SUNBURN PREDICTORS AMONG A NEW ZEALAND POPULATION IN A CROSS-SECTIONAL SURVEY SERIES, 1999-2006

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Background:
New Zealand has the highest overall (males and females together) age standardised incidence rate from cutaneous malignant melanoma in the world. Excessive exposure to solar ultraviolet radiation is a major contributor in skin cancer pathogenesis. Health promotion programmes have been implemented in New Zealand since 1988, aiming to decrease harmful sun exposure by encouraging the public to engage in sun-safe behaviours. To assist with the evaluation of the SunSmart programme, the Cancer Society of New Zealand Inc. and the Health Sponsorship Council undertook the Triennial Sun Protection Survey series (Sun Survey) from 1994 to 2006.

Aim:
To use a dataset of from the 1999/00, 2002/03 and 2005/06 summers combined and link this information with National Institute of Water & Atmospheric Research climate and UVR data.

Method:
The Sun Survey was a computer assisted telephone interview (CATI) survey of residents (15 - 69 years) in five New Zealand metropolitan areas (Auckland, Wellington, Hamilton, Christchurch, Dunedin), conducted every three years during the southern hemisphere summer. Interviews were conducted on randomly selected households following selected weekends. Data were obtained from 3,764 respondents: 1999/00 (n=1,250), 2002/03 (n=1,250), and 2005/06 (n=1,264). Survey participation rates were 55% (1999/00), 47% (2002/03) and 21% (2005/06). Interviews collected information on socio-demographics, sun protection attitudes and knowledge, sun exposure and sun protective behaviours. To control for weather conditions experienced by the respondents, individuals were matched to regional weather data on the interview day. A conceptual model was developed to guide the statistical analysis.

Results:
Unadjusted and adjusted regression models were used to identify predictors of sunburn experience classified as: socio-demographic (Fitzpatrick Skin Type II p<0.001), weather (higher UVR p=0.021, less cloud cover p=0.020) and potentially modifiable variables (positive attitudes towards tanning p=0.034, more SunSmart knowledge p=0.002, attempting to tan, passive outdoor recreation, partly shaded area, longer duration outdoors and lower sun protection (all p<0.001).