

Where someone drowns determines their chance of survival, according to new research

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Two new research studies show that location is the most important factor in determining drowning survival.

"Ontarians from rural areas are almost three times more likely to die of drowning than [urban residents](#)," said Dr. Stephen Hwang of the Centre for Research on Inner City Health at St. Michael's Hospital in Toronto.

Rural residents' increased access to open water, and possibly decreased access to swimming lessons, were some of the factors that the study's authors felt might account for the difference between rural and urban drowning rates.

Another study, published today in *Canadian Journal of Emergency Medicine*, showed that most drownings occur in public places – such as on open water, recreation centres or parks.

"Even though most occur in public, four out of five drownings happen without a witness," said Jason Buick, lead author and a University of Toronto graduate student doing a research project with Rescu at St. Michael's Hospital. "Canadians aren't using good judgment when it comes to water safety."

Using a database of cardiac cases attended by Greater Toronto Area paramedic services, Buick found that bystanders performed CPR for half of all drownings, but only one-third of all other cardiac incidents.

Despite being more likely to receive bystander CPR, a drowning victim's five per cent chance of survival is as low as all other cardiac arrests – highlighting that more needs to be done to improve survival.

Buick recommends swimming with others in public spaces where lifeguards or other bystanders are more common.

Differing CPR rates may result from increased bystander recognition. Many Canadians first learn CPR in swimming classes and more easily associate drowning and CPR – especially when a victim is found in or around water.

"We can improve survival by emphasizing the importance of providing CPR and by teaching more people to perform it," said Buick, who is also a paramedic.

The number of Canadian drowning incidents has risen since 2004 and the Lifesaving Society of Canada estimates that between 400 and 500 people drown countrywide every year.

The rural drowning rates study, published this week in the *International Journal of Aquatic Research and Education*, looked at five years of Ontario [drowning](#) data from 2004 to 2008. The lead authors on the study were internal medicine residents Dr. Michael Fralick and Dr. Zane Gallinger.

Provided by St. Michael's Hospital

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