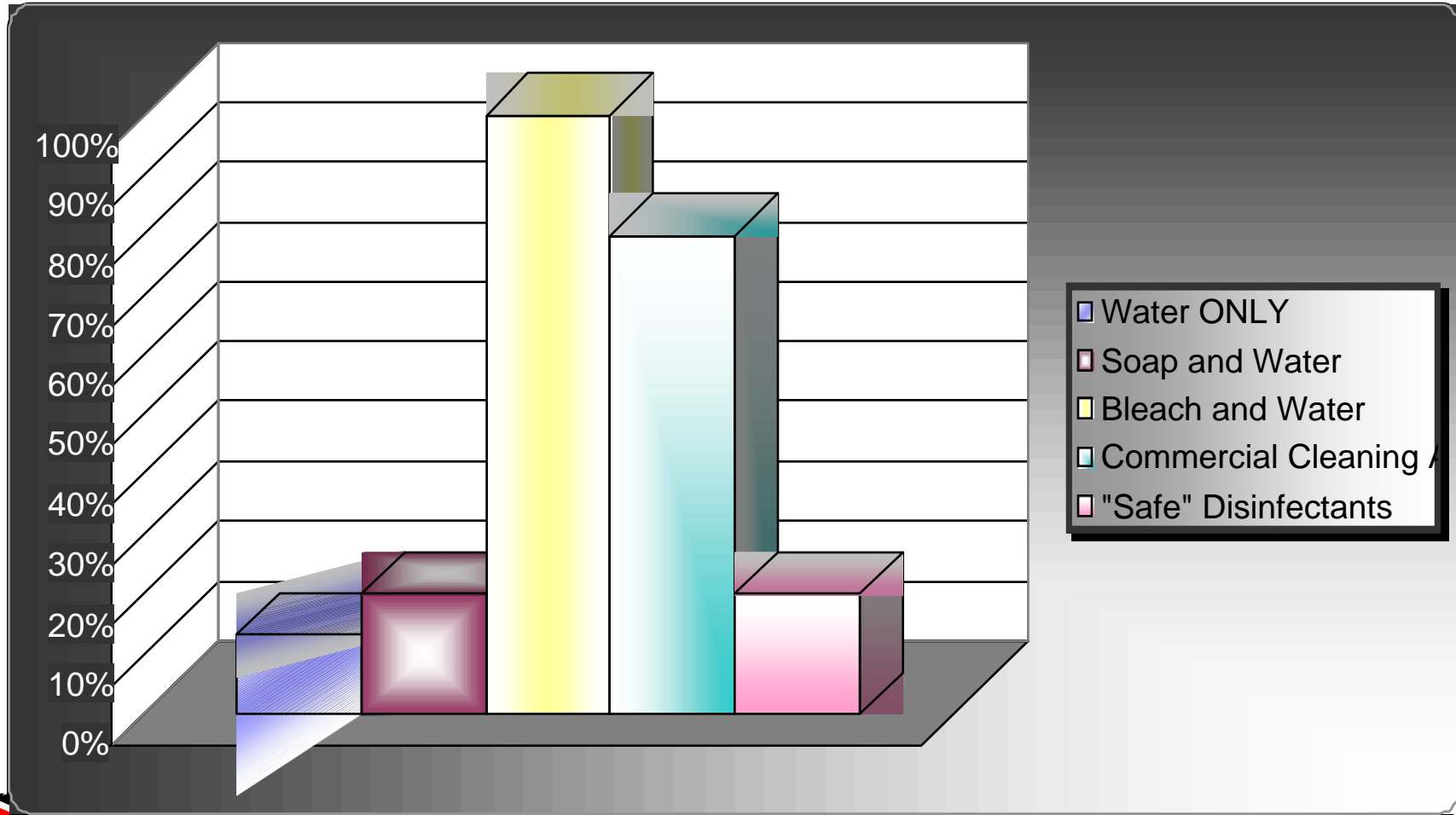
Methods:

- Phone interviews with verbal and written consent
- >300 CCC
- Random selection of 45 CCC
 - 15 study participants which were PA licensed

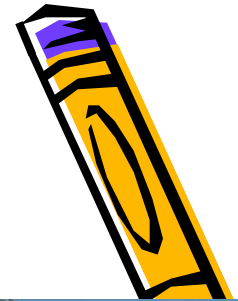


Christa Sauer-Smolenski, MPH; Julie A. Becker, PhD, MPH

Results: 2) Environmental Safety in CCC Survey



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- ❖ **One third** could define IPM (Integrated pest management)
- ❖ **None** of the centers practiced IPM on a regular basis
- ❖ Results were used to restructure the survey and to help with evaluation of pilot intervention



Method: 3) Pilot Intervention

Objectives: To develop and implement curriculum through workshops to train child care providers and parents/guardians about green cleaning and IPM using graduate level students as instructors

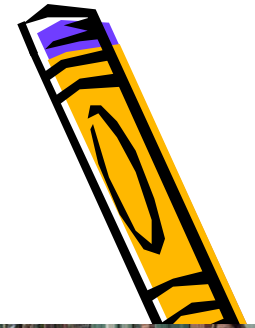
Purposive Sample of Six CCC in Philadelphia

Two trainings per CCC were implemented by trained graduate students:
one for parents and one for child care providers

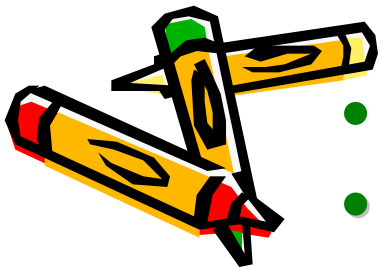


Funded by Pennsylvania Department of Environmental Protection-Environmental Education Grants Program: Julie Becker, Ph.D., MPH; Teresa Mendez-Quigley,MSW; Suzanne DiGiorio-Poll, M.Ed.; Kathleen Kennedy, Ph.D., RN

Results: 3) Pilot Intervention



- Trained 2 graduate students
 - Increased knowledge from 55% to 85%
- Presented workshop information to:
 - 101 child care staff
 - 75 parents/guardians
 - Centers varied in size from 104-250 children per site; Influence upon ~450 children
 - 90 minute workshop: indoor air toxins, IPM, and methods for greening both indoors and around the building; incentives- environmentally friendly cleaners



- **Increase staff knowledge by 22.3%**
- **Increase parent/guardian knowledge by 22.3%**

What do these studies tell us?

- Gap in knowledge and practices for childcare providers, parents and guardians
- Opportunity to expand training and improve childcare facilities through greening practices including cleaners and IPM
- Change facility practices through policies and procedures at the State and Federal levels

