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## PREVENTIVE HEALTH IN A CHANGING WORLD

### THE EFFECT OF IMPLICIT AND EXPLICIT TAXES ON THE PURCHASING OF 'HIGH-IN-CALORIE' PRODUCTS: A RANDOMIZED CONTROLLED TRIAL (IMPEX)

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#### **Background**

It is unclear if price increases or the accompanying messaging as a result of sin taxes are responsible for reductions in purchases of high-in-calorie products and whether the effects are moderated by the level of support for the tax.

#### **Methods**

941 adults were randomized to shop in one of four versions of an on-line grocery store: 1) no tax control; 2) implicit tax showing only post-tax prices (i.e., 20% higher than control prices) on high-in-calorie products; 3) fake tax showing pre-tax prices and a label falsely indicating that the price includes a 20% tax on high-in-calorie products; and 4) explicit tax showing the same label as in 3) and an actual 20% price increase applied to the high-in-calorie products. Differences in the proportion of taxed/targeted products purchased were assessed using a fractional logit model.

#### **Results**

The proportion of taxed/targeted products purchased was 14% in the control arm, a non-statistically significant 0.08 (95% CI -3.31 to 1.77) and 2.59 (95% CI -5.04 to 0.00) percentage points lower in the implicit and fake tax arms respectively and a statistically significant 3.35 (95% CI -6.01 to -0.005) percentage points lower in the explicit tax arm. Tax supporters showed greater responsiveness to explicit and fake taxes compared to non-supporters (elasticities -1.38 and -0.51 respectively).

#### **Conclusion**

Reductions in the proportions of high-in-calorie products purchased are largely attributable to explicit messaging rather than price increases and the effects are heavily dependent on the level of support for such taxes within the population.