

# 'Don't drink and ride': Improving subway safety

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Structural interventions and public safety messages may be the most effective ways to prevent subway fatalities and improve the overall safety of New York City subway systems, according to a study by researchers at Columbia University's Mailman School of Public Health. Subway safety is important because even though subway transit is a relatively safe mode of transportation, it has the highest fatality rate of all forms of mass transit in the U.S. The paper, "Epidemiology of Subway-Related Fatalities in New York City," is published in the November 2008 edition of the *Journal of Safety Research*.

To characterize subway-related fatalities and identify opportunities for risk reduction, the Mailman School researchers reviewed files from the Office of the Chief Medical Examiner of New York City (OCME) for all NYC subway-related deaths between the years 1990-2003. During that time, there were 668 subway-related fatalities. Of these, 10 (1.5%) were homicides, 343 (51.3%) were suicides, and 315 (47.2%) were accidental (unintentional) deaths. The majority (84%) of all subway fatality victims were male, and the largest proportion (26.5%) of victims were between 35-44 years of ages. More subway-related fatalities occurred in Manhattan (43.1%) than in any other borough.

Unintentional subway fatalities may result from a variety of adverse events, such as incursions onto the tracks. Passengers may purposefully jump onto tracks to retrieve dropped personal items, or accidentally fall onto the tracks through missteps, sudden illness, or lack of supervision of children. Thrill-seeking behaviors ("subway surfing") of youth may

also result in fatalities.

"An interesting finding of the study was the relationship between alcohol intoxication and unintentional subway fatalities; 46% of all accidental subway-fatality victims had a positive toxicological screen for alcohol. This is significantly higher than the average rate reported by the OCME for all other subway fatality victims, including homicides and suicides," says Robyn Gershon, DrPH, professor of clinical Sociomedical Sciences at the Mailman School of Public Health. "Given that more than 75% of households in Manhattan and more than 50% of those in all of NYC do not own a car, there may be a sense that drinking alcohol to the point of intoxication is not risky since people are not driving," says Dr. Gershon. "However these data suggest that riding subways while intoxicated may be associated with accidental death. This is a public health message that has not, to our knowledge, been communicated to the general public."

Improvements to the subway environment, such as adequate lighting, well-functioning and structurally sound elevators, escalators, subway cars and rails, clear egress paths, easy to follow signage, effective communication systems, good housekeeping, and other standard environmental controls may improve safety outcomes. Increasing the visibility of police and lowering the level of disorder on subways is also an important component to reducing the overall climate for violent crime, as well as the fear of violent crime.

Dr. Gershon suggests that public information campaigns addressing the dangers associated with riding after drinking may help lessen the risk of this type of unintentional fatality. The Metropolitan Transportation Authority already promotes safety through numerous messages aimed at parents of young children and thrill-seeking individuals, as well as safe riding in general. "Public messages, similar to the ones developed to discourage drunk driving, might be similarly effective in raising the awareness of the risk associated with intoxication while riding the

subway," Dr. Gershon recommends.

Source: Columbia University

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