Economic evaluation of the anti-stigma social marketing campaign in England 2009-2011  
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Record Status  
This is a critical abstract of an economic evaluation that meets the criteria for inclusion on NHS EED. Each abstract contains a brief summary of the methods, the results and conclusions followed by a detailed critical assessment on the reliability of the study and the conclusions drawn.

CRD summary  
This study assessed the costs and effectiveness of an advertisement campaign to reduce stigma towards people with mental illness. The authors concluded that their findings suggested that the campaign could produce positive changes associated with economic benefits from reducing the impact of stigma on people with mental health problems. The effectiveness portion of the study appeared well conducted. While there are positive short-term intermediate outcomes, there is uncertainty in the cost-effectiveness of the campaigns in achieving tangible, sustainable benefits.

Type of economic evaluation  
Cost-effectiveness analysis

Study objective  
The costs and effectiveness of an advertisement campaign to reduce stigma towards persons with mental illness were assessed.

Interventions  
The intervention was the Time To Change mental health awareness campaign. This campaign was designed to decrease negative views and stigma attached to mental illness including examples of schizophrenia, depression and other mental illnesses. Those who were aware the advertising campaign (the intervention group) were compared with those who were not aware of it or did not recall it (the control group).

Location/setting  
UK/Public health

Methods  
Analytical approach:  
The economic evaluation was conducted alongside a large online observational study that ran from 2009 to 2011 (see Evans-Lacko, Malcolm et al 2013 below). Participants were propensity score matched using stabilised inverse probability weighting derived from a logistic regression controlling for potentially confounding participant characteristics. The stigma outcomes from the observational study were linked to employment and mental health service uptake using a published model.

Effectiveness data:  
Following six bursts of the Time To Change social marketing campaigns, sampled participants were surveyed to assess: knowledge on mental illness using the Mental Health Knowledge Schedule (MAKS); attitudes on mental health using three items from the Community Attitudes toward the Mentally Ill (CAMI) scale; and their future intended behaviour towards mentally ill people using the Reported and Intended Behaviour Scale (RIBS). The MAKS scale assessed stigma related mental health knowledge regarding help-seeking, recognition, support, employment, and treatment and recovery. The three items from CAMI assessed agreement with three statements about mental health myths/facts. RIBS asked participants about living with, working with, living nearby, and continuing relationships with persons with mental illness. Percentage differences between the two groups were used as measures of effectiveness.

The total number of people in the population with a change in knowledge, attitude or intended behaviour attributable to the awareness campaigns were estimated.

Monetary benefit and utility valuations:  

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Measure of benefit:
The effectiveness measures were also the measure of benefit in the cost-effectiveness analysis. In the return-on-investment analysis, the benefit was the additional income from increased employment minus the cost of additional health service use for people with depression.

Cost data:
Costs were primarily direct campaign expenditures in UK £. In the return-on-investment analysis, increased wages due to decreased stigma was calculated using a published UK assessment of implementation of a National Institute for Health and Care Excellence (NICE) guideline on depression and anxiety. The return-on-investment analysis also included costs for uptake of mental health services.

Analysis of uncertainty:
A broad range of one-way sensitivity analyses were undertaken.

Results
Intervention (Time To Change campaign) effectiveness was assessed on a sliding scale of percentage of change attributable to the campaign with the percentage varying from 10% to 100% of effect. This percentage was varied in sensitivity analysis as this still seemed uncertain even after accounting for known confounding factors. Results were presented as graphs for each value.

The base case results assumed 100% of change was attributable to the campaign. With values assessed against the total target population that was aware of the campaign (6.35 million individuals aged 25 to 45 years), the ratio of cost for individual with improved MAKS (changed knowledge) ranged from £1.47 to £4.28 for each MAKS item/domain. The cost per individual with improved CAMI (changed attitudes) ranged from £1.25 to £5.47 for each CAMI item/domain. The cost per individual with improvement in RIBS (changed intended behaviour) ranged from £1.12 to £1.93.

The return on investment analysis found that almost all domains in questionnaires resulted in positive return on investment.

Authors' conclusions
The authors concluded that their findings suggested that the Time to Change anti-stigma social marketing campaign could produce positive changes associated with economic benefits from reducing the impact of stigma on people with mental health problems.

CRD commentary
Interventions:
The intervention was only briefly described but adequate references were provided to the original study and media produced for the Time to Change campaign. It was unclear how the campaigns were executed. As acknowledged by the authors, it was unclear whether the control group had truly never been exposed to the campaign over the study period or whether they just could not recall it.

Effectiveness/benefits:
A detailed explanation was given of the propensity score matching methods; these appeared appropriate for controlling known confounders in the observational data sample. The sampling technique to recruit participants was not completely clear.

The negative outcome related to the statement "People with mental health problems should not be given any responsibility" in the intervention group was not highlighted as negative in the text.

Costs:
The costing perspective was extremely limited. It appeared that only the direct costs for the intervention were used.

Different analyses were conducted with different assumptions about increased resource use and whether increased
employment was due to increased use of health services or changes in attitudes towards mental illness. The average cost of health service use was not stated.

The price year was not stated which limited the comparability of the study with similar work.

Analysis and results:
The analysis and results were sufficiently well reported. The authors acknowledged many limitations to their study: actual awareness of the campaign was unknown; it was not possible to control for the affect of other contemporaneous influences; the study measured behavioural change intent rather than fulfilled behavioural change; and it was unclear whether the affects of campaign were sustainable. Additionally, the time horizon of the analysis was unclear, and the measures of benefit were proxy measures for quality of life improvement for people with mental illness. Given the data presented, it was not known whether significant differences in behaviour were actually realised, and whether any differences realised had a measurable effect on quality of life for people with mental illness.

Concluding remarks:
The effectiveness portion of the study appeared to be well conducted. While there are positive short-term intermediate outcomes, there is uncertainty in the cost-effectiveness of the campaign in achieving tangible, sustainable benefits.

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