Self-management education en masse: effectiveness of the Back Pain: Don't Take It Lying Down mass media campaign

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ABSTRACT

- Despite the availability of a range of Australian self-management support programs targeting the individual patient and/or health professional, three-quarters of Australians have at least one long-term medical condition, suggesting that a more comprehensive public health approach is needed.
- Use of mass media to deliver community health messages is a well established public health strategy. It may enhance more targeted approaches with its ability to reach large numbers of people simultaneously, including those difficult to identify, high-risk groups and those difficult to reach through traditional medical delivery.
- By simultaneously influencing large numbers of people, well designed health messages have the potential to promote and maintain behavioural change over time.
- Back Pain: Don't Take It Lying Down (1997–1999), a mass media campaign of the Victorian WorkCover Authority, can be seen as a prototype of a successful public health strategy designed to enhance people's self-management abilities.
- One of the main messages of the campaign was that there is a lot you can do to help yourself, which emphasises shifting the responsibility of control onto the individual.
- The success of the campaign makes a compelling evidence-based case for using a similar strategy to enhance the self-management abilities of the population.

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Use of mass media to deliver health messages to the general community is a well established preventive health strategy, particularly in Australia.[1] It may be used to influence population attitudes and beliefs, and to change health risk behaviours. The media have been used to alert the public to dangers related to behaviours such as smoking, excessive sun exposure, unprotected sex, and driving under the influence of alcohol or without a seatbelt. Mass media have also been used to promote healthy behaviours such as cancer screening and increasing physical activity, and to promote effective and efficient use of health services such as cancer and HIV screening, immunisation programs and emergency services for suspected myocardial infarction.

This type of public health approach can be much more cost-effective than strategies targeted to individual patients or health professionals.[2] They may also be of use in priming the population to enhance the effects of more targeted strategies.[3] The advantages of using mass media to deliver public health messages include the ability to reach large numbers of people simultaneously, including those difficult to identify, high-risk groups and those who might be difficult to reach through traditional medical delivery.[3] If successful, this approach results in a favourable shift in the overall population distribution of prior beliefs, which is in keeping with the "population strategy" of prevention.[2] Paradoxically, a small improvement in beliefs in the majority of the population, who will have intermediate beliefs, can result in a more substantial public health benefit than a large improvement in the small group who have the poorest beliefs.[4] Further, by influencing a large proportion of the community at the same time, there is societal support for sustained behavioural change, so fewer resources may be needed to maintain the message. Although use of media is costly, it is less expensive than provision of similar messages via face-to-face services,[3] and depending upon the messages presented, cost savings, in terms of reductions in time lost from work, compensation costs, and health care utilisation, may be considerable.

In 1997, the Victorian WorkCover Authority (VWA), the manager of the state's workers compensation system, initiated an innovative mass media campaign designed to influence attitudes and beliefs about back pain. The 3-year campaign, entitled Back Pain: Don't Take It Lying Down, came about in response to a significant rise in workers compensation costs for back pain claims, which had tripled over the previous decade.[5] This trend was also observed at that time in other developed countries.[6]

It was recognised that although the traditional biomedical approach to back pain management was playing a role in the development of disability, and contributing to the escalating costs, targeting health care providers alone had limited impact upon changing clinical practice (Eileen McMahon, former Director of Public Affairs, VWA, personal communication, 1997).

Rationale for a population approach to addressing back pain disability

Despite the availability of numerous evidence-based guidelines advocating a biopsychosocial approach to treating back pain,[7] physician surveys have continued to demonstrate only partial adherence to this approach.[8] For example, although there is robust evidence that imaging is unnecessary for acute back pain in most patients,[9] an Australian study found that 28.7% of new back pain patients presenting to a general practitioner led to an imaging request.[10] Indeed, low back pain is the most common reason for imaging requests in primary care.[11]

The lack of significant success in shifting doctors' management of back pain towards evidence-based care highlights the fact that changing doctors' behaviour is complex and requires a comprehensive understanding of factors that may be influential — doctors' knowledge, beliefs, training and previous experiences all strongly influence how they manage back pain.[12] Similar factors also influence the management decisions of physiotherapists and chiropractors.[13,14] Other important determinants of physicians' management of back pain include patients' presentation of symptoms, knowledge and beliefs; expectations about the consultation; patient satisfaction; provision of reassurance; relationship to work; and maintenance of the doctor–patient relationship.[15,16] Societal factors, such as prevailing community views and existing legislation regarding sickness absence and compensation, can also affect medical behaviour and decisions.[17]

Outcomes of back pain are known to be strongly influenced by the patient's attitudes and beliefs, particularly fear-avoidance beliefs, pain-coping strategies and illness behaviours;[18] these are thought to be more influential than biomedical or biomechanical factors.[19] This has led to the development and testing of interventions designed to promote a more positive approach to managing back pain, with an emphasis on addressing fear-avoidance beliefs and poor coping strategies. These types of strategies have been shown to improve outcomes in both primary care and industrial settings,[20,21] and their benefits may far outweigh those derived from specific traditional treatments.[22] Educational interventions specifically designed to modify patients' expectations have also been shown to reduce inappropriate imaging and costs without compromising symptom resolution, functional improvement, satisfaction or detection of serious abnormalities.[23]

Workplace factors also play an important role. For example, efforts by employers to accommodate people with low back pain at work are important in reducing duration of disability because of back pain.[24] Appropriate modification of work duties, enabling either no lost time or early return to work, also reduces the duration and incidence of back claims.[25]

The significant rise in back pain disability and workers compensation costs for back pain claims can thus be seen to have arisen due to a complex interaction of individual, health care, workplace and societal factors.[26] A societal approach designed to simultaneously shift the attitudes and beliefs of the general public, clinicians, patients, employers and workers to concur with the best available evidence for back pain can therefore be a highly cost-effective way of addressing the problem.

Mass media campaigns for back pain

The VWA back pain mass media campaign and its evaluation have been described in detail previously (Box).[29-33] Television advertisements, aired in prime time, were a major component of the campaign. They delivered simple evidence-based messages conveying the notion that back pain is not a serious problem, that disability from back pain can be improved and even prevented by positive attitudes, and that there is a lot you can do to help yourself. A major emphasis was on shifting the responsibility of control onto the individual and promoting self-management.

Evaluation of the VWA campaign showed dramatic improvements in both community and GPs' beliefs.[29,30] Importantly, the campaign penetrated the wider community and uniformly shifted population beliefs irrespective of age, sex, education level, occupation, employment status, type of work (manual or non-manual), income, country of birth (Australia or other), residence (metropolitan or rural), previous back pain experience and reported awareness of back pain advertising. In line with the population strategy of prevention, there was a favourable shift in the whole population distribution of prior beliefs; that is, those with poorer prior beliefs improved by the same amount as those with intermediate and better prior beliefs. These belief changes were accompanied by a decline in the number of workers compensation claims for back pain and health care utilisation over the duration of the campaign.[29]

Follow-up studies have demonstrated that the improvements in both population and GPs' beliefs were sustained over time (end of 2002 and mid 2004, respectively).[31-33] However, there has been some decay in effect,[31-33] likely due to an ill-informed lack of any reinforcement from ongoing small "top-up" media reminders. These had been planned but were not implemented, coincident with the change in state government and senior VWA staff at the end of 1999.

The Victorian study was the first worldwide to show that mass media could successfully be used to reduce the overall burden of illness due to low back pain. Similar public health campaigns have now been, or are currently being, carried out in other countries, including Scotland, Norway and Canada.[34-38] The observed effects have varied, most likely related to the major type of media used, the intensity of the campaigns and available funding, and setting-specific contextual factors and the type of evaluation performed.[27]

The Scottish campaign, Working Backs Scotland, was performed between 2000 and 2003 and used radio advertisements (Box).[34] Its major messages were to stay active, try simple pain relief and, if you need it, get advice. It resulted in a significant shift in public beliefs regarding staying active despite the pain, and it influenced the behaviour of health professionals to provide advice in keeping with the campaign messages. There was little indication that the campaign had altered work-related low back pain disability in terms of reduction in sickness absence or new awards of social security benefits for back pain; however, in contrast to the Victorian campaign, explicit recommendations about work were not presented.

The Norwegian Back Pain Network Active Back campaign was a small, low-budget intervention carried out in two counties, Vestfold and Aust-Agder, between 2002 and 2005 (Box).[36,37] It comprised a low-budget mass media campaign directed towards the general public and more targeted interventions, including an information campaign targeted to physicians, physiotherapists and chiropractors in primary health care, an information campaign directed towards social security officers and a practical intervention in six cooperating workplaces. As with the Australian campaign, the main messages were that back pain is usually benign, x-rays rarely show the reason for back pain, recovery is aided by remaining active and returning to work as soon as possible even if pain is present, and surgery is needed infrequently.

Evaluation of the Norwegian campaign demonstrated a small but significant shift in population beliefs towards more optimistic, self-coping attitudes, but no overall changes in sickness behaviour,[37] and no important improvements in the back pain beliefs of health care providers exposed to the campaign.[36] The study authors concluded that a much larger investment with wider coverage would have been needed to affect changes comparable to those seen in Australia.

Like the Scottish campaign, the Canadian campaign Back@It, which has been underway in the province of Alberta since 2005, is using radio as the major medium of the campaign because of the expense of television advertisements (Box).[35] The messages and slogan are based on the Australian campaign, and an ongoing evaluation of the campaign is forthcoming.

Self-management education en masse

Based upon empirical Australian data and results of similar campaigns performed elsewhere, there is now growing evidence that public policy initiatives designed to influence population attitudes and beliefs about back pain can achieve a sustained change in patient and clinician behaviour. While there has been variable demonstration of improvements in desirable economic and clinical outcomes, there is strong observational evidence that beliefs predict outcome.[39]

Key features, evaluation and outcomes of the Australian, Scottish, Norwegian and Canadian mass media back pain campaigns*

	Back Pain: Don't Take It Lying Down (Victoria, Australia, 1997–1999)	Working Backs Scotland (Scotland, 2000–2003)	Active Back (Vestfold and Aust-Agder, Norway, 2002–2005)	Back@It (Alberta, Canada, 2005–2008)
Primary medium	Television advertisements	Radio advertisements	Combination of local TV, radio, cinema advertisements	Radio advertisements
Intensity and frequency	Intense campaign for first 12 and final 3 months; planned "top-up" yearly advertisements never implemented	Intense campaign on all 15 commercial stations for 4 weeks; five short "booster" campaigns in 2001–2003	Four 1-month campaigns	During peak listening months only
Overall cost	A$10.1 million over 3 years	Not known	US$531 000 for media campaign	US$930 000 over 3 years
Main messages	Back pain is not a serious problem; continue usual activities, don't rest for prolonged periods, continue exercising and remain at work if possible; positive attitudes are important and it is up to you; x-rays are not useful; surgery may not be the answer; keep employees at work	Stay active; try simple pain relief; if you need it, get advice; don't take back pain lying down; there's a lot you can do to help yourself; the prognosis is usually good	Low back pain is not dangerous; x-ray is not useful; activity helps improvement; surgery is rarely necessary	Back pain: don't take it lying down; the key to feeling better sooner is to stay active
Other media	Radio and printed advertisements; outdoor billboards; posters; seminars; workplace visits; publicity articles	Website (http://www.workingbacksscotland.scot.nhs.uk/); printed advertisements; outdoor billboards; posters; seminars; workplace visits; publicity articles	Website (http://www.aktivrygg.no); posters with the campaign messages at health care clinics	Website; posters; pamphlets, billboard and bus advertisements; articles in public/industry news publications; TV public service announcements
Other interventions	*The back book*[28] translated into 16 languages; all Victorian doctors provided with management guidelines for compensable back pain	Employers and health professionals given leaflets and posters; 35 000 information packs to all health professionals; other materials developed and distributed during the campaign	Information paper delivered to all households, primary care physicians, physiotherapists, chiropractors and social security officers	None
Evaluation	Quasi-experimental design: population-based telephone surveys before, during and after the campaign with New South Wales as the control group; before–after postal surveys of general practitioners in both states; descriptive analysis of VWA claims database	Before–after observational study: monthly population-based telephone surveys from before the campaign and over the following 3 years; before–after comparison of Royal Mail sickness absence rates and new awards of social security benefits for back pain in Scotland versus the rest of the United Kingdom	Quasi-experimental design: population-based telephone surveys before, during and after the campaign with the county of Telemark as the control group; before–after postal surveys of health professionals; analysis of sickness absence, surgery rates for disc herniation and imaging for low back pain	Quasi-experimental design: population-based telephone surveys before, during and after the campaign with the province of Saskatchewan as the control group; interrupted time series of indicators of health care utilisation and work-related disability from 5 years before the campaign until its conclusion
Outcomes	Significant, sustained shift in population and doctors' back pain beliefs and stated behaviour in Victoria and no changes in NSW; significant reductions in back pain workers' compensation claims, medical and total payments for back claims, and rate of days compensated for back claims in Victoria	Significant, sustained shift in public beliefs about staying active and self-reported change in comparable advice to stay active provided by health professionals over 3 years; no change in advice about work or number who said they stayed off work; no effect on sickness absence or new awards of social security benefits for back pain	Significant shift in public beliefs regarding staying active and at work, ability to self manage and better use of x-rays in Vestfold and Aust-Agder (no changes in Telemark); no changes in sickness behaviour or sickness listing; no important improvement in back pain beliefs of health care providers	Evaluation results not yet reported

VWA = Victorian WorkCover Authority. * Modified from Table 1 of Buchbinder et al.[27] ◆

Although each media campaign sought to promote positive beliefs about back pain, encourage self-coping strategies and continued activity and reduce negative beliefs about the inevitable consequences of back pain, the nature of the campaigns varied widely. The more intensive and expensive television media campaign conducted in Australia appeared to be more effective than limited low-budget campaigns. Further, only those campaigns that made explicit recommendations regarding work changed work-related outcomes.

Even as a range of self-management support programs targeting the individual patient and/or health professional are initiated in Australia, three-quarters of Australians are reported to have at least one long-term medical condition, suggesting that a more comprehensive public health approach may greatly enhance current initiatives. The success of the Australian back pain mass media campaign makes a compelling evidence-based case for using a similar societal approach to enhance the self-management abilities of the general community, and this could augment the effectiveness of more targeted strategies.

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