Conclusion: The abridged walkability index for metropolitan Sydney is comparable to existing indexes that include net retail area and has demonstrated specificity for utilitarian walking behavior. The index utilizes the best available spatial data and is easily linked to existing data sources with address-level identifiers, reducing the need for high-level GIS expertise and potentially contributing to greater comparability across research, policy and planning applications.

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Can publicly available webcameras and mechanical Turks be used to evaluate physical activity policy and built environment change?☆

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Introduction: Fewer than 50% of adults and 40% of youth meet US CDC guidelines for physical activity (PA) with the built environment (BE) a culprit for limited PA. A challenge in evaluating policy and BE change is the forethought to capture a priori PA behaviors and the ability to eliminate bias in post-change environments. The present objective was to analyze existing public data feeds to quantify effectiveness of BE interventions. The Archive of Many Outdoor Scenes (AMOS) has collected 135 million images of outdoor environments from 12,000 webcams since 2006. Many of these environments have experienced BE change.

Methods: One example of BE change is the addition of protected bike lanes and a bike share program in Washington, DC. We selected an AMOS webcam that captured this change. AMOS captures a photograph from each webcam every half hour. AMOS captured the 120 webcam photographs between 0700 and 1900 during the first work week of June 2009 and the 120 photographs from the same week in 2010. We used the Amazon Mechanical Turk (MTurk) website to crowd-source the image annotation. MTurk workers were paid US$0.01 to mark each pedestrian, cyclist and vehicle in a photograph. Each image was coded 5 unique times (n=1200). The data, counts of transportation mode, was downloaded to SPSS for analysis.

Results: The number of cyclists per scene increased four-fold between 2009 and 2010 ($F=36.72$, $p=0.002$). There was no significant increase in pedestrians between the two years, however there was a significant increase in number of vehicles per scene ($F=16.81$, $p<0.001$).

Discussion: This novel research presents unobtrusive surveillance of PA policy and BE intervention effectiveness. Washington, DC, added bike lanes during 2009 and the use of webcam data allowed for a pre- and post-bike lane analysis of travel. The addition of the bike lane is associated with a significant four-fold increase in number of cyclist per scene. The number of vehicles per scene also increased. A portion of this increase may be associated with compressed lanes due to lane removal for the bike lane, thus increasing vehicles per remaining lane. Captured public webcam scenes and MTurks offer an inexpensive (US$12.00), discreet means to evaluate effectiveness of BE policy change and interventions. This abstract presents an initial effort. We continue to test methodology with additional scenes, including parks, school playgrounds, and safe routes to schools, and are working to automate the MTurk process.

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In search of sports medicine success: Five lessons for clinical, team, and research success

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Plenary Keynote Refshauge Lecture
Australian Sports Medicine Federation Fellows Sponsored Speaker

K. Khan

University of British Columbia

Major General Sir William Dudley Refshauge, AC, CBE, ED, FRSH, FRCOG (3 April 1913–27 May 2009) was an Australian soldier and public health administrator. He was Honorary Physician to Queen Elizabeth II (1955–64), Director-General of the Commonwealth Department of Health (1960–73), and Secretary-General of the World Medical Association (1973–76). The Sir William Refshauge Lecture was inaugurated in 1999 and it is a tremendous privilege to give the 14th in this series. I believe this will be the first Refshauge lecture focused on how teamwork and team leadership influences success in work and sport (which for many audience members is the same thing). One of the major shifts in the 'information age' has been that from working individually to working in teams. Similarly, even in the so-called 'individual sports' champions acknowledge the critical contribution of the retinue of supporters of which the sports medicine/strength and conditioning team is just one element. The Refshauge Lecture provides an ideal opportunity for us to consider this 'big picture' issue – Why do some teams succeed and others are a nightmare to be part of? Because of the various disciplines that make up this exciting international meeting, I will define teams broadly – I will consider i) sporting teams, ii) the 'off-field teams that support athletes via sports science and sports medicine, iii) research teams such as labs/research groups, as well as iv) workplace teams. It is the norm to apply 'data' and 'evidence' to make clinical decisions, to decide research strategy and to make policy. Given this platform then, please consider how much evidence to we apply to the critical process of i) forming teams and ii) contributing to clinical and research teams? Is this a 'random' or 'gut feel' process. Is that good enough in the 21st century? The vast majority of the participants in this 'Be Active 2012' conference have successful leadership roles in various organizations. What literature and evidence is there to guide this behaviour? For team success which is the greater priority – a compelling goal, effective communication, or trust? Do teams function better than individuals? What is the difference between a team and working group and when does it matter? A substantial body of evidence relates to both teams and leadership. The majority of it has been outside the setting or sport, some of it has been in the setting of academia and large organizations which are relevant to the workplace of many conference participants. I contend that the principles espoused by thought leaders in organizational behaviour and leadership such as Jon Katzenbach, Richard Hackman, Jim Collins, and John Kotter, to list a few, have enormous relevance to our daily lives. This work is based on research – studies of teams and leaders. This research has been cited many thousands of times. It is my hope that shining a light on this body of work will add value for conference participants by providing principles that can be applied immediately and, perhaps, inspiring further reading and study in this domain. I argue that teams and leadership are pervasive to all the disciplines that contribute to the Be Active 2012 conference.

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