

10,000 Steps Rockhampton: Establishing a multi-strategy physical activity promotion project in a community

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Introduction

The health benefits of physical activity (PA) are well established.¹ In addition, there is a large body of evidence on effective physical activity interventions.² However, much less is known about how to translate this evidence base into real-world settings such that sustainable, population-wide increases in PA are achieved.³ Indeed, this process of translation or dissemination is, in and of itself, a field of study, and of critical importance in terms of our ability to successfully translate research into practice.^{4,5} The aim of this paper is to describe the process of developing a multi-strategy project for increasing levels of PA in a whole-of-community setting. This was undertaken in response to a Queensland Health tender specification by a multi-disciplinary group of researchers and health promotion practitioners. Typically, reports on health behaviour interventions contain limited information about the early-stage process of developing

a health promotion project. This information is sometimes presented in a brief paragraph in publications describing project outcomes, but often is not presented at all. However, the initial conceptualisation and development process is a critical part of the overall project, perhaps more critical than any other stage as it sets the tone for the way in which the project will be managed, the extent to which community groups and individuals will be involved and, ultimately, affects the longer-term sustainability of the project.^{3,5}

This paper describes the six stages of the project's development, including the proposed methods and approaches, as well as an outline of the project evaluation plan.

Methods and results

The project was developed in response to a brief released by Queensland Health as part of its strategy to support community-

Abstract

- Issues addressed:** To describe the process of developing an innovative, multi-strategy community-based physical activity (PA) intervention project.
- Method:** Project development utilised key informant discussions, a nominal group process and researcher and community discussions to identify the target community and to develop the proposed intervention and evaluation strategies.
- Results:** Five strategies with a central co-ordinating theme of '10,000 steps a day' were identified as being 'best buys' for the promotion of PA in the selected community. They were: 1) a local media campaign; 2) promotion of PA through the general practice setting and other health services; 3) improving social support for PA among disadvantaged groups; 4) policy and environmental approaches; and 5) establishment of a fund to support small, community-led PA promotion initiatives.
- Conclusion:** The development of multi-strategy, community-based health promotion projects based on evidence-based 'best buys', but with promotion of community ownership, can be a complex process. To our knowledge, the concurrent trialing of several interventions with an innovative core component focusing on pedometers and the '10,000 steps' PA recommendation has not previously been attempted in a community-based PA intervention.
- Keywords:** Community-based interventions; health promotion; pedometers.

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So what?

The project, which emphasises multi-level strategies and a balance between 'top-down', researcher-driven consultation and 'bottom-up' input from key contacts and organisations, took about eight months to develop. Researchers and funders should not underestimate the amount of time needed to develop whole-of-community interventions.

based demonstration health promotion projects. The call for tenders was publicised in the local print media in late October 2000, with a closing date for expressions of interest by 1 December 2000. The research group was advised at the end of December 2000 that its expression of interest had been chosen, along with two others, to be worked into a full proposal submission, due in early March 2001.

The research group was convened quickly (through personal networks) within one week of the tender release. Initially, it comprised experts in PA promotion from the University of Queensland, Central Queensland University and Queensland University of Technology, and one representative from a non-government organisation. As there were no specific resources available for project development, the universities or individual researchers met their own costs to attend the 15 subsequent face-to-face and telephone conference meetings that resulted in development of the final submission. Following a final interview and selection process, the group was advised that it was the successful tenderer in May 2001.

Stage 1: Nominal group process to identify physical activity intervention 'best buys'

In stage 1, the research team organised a meeting at which a modified nominal group process was used to identify today's 'best buys' in physical activity promotion strategies. This meeting took place immediately following the release of the tender specifications. Participants included members of the Queensland Physical Activity Task Force and its two advisory groups, and seven international expert external consultants (who were fortuitously in Brisbane at the time to attend a major international conference). They worked in six groups of three to five people to identify the three strategies they considered would be most likely to increase levels of physical activity. The three priorities nominated by each group were then the focus of whole group discussion, followed by a voting process to determine which strategies would be most suitable for the promotion of PA in Queensland. Five strategies were identified:

- Media campaign for raising awareness.
- Advice from health professionals.
- Active transport (to/from places, especially schools).
- Environmental support (infrastructure and safe communities).
- Community 'competition' for micro-project funding.

Stage 2: Choosing an intervention community

In stage 2, the research group met weekly for three weeks to review and refine the strategies suggested by the stage 1 nominal group process. Initial discussion focused on identification of a potential intervention community, using the criteria of disadvantage (as specified in the tender brief), accessibility to the researchers, and the existence of community networks for intersectoral action.

The City of Rockhampton (population ~ 60,000 at 1996 Census) was selected as the intervention community because:

- It is a large rural centre that demonstrates disadvantage in terms of both socio-economic and health status. There is a high proportion of single-parent and low-income families and the proportion of people who are overweight or obese is significantly greater than in Australia as a whole.
- One member of the consortium (KM) had already established strong links with community groups, which would be necessary for this project (see below), and had already collected background socio-demographic and behavioural data, so that those sectors of the population who would be least likely to be adequately active for health benefit could be identified.
- There had been significant urban renewal in the central business district of Rockhampton, which would provide important environmental support for PA behaviour change.
- The community is sufficiently large to support the implementation of several concomitant strategies and could serve as a model for other large regional centres in Queensland and throughout Australia.

For purposes of evaluation, it was decided that another central Queensland town with similar socio-economic characteristics would serve as a comparison community for the main outcome evaluation. Based on a comparison of Australian Bureau of Statistics data on the proportion of single-parent and low-income families, unemployment and index of socio-economic disadvantage, a second town of similar size (population 60,000) was selected as a comparison site. In response to concerns among the group that residents of the comparison town might change their physical activity behaviour, as had been the case in the US 'MRFIT' project,⁶ it was decided to conceal the identity of the second town.

Stage 3: Engaging community partners and developing the local physical activity intervention strategies

In order to develop a proposal that would be responsive to the needs of the Rockhampton community and would be sustainable beyond the life of the two-year funded project, members of the research team contacted key informants in the local community (from the health, education, local government, sport and recreation, media and non-government sectors) to further discuss and develop the proposed strategies and to engage support from community partners. This community consultation took the form of discussions with Rockhampton residents, key informant interviews, and meetings with groups from local community organisations and health service providers. The aim was to solicit feedback on community PA needs, resources, and the level of interest in and commitment to the proposed project. These efforts took place during the central eight weeks of the project's

development and served to engage the community in the proposed project and to give them a sense of ownership and responsibility.⁷ A series of meetings provided valuable insights into existing organisational structures and community resources that would need to be engaged to increase the likelihood of sustainability of any behaviour change. Following these meetings, representatives from the Capricornia Division of General Practice, from the local offices of public health and sport and recreation services, and from the Rockhampton City Council, assisted with the development of the project proposal. The choice of initial intervention strategies was guided by the social-ecological framework adopted in most population health interventions.^{3,8} This framework emphasises intervention at multiple levels to address the multi-level determinants of PA.⁹ Based on the stage 1 nominal group process, previous experience of the project team, and community consultation, five strategies for increasing PA were selected. The strategies reflect those proposed by the Task Force for the Promotion of Physical Activity in Queensland (2001-06), in as much as they focus on people (encouraging people to be more active), organisations (assisting organisations to deliver better PA opportunities) and environments (creating safe, accessible, sustainable and well-managed built and natural environments to support participation in regular PA). They are:

1. **Local media campaigns** to raise awareness of the low levels of physical activity in the community, profile the project theme ('Ten Thousand Steps a Day'), profile community role models, and promote associated activities.
2. **Promoting PA through general practice and other health services.** To give general practitioners and other health professionals opportunities for training to increase their skills in brief PA counselling, to be provided with evidence-based protocols and materials to support these efforts,¹⁰ and to be invited to trial an innovative pedometer loan scheme.
3. **Improving social support among disadvantaged groups.** To work with a wide range of community partners (e.g. the Heart Foundation, the fitness industry, community-based health services, workplaces, etc) to initiate group-based activity programs for people from disadvantaged backgrounds.
4. **Policy and environmental change.** To be guided by the recently published *Creating Active Communities: Physical Activity Guidelines for Local Councils*, with a focus on developing infrastructure to promote active living within the community (NSW Health toolbox).¹¹
5. **Community initiatives.** A community fund to be established to support community-based initiatives to increase PA in local neighbourhoods, small workplaces and non-government organisations.

Stage 4: Development of the central co-ordinating theme: '10,000 Steps a Day'

In order to unify our multi-strategy approach, it was decided that we should develop a central co-ordinating theme for the project. Most of the discussion about this issue took place during group meetings in the latter stages of the project's development. From a social marketing perspective, it was considered that this co-ordinating theme should also be the project name and should convey a very specific PA message. This decision was based on earlier focus group findings in which participants had expressed frustration with the lack of specificity of advice in PA promotion campaigns.¹² Therefore, in contrast to the relatively generic activity message, "take it regularly not seriously" (Active Australia), we decided that this project should have a more prescriptive and focused tag-line as its title. After much debate, the project team agreed on the '10,000 Steps Rockhampton' title to clearly convey the specific dose of PA that would be recommended. In light of the fact that there was little scientific evidence about the benefit of '10,000 steps', some of the researchers were concerned that the target of 10,000 steps might be too high for some population groups, especially older people. It was therefore subsequently decided that a secondary theme of 'Every Step Counts' would be used to encourage people to find ways of increasing daily steps, even if they did not reach the 10,000 steps target. While it was acknowledged that the theme would require further concept testing in the community, preliminary meetings with community leaders and key informants suggested that it was an idea that might capture the interest of the people of Rockhampton.

The idea of '10,000 steps' was based largely on the growing international interest in the potential use of pedometers as motivators for physical activity.¹³ It was also based on our own view that accumulating 10,000 steps per day is comparable with meeting national physical activity guidelines, (i.e. 30 minutes a day of accumulated moderate PA),¹⁴ because the average non-sedentary person takes approximately 7,000 steps per day.¹⁵ Adding a 30-minute walk to this brings the daily total to about 10,000 steps, given that a 10-minute walk equals about 1,000 steps. In addition, the selected theme focused on accumulation of physical activity across the course of the entire day, instead of the traditional focus on longer blocks of leisure-time activity. (During the past two years there has been a growing body of evidence on the use of pedometers, including large sample studies of steps per day for various subgroups, which, while still requiring further research, give us increased confidence in the validity of the 10,000 steps goal as a population health target.¹⁵)

To promote the 10,000 Steps message, it was decided that we would develop a 'bank' of pedometers that would be used by community groups and health service providers to supply increased knowledge of current levels of (in)activity and to assist

individuals to accumulate the targeted 10,000 daily steps. The use of the pedometer as a motivational tool, allowing for individual goal setting in terms of accumulated activity, while simultaneously acting as a self-monitoring tool, was thought to be a promising approach to promoting activity. The researchers also felt that media stories based on the steps per day achieved by 'average' Rockhampton citizens could be used to raise awareness of the level of inactivity in the community and to help people to see that PA can be built into their day rather than carved out of it.¹⁴

Stage 5: Development of project management and evaluation plans

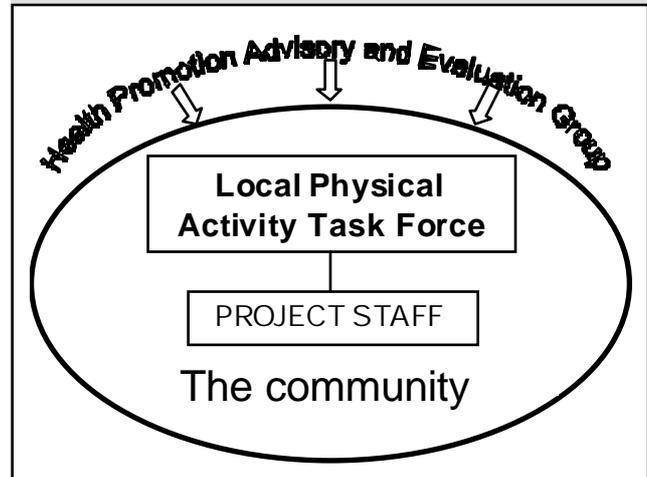
It was decided by the community partners, in agreement with the research team, that the project would eventually be directed locally by a Rockhampton-based multi-disciplinary Local Physical Activity Task Force (LPATF), which would be responsible for the further development and implementation of the selected strategies, with the researchers providing training, consultation and 'top-down' expertise through a Health Promotion Advisory and Evaluation Group (see Figure 1).

Building on the lessons learned from recently published health promotion and community-based intervention literature, it was agreed that we (the researchers) would work through the LPATF to provide feedback on the level of PA within Rockhampton and to describe the evidence-based strategies that have worked in other communities and settings.^{2,7} The LPATF would be the co-ordination centre for the project and would identify the most in-need sectors in the community to tailor the nominated strategies, based on bottom-up input from the groups themselves. The LPATF would be formed at the outset of the study and made up of key members of the various community organisations, some of whom have high-level expertise in PA promotion. These include representatives from the National Heart Foundation, Rockhampton City Council, Capricornia Division of General Practice, Local Health Services and the Central Public Health Unit, Sports Medicine Australia, Central Region Sport and Recreation, and local media services such as WIN TV Central Queensland and the *Rockhampton Morning Bulletin*. Exact representation of the group was not finalised at this stage.

One of the final meetings of the research group was devoted to development of an evaluation plan for the project. At this meeting it was agreed that the project would be evaluated in three main ways:

1. **Outcome evaluation.** This would assess physical activity and selected determinants in a representative random sample of the intervention and comparison communities using computer-assisted telephone interviews. Broad agreement on the nature and scope of the questions that would be included in the telephone interview was reached at this stage.

Figure 1: Diagrammatic representation of the proposed management structure for the project. The community is represented by the circle – the LPATF and the project staff will be part of the community, with advice from the HPAEG coming largely from academic experts, most of whom are located outside the community.



2. **Physical activity audit.** The aim of the proposed audit was to develop an overview of PA resources that already existed in the community. It was envisaged that this would be disseminated widely in both print and electronic formats to raise awareness of opportunities for activity in the town. It would also serve to highlight gaps that would need to be addressed by the relevant community partners in their attempts to increase PA levels for their constituents.
3. **Process evaluation.** It was agreed that process evaluation would form an important part of the overall evaluation. Without this, it would be impossible to know the extent to which any of the strategies had contributed to changes in behaviour. This process evaluation would involve: a) systematic collection of key indicators relating to the level of implementation of the five program strategies, and b) the solicitation of feedback from community residents, key stakeholders and service providers on program feasibility, satisfaction and issues pertaining to sustainability of each of the major strategies.

Stage 6: Development of budget and timelines

The final stage of development of the submission involved formulating the overall budget and timelines for the project. The process was based largely on the experience of the researchers and involved discussions about the proportions of the available funds that would be attributed to each component of the proposed project. Although we were aware of the limitations that would be imposed by the availability of resources, there was agreement that at least 10% of the project resources should be allocated to outcome evaluation. While this would

ensure that the majority of resources would be directed to the intervention phase, it was acknowledged that further resources could be allocated to process evaluation, as each of the strategies was further developed. It was agreed that about 35% of the remaining resources would be allocated to salaries for project staff, who would be based in Rockhampton and responsible for assisting the community to implement the intervention strategies, and that about 10% would be quarantined for the community initiatives component of the project.

It was acknowledged at this stage that a two-year time frame for development, implementation and evaluation would mean that we would have to work very quickly to undertake the baseline evaluation at the outset of the project.

Theoretical considerations

The overall goal of the 10,000 Steps project is to increase population levels of physical activity. The multi-level population-based health promotion model of McKinlay (1993 and 1995) forms the methodological basis for behaviour change in this project.^{16,17} The strategies are designed to intervene at the 'downstream' or individual level, 'midstream' or population level and, to a more limited extent, at the 'upstream' or macro-level. Downstream strategies will focus largely on the distribution and promotion of pedometers as individual self-monitoring and goal-setting instruments. These strategies will include the involvement of local general practitioners and allied health professionals in counselling about physical activity and promotion of pedometer use to appropriate clients, as well as workplace interventions. Midstream strategies will focus on the media campaign to raise individual awareness about the health benefits of physical activity, and upstream strategies will involve work with the local council to develop local environments that are conducive to being more physically active. Although McKinlay's model defines 'upstream' interventions as those happening at the national or state policy level, the geographic delimitation associated with the project will allow the 'upstream' focus in this project to be on policy and environmental change at the local municipal government level. The success of the project will depend on our ability to successfully integrate and balance these downstream, midstream and upstream approaches within the overall project.

Although the five key strategies sit within this over-arching health promotion model, their implementation will incorporate a blend of 'top-down' and 'bottom-up' approaches.¹⁸ Given the relatively short two-year funding period, the initial 'top-down' approach reflects the need to raise awareness about current levels of inactivity in the community and to establish a 'project presence'. Over time, it is envisaged that there will be a gradual transition to a more 'bottom-up' approach, with increased capacity within the community to support and promote community and cultural change as 'ownership' by the Local Physical Activity Task Force

increases. This will be essential if any changes in physical activity behaviour are to be sustained.¹⁹

Conclusions

In developing this project, we aimed to unite the knowledge we have about evidence-based 'best buys' in the promotion of PA with innovative, community-driven strategies, and to promote community ownership of the interventions so that there will be enhanced capacity to continue health promotion efforts after the end of the project. To our knowledge, the concurrent trialing of several interventions with an innovative core component focusing on pedometers and the '10,000 Steps' PA recommendation has not previously been attempted in a community-based PA intervention. Consistent with the social-ecological framework underpinning this study,⁸ we would expect this multi-level approach to be more effective and more sustainable than a single-strategy approach. It remains to be seen whether we can successfully work with the community to achieve any increase in baseline levels of physical activity and whether we can reach the most disadvantaged groups in the community.²⁰

Postscript

It is now almost two years since we went through this development process. Our experiences in implementing the project, and a full evaluation, will be published in due course. There is, however, one key lesson we learned in the early stages of this project that might be helpful to others who are going to embark on a similar process. It relates to the amount of time required between being notified of success in the tender process and beginning the 'real' work of the project. Our advice is as follows:

1. Allow sufficient time for the development of contracts and negotiation of issues relating to IP and ownership of project materials. This took about six weeks following the notification that we were the successful tenderer.
2. Allow at least four months to establish the project team. This includes advertising and recruitment and time for relocation of staff from other areas (including giving appropriate notice to their current employers). This period could extend to six months if you intend to establish a project office involving negotiations for space, refurbishment, and purchase of equipment.
3. Don't forget to allow time for the ethics approval process. You cannot collect any data until this process is completed.

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