Results: Initial results show promising links between external climatic factors, the subway climatology and the ability to predict the dispersal of smoke/toxins. It has also been established that by navigating pedestrians on routes away from smoke and/or toxic dispersion can significantly reduce the number of fatalities and effect on evacuee's health. The possibilities of integrating these findings is allowing for a more integrated assessment to be carried out.

Conclusions: The study discussed demonstrates that by integrating the datasets mentioned, a greater understanding of the effect subway climatology has on evacuations strategies of subway stations can be understood. It is shown that accessible technology and software, along with methodologies developed, supports the assessment and development of integrated evacuation strategies that reduce the loss of life or effects on public health.

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A12 Will moving into East Village housing increase household physical activity levels? Evaluation of a natural experiment

Bina Ram [a], Ashley Cooper [b], Billie Giles-Corti [c], Venediktos Kapetanakis [a], Derek Cook [a], Peter Whincup [a], Owen [a], Ellaway [d], Page [b], Lewis [e], Cummins [e], Rudnicka [a]

[a] *St. George's University, UK*
[b] *University of Bristol, UK*
[c] *The University of Mebourne, Australia*
[d] *University of Glasgow, Scotland, UK*
[e] *London School of Hygiene and Tropical Medicine, UK*

Abstract

Background: Although the built environment may be an important influence on physical activity (PA), formal evidence is weak. The 2012 London Olympic Games Athletes' Village (renamed East Village) is being used to provide a combination of affordable (social, intermediate) and market-rent accommodation. It offers a unique opportunity to assess the health impact of moving to a built environment designed to encourage active living.

Methods: A two-year controlled longitudinal study of 1200 households (including at least one adult) is being carried out to establish whether PA levels in households relocating to East Village show a sustained increase when compared to households living outside East Village. Those applying to live in East Village are being recruited on application. Participants are having assessments of objectively measured PA (using Actigraph monitors), and body composition in their current place of residence and will be reassessed two-years later, either in East Village (intervention group) or in their original place of residence (control group). GPS receivers are being worn to map patterns of use of the local environment (including indoor and outdoor activity). In addition, accurate GIS mapping is being used to establish whether health promoting environmental resources influence levels of active transport, including walking and cycling. Multilevel models will examine differences in PA change between intervention and control groups, adjusting for individual and household level factors, and other sociodemographic confounding factors collected using electronic questionnaires.

Results: We are examining whether differences in PA amongst intervention and control groups relate to use of the local environment, and if so, which environmental components. With a 70% follow-up rate the study is powered to detect a 5% increase in the number of daily steps (and other activity/adiposity outcomes); this represents the lower limit of a potentially worthwhile increase in physical activity. To date, 1225 participants (from 833 households), have been recruited; 712 from social households, 486 and 27 from those seeking intermediate and market-rent accommodation. At least 4 days (>540 min) of PA data have been collected from 69%, 85%, and 85% respectively. Sub-group analysis shows three-quarters of Actigraph data matches GPS data. Baseline recruitment will be complete by Autumn-2015.

Conclusions: This study offers an important opportunity for a natural experiment. This study seeks to identify factors that encourage active use of the local environment. While the opportunity is unique, the results may be generalisable to other urban building projects and should inform future evidence-based urban planning.

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A13 Comprehensive Health Impact Assessment for Active Travel: A "PASTA" project approach

David Rojas-Rueda [a], Esther Anaya [b], Ione Avila-Palencia [a], Christian Brand [c], Thomas Cole-Hunter [a], Audrey de Nazelle [b], Evi Dons [c], Fabienne Frick [e], Regine Gerike [f], Thomas Götschi [g], Sonja Kahlmeier [g], Natalie Mueller [a], Annika Nilsson [h], Fabio Nussio [i], Juan Pablo Orjuela [b], Luc Int Panis [d,j], Francesca Racioppi [k], Carsten Rothballer [l], Julian Sanchez [b], Christian Schweizer [k], Tina Uhlmann [f], Sandra Wegener [f], Mark Nieuwenhuijsen [a]

[a] *Center for Research in Environmental Epidemiology (CREAL), Spain*
[b] *Imperial College, UK*
[c] *University of Oxford, UK*
[d] *Hasselt University, Belgium*
[e] *DSHS Koln, Germany*
[f] *BOKU, Austria*
[g] *University of Zurich, Switzerland*
[h] *Trivector Traffic, Sweden*
[i] *Rome Mobility Agency, Italy*