Mouth to mouth ventilation does not improve CPR

Scott Gottlieb *New York*

When performed by a bystander, cardiopulmonary resuscitation (CPR) with chest compression alone provides similar survival to standard CPR with chest compression plus mouth to mouth ventilation in sudden cardiac arrest, according to a new study.

Researchers at the University of Washington, in Seattle, compared the outcome of 520 cases of cardiac arrest outside hospital. In each case, a bystander was randomised to receive telephone instructions by a fire department dispatcher, who provided either standard CPR instructions with mouth to mouth ventilation or instructions for chest compression alone. Instructions for compression took only 1.4 minutes less than instructions for compression plus mouth to mouth breathing, the report indicates.

Overall, 64 patients, 29 (10.4%) in the mouth to mouth breathing group and 35 (14.6%) in the chest compression only group, survived to hospital discharge, the authors report. This difference was not significant, and adjustment of the results for the patient's age, race, location, fire department response time, and other factors in a logistic regression model yielded similar results *(New England Journal of Medicine* 2000;342:1546-53).

"This challenges preconceived notions, but provides some proof that the challenge is realistic. I think people need to think rationally and carefully about the process of teaching and performing the various components of CPR," said lead author Dr Alfred Hallstrom, director of the Clinical Trials Coordinating Center in Seattle, which is affiliated with the University of Washington.

Enrolment into the study, which ran from January 1992 to August 1998, totalled 1296 cases of cardiac arrest. However, 776 cases were excluded for various reasons, the most common being misdiagnosis of cardiac arrest and arrest due to drug overdose or alcohol intoxication.

In an editorial accompanying the study, Dr Gordon A Ewy of the University of Arizona Sarver Heart Center called the paper a "landmark study" that "will encourage efforts to re-evaluate the way we teach and perform basic CPR." He said that simplification of CPR instructions would be beneficial: "Authorities in CPR have come to realise that our standard method of performing basic CPR is difficult for the average layperson to learn, retain, and perform" (*New England Journal of Medicine* 2000;342:1599-600).

JAMES HERMIT, GLASGOW

Resuscitation methods being demonstrated at a specialist unit

However, mouth to mouth resuscitation should not be abandoned, according to a statement from the American Heart Association. "A trained rescuer is very likely going to increase the chances of survival by doing mouth to mouth along with chest compression," said Dr Jerry Potts, director of science for the association's emergency cardiovascular care programme. "People should be taught both components of CPR and be able to respond quickly if someone near them has cardiac arrest." □

Prisoners in England and Wales are at risk of bloodborne viruses

Gavin Yamey *BMJ*

A quarter of adult male prisoners have injected drugs, and 6% inject while in prison, according to a national survey of risk behaviours for transmission of bloodborne viruses among prisoners in England and Wales. Three quarters of those who inject drugs in prison share needles or syringes.

The survey, by researchers from the Public Health Laboratory Service, found that 3% of adult male prisoners have had penetrative sex with another man while in prison (*Communicable Disease and Public Health* 2000;3:121-6).

In addition to questioning prisoners about risk factors, the researchers collected saliva specimens to test for antibodies against HIV, hepatitis C virus, and the core antigen of hepatitis B virus.

Among all those tested, 0.4% were HIV positive, 7% had antibodies to hepatitis C, and 8% to hepatitis B. Among adult intravenous drug users, 0.5% were HIV positive, 31% had antibodies to hepatitis C, and 20% to hepatitis B.

The authors conclude: "It is reasonable to assume that some of the hepatitis infections were acquired by injecting in prison."

Many of the intravenous drug users in the survey had never received any treatment for their drug use. The authors believe that they should have access to services aimed at minimising harm from drug use and supporting those who wish to abstain.

They call for needle exchange programmes to be established inside prisons. They also suggest that condoms should be freely available.

Noel Gill, of the Public Health Laboratory Service and one of the authors of the study, said: "We have to intensify the prison services' interventions around harm minimisation [from drug use]."

A spokesman for the Prisons Service said: "The Prisons Service has no plans to introduce needle exchange systems currently but is monitoring developments at home and abroad. However, disinfecting tablets have been trialled in eleven establishments since 1998 and extension to all other establishments is being considered. Prison doctors have the authority to prescribe condoms if, in their clinical judgment, there is a known risk of HIV infection."

This is the first multisite survey of HIV, hepatitis C, and hepatitis B prevalence in prisons in England and Wales, but there are no accurate data on time trends.

Eight prisons were selected for the survey from the 135 in England and Wales. Six were for adult inmates, one was for women, and one was for male young offenders (under 21 years). Half the prisons selected had a catchment area that included London. Prisoners were excluded if they were unable to give consent or if they could not be reached on the days of the survey. The survey data were unlinked and anonymous. □