The Healthy Lifestyle Program: Implications for Preventative Intervention in the Rural Setting

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INTRODUCTION

The benefits of a structured program of activity and education for clients with specific conditions are well recognised, and many health centres have such programs as part of their preventative strategies or post-operative rehabilitation. Large metropolitan centres have the resources to be able to offer programs targeting specific conditions or post-operative procedures, however smaller rural centres often do not have the staff, time, or even populations to justify such programs.

A program that addresses the needs of several conditions has the obvious benefit of greater efficiency of the use of physical and fiscal resources. The resultant improved efficiency of service delivery has implications for areas that are currently providing a program for one or more of these groups, or for areas that are considering the implementation of such a group.

THE DEVELOPMENT OF THE HEALTHY LIFESTYLE PROGRAM

Orange is a town of 35 100 people located 280 km west of Sydney in rural NSW. Orange Base Hospital (OBH) is a 194 bed centre which directly services a population of 47 500, and has a catchment population of 180 000 for retrieval purposes. In the year ending 30 June 2000 the medical records department reported 14 250 admissions were treated at the hospital.

The Allied and Community Health staff at OBH have conducted phase 2 cardiac rehabilitation since 1994, with a Physiotherapist and a nurse co-ordinating a twice weekly exercise session and a weekly education session. In 1997 a program for pulmonary rehabilitation was commenced, run separately but following a similar format to the cardiac rehabilitation group. In addition to this clients with morbid obesity were referred to the cardiac rehabilitation group.

The co-ordinating of two separate groups, and the resultant increased demands upon staff time and hospital facilities, led to an increased difficulty in providing the service under this method of service delivery. In addition to this the need to have separate referral systems in place for the different streams added to the difficulties. Also an issue was co-ordinating other staff to utilise their time in the delivery of information which had many generic similarities to separate groups of clients. This, and the relatively successful introduction of two morbidly obese clients into the conventional format for cardiac rehabilitation led us to question if this was the most effective and efficient method of service delivery.
It became evident to us that if we could combine these separate groups into one, the resultant gains in efficiency of service delivery would be large, in effect twice as efficient. We also began to consider the possibility of introducing clients with type 2 diabetes mellitus (DM) into a similar group. In addition to improved efficiency of resource use, the resultant single group would lead to a streamlining of referral systems that would simplify our processes.

EVIDENCE-BASED LITERATURE FOR THE HEALTHY LIFESTYLE PROGRAM

A literature review was conducted to gather information on group activity for clients with each of the targeted conditions. The main rationalisation for combining the groups of type 2 DM and morbid obesity was that they are both accepted risk factors in cardiovascular disease. Therefore targeting these groups is a form of preventative intervention for cardiovascular disease. Despite the different pathology for clients with pulmonary disease, the targeting of this group is also appropriate in light of the recognised benefits of exercise and education for this condition.

Rehabilitation consisting of activity and education for clients has long been recognised as an integral part of the management of a patient after a cardiovascular event. These programs are begun in the immediate postoperative hospital setting (Phase 1), progress into the sub-acute period as clients are discharged home (Phase 2) and aim to equip the client with the tools to manage their rehabilitation for the rest of their lives (Phase 3). These rehabilitation programs have two basic components to their structure, a physical component, and an educative component.

The physical component of rehabilitation is usually based upon a supervised and supportive progressively increasing exercise and activity program. The aim of this is to increase the functional ability of the client in an environment where they feel safe to slowly return to their pre morbid level of function (or beyond). This is usually held 2–3 times weekly for duration of 30 minutes as recommended by the NSW Health Department.

The educative component of the program has the aim of increasing the clients’ ability to care for themselves through greater understanding of the physiology of their condition, and how to minimise the effect of preventable risk factors through lifestyle modification. This usually runs concurrently with the physical component of the program with structured educative sessions often involving speakers on specialised topics.

Rehabilitation programs for diabetic clients are based on a modified program of activity and education similar to that for cardiac rehabilitation. Type 2 DM is recognised as being better controlled with healthy eating and regular exercise. When we consider that obesity is a risk factor for type 2 DM, and type 2 DM is a risk factor for cardiac disease it is not surprising that there is a large component of the program that is generic to these groups.

Pulmonary rehabilitation has been advocated and accepted as being beneficial for clients suffering from pulmonary conditions, and follows a similar format to phase 2
Rehabilitation programs for clients with morbid obesity have been evolving since their introduction. There is some agreement upon the need for a supportive program of exercise, lifestyle modification, and improved awareness of dietary needs, as opposed to strict calorie control,\textsuperscript{10,11} with the close support of medical practitioners and psychological and social support if warranted. It is often advocated that a low intensity program similar to that recommended for phase 2 cardiac rehabilitation be followed.\textsuperscript{10,12,13} Differences in the needs of a client with morbid obesity compared to a conventional cardiac rehabilitation program include the longevity of the program, the goals of the program, and the level of follow up necessary for success.\textsuperscript{14} Clients with morbid obesity require a longer period of support, and it is often advocated that 3 months is a minimum duration for any program due to the difficulty these clients often have with lifestyle modification, especially in the absence of objective improvement.\textsuperscript{13} The need for ongoing support or phone calls to assist the client to maintain their motivation may also be necessary.\textsuperscript{12,14} The healthy lifestyle program is currently using the following guidelines for duration of attendance by clients. For obese and diabetic clients we are using a three month period to allow time for lifestyle modification and some early gains in function.\textsuperscript{15} For cardiac patients we are using a six week program to allow the clients to experience the full range of education and to assist in getting the client to the third stage of cardiac rehabilitation.\textsuperscript{4,5} For our respiratory clients we are using a three month duration to allow time to recover from any debilitation caused by disuse, and to allow time for increased confidence and lifestyle modification.\textsuperscript{3,9}

**REFERRAL AND ASSESSMENT FOR THE HEALTHY LIFESTYLE PROGRAM**

Referral to our program is through any source. Once referred all clients are asked to attend an initial assessment, which involves an interview and a brief physical assessment requiring a total of 30 minutes.

The information collected consists of two forms, one generic to all clients and one that is specific to the primary reason for referral to the group. The first form collects information regarding the client’s demographic data, general medical and surgical history, medications and general practitioner. The second form is modified depending upon the primary condition referred, and gathers information on such things as specific risk factors, operative procedures, as well as data on body mass index (BMI), waist circumference, timed “up and go” test, and a six-minute walk test.
The aim of collecting this information is to have some objective information that can be used to assess the effectiveness of the program. Whilst losing weight is a goal of the program, the decision to look at waist circumference has been made to try to avoid the problem of clients who increase their lean muscle mass and therefore occasionally increase their weight despite decreasing their fat levels.2

There is also evidence of a growing trend to avoiding focus upon a clients weight as the sole reason for participation, as exercise has benefits besides weight reduction. Exercise has been shown to increase the ratio of high-density lipoproteins to low-density lipoproteins,12 which is associated with a reduced risk of heart disease7,16 (however this may not lead to a reduction in total cholesterol levels). Exercise will also lead to an increase in functional ability, physical capability, and improved sense of well being as indicative of improvement, even in the absence of a reduction of overall weight.12,13 It is important to also note that even small decreases in overall weight in the obese client can improve their blood pressure (BP), lipid profile and glucose metabolism.7,8,12

The timed “up and go” test17 and the six-minute walk test18 are being used to give an indication of an improvement in the physical capabilities of the client. They have been selected as they are easy to administer and have a recognised reliability.17,18 Although the get up and go test is used as a predictor of falls in the elderly, it is relevant to the ability of most of the clients, and may show changes in strength and function as opposed to endurance in mobility.17

Another aim of the program is to increase the participants’ sense of control over their condition and lead to an improved sense of well-being. A standard questionnaire has not been settled upon at this time due to the varied nature of the groups involved, but once settled upon will be incorporated into the assessment of the clients.

STAFF INVOLVEMENT IN THE SESSIONS

The staff involved in the program are a Registered Nurse, Physiotherapist, and Dietitian. At OBH, we use a pool of four nurses in order to distribute the workload and for timetable considerations. It also leads to an increased awareness of the program in different areas of the hospital and for easy dissemination of information. The presence of these staff leads to a greater continuity for clients referred from the inpatient wards of the hospital, and an increased ease of information for the client, allowing access to staff in an informal setting for questions and comments. The participation of a Dietician in the sessions, in addition to a Physiotherapist, has enhanced the ability of the clients to access information through impromptu questions during the program.

The program is run twice weekly at a venue which is located in the hospital grounds, but not in the inpatient areas of the hospital. By having the venue within the hospital grounds we are trying to achieve a flow from inpatient to community care, and see this as a transition to achieve this. It also increases our links with associated inpatient staff, and leads to easier access for staff delivering the educational component of the class. The decision not to base the group too closely to the inpatient areas, if possible, was made to try to decrease a sense of dependency to the hospital, and increase independence of care, and attendance.19
CONDUCTING THE CLASS

When clients arrive for the class they have their heart rate (HR) recorded and BP taken for the purposes of preventing a client with a HR or BP outside their usual safe range from participating, or to modify their participation on that day.\(^5\) The clients are taught how to take their own HR as part of their self-regulation.

Once gathered, a gentle warm up is commenced, consisting of a walk, followed by stretches prior to the activity starting. This is followed by 30–45 minutes of activity. In our program we have chosen to use a circuit style class as our activity, although the nature of the activity is not as important as the participation itself.

We have chosen a circuit style class in order to decrease competition between participants and allow each client to work at the appropriate level for their condition and level of fitness. The circuit class has also been chosen to decrease feelings of apprehension by potential participants who dislike group activity, or feel inadequate compared to their peers.\(^12\) In addition to this a circuit class allows greater interaction of clients by keeping the group in a relatively small area, leading to ease of conversation.

During the circuit participants are encouraged to use the Borg scale of perceived exertion\(^18\) to monitor their intensity of activity.\(^12\) This is a scale whereby a feeling of mild dyspnoea and warmth, but still being able to comfortably carry out a conversation correlates to the heart rate recommended for cardiac rehabilitation by the national heart foundation. A modified Borg scale is used for shortness of breath in respiratory clients.\(^9\) This eliminates the need for monitoring of heart rates by the participants, particularly for those with weak peripheral pulses or peripheral vascular problems.

Water is available throughout the class, and clients are advised to slow down or cease their activity if they exceed their level of perceived exertion, or feel any symptoms of chest pain or angina. The staff also monitor for any signs of overexertion and act accordingly.

The circuit class itself involves a range of tasks, with an emphasis on making the activities either functional, or stimulating without using an abundance of expensive or inaccessible equipment. The rationalisation here is that in order to decrease dependency, the equipment should be easily replicable with little outlay, or modified to incorporate home activities should the client wish to continue at home. In all circumstances emphasis is placed on frequency, duration and intensity of exercise, rather than the type of activity.\(^20\)

Upon completion of the activity component of the class the clients have a gentle warm down involving a walk for 3–5 minutes. Resting heart rates are recorded two minutes post exercise in order to assess recovery from the activity. Thus the only recorded information of the clients’ performance is pre and post-activity heart rate and pre-activity BP. If a client states or shows signs of distress BP is taken and recorded.
EDUCATION

After the warm down, we have our educative component for the session, which includes afternoon tea and lasts for 30–60 minutes. The educational component of the group consists of a roster of six weeks duration, and includes contributions from a Cardiologist, Respiratory Physician, Psychologist, Occupational Therapist, Pharmacist, as well as the Nurse, Physiotherapist and Dietician who attend the classes. This is in addition to informal questions, which may be asked of the staff during the other segments of the classes.

DISCUSSION

Proposed benefits

There are numerous benefits for rural centres in conducting a generic program incorporating cardiac, respiratory, type 2 diabetic and obese clients into one group. We would like to expand on some of the proposed benefits in the following paragraphs.

The participation of staff from Physiotherapy, Nursing, and Dietetics in the classes leads to a greater dissemination of information from a united multi-disciplinary team, and hence to increased information for the clients. In addition to this benefit to the clients, this also leads to a greater awareness and understanding of information by the participating staff, and can lead to the ability to advise upon areas normally outside the individuals’ expertise. Of course in the presence of staff specialised in answering the individual query, such questions would usually be referred to the most qualified professional present.

The multi-disciplinary approach to the program also increases the variety for both staff and clients, which leads to increased compliance and also increased satisfaction for the staff. This is important to maintain the dynamics of the group, and prevent a single staff member from becoming fatigued with the demands of co-ordinating and conducting the entire program.

The need for a single venue that is appropriate to all groups leads to a more efficient use of physical resources. As well as not utilising hospital grounds for longer periods, it also allows for the pooling of funds to purchase equipment and other resources, avoiding duplication of resources needed for conducting separate groups.

The demands on staff time are obviously reduced by conducting sessions that incorporate multiple client groups. This allows greater efficiency of service delivery and also increases staff compliance and participation through increasing the perceived benefit of staff using their time for the delivery of education and activity.

The combination of different client groups also reduces the reluctance by potential clients to participate based upon the false understanding that the group will be depressing or boring. The perception that a group will involve people with a condition sitting around and talking about their problems is very real in the community. The emphasis on physical activity and education, involving clients with varied conditions assists in dispelling this. Despite this, we believe that one of the beneficial features of
these groups is for clients to see others who have had similar procedures doing well, and having the opportunity to discuss various aspects of their recovery or management of their condition.4

In Orange, the local branch of Heart Support Australia have been happy to accept members from the group irrespective of the underlying condition in order to assist in the continuance of clients into a dynamic and supportive environment after finishing the program, and it is envisaged that with increased numbers of graduates, the program could easily be continued in a form which is of benefit and enjoyed by the participants.

Difficulties and issues with the healthy lifestyle program

One of the main issues with any program is its longevity, and what is to happen to the clients once they have finished their time within the environment provided. The risk of dependency upon any program is always a factor, but by increasing the number and variety of clients who participate in a program, you increase the ability for a critical mass of clients to be achieved to allow continuance of the program through support groups or activity groups.14

There is a need for a co-ordinated approach to this program, and a potential difficulty is who will co-ordinate the referral process, assessments, feedback, and ultimately any quality improvement projects involving the program. The appointment of a staff member to this role, with the knowledge, time and resources to effectively fulfil these requirements would be an obvious advantage.14

The healthy lifestyle format is based in a central location, which does not help to solve issues associated with distance, particularly in rural areas. Clients who are unable to attend due to distance, or an inability to drive post-operatively need to be considered as part of an overall plan for service delivery.

In our program clients who are unwilling or unable to attend regularly are sent a timetable of the educative content of our program in order to allow them to attend for the education sessions if they wish. There may also be room for development of an educative package that could be compiled and sent to clients in isolated areas, with support groups or publications for additional information.

CONCLUSION

The initial costs involved in changing the method of service delivery need to be justified in order to commence a program such as the healthy lifestyle program, with the proposed long-term benefit outweighing any immediate productivity loss. With the prioritisation of focus on diabetes, heart disease, and injury prevention in rural areas21,22 it can be successfully argued that the healthy lifestyle program, or programs with similar approaches should be looked upon favourably in the allocation of resources for preventative medicine. The fact that many conditions are targeted increases the pool of resources or funds that can be accessed. Additionally, the increased ability to provide sufficient numbers for ongoing community-based intervention independent of the health service could provide a benefit in reduced demand on the resources of the health service.
In small centres, it is not always possible due to physical or fiscal restrictions to conduct programs for individual conditions. In the event that this was possible, the number of appropriate clients who may be interested in such a program may not make the program a viable proposition, or even enjoyable to the participants. The healthy Lifestyle Program is an example of modifying the method of service delivery in an area to increase the variety of conditions addressed, with no increase in human or physical resources, and with the additional aim of increasing the likelihood of a sustainable self-reliant community group to continue these benefits.

REFERENCES

5. NSW Health Department. NSW policy standards for cardiac rehabilitation. NSW Health Department 1997. State health publication No (C) 97 0120.


