

# Evidence Update

Summary of a Cochrane Review

Diarrhoea Series

Do interventions to promote hand washing prevent diarrhoea?

Promotion of hand washing among children and their care givers can reduce the number of episodes of diarrhoea in children by about 30%.

## Background

Diarrhoea is a leading cause of death among children aged less than five years, particularly in low-income countries. Hand washing can interrupt the transmission of diarrhoea-causing pathogens.

## Inclusion criteria

### Studies:

Randomized controlled trials.

### Participants:

Adults and children in households, communities and day care centres.

### Intervention:

Intervention: activities to promote hand washing after defaecation or disposal of children's faeces and before handling or preparing foods.

Control: no hand washing promotion.

### Outcomes:

Primary: episodes of diarrhoea in individuals in the household, community, or day care centre.

## Results

- 14 trials met the inclusion criteria; eight cluster-randomized day care centres or schools, five cluster-randomized communities or households and one individually randomized adults with AIDS. One trial had adequate allocation concealment.
- In institutional settings in high-income countries, promotion of hand washing was associated with a 39% reduction in episodes of diarrhoea in children under the age of three (incidence rate ratio 0.61, 95% confidence interval 0.40 to 0.92; 2 trials that adjusted for cluster randomization). In all trials participants were monitored at least fortnightly; but one trial, which monitored participants for diarrhoea on a daily basis, found that monitoring alone was associated with reduced incidence of diarrhoea compared to before the intervention.
- Within communities or households in low- and middle-income countries, promotion of hand washing was associated with a 32% reduction in diarrhoea episodes in children (incidence rate ratio 0.68, 95% CI 0.52 to 0.90; 4 trials that adjusted for cluster randomization).
- One trial from the USA reported that adults with AIDS who received hand washing education by a nurse had fewer episodes of diarrhoea over one year compared with the control group (mean difference 1.68, 95% CI 1.93 to 1.43; 148 participants).

Adapted from Ejemot RI, Ehiri JE, Meremikwu MM, Critchley JA. Hand washing for preventing diarrhoea. Cochrane Database of Systematic Reviews 2008, Issue 1. Art. No.: CD004265. DOI: 10.1002/14651858.CD004265.pub2. Evidence Update published in September 2009.

