

## CHAPTER 9

# Goal Setting to Plan and Evaluate Memory Rehabilitation

### What Are Goals?

The *Concise Oxford English Dictionary* (1999) defines a *goal* as “the object of a person’s ambition or effort; a destination; an aim” (p. 505). Ylvisaker and Feeney (2000) suggested that “rehabilitation needs to involve personally meaningful themes, activities, settings and interactions.” Wade (1999), discussing rehabilitation goals in particular, indicated that “a goal is the state or change in state that is hoped or intended for an intervention or course of action to achieve” (p. 2). In practice, for our purposes, a goal is something the individual in receipt of and participating in rehabilitation wants to achieve, and subsequent actions will be relevant and meaningful to this person when they reflect his or her longer term aims. Although other people, who may be family members or therapists involved in the particular therapy program, may help in the achievement of goals by their efforts and support, their *actions* in this process are not regarded as goals.

Houts and Scott (1975) and McMillan and Sparkes (1999) proposed several principles of the goal-planning approach to rehabilitation. First, the patient should be involved in setting goals. Second, the goals set should be reasonable and client centered. Third, they should describe the patient’s behavior when a goal is reached. Fourth, the method to be used in achieving the goals should be presented in such detail that anyone reading the plan would know what to do. McMillan and Sparks summarized the principles of Houts and Scott and added to them, suggesting that goals should (1) be client centered, (2) be realistic and

potentially attainable during admission, (3) be clear and specific, (4) have a definite time deadline, and (5) be measurable.

In most rehabilitation centers, long-term goals are those the patient or client is expected to achieve by the time of discharge from the program, whereas short-term goals are the steps set each week or two to achieve them. Long-term goals target disabilities and handicaps in order to improve day-to-day functioning, and they should be achievable by the time of discharge from the center. Collicut-McGrath (2008) captured the essence of goal-planning philosophy by stating that ideally rehabilitation should be “patient centered *not* profession centered; participation/role based *not* impairment or activities based; interdisciplinary *not* multidisciplinary; goal directed *not* problem focused; individualized *not* programmatic” (p. 41). Regarding Collicut-McGrath’s third stipulation, Nair and Wade (2003) suggested that in interdisciplinary rehabilitation professionals work toward common goals, whereas in multidisciplinary rehabilitation the different disciplines individually set goals appropriate to their profession.

### **Why Use Goal Setting in Memory Rehabilitation?**

Nair and Wade (2003) argued that incorporating people’s life goals into treatment leads to better outcomes. The main purposes of rehabilitation are to enable people with disabilities to achieve their optimum level of well-being, to reduce the impact of their problems on everyday life, and to help them return to their own most appropriate environments. In other words, rehabilitation is ultimately concerned with enabling people to participate effectively in valued activities (Hart & Evans, 2006). Memory rehabilitation is no different. Its purpose is not to teach people to do better at memory exercises, to improve performance on memory tests, or to learn lists of words but rather to enable them to achieve personal goals. These goals, therefore, should be the main focus of memory rehabilitation, and if they are pursued then, whether or not they are achieved, they represent one of the best channels for evaluating the success of memory rehabilitation.

Some studies use standardized test scores as the main or only outcome measure (see, e.g., the studies reviewed by Carney et al., 1999). This is inappropriate not only because memory rehabilitation is not about improving test scores but also because the relationship between test performance and real-life skills is at best modest and at worst nonexistent (Sbordone & Long, 1996). For the same reason, it is wrong to use test scores to determine those memory problems that should be tackled in rehabilitation. Although tests provide a profile of a person’s cognitive

strengths and weaknesses, they do not tell us a great deal about how people with neuropsychological deficits cope in everyday life. Nor do they tell us what brain-injured people and their families hope to achieve and what is important for them.

As an illustration, take the example of an amnesic patient who was able to live on his own, hold a job, and complete his own tax forms. He could do all of these things because he used compensatory strategies very efficiently and because of excellent organization and planning abilities. Almost anyone working in rehabilitation would describe him as a rehabilitation success, but if standardized tests were used to measure this success, then he would be a failure because he scored zero on any test of delayed memory (Wilson, 1999; Wilson, Gracey, Evans, Bate-man, in press).

There are several advantages to a goal-setting approach. First, it makes certain the aims of the admission are clearly documented. Second, patients, relatives, and caregivers are all involved as well as the rehabilitation team. Third, such an approach promotes team work. Fourth, it incorporates a measure of outcome. Fifth, it removes the artificial distinction between outcome and client-centered activity. Goal setting as a measure of outcome is further addressed later in this chapter. Among the disadvantages of goal setting are:

1. It does not provide systematic data on all problems. To address this issue, one can, of course, include additional data such as questionnaires, rating scales, and demographic data.
2. It depends on a good and experienced chairperson. This can be overcome by having new members of staff shadow experienced members before they take on the position of chair.
3. It is possible to set goals that are too easy.

McMillan and Sparks (1999) believed this latter point can be resolved with staff training and experience; in addition, one could make the case that some easy goals are a good thing because they may increase motivation and self-esteem. Although, according to Wade (1999), "good rehabilitation practice should set meaningful and challenging but achievable goals" (p. 41), there is surely a place for a few easy goals to improve patients' morale. Furthermore, one can always use goal attainment scaling (GAS; Kiresuk & Sherman, 1968) to weight the goals and thus make them more comparable. GAS also allows for the comparison between patients. Once goals have been negotiated, weights can be applied to each of them to reflect their relative importance.

GAS was developed in 1968 by Kiresuk and Sherman for use in mental health settings. Ottenbacher and Cusick (1990), recommending

it for occupational therapists, suggested that GAS provides a framework for goals that is “measurable, attainable, desired by all, and socially, functionally and contextually relevant” (p. 520). Malec (1999) described the steps involved in GAS.

1. The initial goals are agreed.
2. The goals are weighted, with high-priority goals rated 1 (if all goals are of high priority, they can all be given a rating of 1). (Malec also stated that in rehabilitation settings weighted goals are not typically used.)
3. The time by which the goal is to be achieved is specified.

So far, GAS appears to be much like goal setting described elsewhere in this chapter. The fourth and fifth steps are what sets GAS apart.

4. Articulate the “expected” level of outcome in specific behavioral terms (Malec, 1999, p. 256). The expected outcome is scored 0.
5. Articulate other possible outcomes.

A better than expected outcome is scored +1 and an even better outcome scored +2. Next, determine a worse outcome, which is scored -1 and an even worse outcome scored -2. So, for example, if the goal is for Jim to remember to take his medication four times a day for 2 weeks (i.e., 56 times over the specified time period) and all parties involved in the negotiation believe Jim will manage to do this approximately half the time (26–30 occasions), this score will be 0; if he does better (e.g., managing 31–38 times), he will score +1; if he remembers more than 38 times, he will score +2. On the other hand, if he remembers fewer than 26 times but more than 18, he will score -1, and if he does worse than this he will score -2. The final step is to score the patient on the goals before treatment and at the time when it is expected he or she will achieve the goal.

Zweber and Malec (1990) were probably the first to describe GAS for people with brain injury. They suggested using GAS in addition to, and not in place of, more traditional goal setting. Malec, Smigielski, and DePompolo (1991) followed this up with a further study looking at outcome after a brain injury rehabilitation program. They found that GAS was “a quantifiable individualized measure that is useful for (1) monitoring patient progress, (2) structuring team conferences, (3) ongoing rehabilitation planning and decision-making, (4) concise, relevant communication to family, referral sources, and funding sources, and (5) overall program evaluation when used in the context of other objective outcome measures” (p. 138).

Rockwood, Joyce, and Stolee (1997) studied 44 people with brain injury. They reported a range of correlations between GAS and other outcome measures such as the Disability Rating Scale and Daily Living Scales. Malec et al. have published several papers on GAS in brain injury rehabilitation (e.g., Malec, Smigielski, DePompolo, & Thompson, 1993; Malec, 1999). Although Tennant (2007) believes GAS has serious flaws, the 1999 paper is a useful review of GAS and includes a discussion on strengths and weaknesses. A 2006 appraisal of GAS studies by Hurn, Kneebone, and Cropley also suggested strong evidence for the reliability, validity, and sensitivity of GAS.

### Theories of Goal Setting

Hart and Evans (2006) observed that theories of treatment try to explain the process by which received treatment results in improved health. They found that social cognitive theory is a useful source for rehabilitation because it proposes that “human behavior is self regulated to meet personal standards or goals” (p. 143). People attempt to reduce the discrepancy between the actual state of affairs and the desired state of affairs or, in other words, they are trying to achieve personal goals. Other sources that have value for brain injury rehabilitation include commerce, education, and sport. Locke and Latham (2002) carried out a meta-analysis of more than 30 studies of goal setting and concluded that there is strong evidence that goal setting improves performance. They suggested that there are a number of mechanisms by which goal setting influences behavior. Goals serve a directive function, directing attention toward goal-relevant activities and away from goal-irrelevant activities. They have an energizing effect, with more demanding goals leading to greater effort than less demanding goals. They also affect persistence, with hard goals leading to more prolonged effort. Finally, goals are thought to lead to the arousal, discovery, and use of task-relevant knowledge and strategies.

Gauggel and Fischer (2001) found that specific goals are better than vague or general goals, such as “do your best.” In one study, 45 people with brain injury were randomly divided into two groups. Each group was assessed on the Purdue Pegboard Test. One group was given a general goal to “do your best.” The other group was set a specific goal: “Try to increase your speed by 20 seconds.” Those given the specific goal performed significantly better than the group set the general goal. Gauggel et al. have found similar results with other tasks, including mental arithmetic (Gauggel & Billino, 2002) and reaction times (Gauggel, Leinberger, & Richardt, 2001).

Latham and Sejts (1999) also found that setting long-term goals alone resulted in poorer performance than when long-term and short-term goals were combined. As stated by Wilson, Gracey, Evans, and Bate-man (in press), feedback is likely to be critical in brain injury rehabilitation and achievement of short-term goals provides feedback in the quest to achieve long-term goals because they serve as markers of the progress attained. Carver and Scheier (1990) also argued that reducing the discrepancy between current state and goal state is critical in reducing emotional distress. A study of 82 brain injury rehabilitation patients by McGrath and Adams (1999) suggested that progress in rehabilitation (through goal setting and achievement) was associated with reductions in anxiety. Young, Manmathan, and Ward (2008) also found that goal setting reduced anxiety in caregivers and provided psychological benefits to patients and to caregivers in the form of increasing motivation and providing reassurance.

### **Identifying and Setting Goals: The Art of Negotiation**

Some patients may seem to want to achieve the impossible. A patient with a spinal injury may say "My goal is to walk again." A patient with severe and widespread cognitive deficits may say "I want to return to my former employment as a lawyer." An amnesic patient may say "I want to get my memory back." This is where the art of negotiation comes in. In the case of the amnesic patient, the answer may be along the lines of "We don't think it is possible for you to restore your memory to what it was before your accident/illness/injury, but we can find a way to help you remember what you have to do each day. How do you feel about having that as one of your goals?" This may be sufficient to get the first memory goal set. If not, we could try to persuade the patient to accept a simpler goal first: "Let's try this first and we can look again at other possible goals in a few weeks." Sometimes it is necessary to accept an unrealistic goal if the patient and/or family will not compromise; in these situations, however, staff may feel uncomfortable agreeing to goals they firmly believe are unattainable. After all, one of the main principles of goal setting is that goals should be potentially achievable. If the goals are to do with return to work, it is more realistic to have as a goal "Identify the tasks you need to do in order to be able to return to work." The reason for this is that it is difficult to predict, in most cases, how achievable the return to work goal is, depending, as it does, on so many other factors such as community support, whether or not the person was employed at the time of the injury, the economic situation of the country or town where the person

lives, and so forth. In the end, however, the patient has the last word because he or she “owns” the goal.

The first step in goal setting is to discuss with the patient, family, and members of the rehabilitation team just what it is they would like to achieve in the long term and short term. All parties need to consider what changes would be required for any goals to be achieved: Does the person need to learn a new skill or do something more frequently or for a longer duration, or does he or she need more support in order to carry out the task or behavior? Negotiation, as discussed earlier, is important. It is also necessary to decide how one will know whether or not any goal has been achieved. Sometimes this is easy, when, for example, behavior leading to and attaining the goal can be observed. Checking a memory book after each meal would fit this category. However, a goal involving, for example, the development of more confidence would probably have to be rated through a rating scale or questionnaire or through the number and nature of self-critical statements made, and this would be more difficult to observe and evaluate.

Once goals have been set, intervention can begin. After a period of time, goals should be reviewed. If the goal has been achieved, then a new goal can be set; if it has not been achieved, reasons for failure need to be examined. Was the goal inappropriate? Is more time required? Do other people need to be recruited to ensure consistency throughout the day? The next step in the process will depend on answers to these questions.

Typical goals for memory-impaired people include setting up a memory system to remind one of the day's activities; remembering to take medication; remembering to carry out self-care activities; learning the way to the shops or around the neighborhood, hospital, school, or workplace; learning the names of one's work colleagues; and other everyday, functionally relevant and meaningful activities. Each of these behaviors or attainments will need to be scaled down into short-term goals. (We return to this later.) Of course, memory problems are not usually observed or treated in isolation. People with memory difficulties may well have other cognitive problems such as attention deficits, poor planning, and slowed thinking as well as noncognitive problems such as anxiety, social isolation, and fatigue. Goals may need to be set for each of these problems. In addition, goals for people with severe and widespread cognitive problems or who are still in PTA will differ from those set for people who have less severe problems or who have a pure amnesic syndrome. A goal for someone in the first category might be to find his or her bed on the ward or learn the location of the toilet. Environmental modifications may be the treatment of choice here. Goals for someone who is hoping to return to work or who has no other cognitive

deficits apart from problems associated with impaired memory may be more focused on external memory aids and learning important pieces of information. As people recover, change, or develop better awareness, goals may need to be altered to reflect changes in status.

### **Goal Attainment as an Outcome Measure**

As in any rehabilitation program, we need to know whether our efforts to help people with memory difficulties have been effective or worthwhile; that is, we need to know the outcome of the intervention. Outcome can be defined as the result or effect of intervention, and it is not easy to measure partly because of the heterogeneity of the patients and their aims or goals resulting from treatment. However, if we recognize the overall purpose of rehabilitation as enabling patients to achieve personal goals, then we must assess whether or not those goals are achieved.

In acute medical care, the main outcome may well be survival or death. This is obviously not appropriate for rehabilitation because the patients have certainly survived. Rehabilitation has a number of outcome measures, the main ones being the Glasgow Outcome Scale (GOS; Jennett & Bond, 1975); the Glasgow Outcome Scale—Extended (GOSE; Jennett, Snoek, Bond, & Brooks, 1981); other disability rating scales such as the Barthel Index (BI; Mahoney & Barthel, 1965), the Functional Independence Measure (FIM), the Functional Assessment Measure (FAM; Keith, Granger, Hamilton, & Sherwin, 1987); and the Mayo–Portland Adaptability Inventory (Malec, 2004). This last named is a well-documented and psychometrically sound scale and highly appropriate for measuring outcome after rehabilitation. It includes measures of physical, cognitive, emotional, behavioral, and social problems that people with brain injury may encounter.

The GOS is a 5-point scale and the GOSE an 8-point scale ranging from *death* to *good recovery*, so neither is useful for determining the effects of cognitive rehabilitation because the categories are too broad. The BI is a 20-point scale covering bowels, bladder, feeding, stairs, dressing, and so on. The upper score equals independence. Although this scale has its uses in physical rehabilitation, it does not capture changes in cognitive functioning. The 18-item FIM has items similar to the BI, whereas the FAM includes 12 items assessing cognitive, behavioral, communication, and community functioning. Again, the scales are too broad and insensitive to measure such changes as better use of an external memory aid or whether someone remembers to take medication. The Mayo-Portland is a useful measure; it is predictive of employment and independent living (Testa, Malec, Moessner, & Brown, 2005). The



participation index can be used to measure the amount people engage socially, and a brief eight-item version exists.

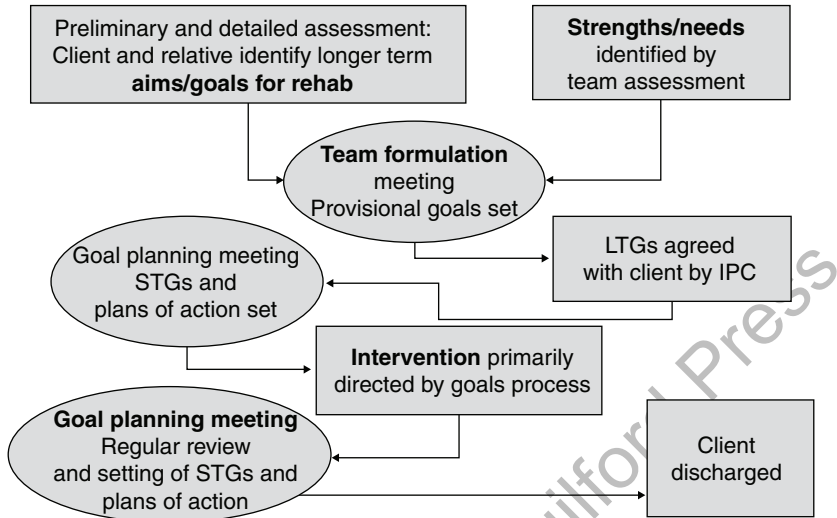
Other scales such as the European Brain Injury Questionnaire (EBIQ; Teasdale et al., 1997) and the Brain Injury Community Rehabilitation Outcomes (Powell, Beckers, & Greenwood, 1998) capture some aspects of rehabilitation. In addition to these standardized scales, measures such as return to work or return to independent living may be used. As far as memory is concerned, however, if we accept that the essence of rehabilitation is to help people achieve personally relevant goals and participate in personally valued activities, then goal achievement is the obvious way to measure success. Goals are what patients want to achieve; they may be at “floor” or “ceiling” on other measures, yet may still become more independent, learn to use a memory system, and gain a better understanding of the nature of their problems. Randall and McEwen (2000) considered that the more specific the goals in terms of the patient’s personal context, the better the outcome will be.

In summary, memory rehabilitation should be centered around goals: Goal setting is the focus of current rehabilitation and achievement of goals is a straightforward outcome measure that does not preclude the use of other measures such as rating scales, questionnaires, and measures of independence. We can even use standardized tests to determine whether people have, incidentally, improved on these, although we should always be aware that the purpose of rehabilitation is not solely to improve test scores. Finally, we need to be very sure that any change is not the result of a practice effect (Wilson, Watson, Baddeley, Enslie, & Evans, 2000).

## Goal Setting in Clinical Practice

We now consider the process of goal planning, short-term versus long-term goals, and action plans. We then look at goals for day patients, inpatients, and outpatients. The stages involved in goal planning can be seen in Figure 9.1.

Following multidisciplinary assessments and observations, there will be discussions with clients, families, staff, and possibly other support services to consider the person’s needs, desires, and hopes. Then there will be a formulation. As mentioned, formulation is a process of deriving hypotheses concerning the nature, causes, and factors influencing current problems or a client’s present situation. Formulation takes into account the multitude of possible influences on an individual’s level of functioning and psychological state. It also helps the team and the client to understand the problems. In an interdisciplinary rehabilitation



**FIGURE 9.1.** Stages involved in goal planning. STG = short-term goal; LTG = long-term goal; IPC = Individual Program Coordinator. Courtesy the Oliver Zangwill Centre.

team, where a range of assessments (and interventions) may be carried out by different professionals, formulation helps bring together results of these assessments into a single coherent whole. Presenting this visually, through a chart or graph, may help summarize the information and promote a shared understanding and team work. A good clinical formulation should lead to appropriate and relevant interventions. In a situation where multiple influences on functioning are present, it is likely that a range of interventions are required. These are most likely to be effective if they are conducted in the same time period and by people who are aware of what else is going on.

After formulation, the identification of goals can proceed. As stressed earlier, it is essential that clients be involved in the process of setting goals. Holliday, Cano, Freeman, and Playford (2007) examined the impact of increased patient participation in goal setting. The patients who had more input in the establishment of their goals perceived their goals to be more relevant and expressed more satisfaction with the goal-setting process than those who received the treatment-as-usual procedure. Goal setting should follow SMART principles: being **Specific, Measurable, Achievable, Realistic, and Time based** ([www.projects.smart.co.uk](http://www.projects.smart.co.uk)). An example of a SMART goal involves Peter (Wilson, Gracey,

et al., in press). One of Peter's long-term goals was to manage his own financial affairs. One of the short-term goals toward achieving this was to be able to sign his own checks. He had apraxia, so writing was difficult for him. The aim was for Peter to sign any check in 6 seconds, and he was to achieve this within 2 weeks (this was certainly specific). At the start, he took almost 30 seconds to sign each check (easy to measure); he could do the task but was very slow. The team felt he could achieve a goal requiring him to do the task faster (achievable). Because Peter needed to be able to sign checks in order to manage his own financial affairs, the task was realistic. The time of 2 weeks was set, so the "T" element (time based) of SMART was part of the process. Two extra letters can be added to make the acronym "SMARTER," with the last "E" and "R" standing for **Evaluate** and **Review** (MEC Services Ltd., [www.mecservices.co.uk](http://www.mecservices.co.uk)). Peter was evaluated (timed) on each occasion he needed to sign a check and was reviewed every 2 weeks at a goal-planning meeting. The wording of the goal should be thought through carefully, with the client having the last say to ensure he or she retains "ownership" of the goal. Short-term goals and plans of action need to be established (see following discussion). The goals must then be reviewed.

In most rehabilitation centers, there will be a lead person for each patient or client. This person will probably chair the goal review meetings and provide an update on progress, along with any issues or concerns that have arisen. This may be followed by comments and general concerns from the staff. There will probably be a review of the formulation and the goals. New short-term goals and plans of action will be set together with a date for next meeting. If the long-term goals have been achieved or are considered unachievable, then new ones may also be set.

Although the frequency of the review meetings depends on time scales for goal achievement, regular reviews are essential. Goals may be achieved, partially achieved, or not achieved. If they are not or only partially reached, the team and the client need to know why. Variance codes may be useful. Four category codes are used at the Oliver Zangwill Centre to record the reason why goals were not achieved: client/caregiver (e.g., client was unwell), staff (e.g., insufficient therapy time available), internal administration (e.g., bus to collect the patient did not arrive), and external administration (e.g., a work trial was canceled).

We now turn to examples of goals for day patients, inpatients, and outpatients. Although the goal areas are different for each group, some aspects are common to all. Collicutt-McGrath (2008) discussed nine life goal areas that are likely to affect all rehabilitation patients (see Table 9.1). These can be measured by the *Rivermead Life Goals Questionnaire* (Davis et al., 1992).

**TABLE 9.1. Life Goal Areas Likely to Affect All Rehabilitation Patients**

1. Residential and domestic issues.
2. Personal care.
3. Leisure, hobbies, and interests.
4. Work.
5. Relationship with partner.
6. Family life.
7. Friends.
8. Religion or life philosophy.
9. Finances.

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*Note.* Data from Davis et al. (1992).

This questionnaire may help us decide which areas are of particular importance to our clients. Our specific goals are likely to fit under broad domains such as mobility, communication, self-care, productivity, leisure, understanding brain injury, mood, and cognitive functioning. Memory, of course, comes under cognitive functioning, but memory-impaired people will also have a range of other goals set in addition to the specific memory ones. Bateman et al. (2005) examined 680 goals set for 95 clients at the Oliver Zangwill Centre in the United Kingdom. The most common goals ( $n = 248$ ) were those concerned with managing activities of daily living, followed by leisure goals and goals relating to understanding the consequences of brain injury (both  $ns = 154$ ), and then work or study skill goals ( $n = 119$ ). This same study showed that of the 680 goals set, only 50 were not achieved. The remainder were wholly or partially achieved, and on two of the other outcome measures—the EBIQ (Teasdale et al., 1997) and the Dysexecutive Questionnaire (Burgess et al., 1998)—there was a significant improvement in scores from the beginning to the end of the program.

The Oliver Zangwill Centre in Ely provides a 6-month day rehabilitation program for people who have some chance of returning to work or further education. Before patients begin the full program, they will have received a 2-week detailed assessment. During this time, they will have undergone a neuropsychological assessment of their cognitive and emotional functioning as well as assessments from other therapists regarding, for example, activities of daily living. The latter might include shopping, cooking, road safety, communication skills, and psychosocial assessments. In addition, they will have been observed in group and

individual sessions. During this two-week period, clients are asked to think about possible goals for the full program.

When clients start the 6-month program, goals are reconsidered and drawn up following meetings with other team members, the client, and family members. Most will work on seven or eight long-term goals during the program, but some will have more and some less. Many, but not all, have one or two memory goals, and most have a goal concerned with understanding the consequences of their brain injury. There will also be one or two goals relating to mood and emotion, a goal concerned with leisure, and one connected to work or education. Other frequent goal areas relate to driving, family responsibilities, self-esteem or confidence, emotional well-being, and, frequently, specific personally important goals. Peter, for example, was passionate about flying his model helicopter and, because he was no longer able to do so because of his brain injury, felt strongly that he wanted to include this as a goal (Wilson, Evans, & Keohane, 2002; Wilson, Gracey, et al., in press). Lorna, a patient with dysphasia and severe word-finding difficulties, used pictures to remind her to achieve her goals (Prince et al., in press; see Table 9.2).

Like all goals, memory goals are broken down into short-term goals and action plans. Long-term goals are those expected to be achieved

**TABLE 9.2. A Brief Description of One of the Goals Set for Lorna, a Woman with Dysphasia**

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- Lorna, a 34-year-old woman, sustained a gunshot wound to her head in 1999.
  - Scans showed the bullet entered through the left lateral orbital margin and exited in the left parieto-occipital region.
  - She was assessed in 2004 at the Oliver Zangwill Centre.
  - Residual difficulties were expressive and receptive dysphasia, memory, attention, and anger management.
  - One goal selected by Lorna was to be independent in remembering appointments and other daily tasks.
  - Because of her language and communication difficulties, written and spoken prompts were inappropriate.
  - Lorna decided she wanted to use a filofax, or personal organizer.
  - Picture stickers were used for her to put onto the relevant date to remind her what she had to do (e.g., a picture of teeth to remind her to go to the dentist, of people dancing to remind her to go to her dance class, and of tablets to remind her to collect her prescription).
  - Weekly therapy helped Lorna learn to plan out her week.
  - She was able to recall appointments.
  - Her husband helped her to print out the stickers.
  - On discharge from the center her husband helped Lorna to plan her week.
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*Note.* Data from Prince et al. (in press).

by the time of discharge from the program, in this case 6 months. As mentioned, short-term goals are steps toward the long-term goal and are expected to be achieved in 1 or 2 weeks. Action plans are steps taken by someone other than the client to help achieve a short-term goal. If someone other than the patient is carrying out the activity, this is not a goal. When drawing up an action plan, it should be made clear who is to do what and *how* this will be achieved. Take, as an example, the long-term goal "Joe will learn to use a memory system to remember what he has to do each day." The first short-term goal might be "Joe will choose an aid and try it out for a week to see if he thinks it might be suitable for him." The action plans might be as follows: "1. Donna, Joe's occupational therapist, will take Joe to the memory aids resource center by car on Wednesday to look at the memory aids there. 2. Donna will discuss with Joe the pros and cons of several aids and help him select one. 3. Donna will arrange for Joe to borrow the chosen aid for a week to try out at the rehabilitation center." If Joe likes the aid, the second short-term goal for him might be "Joe will learn to put in the day, date, and time of one new appointment by himself." The action plan might be "Donna will demonstrate to Joe how to do this and, using an errorless learning approach, teach Joe how to accomplish this task." The EL learning approach might be to take Joe through each step three times and then use a backward chaining approach to see whether he can accomplish the steps himself. If he looks as if he is about to make a mistake Donna will preempt this by guiding his hand," and so the process goes on. Wilson, Gracey, et al. (in press) provided detailed examples of this approach at the Oliver Zangwill Centre. Another action plan might be that Donna will purchase the aid for Joe when the one he is trying out has to be returned to the resource center.

For inpatients the principles are the same, but the nature of the goals may be very different. For somebody in PTA, the goal maybe to teach him or her to look at the orientation board in the ward to check what day it is. The first short-term goal might be learn the location of the board ("Susan will learn the location of the orientation board"), and the action plan might be "Kate (Susan's nurse) will take Susan to the board and say, "This is the board that tells you today's day and date." Kate will follow a spaced retrieval plan so once Susan has dressed and had breakfast, Kate will take her to the board and return to the day room. She will repeat the process after 2 minutes, then 5 minutes, 10 minutes, 20 minutes, and 30 minutes. Susan will then be asked if she can find the board that tells today's day and date. She can be prompted if necessary. If Susan appears confused, Kate should return to the beginning but build up more slowly in 5-minute increments. For inpatients who are out

of PTA, the goals may be focused on finding their way around the hospital to different departments or learning the names of staff and other patients plus learning to use an external memory aid.

A colleague in London, Rene Stolwyk, described a goal for an inpatient who needed to remember to go to the toilet. The long-term goal was for the patient to use the toilet independently. To maximize motivation, the patient was told there would be a number of short-term goals that would become progressively more difficult. The first short-term goal was for him to agree to go to the toilet when the nurse prompted him. Once this was achieved, the second short-term goal was to set an alarm and for the patient to ask the nurse for the toilet once the alarm sounded. This was followed by the patient setting the alarm when prompted, then for him to set the alarm without prompting, then to only use the alarm at night before achieving the final step of using the toilet independently with no alarm or prompting. This was successfully achieved within 2 weeks.

For outpatients, once again, the principles are the same but the goals will probably be different and possibly have more to do with independence in everyday life. Wilson (1999), for example, discussed the case of Jack, who became amnesic because of carbon monoxide poisoning. An outpatient seen weekly for several weeks, Jack wanted to remember where his car was parked and where he had put his belongings; he also wanted to make sure he did not double-book appointments. As discussed, Clare et al.'s (1999) patient, V. J., diagnosed with AD 6 years earlier, wanted to relearn the names of people at the club he attended once a week. He was seen weekly at home and learned 11 names, one each week from photographs of the club members. This learning generalized to the real people at the club and was maintained for 9 months.

Whether working with inpatients, day patients, or outpatients, other goals set for memory-impaired people will need to take into account their memory problems. Sometimes specific learning strategies will be required to teach the use of an electronic aid or to become familiar with a new computer program. Hart, Hawkey, and Whyte (2002) asked clients to record their goals on a voice organizer, which was used to prompt them to review their goals from time to time. There was evidence that this led to better recall of therapy goals. For emotional and mood goals, it may be helpful to use a pager or timer to remind people to perform relaxation exercises or breathing techniques to reduce anxiety.

Caroline (Evans, in press-b), described in Chapter 8, had severe PTSD plus memory problems, so using the general guidelines outlined in Chapter 1 helped her to achieve her goals. These included the following:

1. Understand the consequences of her brain injury, their impact on her daily life, and the strategies that she can use to manage them.
2. Reduce the intensity of daily intrusive thoughts/images.
3. Reduce the frequency of unpleasant dreams (from severe to moderate).
4. Rate herself as comfortable in more than 70% of interactions in personal relationships.
5. Rate herself as being hopeful more than 50% of the time.
6. Use a memory and planning system to carry out independent living activities successfully on at least 80% of occasions.
7. Use strategies to sustain attention during everyday activities in order to concentrate on them successfully on more than 70% of occasions.
8. Be able to engage comfortably in identified activities previously avoided, including (a) travel independently by train on at least one short familiar route, (b) go shopping at a moderately busy time, (c) feel comfortable in an unfamiliar pub or restaurant, and (d) feel comfortable in a cinema.
9. Engage in a physical leisure activity on a weekly basis.
10. Undertake a vocationally related course and have a clearly documented plan for returning to paid employment (Evans, in press-b).

In Chapter 10 we aim to encapsulate previously discussed knowledge by designing a program for memory rehabilitation.