Charter 3
11:00

Urban Planning and Architecture	
Session title	Small are research for improving urban health
Chair	Professor Larry Frank

Ref: 621 Oral

Exploring associations between urban green, built environment configuration and walking: Results from the Greater London boroughs

Presenting author**: Dr Chinmoy Sarkar* *Department of Primary Care and Public Health, Centre for Health Sciences Research, School of Medicine, Cardiff University, Cardiff, CF14 4XN, United Kingdom. *Corresponding email: SarkarC1@cardiff.ac.uk**

Cochrane Institute of Primary Care and Public Health Cardiff University, 5th Floor, Neuadd Meirionnydd Heath Park Cardiff CF14 4YS, United Kingdom.

Co-authors: Dr John Gallacher*, Prof. Chris Webster** *Department of Primary Care and Public Health, Centre for Health Sciences Research, School of Medicine, Cardiff University, Cardiff, CF14 4XN, United Kingdom. ** Faculty of Architecture, The University of Hong Kon

Abstract: In recent years, lack of requisite physical activity has been identified as a key determinant of obesity and associated chronic diseases. In this paper, we examine the associations between objectively measured urban green and walking behaviour and how such associations are mediated by built environment configuration and street-level physical accessibility. The dwelling locations of the respondents of London Travel Demand Survey were geocoded and individual walking behaviour was extracted from the travel diary. The UK Map data was employed to calculate accessibility to urban green; expressed in terms of density of natural green, agricultural and anthropogenic green as well as street trees within defined buffers. A 0.5 metre resolution normalized difference vegetation index was employed to operationalize the degree of greenness. A network model of street-level physical accessibility was developed using spatial Domain Network Analysis (sDNA). A two-part multi-level regression model was employed with individuals nested within census-defined lower super output areas. The results show a significant influence of both urban green and street-level accessibility highlighting the need for targeted intervention strategies in the activity-friendly planning and design of urban built environment.