THE 2008 GREAT NORTH RUN AS PUBLIC HEALTH INTERVENTION: PARTICIPANT CHARACTERISTICS AND CHANGES IN PHYSICAL ACTIVITY AND BODY MASS INDEX FROM 20 WEEKS BEFORE TO 20 WEEKS AFTER THE EVENT

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Background: Mass participation sporting events are often proposed as methods of promoting physical activity and decreasing obesity. Little research has explored who takes part in such events or if participation leads to sustained behaviour change. The Great North Run (GNR), from Newcastle upon Tyne to South Shields (13.1 miles), is the UK’s largest mass participation sporting event.

Objectives: To describe the characteristics of non-elite runners in the 2008 GNR, and document group-level changes in physical activity and body mass index (BMI) between 20 weeks before (time 1) and 20 week after (time 2) the event.

Design: Age, gender and postcode of residence for all 2008 GNR non-elite runners was provided by the organisers (n = 51 185). Links to online surveys were sent to all non-elite runners via email at times 1 and 2. These collected information on age, gender, current physical activity levels (using the short International Physical Activity Questionnaire, IPAQ), self reported height and weight, and postcode of residence. IPAQ responses were used to categorise physical activity over the past seven days as low, moderate or high. Postcodes of residence were used to assign Index of Multiple Deprivation data to those runners living in England (91.7% of all non-elite runners).

Results: Median age of all 51 185 non-elite runners was 35.6 (IQR 28.4 to 43.7) years, 58.9% were male and 53.5% of those living in England lived in the least deprived 40% of areas. 3018 participants responded to the survey at time 1 and 2851 at time 2. Respondents to both surveys were slightly older and less likely to be male than all non-elite runners but had a similar deprivation profile. Among respondents at time 1, physical activity was categorised as high in 65.0% and moderate in 29.2%; median BMI was 24.0 (IQR 22.0 to 26.3). At time 2, physical activity was categorised as high in 68.0% and moderate in 21.8%. Median BMI was 24.0 (IQR 21.9 to 26.3).

Conclusions: The typical GNR participant is male, mid-30s, lives to some but not all areas of the city, suggesting that the significance and magnitude of associations between built environment characteristics and walking are not the same across space.

Discussion: Application and findings of the three approaches lead to distinct yet complementary conclusions about the environmental and temporal determinants of physical activity and the scales at which they may be operating. Findings are discussed in terms of their implications for public health practice and policy, eg acquiring and inventorying data on population health as well as area characteristics for surveillance purposes, developing and implementing health promotion and prevention strategies based on extent data at the local and at different geographical levels, and evaluating policy interventions aimed at changing the local environment. The challenges of targeting actions at the local area level are underlined and examined in light of recent national (UK and Canada) and international recommendations and guidance to create environments conducive to physical activity.
examined and compared treatment of Māori (Indigenous) and non-Māori New Zealanders with colon cancer.

**Methods:** From the New Zealand Cancer Registry we identified a population-based cohort of 629 patients diagnosed with colon cancer between 1996 and 2003. We reviewed medical notes and compared surgical and oncology treatment in Māori and non-Māori patients. We adjusted treatment differences for tumour characteristics, patient comorbidity and treatment facility type.

**Findings:** Māori and non-Māori patients received similar rates of surgical resection although Māori patients were less likely to have extensive lymph node clearance (relative risk (RR) 0.25, 95% CI 0.13 to 0.50 for removal of 30 or more nodes) and were more likely to die in the post-operative period (RR 5.31, 95% CI 1.54 to 18.32 for death following elective surgery). In patients with stage III disease Māori were significantly less likely to receive chemotherapy (RR 0.69, 95% CI 0.35 to 0.91) and more likely to experience delay of at least eight weeks to start chemotherapy (RR 1.98, 95% CI 1.25 to 3.16). Treatment disparities were not accounted for by patient comorbidity or treatment facility type (public cancer centre, public non-cancer centre and private facility) although differences within facility types remain a potential explanatory factor.

**Interpretation:** Māori and non-Māori patients with colon cancer receive similar surgical treatment but Māori are less likely to receive adjuvant chemotherapy and may experience a lower quality of care. Attention to health-system factors is needed to ensure equal access and quality of cancer treatment.

**Conclusion:** Reported use of statin is considerably lower than need however, most high-risk participants are unaware of their risk, despite being informed of their risk by the study. Ethnic minorities and lower socioeconomic position groups, who are most at risk of heart disease, are significantly less likely to be aware. This is likely to impact on ability to participate in self-management and may partly explain poorer clinical outcomes.