Health Contract Calendars: A Tool for Health Professionals With Older Adults

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A health contract is a written agreement, signed by a client and a health professional, for the purpose of accomplishing a health goal. The health goal is established through discussion and negotiation and then recorded on a contract form.

The major purpose of a health contract is for the health professional to increase the client's confidence and skill level in accomplishing a health goal. The client's confidence and skills are improved when the health professional helps the client, through the use of the health contract technique, to organize and implement cognitive, social, and behavioral skills to meet a health goal (Jette et al., 1999; Lorig et al., 1996; Neale, Singleton, Dupuis, & Hess, 1990).

Theoretically, the client's confidence and skill level increase when the client can (a) identify an achievable and measurable health goal, (b) garner support from the health professional, family, and friends, (c) use behavior and cognitive management tools such as setting goals, clarifying health behaviors, promoting social support, keeping records, building motivation, improving memory, and managing the environment, and (d) refine or change the strategies or health goal as necessary.

According to Bandura's (1977, 1986) social learning theory, skill mastery in the areas of behavioral, social, and cognitive techniques is the most important influence on building confidence, or self-efficacy. Developing and implementing a health contract provides the client with the opportunity for skill mastery while also affording considerable flexibility. The client can collaborate on which techniques are important to implement and whether these techniques, or the health goal itself, need to be modified to increase the likelihood of success.

Evaluation of Health Contracts

There has been research on the effectiveness of health contracts in achieving goals in the areas of exercise, weight management, smoking cessation, seat belt usage, and alcohol abuse (Alexy, 1985; Berry, Danish, Rinke, & Smiciklas-Wright, 1989; Leslie & Schuster, 1991; Neale et al., 1990). In general, the results of these studies have been promising, but not conclusive, because of the absence of methodological rigor. It is not known, for instance, which components of a health contract (e.g., promoting social support, keeping records, building motivation) are most effective, for whom they are most effective, and under what circumstances (Jette et al., 1999; Berry et al., 1989).

The importance of active, ongoing social support with the use of health contracts was reinforced by an AARP Andrus Foundation grant project (Haber, 1993). During Phase 1, five graduate nursing students achieved an 80% success rate with older adults in a community setting. Success rate was defined as a positive experience reported by the older adult with the health contract and at least partial achievement of their health goal.
During Phase 2 the same health contracts were used, but they were mailed along with instructional booklets to persons who requested them after reading about their availability in one of several gerontology publications. Two months later a random sample of these recipients (n = 100) received a brief questionnaire along with a stamped, self-addressed envelope. As expected, the reported success rate was substantially reduced to 16% (Haber, 1993).

Another health contract study also produced a predictable result. Specific goals and ongoing feedback led to higher client performance than did vague goals and inconsistent feedback (Latham & Locke, 1991). Other studies, however, have been less predictable. Clients who selected their own health goals, for instance, were not more successful than those who had health providers set them (Alexy, 1985).

In general, health contract studies have used small sample sizes and have not been replicated. On the unusual occasion when they are replicated, the results are often inconsistent, as is the case with studies that compare the use of external versus internal incentives (Strecher et al., 1995).

Despite the research shortcomings, behavior analysts have found health contracts to be promising. The result of a study of a cardiac program in Canada, for instance, demonstrated this promise. In this study, Oldridge and Jones (1983) reported that participants who signed contracts adhered to their 6-month program (65%) more than did control group members (42%) or those who were asked to sign an agreement but did not (20%).

Three Stages of Implementation

We have taught undergraduate and graduate students in occupational therapy, physical therapy, nursing, health education, and gerontology; family medicine medical residents; and geriatric physician fellows. Within these student courses and provider rotations, we have implemented health contracts in three stages.

The first stage is training, typically about 4 hours in duration. The first hour is an overview of how to complete a health contract, which is divided into four steps:

1. How to collaborate on a measurable and modest health goal with an older client
2. How to identify benefits that motivate the client
3. How to identify barriers and record a brief plan of action to circumvent them
4. How to provide follow-up

The follow-up period begins when both parties sign the health contract and agree upon two follow-up contact dates. These contacts are then made over the following month.

The next 2 hours of training consist of two supervised, practice health contract interviews with older volunteers. The final hour is focused on a discussion of the student’s or provider’s interview experience and how to improve their technique.

The second stage involves applying the health contract technique to older adults in the community. This application takes place for students during a community health class or, in the case of medical residents or geriatric fellows, during a community health rotation. The general impression of these students and health providers has been that most older adults demonstrate enthusiasm for the technique, whereas a few appear to be humoring them. However, because we provide considerable social support, the impression of the students and providers is that almost all of the older adults appear to respond favorably to the technique.

To prevent reliance on impressions, we set the third stage as an evaluation of the impact of the health contract that typically takes place over a 1-month period. Although clinicians and health educators in the community have the potential to provide clients with long-term support as well as long-term evaluations, students in semester-long classes and providers during specified rotations are limited by time.

The first contact by the student or provider is made by telephone within a week to determine if the older adult is having difficulties with the health contract and whether adjustments need to be made. The second contact is made in person after 1 month (though intervening contacts may be required with specific individuals). At that time the individuals were asked if the use of the contract was a positive experience and whether they achieved at least partial success with their health goal.

Although many issues remain in the implementation and evaluation of health contracts, this article is focused on one problem area—finding a more objective way, one that can be quantifiable, to measure client success with a health contract. The contract, therefore, was modified to include a calendar to identify specific health behaviors that could be recorded on specific dates. A preliminary evaluation of this health contract/calendar technique is the subject of this article.

Methods

One older participant recorded on her health contract (see Figure 1) the goal of brisk walking for at least 30 min 5 days of the week. Under the “benefit” category she listed weight management and decreased blood pressure. Under “barriers” she noted, in bad weather, use indoor location; and seek social support from a friend or neighbor as much as possible.

The calendar month then became the new component to be completed. “Brisk walking” was written into the boxes for 5 days of the week over a 4-week period. The days of the week selected by the client were perceived to be the most conducive for walking, with the remaining 2 days serving as potential back-up dates. Finally, the health contract was signed by both parties, and two follow-up contact dates were agreed upon.

Another older client determined the baseline number of fruits and vegetables that he typically ate and then decided to add another serving of fruit or vegetables to his diet on 4 days of the week. The client noted the additional food items on the agreed-upon calendar dates for a 4-week period.
An older gentleman wanted to reduce the number of times he ate at fast food restaurants from five to two times a week. We identified 2 days of the week when the client wanted to eat out the most and recorded these dates for a 4-week period.

An older woman selected a health goal of getting a flu vaccination. The client recorded on one of the calendar dates to call her senior center and find out on which days the shot would be available. On a second date the client agreed to record when she had gotten the flu shot. On a third date she agreed to record when she had contacted her physician’s office and asked to have the flu shot included in her medical record.

For the typical client, between 6 and 20 specific health behaviors were recorded on the calendar month. When the client completed the health behavior on a designated day, or on a back-up day, that date was check marked. The number of behaviors that the client performed and check marked, divided by the total number of behaviors scheduled to be performed, provided the client and the provider with a quantitative measure of success.

Sample

This new method was applied by four geriatric fellows from the Center on Aging, University of Texas Medical Branch, and three family medicine residents from the Department of Family Medicine, University of Texas Medical Branch. The fellows and residents were diverse in terms of gender (4 women, 3 men), race (including one African American and one Hispanic), geography (4 from the United States, 3 from other countries), and age (28–44 years old). When the diversity of the providers (and, in previous efforts, students) is combined with the limited sample size and diversity of older adults, no attempt at differentiating among provider effectiveness is possible.

The providers conducted their health contract interviews with a convenience sample of a diverse group of 48 older adults. The average age of the participating adults was 73 years, with 54% Caucasian, 25% African American, 13% Hispanic, and 8% Asian. Seventeen percent had less than a high school diploma, 42% had a high school diploma, and 42% had at least some college education.

We recruited the older adults from senior centers and churches. To meet our screening criteria, we recruited culturally diverse and cognitively intact adults who were at least 65 years of age and willing to participate in a 45-min interview. Although no cognitive assessments were conducted, three older adults were identified as cognitively impaired by the senior center director and were not approached.
Fifty-eight older adults were approached and 48 agreed to participate.

Results

Among the 48 participants, 18 (38%) chose an exercise or physical activity goal, 11 (23%) a nutrition goal, 10 (21%) a medical screening or immunization goal, 3 (6%) a mental health or stress management goal, 2 (4%) a smoking cessation goal, 2 (4%) a fall prevention goal, 1 (2%) a dietary supplement goal, and 1 (2%) a safety goal.

Each participant was contacted by telephone 1 week after the initial interview to check on his or her progress and determine if refinements needed to be made. We made minor refinements on five contracts. At the end of a 4-week period we checked on the clients again and collected the health contracts.

Among the 48 participants, 15 documented a 100% success rate (based on the method previously described—number of behaviors performed and check marked, divided by total number of behaviors scheduled to be performed), 8 documented a success rate from 75% to 85%; 13 from 50% to 74%, 8 from 20% to 44%, and 4 reported no success.

With the 50% or more achievement threshold, the success rate among the 48 clients was 75% (36 of 48). This success rate was consistent with previous efforts that involved the short-term use of health contracts with considerable social support (Haber, 1993).

However, the option is also available to use other thresholds for success. Focusing on at least 75% achievement, 31% (n = 23) can be identified as highly successful. Focusing on the other end of the spectrum, the range from 20% to 44% achievement, 17% (n = 8) can be identified as being not too successful. Eight percent (n = 4) were not successful at all.

Three of the four unsuccessful participants were unable or unwilling to come up with a health goal. These participants felt that they were already significantly involved in the maintenance or improvement of their health and were not motivated to come up with a health goal. The fourth participant was not significantly involved in the maintenance or improvement of her health, but did not want to participate in developing a health contract.

Discussion

Bandura (1986) reported that the successful achievement of a behavioral goal is the most influential source of self-efficacy, because it is based on the actual experience of skill mastery. The documentation of each behavior by “checking off” on a contract calendar provides visible evidence of skill mastery. Each subsequent successful behavior adds to a sense of self-efficacy. To avoid a decline in self-efficacy, one can alter the frequency or magnitude of health behaviors or, if necessary, the health goal itself.

Several limitations with the health contract technique have been noted: (a) There is a lack of methodological rigor in evaluating contracts; (b) the technique has been used with small samples of older adults, health providers, and health students, and has been limited to volunteers in specific settings; and (c) long-term use of the health contract has not been examined.

Nonetheless, we believe that our short-term approach, which has incorporated feedback from older adults, health science students and health providers, has been useful over the past several years. In addition to providing consistently positive feedback from students and providers, we have refined our measurement of client success with this project. Client success is measured by calculating the percentage of successful health behavior events completed from the total number of events contracted.

Several features of the health contract appear to contribute to its acceptance by providers, students and older adults. First, it is both a structured and flexible technique. The health contract makes it quite clear what needs to be done, when it needs to be done, and by whom. However, unlike a real-world contract, it can easily be changed multiple times until it works to the satisfaction of participants.

Second, the health contract itself is a behavior management tool, as it can be made visible on the refrigerator, coffee table, or other conspicuous place in the home. The contract can serve as a constant visual reminder of what needs to be done.

Third, the contract timetable is achievable because clients report that a 1-month period is long enough to feel a sense of accomplishment but short enough so that they do not feel locked in and overwhelmed.

Finally, the additional calendar component of the health contract is a familiar device to almost everyone. All but 3 of the 48 participants stated that they had already been using a calendar of some type to remind themselves of future events. The use of a health contract merely transforms this existing practice into a strategy for accomplishing an important health goal.

For clinicians or health educators who want to adopt or adapt the health contract technique, we recommend thought be given to the following issues:

1. The technique does not have to be implemented by clinicians. An office staff person or volunteer with a health education background, or a willingness to learn, and good communication skills can be an effective practitioner.

2. A brief overview of the technique given to a client, followed by a question such as, “Is this of interest to you?” will separate those clients who are eager to try it from those who are reluctant or unwilling.

3. Few clients initially choose modest goals. An important task is not only to find a health goal of interest to the client, but also find one that is achievable.

4. In general, the reward for the clients comes from the time and attention paid to their sense of satisfaction with the accomplishment of a goal. However, the health contract may also include incentives for accomplishing a certain number of health
behaviors or the health goal itself. The practitioner may want to encourage clients to select rewards that are meaningful. It is unclear, however, from previous research whether this makes the contract more effective (Strecher et al., 1995).

5. The opportunity for long-term guidance and support is more likely in the clinical setting, where many older adults see a health provider multiple times during the year, than it is in the educational setting. The length of the calendar period, therefore, may be altered to coincide with the next office visit rather than structured exclusively for a 1-month period.

6. Students and providers report more confidence with the health contract technique over time. Try the health contract with at least 10 clients, preferably more, before deciding whether the technique is promising enough to continue with.

References

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