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Unproven Olympic health legacies

British couch potatoes are not trading their TV remotes for running shoes as quickly as organizers of the 2012 London Olympic Games had hoped. An initiative called the 3x30 plan, tied to the Olympics, set a goal of getting one million more British citizens to participate in sports — three times a week, for at least 30 minutes — by 2012–13. Turns out that goal, set in 2007–08, may have been a tad ambitious.

As of 2009–10, only 123 000 more people had begun playing sports thrice weekly, according to Sport England, part of the UK's Department for Culture, Media and Sport

(www.sportengland.org/research/active_people_survey/active_people_survey_4.aspx).

Unless interest in physical activity spikes enormously, the one-million target may not be achieved until more than 10 years after the Olympics.

During the past decade, it has become commonplace for organizers of major multi-sport events to set lofty legacy goals. These events last a short period but cost millions, and to make the expense more palatable to the public, politicians and other supporters must tout benefits beyond entertainment or national showcasing. The potential health benefits for residents of the host nation are always high on the list. The only problem is that the upfront rhetoric rarely leads to a substantial post-event investment in evaluation of actual health impacts.

“If you start with an objective of improving health, it would be a risky investment. That is not to say that it couldn't happen, but there is no evidence to indicate it will,” says Gerry McCartney, head of NHS Health Scotland's Public Health Observatory Division. “There are very few studies to show what the actual impacts are, and the ones that exist are of pretty poor quality.”

McCartney led a recent review of evidence regarding the health and socioeconomic impacts of multi-sport events held from 1978–2008 (*BMJ* 2010; 340:c2369). The study, undertaken in anticipation of both the 2012 London Olympics and the 2014 Commonwealth Games to be held in Glasgow, Scotland, considered societal impacts in various cities, including Seoul, South Korea (host of 1988 Summer Olympics); Atlanta, Georgia (host of 1996 Summer Olympics) and Sydney, Australia (host of 2000 Summer Olympics).

So, do costly and resource-intensive sporting events better the lot of people in countries that host them? According to the available evidence, the answer appears to be: who knows?

“Our review found insufficient evidence to confirm or refute expectations about the health or socioeconomic benefits for the host population of previous major multi-sport events,” the paper states. “There is a lack of evidence on the impacts of major multi-sport events on the host population, and until decision makers include robust, long term evaluations as part of their design and implementation of events, it is unclear how the costs can be justified in terms of host population benefits.”

Governments that make big promises to lure an event like the Olympics should backup those promises by evaluating actual outcomes, says Mike Weed, professor of sport in society at Canterbury Christ Church University in Kent, United Kingdom. In a recent editorial, Weed wrote that the 2012 London Olympic and Paralympic Games will cost England £9.6 billion, or £150 for every British citizen, and “the risk for the UK population is not that we will not get the benefit we want for our £150 a head investment in London 2012, but that there will be no robust evidence of what we have paid for.” (*BMJ* 2010;340:c2202)

“The Games could have an effect,” says Weed, “but not the magic bullet-panacea effect of getting average couch potatoes playing sports three times a week.”

A large-scale, multi-sport event has the potential to positively affect society in two ways, says Weed. The first is the “demonstration effect.” Watching the Olympics may inspire people who once participated in sports to take them up again, and it may inspire people currently playing a sport to play it more often or to switch to another sport.

“What it doesn’t do is have any effect on people who don’t — and have never — participated in sports,” says Weed.

The second potential benefit is the “festival effect.” This occurs when an event is promoted as bigger than just sport, leading people to get swept up in the excitement and become “incidentally active,” drawn from their sofas to party rather than play a sport.

“This is aimed at the least active,” says Weed. “You don’t use health messages because these people are pretty much fed up with being told they don’t exercise enough.”

There are external factors, though, that could reduce the potential health benefits of the 2012 Games. Since winning the bid in 2005, England, like most every country, has suffered through a terrible economy, which may limit investment in a sports participation legacy. Another change has been a new government that is transforming existing Olympic programs, not necessarily for the better, to put its own stamp on them.

Still, a government can use an event like the Olympics as a tool to make real change, says Weed, but only if it takes a long-term approach. “What is absolutely needed are long-term goals and long-term programs,” says Weed.

Indeed, a coordinated, long-term, multi-level approach to leveraging the exposure gained from hosting a global sporting event can produce benefits, says Dr. Karim Khan, principal investigator at the Centre for Hip Health and Mobility at the University of British Columbia in Vancouver, which hosted the 2010 Winter Olympics.

“People are trying to win the bid and to put it in terms of public benefits is important these days,” says Khan. “Politicians try to justify it in terms of sustainable benefits. How do we get the population more physically active? These events could be a fantastic and powerful way if they were part of an overall strategy.”

Robert Geneau, a research scientist in the Health Promotion and Chronic Disease Prevention branch of the Public Health Agency of Canada, also touts high-profile events like the Olympics as effective tools for marketing positive social messages, such as the health benefits of increasing physical activity. “The expectation is that the social marketing would be enhanced because it is tied to something prestigious like the Olympics,” says Geneau.

There is a danger, however, if that marketing takes the form of tangible, quantifiable, time-limited goals. If those goals aren’t met, it might be viewed by some as a failure. Then again, perhaps goals that are ambitious, even if eventually unfulfilled, are

better than ones that are easily achievable. “They are supposed to be inspirational,” says Geneau. “The main thing is for people to see trends going in the right direction.” — Roger Collier, *CMAJ*

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