



Improve CPR Training

Current guidelines for cardiopulmonary resuscitation (CPR) may oversimplify how effective and time-consuming it is to check for breathing to diagnose cardiorespiratory arrest in emergency situations.

In a new study, researchers from the University of Munich Medical School in Germany simulated emergency conditions to test how quickly and effectively health care professionals and laypersons could evaluate respiratory function. The researchers tested 261 individuals using a mannequin and a human test subject. They correctly assessed breathing 81% of the time, a track record the researchers called “quite insufficient” since the statistical probability of guessing if someone is or isn’t breathing is 50%.

Emergency medical services personnel in the study fared best—90% of their evaluations were correct. Physicians were correct 85% of the time; medical students, 78%; and laypersons, 72%. It took them a median of 12 seconds to make their determinations, longer than the 3 to 5 seconds suggested in American Heart Association guidelines, or the 10 seconds recommended by the European Resuscitation Council. The researchers questioned how an accurate determination could be made in 5 seconds or less if breathing had slowed to 10 breaths a minute—one breath every 6 seconds.

Given their findings, the researchers concluded that “checking for breathing cannot be considered a reliable diagnostic measure,” and they recommended a keener focus on diagnostic skills in CPR training. The study appeared in last month’s issue of the *Annals of Emergency Medicine*.

Syringe Dispensers

Could vending machines be a viable way of providing injection drug users with sterile syringes that may prevent

transmission of HIV and other blood-borne pathogens?

Yes, said French researchers who analyzed survey results from injection drug users who obtained sterile syringes from pharmacies, needle exchange programs, and vending machines in Marseilles. The syringe vending machines, introduced in Marseilles in 1996, are similar to coin-operated soda machines except they exchange used syringes for clean ones.

Researchers received completed questionnaires from 343 injection drug users who obtained sterile syringes at 39 sites, including three vending machines, during a 3-day period in 1997. Overall, about one third had never used the vending machines. But 21% used the machines as their primary source of syringes. Those who preferred the machines were younger and less likely to have been in drug maintenance treatment or to have engaged in HIV risk behaviors in the previous 6 months than those who used other sources.

Because the machines attracted a population hardly ever reached by other syringe programs, the researchers concluded that the approach is a “useful adjunct” to existing needle exchange programs and merits consideration in the United States. The study is in last month’s *American Journal of Public Health*.

Rubella Risk in Greece

Researchers at the Institute of Child Health in Athens have linked a 1993 increase in congenital rubella in Greece to low immunization coverage in the mid to late 1970s.

The researchers reported in the December 4 *BMJ* that rubella vaccine was recommended in Greece for children at 15 months of age beginning in 1977. However, their review of documents from several public and private agencies showed that coverage for children consistently remained below 50%. Rubella vaccination for adolescent girls and young women also was limited.

Compulsory rubella immunization was instituted in 1989, and a two-dose vaccination schedule was adopted in 1991, but Greece experienced a major rubella outbreak in 1993. The researchers’ review showed that while the mean age of persons with rubella in the early 1960s was 8.5 years, it was 17 years in 1993, and 64% of patients with rubella that year were 15 years or older. Subsequently, 25 cases of congenital rubella were recorded from hospital admissions in 1993-1994 compared with four in 1986-1987.

The researchers said their findings serve as a warning for countries to maintain high immunization levels.

Zinc Reduces Pneumonia

Developing nations may have a new weapon in their fight against the high incidence of pneumonia and diarrhea among children: zinc supplementation.

In efforts to determine the effects of zinc supplementation on infectious diseases, researchers from the World Health Organization and Johns Hopkins School of Public Health conducted a pooled analysis of randomized controlled trials in children in developing countries. Trials included in the analysis provided oral supplements containing at least half of the US recommended daily allowance of zinc to children under the age of 5 years. Illness from infectious diseases was monitored by home visits.

The researchers reported in the December 1999 issue of the *Journal of Pediatrics* that zinc supplementation was associated with a 41% decrease in pneumonia and a 25% decrease in diarrhea. They noted that for reducing diarrhea, zinc supplementation is comparable with such other interventions as clean water, sanitation, and breastfeeding. However, they said zinc supplementation has shown a greater preventive effect for pneumonia than other interventions currently in use.

—Rebecca Voelker