

Preventing Skin Cancer: Mass Media

Task Force Finding and Rationale Statement

Intervention Definition

Mass media interventions to prevent skin cancer by reducing individuals' exposure to ultraviolet (UV) radiation use communication channels such as print media (e.g., newspapers, magazines), broadcast media (e.g., radio, television), billboards, or the Internet to disseminate information, behavioral guidance, or a combination of these to wide audiences. Messages may target specific audiences, though the interventions typically rely on broad distribution channels. Some interventions provide up-to-date information about the intensity of the sun's rays (UV index), with the goal of raising awareness of the dangers of UV exposure and prompting sun protection measures. Others use persuasive techniques intended to change knowledge, attitudes, beliefs, intentions, and behaviors related to sun-protection and skin cancer.

Although this review assessed the effectiveness of mass media interventions themselves, eligible interventions could also use small media (e.g., brochures, flyers, newsletters) or promotional products to increase awareness of campaign messages.

Task Force Finding (June 2011)

The Community Preventive Services Task Force finds insufficient evidence to determine effectiveness of mass media interventions to prevent skin cancer by reducing exposure to ultraviolet radiation. Although available evidence generally indicates that mass media interventions are associated with improvements in protective and preventive behaviors, the small number of studies, several with methodological limitations, make it difficult to draw clear conclusions.

Rationale

This finding is based on an update of a previous review published in 2004, and includes studies published through May 2011.

Primary evidence for the finding comes from four studies that evaluated effectiveness of mass media interventions to prevent skin cancer by reducing exposure to ultraviolet radiation. Two studies showed interventions generally led to improved sun protection behaviors among children and adults (e.g., use of sunscreen; protective clothing, hats, and shade). One study found that degree of audience exposure to televised sun protection messages over a 14-year period (1987–2002) was associated with use of hats (OR=1.24, 95% CI=1.15, 1.33) and sunscreen (OR=1.16, 95% CI=1.07, 1.25) and with average amount of unprotected skin (-0.02, 95% CI=-0.02, -0.01). Another intervention that used both traditional mass media and social media to reduce tanning bed use led to a decrease in overall incidence of tanning bed use (OR=0.61; 95% CI=0.54, 0.69) as well as a decrease in the proportion of teens who started using tanning beds in early adolescence (< 13 years: 13% to 8%, $p < 0.001$; 13-15 years: 75% to 65%, $p < 0.001$). Four other studies provided additional information on effectiveness of mass media interventions for improving sun protection behavior and early detection of skin cancer.

Several studies assessed in this review were conducted in Australia, where climate and population demographics contribute to high rates of skin cancer. In response to high public health burden of skin cancer, Australia has been engaged in a longstanding, intensive, and multi-pronged health promotion campaign to improve sun protective behaviors. All Australian studies included in this review evaluated effectiveness of mass media interventions that were part of this comprehensive campaign and implemented in a context where extensive educational or policy interventions

to reduce UV exposure were already taking place. Although results of Australian studies may be useful in informing U.S. efforts to reduce UV exposure, their direct applicability is uncertain.

It is challenging to evaluate behavioral effects of mass media interventions, particularly when other interventions to influence the same behaviors are underway. Most studies included in this review used designs, such as simple pre-post assessments, that offer limited protection against potential sources of bias. Additional studies with stronger research designs would be valuable to clarify effects of mass media interventions to reduce UV exposure.

Although some potential harms of mass media interventions to reduce UV exposure have been postulated (i.e., decrease in physical activity, vitamin D deficiency), evidence does not indicate any harmful effects.

Mass media can be used in several distinct ways to influence UV protective behaviors. Providing information about UV radiation intensity in weather reports may prompt immediate sun-protection behavior and increase awareness of risks of UV radiation. Most studies included in this review evaluated mass media interventions that used persuasive messages over varying periods of time to influence attitudes and behaviors. In recent years, there has been an increasing focus on use of social media as either a primary channel for mass media campaigns, or as a secondary channel to amplify messages. The only intervention in this review that incorporated social media strategies found evidence of a substantial effect on the target behavior of tanning bed use.

Directly influencing health behaviors of target audiences may be only one of several goals for mass media interventions. Such interventions often also have broader goals of contributing to changes in attitudes toward the health behavior in question, with possible subsequent effects on social norms and on support for policies and programs to improve health. Such downstream effects may have important long-term effects on health behaviors.

The data presented here are preliminary and are subject to change as the systematic review goes through the scientific peer review process.

Disclaimer

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Document last updated July 16, 2014