

Australian Government Mental Health Lifecycle Package

A Study into the Barriers to Rehabilitation

Phase Two – Evaluating the Feasibility of a Routine
Outcome Measure for DVA Rehabilitation Clients
Final Report, January 2011

Note

This document is a Final Report for the Government's Mental Health Lifecycle Package "Study into the Barriers to Rehabilitation". It is the Final Report on the evaluation of a routine outcome measure for DVA's rehabilitation clients.

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Executive Summary

The *ADF Mental Health Lifecycle package* and the initiative to “*Make community mental health care ‘ex-service friendly’*” (“Training for Mental Health workers”) were announced by the Government in 2007.. One of the projects specified in the Lifecycle package was a *Study into Barriers to Rehabilitation*.

Evidence from Phase One of the Research into Barriers to Rehabilitation supported the need for a useful measure of non-return-to-work related outcomes in particular, and “successful outcomes” beyond return to work in general. Consensus amongst participants and other key stakeholders indicated that measuring success in rehabilitation is an important and necessary requirement for a purchaser of services such as DVA. The current study was designed as a trial of the routine adoption of an outcome measure that would be relevant for all of DVA’s rehabilitation clients. The method of measuring success selected for the trial was Goal Attainment Scaling (GAS). Under this approach, targeted goals with well-defined outcomes to be achieved within a specified time are determined for each individual. The achievement of the intended outcome (or previously defined better or worse outcomes) is recorded and a comparable score is able to be calculated for all goals and each client. A life satisfaction measure (LSQ) was also selected to be included in the trial.

Analysis of the use of Goal Attainment Scaling and a Life Satisfaction Questionnaire as routine outcome measures for DVA rehabilitation cases generally supported their feasibility and potential usefulness. The GAS approach was seen by providers to support a client-focussed approach to rehabilitation. The data that can be extracted from the GAS and LSQ are potentially useful at a number of levels: for the provider in their professional relationship with the client; for DVA rehabilitation coordinators to assess the extent to which purchased services have met the needs of clients; for DVA rehabilitation coordinators to consider the extent to which providers are able to set appropriate goals and support clients to achieve them; for the Rehabilitation group and DVA senior executives to report to their stakeholders on the overall success of rehabilitation provided to DVA clients.

A number of key recommendations for DVA emerged from this trial:

- **Recommendation 1:**
 - It is recommended that DVA adopt the Goal Attainment Scale (GAS) approach as a routine outcome measure for rehabilitation for all referrals leading to a rehabilitation plan.
 - The optional use of the Life Satisfaction Questionnaire (LSQ) is also recommended.
- **Recommendation 2**
 - It is recommended that DVA give further consideration to using a brief form of GAS for services provided without assessment or a rehabilitation plan. This would include identifying the most appropriate individual (DVA or rehabilitation provider) to follow-up with clients to ensure that the intended outcome has been achieved.

- **Recommendation 3**

- It is recommended that DVA provide training to providers in the use of the GAS and LSQ, and that this be provided in a format that can be accessed easily by providers when they have changes in personnel. An on-line format or training CDs would be most appropriate. DVA would need to ensure through liaison with contracted providers that staff are up-to-date with recommended procedures.

- **Recommendation 4**

- It is recommended that DVA provide basic training to DVA staff in the background, intent, and practicalities of the GAS and LSQ, and that this be provided in a format that can be accessed easily by offices when they have changes in personnel (e.g. online, self-directed learning modules). DVA staff should understand the requirements on providers in relation to the GAS and LSQ, and be able to provide the necessary guidance and support around the application of the measures in a flexible and appropriate manner.

- **Recommendation 5**

- It is recommended that DVA consider ways to incorporate the use of the GAS and LSQ data into existing or future systems. In the meantime, consideration could be given to a simple data base that could be used to capture GAS/LSQ data in an ongoing way, or through routine audit of sequential rehabilitation plans (such as might take place for continuous quality improvement).

Section 1: Introduction

Background

The *ADF Mental Health Lifecycle package* and the initiative to “*Make community mental health care ‘ex-service friendly’*” (“Training for Mental Health workers”) were announced by the Government in 2007. The *Mental Health Lifecycle package* included “nine strategic mental health initiatives targeted across the four stages of an ADF member’s lifecycle”. The stages were described as “recruitment, service, transition or discharge, and rehabilitation and resettlement into civilian life”. The aim of the package of initiatives is to achieve four outcomes across the ADF ‘lifecycle’:

- Enhanced psychological resilience among serving personnel
- Better early intervention and mental health surveillance
- Successful transition from defence to civilian life for the member and their family
- Effective rehabilitation and support, and timely mental health treatment

One of the projects specified in the Lifecycle package was a *Study into Barriers to Rehabilitation*. Phase One of this project involved data collected from a range of data sources with four aims: to increase understanding of the rehabilitation process; to explore how rehabilitation outcomes were currently being measured; to examine how ‘success’ in rehabilitation was conceptualised by different stakeholders; and to identify perceived barriers to achieving successful rehabilitation outcomes. It involved data collection from a range of sources including:

1. Interviews with DVA clients;
2. Focus groups with DVA staff;
3. An online survey of rehabilitation service providers;
4. Interviews with key stakeholders; and
5. A review of a sample of DVA case files.

The Final Report on Phase One was delivered to DVA in June 2009. The report highlighted a number of themes to guide a second phase of work. The themes that emerged included:

- Communication. It was noted through multiple sources that for some DVA clients there is a lack of perceived support and awareness regarding the rehabilitation process and available services. Related to this point was the need to improve general communication between DVA staff and clients during their rehabilitation, and between DVA staff and rehabilitation service providers.
- The importance of a holistic and flexible approach to rehabilitation where the focus is on addressing the needs of individual clients rather than a generic approach to rehabilitation. Some participants discussed a perceived tension between the provision of financial compensation to DVA clients and the engagement with relevant rehabilitation services. There was the belief amongst some clients that there is a greater focus by DVA staff in providing compensation rather than rehabilitation for clients, whilst several key stakeholders, DVA staff, and rehabilitation service providers felt that, at

times, clients are more motivated by the financial entitlements they can access from DVA rather than rehabilitation to recover from their injuries or conditions.

- Improvement of DVA's administrative processes. Issues around the consistent application of rehabilitation processes impacted on rehabilitation for clients, including potential for a lack of timeliness in liability determination, assessment and the provision of rehabilitation services. It was pointed out that this inevitably impacts on DVA's ability to provide early intervention. A review of a small sample of 40 closed DVA client rehabilitation files suggested that there was inconsistent information being collected; in particular, there was no Needs Assessment documentation in the paper-based case files.

Based on the findings described in the Phase One Barriers to Rehabilitation Report, Phase Two of the project included two studies with different foci:

- Study one (report delivered in September 2010) explored the different factors that may impact the implementation of DVA's Needs Assessment process. The evaluation reviewed the compliance and quality of information documented in DVA's electronic Needs Assessment forms. The study also involved exploring how staff experience, staff ratios, and turnover at different DVA offices impacted on the quality of the Needs Assessment forms completed.
- Study two (findings covered in this report) addresses the key theme of measurement of the outcomes of rehabilitation, and involves a trial of the routine adoption of an outcome measure that would be relevant to apply in all rehabilitation cases. Goal Attainment Scaling (GAS), where clients work with consultants to develop goals across relevant domains (e.g. medical, psychosocial, vocational, etc.), was chosen to be trialled, along with a general life satisfaction measure.

This document is the final report for Phase Two: Study Two – Evaluating the feasibility of a routine outcome measure (Goal Attainment Scaling) for DVA clients receiving rehabilitation services, undertaken from July 2008 to September 2010.

Identifying an appropriate routine outcome measure

One of the outcomes of the first phase of the research into Barriers to Rehabilitation was confirmation that there were a large number of different outcome measures being used by providers. All stakeholders believed it was important to measure outcomes for clients, and there was general consensus that focussing on employment status ("return to work") as the only measure of "success" for DVA clients was inadequate. There was no single outcome measure that emerged as potentially useful across all the different common conditions, complex co-morbidities, and circumstances applicable to DVA clients, and DVA did not consider it to be appropriate to mandate the use of specific instruments for particular conditions. A literature search of potential measures that may be feasible as routine indicators of success in biopsychosocial rehabilitation for all DVA clients was therefore undertaken by ACPMH.

Review of Goal Attainment Scaling (GAS) as an outcome measure

Goal Attainment Scaling (GAS) was introduced in the late 1960s in the context of mental health (Kiresuk and Sherman, 1968). Described as “an individualised, criterion-referenced measure of change” (King et al., 1999; Kiresuk et al., 1994), Goal Attainment Scaling is considered to be “a sensitive method of measuring specific outcomes on individual goals after a period of treatment” (McClaren and Rodger, 2003). The method was used in a range of environments and across disciplines during the 1970s and 1980s and emerged in relation to rehabilitation in the 1990s (e.g. Stephens and Haley, 1991; Grenville and Lyne, 1995; Rockwood et al., 1997; Malec 1999). There has been growing interest in the use of GAS or a modified form of it in rehabilitation internationally. Skinner and Turner-Stokes (2006) reported that 72% of 180 members of the British Society of Rehabilitation Medicine routinely assessed outcomes through the achievement of set goals, “but only four transformed data to a goal attainment scale”. More recently, Turner-Stokes (2010) notes that goal setting has become a standard part of practice in rehabilitation and that clinicians are beginning to explore ways in which goals can be used to evaluate outcomes. “Goal attainment scaling (GAS) is a method for assimilation of achievement in a number of individually set goals into a single aggregated ‘goal attainment score’, providing a person-centred outcome, focussed on that individual’s priorities” (Turner-Stokes, 2010, p67).

Seen as either an alternative to standardised tools or a means of augmenting standardised measures of outcome, GAS can overcome the problems sometimes associated with the application of standardised measures for complex cases in diverse populations. The intent is that each patient has their own relevant outcome measure, but the standardised scoring allows statistical analysis of aggregated data – from providers, services and populations.

In addition, the collaborative goal setting process is considered part of best practice in a number of disciplines and GAS uses this process as part of the method of determining the measurement metric. It has been argued that the process of setting and weighting goals (see below for description of GAS method) in collaboration with key stakeholders fosters cooperation, enhances realistic expectations, and encourages joint decision making (Young and Chesson, 1997; Turner-Stokes, 2009). In a systematic review of evidence regarding the effectiveness of goal planning in clinical rehabilitation, Levack et al. (2006) reported limited evidence that goal planning can influence patient adherence to treatment regimes, and strong evidence that prescribed, specific, challenging goals can improve immediate patient performance on motor and cognitive activities. Whether or not these short-term or process-related impacts led to improved long-term outcomes was not clearly demonstrated.

Finally, Turner-Stokes (2009) notes that utilising GAS may offer a number of potential advantages as an outcome measure for rehabilitation in particular. First, GAS builds on the already established processes of goal setting that many clinicians use and may further encourage communication and collaboration between multidisciplinary team members and patient involvement in their own rehabilitation plan (with evidence suggesting that goals are more likely to be achieved if patients are involved in setting them). Second, there is growing evidence to suggest that GAS is a good measure of outcomes, being as sensitive (if not more

so) when compared with other standard measures. Issues such as floor and ceiling effects¹, lack of sensitivity to change/revision, and disjuncture between the patients concerns and process of previous standard measures are all potentially avoided through the use of GAS.

Use of goal attainment scaling in Australia

There are several examples in the refereed literature of the use of GAS in Australia (e.g., Cox and Amsters, 2002; Dunn, 1997). Cox and Amsters (2002) argued that GAS is “an effective, multidisciplinary measure of client outcomes for rural and remote health services”. They found GAS to be “sensitive to the individual nature of clients’ presenting issues and the multidisciplinary focus of the team”, in a context where the use of one or two standardised outcome measures was not relevant because of the heterogeneity of clients’ needs. GAS was used only with clients with complex needs, and the goals were multidisciplinary or related to a single discipline only.

GAS has been used by Flinders Institute of Public Policy and Management as a method for assessing the achievement of environmental goals (Malavazos, 1995). The Research Centre for Injury Studies advocated the use of GAS for program evaluation, based on the technique’s ability “to accommodate both quantitative and qualitative data about the performance of a program in terms of the goals of the participants” (Research Centre for Injury Studies, 1999; accessed 07/10/2010). In recommending the measure for use in Victorian Health Services, the National Ageing Research Institute (NARI) considered the benefits of GAS to include:

- Sensitive to clinically significant change that is meaningful to the client;
- Inexpensive;
- Assists in rehabilitation planning and decision making;
- Useful for heterogeneous populations;
- Individualised;
- Increases client motivation (Zweber and Malec, 1990);
- Helps facilitate collaborative goal setting between clinician and client (Cox and Amsters, 2002).

Method of applying GAS

The generally applied method of GAS involves a practitioner developing individualised goals for each client in consultation with the client and family or significant others such as carers. For each goal, a scaling system is constructed, again in consultation with the client and family, but also other key stakeholders if relevant (e.g. if providing particular services). The scaling system involves detailed and very specific

¹ A ceiling (or floor) effect occurs when there is insufficient range in a measure so that it does not distinguish between people at the extremes, despite there being differences at the highest (ceiling) or lowest (floor) levels. That is, everyone who has a reasonably high level of the particular characteristic being measured will score the same maximum score (and vice versa for lowest scores). The consequences can include failure to successfully measure change, because anyone with a high level of the test characteristic will have scored the maximum prior to an intervention, so there is no capacity in the test to reflect a higher score. The consequences from a statistical point of view relate to the violation of the underlying assumption of a normal distribution, an assumption that is central to many statistical formulae and procedures.

observable and quantifiable descriptions of possible outcomes. This includes the expected or desired level of performance or outcome, two levels that would be seen as less favourable and two levels that are more favourable (Kiresuk and Sherman, 1968; Kiresuk, Smith and Cardillo, 1994). The outcome levels are assigned numeric values from -2 (the least favourable outcome) to +2 (the most favourable outcome). The expected outcome or goal is labelled 0. The client is rated on his/her goal attainment after the planned intervention or a predetermined length of time. Kiresuk and Sherman (1968) recommended that ideally raters should be independent of goal setters, particularly if the data is to be used for research. The goals identified may then be weighted by the client and family for their relative importance and/or difficulty. Some authors recommend limiting the number of goals to 3-5, and consider weighting to be optional (Turner-Stokes, 2009; Bovend'Eerd et al., 2009).

Turner-Stokes (2009) recommends that clinicians concentrate on defining very carefully the expected (level 0) outcome, rather than developing full descriptions of each possible level. Once this has been documented, clinicians then apply a general rating of the extent to which the goal was achieved ranging from: greatly exceeded (+2), slightly exceeded (+1), achieved (0), not quite achieved (-1) or nowhere near (-2). While full definition of each level may be appropriate for research, Turner-Stokes suggests that this approach is adequate for clinical purposes.

Table 1: Examples of Goal Attainment Scales

Level of expected outcome	Goal 1 Decision making	Goal 2 Self esteem	Goal 3 Isolation
Much more than expected (+2)	Makes plans, follows through, modifies if needed, and reaches goal	Expresses realistic positive feelings about self	Actively participates in group or social activities
More than expected (+1)	Makes plans, follows through without assistance unless plan needs changing	Expresses more positive than negative feelings about self	Attends activities, sometimes initiates contact with others
Most likely outcome (0)	Makes plans and follows through with assistance/reminders	Expresses equally both positive and negative feelings about self	Leaves house and attends community centre. Responds if approached
Less than expected outcome (-1)	Makes plans but does not take any action to follow through	Expresses more negative than positive feelings about self	Leaves house occasionally, no social contact
Much less than expected (-2)	Can consider alternatives but doesn't decide on a plan	Expresses only negative feelings about self	Spends most of time in house except for formal appointments

The goal outcome scores are converted to a single aggregated *T*-score (with a mean of 50 and standard deviation of 10) by applying the formula:

$$\text{Overall GAS} = 50 + \frac{10 \sum (W_i X_i)}{\sqrt{((1-\rho) \sum W_i^2 + \rho(\sum W_i^2))}}$$

Where *W* is the weight assigned to the *i*-th goal (if equal weights, $W_i = 1$), X_i is the numerical value achieved by the client (-2 to +2) and ρ is the expected correlation of the goal scales. According to Kirusek and Sherman, ρ most commonly approximates to 0.3, therefore the equation simplifies to:

$$\text{Overall GAS} = 50 + \frac{10 \sum (W_i X_i)}{\sqrt{(0.7 \sum W_i^2 + 0.3 (\sum W_i^2))}}$$

Turner-Stokes (2009) comments that a mean goal attainment *T*-score of 50 over a study population (or service's clients) would provide a reasonably robust quality check of providers' ability to set and negotiate achievable goals. "If a team attempts to inflate their results by setting goals over-cautiously, the mean score will be >50. Similarly if they are consistently overambitious it will be <50."

While some authors argue that there should be an accurate description of the current status of the client (either defined as the -2 or -1 level) (e.g., Bovend'Eerd et al., 2009; Rockwood et al., 2003), Turner-Stokes (2009) argues that because change is built into the way that goal attainment scaling is derived, the outcome *T*-score is by definition a measure of change, and it is, therefore unnecessary to define the starting point of a client.

Benefits of goal attainment scaling

GAS has enormous appeal to fields with a patient-centred philosophy, as it is argued that it "empowers patients to participate in determining outcomes (e.g., goals), and its evaluation" (Tennant, 2007). It is described as "flexible, client-centred, and individually tailored" with "goals set that are observable and measurable" (McLaren and Rodger, 2003). GAS is considered to be potentially more sensitive than standardised global measures in particular, where small but individually significant changes may not be reflected in the global measure because too many items are irrelevant to the individual and do not change (Turner-Stokes, 2009).

Schlosser (2004) lists a range of positive attributes of GAS:

- Grading of goal attainment;
- Comparability across goals and clients through aggregation;
- Adaptability to any International Classification of Functioning, Disability, and Health (ICF) levels and domains;
- Versatility across populations, interventions, and fields;
- Linkage tied to expected outcomes;
- Facilitator of goal attainment;
- A focal point for team energies.

While some authors have suggested that GAS should not be used to substantiate any causal relationship between treatment and outcome (King et al., 1999; Stephens and Haley, 1991), the method has been used successfully in a range of treatment outcome research. GAS has been used effectively as an outcome measure in research including randomised control trials (RCT) with independent allocators and raters (e.g., Rockwood et al., 2003), with multiple raters (e.g., Dahlberg et al., 2007), or a combination of both (e.g., Balcazar et al., 2005). Rockwood et al. (2006) used a GAS with “blind” clinician-based assessment and client-based assessment in an RCT testing a pharmaceutical intervention for the treatment of Alzheimer’s disease. Rockwood et al. (2003, 2006) advocate strongly for the use of GAS in clinical trials because of the perception that the method captures clinically meaningful changes that physicians observe which they argue commonly used standardised neuropsychological tests fail to reflect.

Various studies have sought to establish the validity and reliability of GAS. In paediatric occupational therapy practice some research has shown GAS to have a low correlation with some normative developmental tests (McLaren and Rodger, 2003); however, Palisano et al. (1992) argued that GAS was a responsive measure of change in individualised motor-based goals for children, able to take account of individual, cultural and environmental contexts. This ability to take into account individual contextual factors when determining a reasonable expectation of success increases the appeal of the method.

In their literature review of GAS as a measure of clinical outcomes for physical and neurological rehabilitation settings, Hurn et al. (2006) found strong evidence for the reliability, validity and sensitivity of the method. Hurn et al. reported evidence of good construct validity in an adult pain control rehabilitation setting (Williams and Stieg, 1987), but noted that congruent validity may not be high. Malec et al. (1991) established good predictive validity when using GAS within an adult post-acute, vocational, neurorehabilitation environment. Program participants with satisfactory work outcomes also had higher goal attainment scaling scores (not expressed in return to work terms) on completion.

In a review of GAS as a useful outcome measure in psychogeriatric patients with cognitive disorders, Bouwens et al. (2008) reported mixed results, but considered that “the GAS is a unique example of an instrument able to reflect the multidimensionality of dementia and other psychogeriatric conditions, including interference with daily life activities, for both patient and caregiver”.

In reviewing the correlation between GAS scores and standardized measures, some authors have argued that GAS scores have a different purpose to standard measures. Schlosser (2004) argued that standardized functional measures are intended to determine the status of clients relative to a particular population-based normatively distributed trait of interest such as activities of daily living or motor function. By comparison, GAS scores are intended to evaluate change rather than status, so low correlations might be expected (see also Ottenbacher and Cusick, 1993 and Heavlin et al., 1982). While some studies have indicated low correlations between GAS scores and some standardized measures, there are also studies that report high and moderate correlations with standard measures (e.g., in rehabilitation Malec, 1999). In addition, the sensitivity of GAS compared with standardised measures has been demonstrated by a number of studies (e.g., Stolee et al., 1999; and see Ottenbacher and Cusick, 1993).

While the issue of rater versus goal-setter independence has been raised as a potential problem for applying the GAS, other client-centred measures such as the Canadian Occupational Performance Measure (COPM) (Law et al., 1998) have demonstrated “the validity, appropriateness and acceptability of the client’s own ratings of change in performance and satisfaction” (McLaren and Rodger, 2003). Hurn et al. (2006) reported studies that provided evidence of good inter-rater reliability for GAS in a rehabilitation setting (e.g. Goodyear and Bitter, 1974 and Stolee et al., 1992). Rockwood et al. (e.g., 1999, 2003) have consistently reported high inter-rater reliability and high levels of congruent validity. In a review of the literature around six individualised outcome measures identified in the rehabilitation and psychology literature, including GAS and the Canadian Occupational Performance Measure (COPM) (Law et al., 1998), Donnelly and Carswell (2002) reported strengths and weaknesses in the use of individualised outcome measures. They reported that of the six measures, GAS demonstrates the strongest evidence of reliability and concluded that “despite questions regarding its reliability and validity, the sustained use of GAS is a testimony to its clinical utility”.

It has been argued that the goal setting that is central to the development of the GAS outcome scale is dependent on the clinical skills of the practitioner as well as their objectivity, independence or bias. The practitioner needs to be able to anticipate a range of possible outcomes and to select realistic goals. This requires knowledge and experience. The role of the client as an active participant in the GAS process has also been noted as having particular impact on the usefulness of the approach in some circumstances. Bouwens et al. (2009) reported the introduction of goal attainment scaling in a service for people with acquired brain injury who receive cognitive rehabilitation. Based on a sample of 48 patients (a large sample for these kinds of studies) they reported:

“It proved possible to set three goals within an acceptable time-frame, to involve patients in the goal-setting procedure, to set realistic goals, and to set goals within relevant domains. We discovered that setting goals is difficult when patients have insufficient insight into their problems, experience emotional and communication problems or have difficulty specifying goals. Measuring the level of attainment is problematic when comorbidity occurs in between the measurements; when patients have mood problems like depression; and when goals change along the way.” (p316)

Bouwens et al. (2009) conclude that goal-setters must be aware of the patient’s emotional status, level of insight, communication skills and capacity to specify goals, and argue that “it requires practice and clinical skills to learn to apply goal attainment scaling”.

An alternative approach to GAS has been adopted widely in Britain (Turner-Stokes, 2009). Reacting to the argument that specifying the continuum of possible outcomes is the most difficult task in the process for most people (Schlosser, 2004), the modified approach also reflects Tennant’s view (2007) that in rehabilitation settings in particular the GAS could be based on “one or more unidimensional ‘item banks’ of goals which can be calibrated onto a metric unidimensional scale, the values of which could be input into the GAS formulae” (p 1587). Turner-Stokes (2009) also considers that developing descriptors for each achievement level is too time consuming for routine clinical use, and therefore reports development of a

simplified process for application of goal attainment scaling in routine clinical practice. The modified approach is based on routinely recorded standard measures and existing well-defined wording for common goals. "For example, a goal to 'reduce pain' may be defined in terms of expected score on a 10 cm visual analogue score." A menu of pre-worded goal statements in common areas for rehabilitation is used to support clinicians. The notion of an item-bank of goals is also reflected in the Goal Attainment Scale for Psychiatric Inpatients (GASPI) (Guy and Moore, 1982). A standardized scale of 37 items that represent likely goals is used in setting goals. Yip et al. (1998) also modified GAS to incorporate a standardized menu of goals and attainment levels. This kind of approach is something that could be developed over time by DVA for its clients.

Quality of Life Measure

An alternative potential generic outcome measure also emerged through consultations and review of the literature: a subjective satisfaction or overall quality of life measure. In contrast to GAS, a quality of life measure can provide a measure of current status at the start of a plan, which can be compared with a re-measurement taken at a later date. Tracking over time is also possible, whereas, with the GAS, the goal and subsequent score is specific to each rehabilitation plan. Some stakeholders were concerned, however, that a client-rated satisfaction measure may be more prone to reporter bias than the GAS measure. In the case of GAS, the goal is defined with reference to an observable outcome, and the potential for an individual client (or provider) to be able to influence the rating with subjective judgement or opinion is minimised. In the case of satisfaction measures that are subjective and opinion based, there is little that can be done to control deliberate biased reporting. For this reason, subjective satisfaction measures alone were not considered to be an appropriate routine outcome measure for DVA clients.

A set of questions about satisfaction with a number of life domains was taken from the Household Income and Labour Dynamics in Australia (HILDA)² survey. The domains included in the "Life Satisfaction Questionnaire" (LSQ) were:

- The home in which you live;
- Your employment opportunities;
- Your financial situation;
- How safe you feel;
- Feeling part of your local community;
- Your mental health;
- Your physical health;
- Your current sleep pattern;
- The neighbourhood in which you live;
- The amount of free time you have;
- Your relationship with your spouse or partner;
- Your relationship with your children; and

² <http://www.melbourneinstitute.com/hilda/> accessed October 22nd 2010

- Overall life satisfaction

In addition, for those individuals who were in some kind of paid employment, a set of additional questions asked about satisfaction with:

- Your total pay;
- Your job security;
- The work itself (what you do);
- The hours you work;
- The flexibility available to balance work and non-work commitments; and
- Overall job satisfaction.

Summary

Evidence from Phase One of the Research into Barriers to Rehabilitation supported the need for a useful measure of non-return-to-work related outcomes in particular, and “successful outcomes” beyond return to work in general. In a survey of rehabilitation service providers, a range of different standardised outcome measures was utilised by organisations depending on the needs of the clients. However there was consensus amongst participants and other key stakeholders that measuring success in rehabilitation is an important and necessary requirement for a purchaser of services such as DVA. The current study was designed as a trial of the routine adoption of an outcome measure that would be relevant for all of DVA’s rehabilitation clients.

Based on the review of the literature, Goal Attainment Scaling (GAS) was proposed as an appropriate measure to trial for routine use with DVA Rehabilitation clients. The key factors supporting this decision included the fact that the focus on goal setting is consistent with the Literature Review on best practice in psychosocial rehabilitation. It is particularly important in rehabilitation that the measurement of effectiveness should take into account the patient’s own needs, circumstances and individually relevant goals. GAS provides a framework to do this. By using the GAS approach, goals can be completely individualised for the client’s needs and they can be changed if circumstances change. GAS enables a single measure to be used across all rehabilitation cases, despite significant differences in the nature of the problems experienced, or the length of time someone has experienced their problems. By encouraging goal definition to be based on standardised measures and observable changes, GAS can augment use of relevant measures according to individual needs. That is, where an outcome can be defined by reference to a commonly used standardised measure, that measure can be incorporated in the definition of the intended outcome. This reinforces the use of standardised measures while providing a mechanism to represent the comparative success of very different rehabilitation plans. This approach also means that DVA is not dictating the universal application of measures that may be inappropriate to some individuals, or that providers do not have the qualifications, skills, or experience to use.

A quality of life “life satisfaction” measure was also selected to be included in the trial. This measure allows comparison of before and after scores, and can also be used to compare scores from DVA clients over time

or with population and sub-population norms. With sufficient data, the relationship between goal achievement and satisfaction could also be explored through the trial, and the relative merits of the measures alone or in combination, as feasible routine outcome measures for DVA to use in assessing the effectiveness of rehabilitation services can be evaluated.

Section 2: Implementing the feasibility trial

Preparation

Based on the recommendations arising from the review of available measures, the trial of the feasibility of using GAS and the LSQ was designed. The intent of the trial was to have as minimal impact on DVA staff's routine practice as possible: the focus of activity required to implement the outcome measures was the rehabilitation providers themselves. For this reason, Victoria and South Australia were chosen as the sites for the trial. Other DVA offices were already involved in a DVA trial of an electronic Needs Assessment (the subject of the other Phase Two study in the overall Barriers to Rehabilitation research program) and so were excluded from the GAS trial.

In consultation with DVA, ACPMH developed modified versions of the current Rehabilitation assessment report, Rehabilitation plan, Rehabilitation progress report (6 months only); and Rehabilitation closure report (refer to Appendix 1 for copies of these modified forms). These forms were modified to include a minimum number of additional fields to allow providers to indicate the goal or intended outcome of the rehabilitation service to be provided and were intended to be as similar as possible to the original forms. All of the information currently used by DVA staff to record the progress of clients through rehabilitation was left intact in the forms.

A communication strategy was also developed to ensure that there was a shared understanding of the purpose of the trial among DVA staff, rehabilitation providers, and DVA clients and their families. A Frequently Asked Questions (FAQ) document was written and distributed widely, including to Ex Service Organisations (ESOs) (refer to Appendix 2 for a copy of the FAQ). The National Manager of (then called) Rehabilitation, Compensation and Income Support Policy (Neil Bayles) sent out letters to each of the Deputy Commissioners in the three states identified to participate in the trial with a copy of the FAQ document. In the letter, the Deputy Commissioners were asked to send out a copy of the FAQ document to each of the ESOs within their state. A shortened version of the FAQ was also provided to telephone operators located in Veterans Affairs Network (VAN) offices.

Training DVA's contracted rehabilitation providers

Initial training

DVA Rehabilitation, Compensation & Income Support Policy (as it was known then) staff contacted rehabilitation providers contracted by DVA in Victoria and South Australia to invite them to participate in the GAS/LSQ feasibility trial.

An Instruction Manual for Service Providers (Appendix 3) was developed to describe the trial and the process to be followed to complete the GAS and LSQ. Training sessions were organised in Melbourne and Adelaide and providers were invited to send as many staff to the training as they would like.

Seven providers from three companies as well as two DVA Melbourne staff attended training in Melbourne on the 23rd July. A second workshop was undertaken in Adelaide on July 24th 2009. Eleven providers from four companies attended the training, and one DVA Adelaide rehabilitation staff member. Training was conducted by Dr Lynda Matthews (University of Sydney) and Dr Virginia Lewis (ACPMH).

The training was well received by providers, many of whom commented that the process to complete the GAS forms was consistent with their current practice. Several noted that it was good to have a measure of the outcomes achieved through rehabilitation that were beyond return to work.

Further roll-out

The GAS trial was effectively under way from August 2009; however a review of progress undertaken following a change in staff at ACPMH in October indicated that fewer rehabilitation plans had been received than had been expected based on DVA's estimates of throughput. When providers were contacted about this apparent short-fall it emerged that most had not received any referrals and, in some cases, the referrals had been for household services or appliances, and they had not used the GAS/LSQ plan form. It also appeared that there were challenges with rehabilitation provider turnover, such that providers who had attended the initial training in July were no longer with the company or were not taking DVA clients, while new providers who had not attended the training may be receiving DVA client referrals. It was decided that "refresher" training would be offered to Victorian and South Australian providers in order to encourage implementation of the GAS/LSQ forms when new referrals were received.

Discussions with DVA about the impact of such small numbers of forms received in the first few months of the trial resulted in a decision to invite participation by rehabilitation providers in Townsville and Brisbane. This decision was further supported by the positive reaction from the National Director, Claims and Rehabilitation and staff in those offices.

Training was conducted by Dr Virginia Lewis in Townsville on November 30th 2009. Thirteen providers attended this training from 4 organisations. A briefing for DVA staff was also undertaken in Townsville (n=7). Twenty-nine providers attended training in Brisbane on December 1st 2009 from 11 organisations with eight DVA staff attending a briefing session. "Refresher" training was provided to Konekt staff in Melbourne, Adelaide, and Tasmania (the latter two by teleconference) on December 9th 2009 (n=21). An additional briefing session for DVA Melbourne office staff was also undertaken around this time.

Procedure for implementing GAS and LSQ in rehabilitation plans

The Training Workshop and Instruction Manual for Service Providers covered the following topics:

- Background to the trial
 - *DVA's approach to rehabilitation*
 - *Changes to the current rehabilitation process for providers*
- Goal Attainment Scaling (GAS)
 - *What is it?*

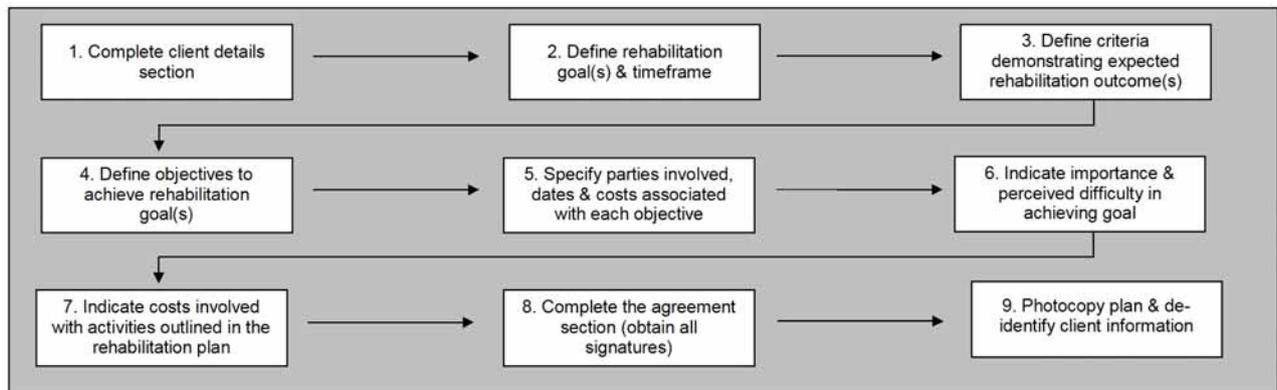
- *Benefits of GAS*
- *How GAS works*
- *How to apply GAS when working with DVA clients*
- Example case studies
- Questions

The Manual also included:

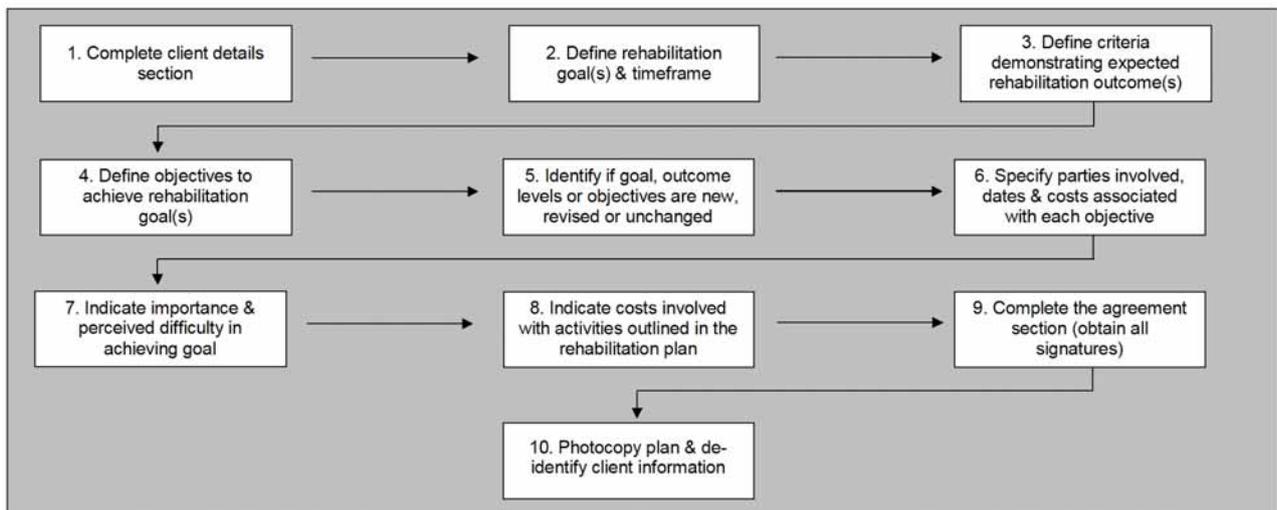
- Key contacts
- For further information (some useful references)
- Appendices of all forms
- LSQ form
- Goal Attainment Score Conversion Table
- Cover sheet to be used to send forms to ACPMH

The steps to follow in order to complete each of the DVA forms were outlined in simple sequences and described in detail in both the workshop and manual.

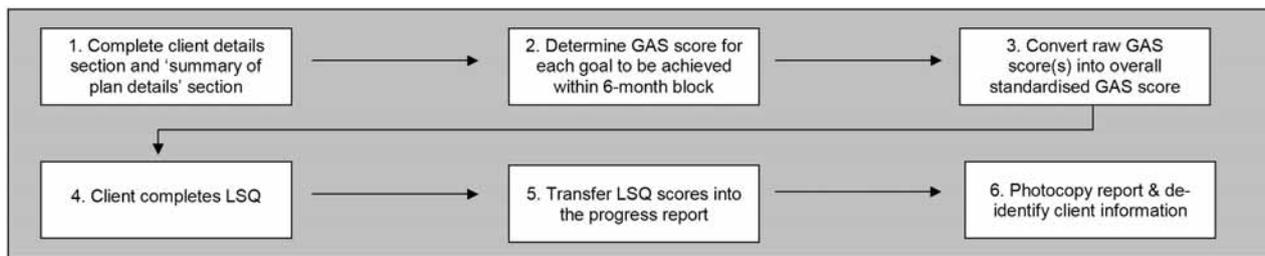
Rehabilitation Plan



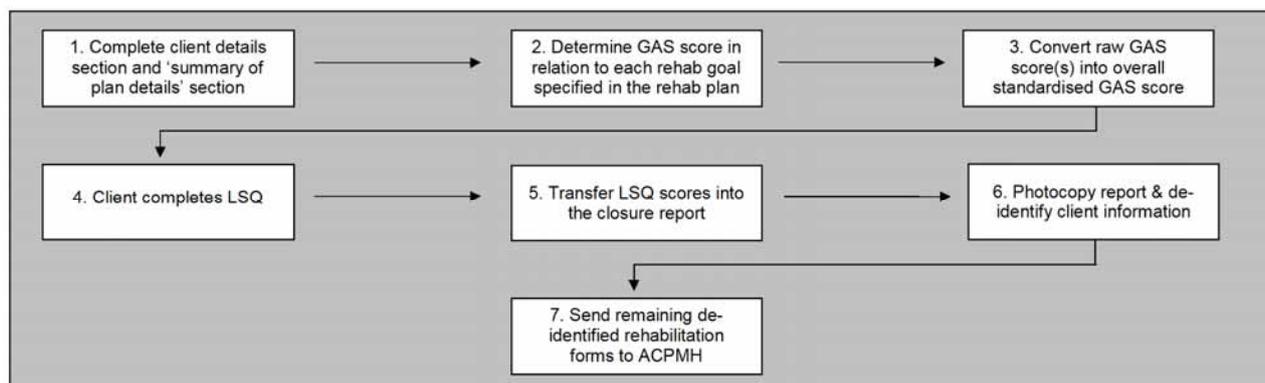
Rehabilitation Plan Amendment



Rehabilitation progress report (6-month review)



Rehabilitation closure report



Procedure for collecting GAS forms

Rehabilitation providers completed the GAS forms in accordance with training provided by ACPMH and the Instruction Manual for Service Providers. Once forms had been completed, prior to sending forms to DVA as usual, providers were instructed to photocopy the GAS rehabilitation plan (removing any identifying information such as name, address, telephone, client signature; but were to leave the client claim number to ensure that data could be matched from case open to close). Providers were then instructed to send the plan and other forms completed for DVA (initial rehabilitation assessment report) to ACPMH via post, fax, or email. ACPMH transferred the data into an Excel workbook and into SPSS files for analysis.

On-going support for DVA’s contracted rehabilitation providers

In order to ensure providers were supported during this trial (particularly with regard to understanding how to use the GAS with different clients), ACPMH maintained contact via email and phone throughout the trial. As a result of the high turnover of providers participating in the trial, and therefore the potential inconsistency with GAS usage (due to new providers not having attended the ACPMH training), a newsletter was developed and distributed to all providers to facilitate on-going communication and to provide a mechanism to share information about the trial. Newsletters can be found in Appendix 4. The newsletters provided participants of the trial with ‘real’ examples of goals that providers had created and shared information about some of the common issues, questions, or ideas that providers had shared with ACPMH. Feedback from DVA and from a rehabilitation expert was also provided in these newsletters. Response to the newsletters was positive, particularly with regard to the ‘real’ goal examples. ACPMH also responded in a timely fashion to any direct queries or comments received from providers by email or telephone. Where necessary, additional information was sought from DVA Rehabilitation staff, and, in some

cases, there was further contact between rehabilitation providers and DVA Rehabilitation Policy around issues not directly relevant to the GAS trial.

Section 3: Analysis of the GAS forms

Rehabilitation Plan

From August 2009 to September 2010, a total of 82 GAS rehabilitation plans were received from participating rehabilitation providers in Queensland, Victoria, and South Australia. Of these 82 GAS plans, 15 closed during the period of the trial, with 14 matched 'sets' of open and closed plans (i.e. plan opened and closed during the trial period for the same client). The remaining plans continue to be 'open', with some being amended throughout the trial. Providers were asked (in an online survey) if there were instances where they did not use the GAS with their clients. Fourteen out of the nineteen providers surveyed indicated that there were instances where they did not use the GAS. Other than for clients who had commenced rehabilitation prior to the trial (and therefore were not involved in the GAS), the feedback indicated that a small number of providers didn't use the GAS for household services, aids, and equipment or that they simply had not had the opportunity to yet.

Of the plans collected during this trial, 69% were received from Queensland, and a further 24% from Victoria (refer to Table 2). Within Queensland, the majority of plans were received from Strive Occupational Rehabilitation (n=20), within Victoria the majority were received from CRS Australia (n=17), refer to Table 3 below for numbers of plans received by organisation from all providers participating in this trial.

Table 2: Number of plans received from each State

Location	Number of plans received
Queensland	58 (69%)
Victoria	20 (24%)
South Australia	4 (5%)
Not specified	2 (2%)
Total	84 (100%)

Table 3: Number of plans received from each provider (organisation)

Location	Provider	Number of plans received
Queensland	Strive Occupational Rehabilitation	20
	Part Two-Psychology and Occupational Rehabilitation	15
	Santé Health Consultancy	13
	Occupational Access	3
	CRS Australia	3
	Arc Rehabilitation Services	2
	Mind Solutions	1

Location	Provider	Number of plans received
	Konekt	1
	CRS Australia	17
Victoria	The ORS Group	2
	Konekt	1
	Personnel Placement Consultancies	2
South Australia	Konekt	1
	CRS Australia	1

Information obtained from the 82 GAS plans indicated that the average number of goals developed per client was 2, refer to Table 4 below. For all clients and all plans, a total of 202 goals were formulated during this trial. All goals developed during this trial can be found in Appendix 5.

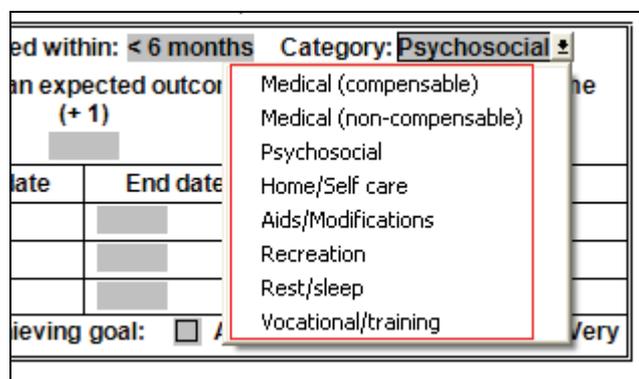
Table 4: Number of goals per client

Number of goals	Number of clients with these goals
Four goals	16
Three goals	21
Two goals	26
One goal	20

Classification of goals

For each goal, providers were required to identify the category which the goal belonged to (refer to Figure 1 below). There were 8 categories available for each goal to be classified under. These categories were chosen as they represented the key areas rehabilitation providers would seek information on during the initial rehabilitation assessment.

Figure 1: Categories for goals to be classified under



Out of the 202 goals formulated during this trial, 186 were classified into one of the categories shown in Figure 1 above. Sixteen goals were not specifically categorised. The goals within each of the 8 categories

were analysed and were further able to be grouped into common themes. Table 5 below details these themes for each goal category and provides some examples of the goals developed by providers. All of the responses grouped under the main headings in Table 5 (under the shaded rows) reflect the way that providers allocated them on the Rehabilitation plans. It is notable that in some instances goals may have been more appropriately categorised (e.g. goals about sleep were allocated under medical, psychosocial and home/self care, when there is a rest/sleep category),

Table 5: Number and examples of goals for each of the 8 categories of classification

Rehabilitation Goal Category	Frequency
Medical (compensable)	66
Increase functional capacity	
<i>"Gain improvement in tolerances relating to his physical functioning"</i>	21
<i>"Improve physical function and decrease chronic pain levels."</i>	
Medical Management	
<i>"Gain additional strategies to manage Bipolar and OCD."</i>	15
<i>"To establish medical team."</i>	
Improve/manage psychological functioning	
<i>"Optimise psychological functioning."</i>	15
<i>"To continue to monitor and maintain current level of mental health."</i>	
Reduce impact of condition on ADLs	
<i>"Decrease impact of medical conditions on daily activities."</i>	7
<i>"To increase independence with household tasks."</i>	
Increase fitness/lose weight	
<i>"Increase fitness and body strength."</i>	4
<i>"To decrease weight and increase fitness levels."</i>	
Receive medical treatment	
<i>"Complete required invasive medical treatment requirements for right shoulder".</i>	2
<i>"To continue to receive treatment for medical conditions."</i>	
Explore suitable employment options	1
Medical (non-compensable)	1
Improve fitness	1
Psychosocial	30
Improve/manage psychological function	
<i>"Improvement in psychological symptoms of depression."</i>	10
<i>"To improve satisfaction with various aspects of his life."</i>	
Increase social/leisure activity	
<i>"To increase level of social activity and community participation."</i>	9

Rehabilitation Goal Category	Frequency
<i>"To learn to be comfortable around others in a civilian setting via volunteer work."</i>	
Manage health	
<i>"Increase daily activity and lose weight."</i>	6
<i>"Manage health."</i>	
Medical management	
<i>"To ensure appropriate medical and psychological interventions are in place."</i>	2
<i>"To maintain interaction with Mr X, DVA and X."</i>	
Improve sleep	
<i>"Increase quality and length of sleep."</i>	1
Obtain full time work	
<i>"To gain full time work in administration or in an occupational health and safety (preferably in X) in a safe and sustainable manner."</i>	1
Decrease smoking	1
Home/self-care	20
Improve daily functioning	
<i>"Improve day to day functioning within the home."</i>	
<i>"Increase client's safety and independence undertaking household tasks."</i>	9
<i>"Reduce ankle strain during domestic duties/hygiene."</i>	
<i>"To improve safety in the shower."</i>	
Receive assistance	
<i>"Temporary assistance with self care and domestic tasks."</i>	6
<i>"To receive cleaning assistance."</i>	
Secure suitable accommodation	
<i>"To monitor and aid Ms X is establishing suitable and secure accommodation..."</i>	1
Manage health	
<i>Improve quality of sleep/pain management</i>	2
<i>Engage in healthy and regular eating patterns</i>	
Psychosocial	
<i>Increase self-esteem</i>	
<i>Increase social participation</i>	2
Liaison with and reports to RCG	1
Aids/modifications	2
Improve sitting tolerance	
<i>"To improve his sitting tolerance from current tolerance of 10 minutes without aggravation of pain."</i>	1
Assist with toilet transfers	1

Rehabilitation Goal Category	Frequency
Recreation	2
Participate in regular/meaningful recreation	
<i>"Mr X to improve his ability to participate in his past leisure pursuit of playing the guitar. He is currently able to play for maximum of 10 minutes."</i>	2
Rest/sleep	8
Decrease fatigue	5
<i>"Decrease feelings of fatigue and tiredness."</i>	
Improve sleep pattern	2
Decrease discomfort	1
<i>"Decrease discomfort levels when sleeping and increase hours of sleep each night"</i>	
Vocational/training	57
Return to suitable work	
<i>"Return to sedentary part time employment that is safe and sustainable and based on medical restrictions."</i>	31
<i>"To find suitable and durable employment as an X."</i>	
Determine vocational goal	17
<i>"Assessment activity to determine suitable vocational goal".</i>	
<i>"Identify vocational goals and training required to meet these goals"</i>	
Training/study	5
<i>"To commence suitable study in Occupational Health and Safety if medically approved."</i>	
<i>"Gain necessary qualification for vocational direction."</i>	
Work trial/placement	2
<i>"To participate in a work trial, to test and extend current document work capacity. And to assist with identification of vocational interest."</i>	
<i>"Commence volunteer work."</i>	
Improve psychological functioning	2
<i>"Improve low mood and general functioning."</i>	

As can be seen in the table above, the highest number of goals were categorised as medical (compensable) (66), followed by vocational / training (57), and psychosocial (30). There were goals classified under every category (although for medical (non-compensable) there was only 1), which suggests that broader psychosocial rehabilitation needs are being considered, along with traditional return to work needs.

It is likely that the number of goals created under aids and modification (2) is lower than the actual services provided in this category during the period of the trial. There were issues arising throughout the trial with this category of service, particularly when it became clearer that there were different forms being used to refer clients to rehabilitation providers for 'simple' home maintenance or installation services or provision of aids and appliances. During training, questions were asked by providers about whether GAS would apply to such services despite the fact that they don't require a full assessment or rehabilitation plan. The response from DVA Policy was that all clients receiving services should have clearly identified intended positive outcomes, and that "successful" delivery of services went beyond basic delivery. For example, a client who has a hand-rail installed in the shower is expecting to have greater self-sufficiency and safety. If the hand-rail is installed but is not able to be used for some reason, or it does not lead to the client feeling safer and more self-sufficient, then a different course of action might be required.

Measuring the success of rehabilitation requires that there is a clear understanding of the intended effect of the intervention, and some follow-up to check that the effect was achieved: the expected outcome to be defined in this example would relate to client's feelings of safety and self-sufficiency (e.g. 'client is able to shower alone and feels safe'), rather than simply 'install hand-rail'. The suggestion was that providers should trial using the GAS rehabilitation plan form for these kinds of services along with other categories. During the course of the trial, however, it was clear that there were a number of instances where providers did not complete a plan for a client referred for this kind of service. This resulted in a loss of capture of significant expenditure and ongoing maintenance.

Further exploration of the issues around these kinds of services suggested that an alternative approach to recording goals/outcomes may be required. Based on an assumption that all services provided to DVA clients are intended to have some positive effect, the issue is how to record this intended outcome and follow-up to ensure it has been achieved without introducing unnecessarily complicated or burdensome procedures. There is potential for DVA to capture outcomes of aids and modifications services to clients by modifying the simple forms typically used for this particular type of service provision.

Defining outcomes

Part of the GAS process involves the construction of a scaling system to develop specific, observable, and quantifiable descriptions of possible outcomes. This includes identifying the expected or desired level of performance or outcome (scored as 0), two levels that would be seen as less favourable and two levels that are more favourable. There are a total of 5 outcome levels, which are assigned numeric values ranging from -2 (the least favourable outcome) to +2 (the most favourable outcome), refer to Figure 2 below. After a planned intervention or a predetermined length of time, clients are rated on their goal attainment.

Figure 2: Outcome scaling system on GAS forms

1. Rehabilitation Goal: <input type="text"/>		To be achieved within: <input type="text"/> < 6 months		Category: <input type="text"/> Psychosocial	
Most unfavourable outcome (-2)	Less than expected success (-1)	Expected outcome (0)	More than expected outcome (+1)	Best anticipated outcome (+2)	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Objectives to achieve goal		Parties involved	Start date	End date	Estimated Cost
<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Importance of goal for client: <input type="checkbox"/> A little <input type="checkbox"/> Moderately <input type="checkbox"/> Very			Difficulty in achieving goal: <input type="checkbox"/> A little <input type="checkbox"/> Moderately <input type="checkbox"/> Very		

Rehabilitation providers were given the following instructions in the Instruction Manual for Service Providers:

Step 3: Define criteria demonstrating expected rehabilitation outcome(s)

After having identified up to 4 rehabilitation goals, the rehabilitation provider will then discuss with the client how they might expect to demonstrate they have achieved that goal. This is done by first identifying what the most likely desirable outcome is expected to be – this is scored at 0. It is crucial that, as a minimum, the description of the desired/expected outcome is completed and that it is SMART (specific, measurable, achievable, realistic/relevant and timed). Time permitting, after having identified the expected (most likely) desired outcome in relation to each rehabilitation goal, it should then be more straight-forward to identify the ‘more than’ (+1) and ‘less than’ (-1) expected outcome levels and the ‘most favourable’ (+2) and ‘most unfavourable’ (-2) levels. Because we are implementing a modified version of the GAS method, in this instance it is not mandatory that rehabilitation providers specify the outcomes at each of the five levels; however, the expected outcome (0) level **must** be described. It is believed that specifying the other outcome levels may be beneficial for both the client and rehabilitation provider in the long-run.

During the period of the GAS trial, 202 goals were defined by providers. Of those 202 goals, Table 6 below shows how many times each outcome (-2, -1, 0, +1, +2) were defined. Appendix 5 lists all 202 goals and the expected outcome (0) for each goal.

Table 6: Number of times the five outcomes are defined

Outcome	Number of times defined
Most unfavourable outcome	157
Less than expected success	158
Expected outcome	194
More than expected outcome	159
Best outcome	161

Note: total number of goals is 202

As seen above, the expected outcome (0) for clients was defined in 194 out of 202 goals. The eight goals that were missing the definition of the expected outcome are detailed in Table 7 below. As shown, there were four clients who did not have their expected outcome defined for at least one of their goals. Only one of the goals was sufficiently precisely described to act as a surrogate outcome (weight loss down to 95kg); others were non-specific (“correct treatment”, “delay symptoms”, “improve sleep pattern”), several also referred to the “goals” of the rehabilitation provider and not the client (“liaison with and reports to RCG”, “determine whether treatment would assist”).

In some instances (e.g. client 4 in Table 7) other goals with expected outcomes had been defined for the client. The presence of goals for rehabilitation providers (e.g. liaise with RCG) may relate to comments received from providers who said they were not sure where to include the costs associated with their meeting the administrative requirements of reporting to DVA and coordinating client’s needs. The “objectives to achieve goal” listed for the client 4 outcome described in Table 7 is: “Liaise with RCG Rehabilitation Coordinator; submit progress reports and other required documentation; implement required services/activities as per the Rehabilitation Plan; provide deeming and closure reports.”

There was also a comment in the online survey about there being no place to account for the administrative costs of providing services. In discussion during the training workshop, DVA rehabilitation policy staff recommended that these kinds of administrative costs be included under the client-focussed goals, either in one block or spread across a number of goals; it was not advised that they become a goal of their own.

Table 7: Goals with missing expected outcome

Client	Goal
1	Correct treatment for sleep apnoea*
1	Delay severity of symptoms of left shoulder*
1	Weight loss down to 95kg*
1	Identify suitable work and training options*
2	To determine whether treatment would assist with management of symptom and to prescribe a home exercise program to assist with symptom management
3	Satisfy RCG requirements for medical management**
3	Improve current sleep pattern**
4	Liaison with and reports to RCG

** same client and provider; ** same client and provider*

Rehabilitation providers were instructed to define the expected outcome (0) as a minimum, and that ideally, if time permitted, they could identify the ‘more than’ (+1) and ‘less than’ (-1) expected outcome levels and the ‘most favourable’ (+2) and ‘most unfavourable’ (-2) levels. As shown in Table 6 above, a significant number of providers managed to define outcomes for all levels. Examples of the 5 outcome levels defined can be seen in Table 8 below.

Table 8: Examples of outcomes defined by providers throughout the GAS trial

Goal	Level of expected outcome				
	Much less than expected (-2)	Less than expected outcome (-1)	Most likely outcome (0)	More than expected (+1)	Much more than expected (+2)
Secure and sustain employment	No employment secured	Limited employment opportunities investigated with unsuitable employment secured.	Suitable employment secured at required hours	Suitable employment secured and sustained with increased hours	Suitable employment secure and sustained with increased hours and no medical restrictions
Improve physical function and increase pain management ability	No days a week at lower pain level	2 days a week at lower pain level	3 days a week at lower pain level	5 days a week at lower pain level	6 days a week at lower pain level
To improve satisfaction with various aspects of his life.	To have a life satisfaction rating of less than 3/10	To have the same satisfaction rating following counselling	To have a life satisfaction rating with life of at least 5/10	To have a life satisfaction rating of at least 7/10	To have a life satisfaction rating of 7/10 or above
To establish medical team	Nil medical team established	Investigated medical team	Medical team established and initial appointments attended	Medical team established and interaction commenced	Medical team established and utilised regularly (as required)
To receive cleaning assistance	Requires assistance with all cleaning activities	Requires assistance with cleaning for more than two hours per week	Requires assistance with cleaning for two hours per week	Requires assistance with cleaning for two hours per fortnight	Requires assistance for cleaning for one hour per fortnight

As can be seen above, providers who developed GAS plans with their clients managed to develop goals across a number of different areas, from vocational goals to home help services. In order to evaluate the quality of the goals and to provide some feedback to providers who were using the GAS, during April 2010, the rehabilitation consultant on the project (Dr Lynda Matthews) reviewed all goals developed to date. The overall purpose of this review was to provide an independent quality assurance check, from an expert, to

determine if the goals being developed looked suitable, achievable, and challenging enough for clients, given their current circumstances. Dr Matthews was provided with the GAS forms along with the Initial Rehabilitation Assessment Forms (in order to understand the background of the client) by ACPMH. This was the same information DVA would be sent for these clients. The feedback from Dr Matthews was disseminated to all providers participating in the trial via the ACPMH GAS trial newsletter.

Overall, Dr Matthews reported that there was logical sequencing of goals from stated barriers to agreed rehabilitation objectives to individual goals. Goals were clearly recorded and defined by activities so that a expected outcome is measurable after an established time frame. Dr Matthews also developed a number of 'tips' for providers, which were disseminated through the newsletter:

Specify all points on the levels of goal attainment in collaboration with the client at the time of goal determination.

Although it may seem quicker at the time of plan preparation to simply identify the zero point, if defining of outcomes is left until follow-up this may highlight misunderstandings or create contention between the client and provider, which reduces motivation for rehabilitation. Collaboratively pre-determining goals and outcomes may also promote client motivation from the outset, because the client knows the parameters on which their progress will be assessed.

Expected outcome (mid-point on the scale) should always progress/improve a client's function from where they are currently.

Most clinical interventions aim to improve function and have time frames for follow up assessment. Therefore, if the rehabilitation goal is treatment for mental or physical health conditions, zero point should reflect improvement in function or behaviour; e.g. a zero point of 'maintaining current level of function' is *not* appropriate for a client with ongoing anxiety issues who is engaged with a mental health provider, because it doesn't progress function. However, a zero point of 'have weekly contact/appointments with Dr X for treatment of Y' is appropriate for a client with anxiety whose barrier is related to infrequent contact with their mental health provider, because it does progress function.

Clearly identify key issues/barriers for rehabilitation.

It is valuable for both the client and for rehabilitation planning if key issues for rehab/barriers to rehabilitation are clearly thought through and listed in dot point - this enhances the quality and logic of goal setting.

These issues can be identified with appropriate prompting; e.g. 'what sorts of things would make it difficult for you to participate in rehabilitation at the moment?', 'is your family supportive of you coming to rehabilitation?' etc.

Address key issues/barriers for rehabilitation

Once identified, key issues/barriers should be addressed in the goals, e.g. social isolation, anxiety, lack of confidence, difficult family relationships, sleep problems.

Use clear language when identifying goals.

Clearly worded goals are more easily assessed.

For instance, 'Working in paid employment' is clear. But 'locating paid employment' has two potential meanings: a) finding paid employment (job seeking), or b) finding and securing paid employment (finding and getting a job).

Ensure consistency in timing of goals.

Check that 'time to be achieved within' is consistent with the start and end dates for the objectives of the goal.

Feedback from providers after this information was distributed was very positive, with most providers reporting that the tips were interesting and practical. It would be useful to include tips such as these in any future revisions of the Instruction Manual. It would also be beneficial for DVA to implement a routine random quality checking process of GAS plans to ensure that goals being developed are suitable, achievable, and challenging enough for clients, given their current circumstances. If the GAS approach is adopted for ongoing routine outcome monitoring, DVA staff will be able to use the information provided through the goal setting and outcome definition to further support the role they currently have around reviewing the content of the rehabilitation plans, including ensuring that the goals for clients meet the SMART criteria.

Importance and difficulty

Providers were instructed to indicate how important the client felt each goal was by marking 'a little', 'moderately', or 'very' on the form, and were also instructed to rate how difficult they (the provider) perceived the goal to be for the client (refer to Figure 3 below). It was recommended to providers that although the difficulty in achieving the goal was to be ultimately rated by the provider, it should be done in consultation with the client (ensuring consistency with DVA's approach to client centred rehabilitation). Table 9 below shows a number of examples of goals and the importance (as rated by clients) and difficulty ratings (as rated by providers).

Figure 3: Importance and difficulty on GAS forms

1. Rehabilitation Goal: [redacted]		To be achieved within: < 6 months		Category: Psychosocial	
Most unfavourable outcome (-2)	Less than expected success (-1)	Expected outcome (0)	More than expected outcome (+1)	Best anticipated outcome (+2)	
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	
Objectives to achieve goal		Parties involved	Start date	End date	Estimated Cost
[redacted]		[redacted]	[redacted]	[redacted]	[redacted]
[redacted]		[redacted]	[redacted]	[redacted]	[redacted]
[redacted]		[redacted]	[redacted]	[redacted]	[redacted]
Importance of goal for client: <input type="checkbox"/> A little <input type="checkbox"/> Moderately <input type="checkbox"/> Very			Difficulty in achieving goal: <input type="checkbox"/> A little <input type="checkbox"/> Moderately <input type="checkbox"/> Very		

Table 9: Examples of goals with ratings of importance and difficulty

Goal	Importance (rated by client)	Difficulty (rated by provider)
Temporary assistance with domestic cleaning	Very	Moderately
Commence volunteer work	Moderately	A little
Improve motivation and confidence	Very	Very
Gain improvement in psychological functioning	A little	Very
To improve wellbeing and adjustment to injury	Moderately	Very

During one of the refresher training sessions run by ACPMH in November a concern was raised from a provider regarding the potential challenge in completing these sections. The provider questioned whether these ratings may cause conflict with the client if the client's perceptions around difficulty were different to the providers (since difficulty is rated by the provider). It was recommended that providers use their own experience and knowledge to ascertain if this rating was going to cause conflict, and to skip these two parts entirely if they needed to. It is worth noting that at no point during the trial did ACPMH receive direct feedback from any provider that these parts were cause for actual concern.

Given this feedback during the training, however, further input was sought on this issue in the online survey of rehabilitation providers participating in the trial. Providers were asked whether the importance and difficulty rating scales:

- Stimulated useful discussion between your client and yourself (7 agree, 5 disagree)
- Were the cause of disagreements between clients and yourself (2 agree, 10 disagree)
- Didn't really seem useful to the process (7 agree, 5 disagree)

One provider gave more feedback through the open-ended response option: "*They are useful [for] checking the client's opinion on this and helps to check if the rehab provider has understood where the client is at*".

It appears that whilst the importance and difficulty rating scales were not a cause for concern for providers (with regard to causing disagreements or conflict with clients) there was mixed feedback regarding the usefulness of this process. A number of providers indicated that the process of rating importance and difficulty stimulated useful discussion, however the same number indicated that these ratings didn't seem useful to the overall process.

Statistical analysis of the importance and difficulty rating scales indicated that there was not a significant difference in the mean importance or difficulty according to the goal categories (refer back to Figure 1): importance: $F(3,161)=.473$, $p>.05$; difficulty: $F(3,163) = .203$, $p>.05$. Note that for this analysis categories with a small sample size (i.e. small number of goals) were omitted. These categories included rest/sleep, medical (non-compensable), recreation, and aids/modifications. This analysis indicates that the ratings of importance and difficulty were not systematically associated with the different goal categories. This suggests that, for DVA clients, none of the goal categories is more likely to be rated as more important or more difficult than any other. This pattern of results also suggests that these ratings were conducted in the

same manner for all goals, regardless of category: there did not appear to be assumptions about relative importance or difficulty of particular categories.

Further statistical analysis revealed that while the relationship between importance and difficulty approached significance ($r=0.134$, $p=.06$), there was not a strong significant relationship between how important a client rated a goal to be and how difficult the provider (in consultation with the client ideally) rated its achievement. This is consistent with the literature which suggests these two constructs are often independent (Ref). There is a suggestion in the literature that the GAS score should be calculated through application of a formula that applies weights for importance and difficulty, on the grounds that a 0 score should be more likely if a goal is both important and easy. Turner-Stokes (2009) and others argue that the impact of this weighting on the final GAS score is minimal, and that it is not worth making the scoring more complicated by use of these weights. There is insufficient data in the current trial to date to contribute to this debate.

Overall, there is inconsistent evidence about the feasibility of the inclusion of importance and difficulty ratings: some providers reported them to be a positive element of the process of establishing goals, while others reported them to be a potential source of conflict. This pattern of results may reflect opinion in the literature (e.g., Bouwens et al., 2009) that it requires practice and clinical skills to learn to apply goal attainment scaling. In the case of applying the GAS with DVA clients, it highlights a need for clear training to be available to providers, and suggests that importance and difficulty should remain as an optional element of GAS.

Amendment Plans

Throughout this trial, a total of 27 amendment plans were received with modifications to GAS described. Of these 27 amendments, 17 were due to a change to the timeline ('to be achieved within') part of the plan (16 extended, 1 shortened), and the remaining 10 had new goals added to the plans. Examples of these changes are presented in Table 10 and Table 11 below.

Table 10: GAS plan amendments – examples of timeline amendments

Goal/s	Plan opened	Original close date	Amended close date
- Increase level of social activity and community participation			
- To improve medical capacity	21/10/2009	31/03/2010	22/12/2010
- To improve day to day functioning			
- Identify a suitable and viable goal of interest			
- Optimise psychological functioning	14/12/2009	14/06/2010	14/12/2010
- Optimise psychological functioning			
- Identify suitable vocational goal and return to suitable employment	14/04/2010	14/08/2010	14/11/2010

Table 11: GAS plan amendments – examples of goal amendments

Original goal/s	Amended (<u>added</u>) goal/s
- Correct treatment for sleep apnoea	- Decrease discomfort levels when sleeping
- Delay severity of symptoms of left shoulder	and increase hours of sleep each night
- Weight loss down to 95kg	- Gain necessary qualification for vocational
- Identify suitable work and training options	direction
- Improvement in psychological symptoms of depression	- Understand outcome of memory
- Improve sleep	assessment and develop memory strategies
- Obtain medical practitioner	-Gain more mobility whilst doing every day
- Improve lifestyle skills	chores
- Get a job	

In most instances providers submitted the rehabilitation amendment report to detail these changes (refer to Appendix 1), however in a few instances providers simply emailed ACPMH to let them know of the change (without following through with any paperwork). It is not clear whether this is also how they informed DVA of changes to the plan: the amendment plan is part of the existing procedure for rehabilitation cases.

GAS Progress Reports

In total, eight 6-Month progress reports were received (refer to Appendix 1 for this form). Within these eight reports, there were 19 goals (note that two were goals yet to be completed according to the original time frame nominated, so were not rated at this time). The GAS scores at 6-months for each goal are presented in Table 12 below.

Table 12: Outcome achieved, and GAS score, for 6-month progress reports

Client	Goal	6-month score	Outcome achieved at 6-months
1	Suitable employment	-1	Not specified
2	To increase level of social activity and community participation	0	Social contact once per week with minor discomfort
2	To improve medical capacity	0	Improvement in capacity demonstration by engagement in vocational activities
2	Improve day to day functioning	0	Slightly less reliance on to do lists and other memory aides
2	Identify a suitable and viable goal of interest to Mr. X	-2	Nil identification of job goal
3	Obtain medical practitioner	0	Receive medical certificates
3	Improve lifestyle skills	-1	Not specified
3	Get a job	NS	

Client	Goal	6-month score	Outcome achieved at 6-months
4	Improvement in psychological symptoms of depression	-1	Not specified
4	Improve sleep	-1	Not specified
5	To reduce worry and anxiety	-1	Anxiety experienced 4-5 times a week
5	To return to an employment position suitable based on restrictions	0	Secure employment in any role that feels competent and pays reasonably well
6	Obtain a suitable job	NS	
6	To improve pain management skills to assist RTW	-1	Not specified
6	Reduce aggravation of low back pain due to home tasks	0	Avoid bad pain days due to lawn mowing. Increase sitting at computer to 45 minutes at a time. Reduce pain levels with ADL.
7	To establish medical team	+2	Medical team established and utilised regularly (as required)
7	To obtain and maintain suitable, paid full time employment	-2	Inability to locate suitable employment
7	To maintain interaction with Mr X, DVA and X	0	Regular interaction with interested 3rd parties coordinated by X
8	Optimise psychological functioning	-1	Irregular attendance at psychological counselling

NS = not started

As can be seen from the table above, most of the goals had outcomes defined, and the relationship between the score and the outcome is clear. It is notable, however, that there were several instances where it is not possible to know what -1 was when achieved because it was not specified in the initial GAS plan. The usefulness of the GAS approach to DVA is increased when the five outcome levels are all defined, as it allows DVA to more clearly understand the goals that are being set by providers and clients, and to understand the level of functioning in the client group.

If DVA adopts the GAS as a routine outcome measure, one of the roles of DVA rehabilitation case managers will be to review the goals and outcomes that were defined in the client's plan. More complete definition of the range of possible outcomes is helpful in developing a good understanding of the needs of clients, and whether or not providers have delivered appropriate services. A modification could be made to the 6-month and closure forms to allow the specific outcome achieved to be written onto the forms rather than requiring DVA staff to go back to the original plan; however, the benefits of reviewing information contained in the initial assessment and plan when considering the closure report may make this an unnecessary duplication of effort.

As noted earlier, it is also possible that, over time, a “menu” of typical goals and associated outcomes could be developed. This might help providers to implement the GAS process efficiently and could also be a way for DVA to indicate the kinds of outcomes they are hoping to achieve for clients, and support achievement of these. It is important, however, that any move to provide such pre-prepared information does not undermine the process of determining client-specific goals and outcomes, as this is the key feature of the GAS when compared with other standardised outcome measures.

From the 6-month progress report GAS scores, standardised *T*-scores can be calculated for each client (by adding the GAS score for all goals then converting this total score to a *T*-score). Providers were given instructions (and *T*-score tables) in the Instruction Manual to assist them with this conversion. Table 13 below shows each client’s goals, their 6-month progress score, the total score for the client, and the standardised *T*-score. When converted to a standardised *T*-score, the aim is to achieve a mean score of 50. Past researchers have noted that a mean goal attainment *T*-score of 50 over a study population (or service’s clients) provides a reasonably robust quality check of a rehabilitation providers’ ability to set and negotiate achievable goals with clients. It is suggested that if a client or provider sets overly ambitious goals, the *T*-score will be less than 50, whilst if the goals are overly cautious, the *T*-score will be greater than 50. Scores of less than 50 may also result from other factors, including those that are outside the control of the client or the provider. For example, a client may have a medical set-back that affects their progress towards employment or retraining, events may occur in the family that undermine psychosocial wellbeing, political and economic factors may impact on employment opportunities, treating professionals may not be available, etc. In these circumstances, providers should still score the GAS as originally defined, but should communicate to DVA any circumstances that may explain scores other than 50. The purpose of the GAS process is not to label “failure”, but to identify patterns in achievement across types of goals, service providers, geographic locations, etc. and to provide DVA with a useful tool to assist a cooperative approach to ensuring the rehabilitation needs of clients are met.

Table 13: GAS score and standardised T-score for 6-month progress reports

Client	Goal	6-month score	Standardised T-score
1	Suitable employment	-1	
	Score for client 1	-1	40
2	To increase level of social activity and community participation	0	
2	To improve medical capacity	0	
2	Improve day to day functioning	0	
2	Identify a suitable and viable goal of interest to Mr. X	-2	
	Score for client 2	-2	43
3	Obtain medical practitioner	0	
3	Improve lifestyle skills	-1	
3	Get a job	NS	
	Score for client 3	-1	44

Client	Goal	6-month score	Standardised T-score
4	Improvement in psychological symptoms of depression	-1	
4	Improve sleep	-1	
Score for client 4		-2	38
5	To reduce worry and anxiety	-1	
5	To return to an employment position suitable based on restrictions	0	
Score for client 5		-1	44
6	Obtain a suitable job	NS	
6	To improve pain management skills to assist RTW	-1	
6	Reduce aggravation of low back pain due to home tasks	0	
Score for client 6		-1	44
7	To establish medical team	+2	
7	To obtain and maintain suitable, paid full time employment	-2	
7	To maintain interaction with Mr X, DVA and X	0	
Score for client 7		0	50
8	Optimise psychological functioning	-1	
Score for client 8		-1	40
Average T-score for all 6-month progress reports			43

Rehabilitation closure reports

During the period of this trial, 15 rehabilitation closure reports were received. Of these 15 reports, 11 contained GAS scores, the remaining four had left the GAS table blank. Table 14 below details the client goals, category identified on the GAS plan, closure scores, and the outcomes achieved at plan close. Reasons for the lack of GAS scores in the 4 blank forms were due to:

- Case closed due to client relocation (1)
- Plan closed early due to unstable psychological state of client (1)
- DVA staff member (from RCG) requested case close (2)

Table 14: Outcome achieved, goal category, and GAS score for closed rehabilitation plans

Client	Goal	Category	Closure score	Outcome achieved at closure
1	Completed required invasive medical treatment requirements for right shoulder	Medical	1	Treatment undertaken. Commenced rehabilitation activities
1	Enrol and successfully completing tertiary training	Vocational	1	Enrolled and credit average for subjects

Client	Goal	Category	Closure score	Outcome achieved at closure
1	Obtain employer exposure via work placement with agricultural industry to enhance employment opportunities	Vocational	0	Work placement implemented in relation to both degrees
2	Increase social activity	Psychosocial	0	Mr X engages in social activity outside of work once per week
2	Increase mental health via a decrease in depressive symptoms	Medical (compensable)	0	Mr X reports a decrease in depressive symptoms and an increase in his mental health
2	Mr X to engage in health and regular eating patterns	Home/self-care	0	Mr X to eat 2 meals per day every day
2	Mr X to engage in full time employment	Vocational/training	-1	Mr X to continue to engage in part-time employment at X
3	To return to an employment position suitable based on restrictions associated with his Psychological condition	Vocational/training	NP	
4	To gain full time work in administration or in an occupational health and safety (preferably in the X) in a safe and sustainable manner	Psychosocial	0	Gain an administration or occupational health and safety role within X
4	Improve self confidence	Psychosocial	0	Feels confident 3-5 days per week and during interview
5	Improve independence in personal ADLs	Home/Self-care	0	Reduce shower and dressing time from 30 minutes down to 20 minutes. Sit at computer 20 minutes (current 10 minutes)
6	To gain improvements in his physical functioning	Medical (compensable)	NP	
6	To feel more positive and be taking less medication	Medical (compensable)	NP	
7	Full time work	Vocational/training	NP	
8	Secure and sustain employment	Vocational/training	-2	No employment secured
8	Improve medical capacity and fitness	Medical (compensable)	-1	No change in medical capacity and fitness

Client	Goal	Category	Closure score	Outcome achieved at closure
9	Secure and sustain employment	Vocational/ training	NP	
9	Decrease smoking	Psychosocial	-1	Smoking reduced for up to six months with cigarette use no more than once per week
9	Decrease feelings of fatigue and tiredness	Rest/sleep	1	Regular sleep patterns established with moderate reduction in feelings of fatigue
9	To enter into sustainable self-employment in computer industry	Vocational/ training	0	Client independent in managing business
10	Facilitate Rehabilitation Program	Medical (compensable)	-2	Fails to participate in Rehabilitation Program
11	Optimise psychological functioning	Medical (compensable)	0	Regular attendance at psychological counselling
11	Optimise physical functioning	Medical (compensable)	NP	
12	Return to suitable employment	Vocational/ training	1	Obtain a suitable employment position
13	Optimise psychological functioning	Medical (compensable)	NP	
13	Clarify vocational goal	Vocational/ training	NP	
14	To resume regular Psychiatric sessions	Psychosocial	-1	Long delay for an appointment with a X based psychiatric appointment but able to see Dr X in X in the interim
14	Improve functional capacity and reduce pain levels	Medical (compensable)	0	Pain levels usually 4 out of 10 or less and there is an increase in overall function to above current levels
14	Participate in regular meaningful leisure and recreational	Recreation	0	Participates in regular leisure and activity of moderate interest to him
14	To identify a suitable work type of interest to Mr X	Vocational/ training	0	Appropriate vocational goal identified.
15	Have rehabilitation plans in	Not known	0	Not known

Client	Goal	Category	Closure score	Outcome achieved at closure
	place			
15	Secure paid employment	Not known	0	Not known

NP = not provided

As can be seen in the table above, there was a wide variety of goals, outcomes, and closure scores for the clients whose rehabilitation plan opened and closed during the period of this trial. This indicates that the GAS process has the capacity to 'work' for goals across all categories; that is, it supports the biopsychosocial model of rehabilitation adopted by DVA.

Presenting GAS data in summary

DVA has the potential to use the information shown in Table 14 above either on a client-by-client basis to assess outcome achievement, by goal category, or as average scores of outcomes obtained (as a whole or by category). Table 15 below presents the GAS scores and standardised *T*-scores at closure for each of the clients presented above.

Table 15: GAS score and standardised *T*-score for closures

Client	Overall Closure score	Standardised <i>T</i> -score
1	2	62
2	-1	46
3	NP	
4	0	50
5	0	50
6	NP	
7	NP	
8	-3	31
9	0	50
10	-2	30
11	0	50
12	1	60
13	NP	
14	-1	46
15	0	50
Average <i>T</i>-score for all closures		48

NP = not provided

As shown in Table 15 above, *T*-scores ranged from 31 to 62 with an average score of 48 for these 11 clients. This is information DVA could potentially use in the “Performance Report to the RC and MRCC” from the Rehabilitation Group. An example of how this could be done can be seen in Table 16 below. Note that for the purposes of this example, we have assumed all cases currently available through the trial are MRCA clients; however DVA would be able to identify which clients are MRCA and which are SRCA.

GAS *T*-scores at rehabilitation plan closure could also be added as a field in data systems in order to ensure this information is recorded for each client receiving rehabilitation services. At the simplest level, this could be the average of the single summary score of all goals across all clients. This would allow the row “MRCA – average goal attainment score (*T*-score)*” to be added.

Table 16: Representing GAS score information in DVA Reports - simple

Measure	2004/2005	2005/2006	2006/2007	YTD
				2007/2008 to 31 Mar 08
MRCA Assessments completed	16	66	268	273
MRCA NRTW cases opened	6 (38%)	19 (29%)	71(26%)	94 (34%)
MRCA RTW cases opened	6 (38%)	32 (48%)	149 (56%)	135 (49%)
MRCA RTW cases closed	2	9	45	60
MRCA - % successful RTW	100%	40%	49%	72%
MRCA – average goal attainment score (<i>T</i> -score)*				48
Total new NRTW cases	670	692	719	555
Total new RTW cases	582	530	512	346

* Note that a *T*-score is a standardised score created by converting a raw score into a standard score (between 1 and 100) with a normal distribution with a mean of 50. The formula used for GAS is described in the introduction, but a simple table is available to determine *T*-scores for a limited number of goals.

At a more complex level, it would be possible to have a field for each of the eight possible categories, and record a total GAS *T*-score in each category relevant to a client. The number of clients contributing to the mean would also be available (although this would not necessarily be the same as the number of goals if a client had more than one goal in a particular category). This would provide a summary of the extent to which different kinds of goals have similar or different levels of achievement. If a particular type of goal appears to less frequently achieve the intended outcomes, DVA staff would be in a position to explore the reasons and intervene if there are some potentially helpful actions, or to understand why some kinds of goals are more likely to be affected by events beyond the control of clients or providers.

Table 17: Representing category-based GAS score information in DVA Reports

Measure	2004/2005	2005/2006	2006/2007	YTD 2007/2008 to 31 Mar 08
MRCA Assessments completed	16	66	268	273
MRCA NRTW cases opened	6 (38%)	19 (29%)	71(26%)	94 (34%)
MRCA – average goal attainment score (<i>T</i> -score) for non-vocational goals: (and Number of clients with at least one goal in this category)				
• Medical compensable				47 (6)
• Medical non-compensable				
• Psychosocial				45 (4)
• Home/Self Care				50 (2)
• Aids and Appliances#				
• Recreation				50 (1)
• Rest/Sleep				60 (1)
MRCA RTW cases opened	6 (38%)	32 (48%)	149 (56%)	135 (49%)
MRCA RTW cases closed	2	9	45	60
MRCA - % successful RTW	100%	40%	49%	72%
MRCA – average goal attainment score (<i>T</i> -score) for:				
• Vocational / Training goals (and Number of clients with at least one goal in this category)				48 (6)
MRCA – average goal attainment score (<i>T</i> -score) - ALL GOALS				50 (20)
Total new NRTW cases	670	692	719	555
Total new RTW cases	582	530	512	346

Further discussion about this category is below

This level of reporting is likely to be sufficient for the overall summarising of rehabilitation outcomes at the higher management levels within DVA. It would, however, be possible to further explore the data. More detailed information about goals, outcomes and associated GAS scores could be captured in a separate database, or through conducting regular audits of sequential rehabilitation plans several times a year. DVA would then have the capacity to generate more detailed reports on GAS outcome scores (-2 to +2) and goals and outcomes achieved for each client or groups of clients. Over time, these could also be explored in relation to the kinds of problems that clients presented with in order to develop a greater understanding of

the kinds of rehabilitation interventions that may be most successful. Information could be analysed at a number of different levels; see Table 18 for an example of individual client outcomes represented by goal categories. Other tables produced for this report would also be feasible with a reasonably small investment of time by DVA.

Table 18: GAS closure scores and standardised T-scores for different goal categories

Client	Closure score	Standardised T-score
Medical (compensable)		
1	1	60
2	0	50
6	NP	
8	-1	40
10	-2	30
11	0	50
13	NP	
14	0	50
Average T-score for all medical (compensable) closures		47
Vocational / training		
1	1	60
2	-1	40
3	NP	
7	NP	
8	-2	30
9	0	50
12	1	60
13	NP	
14	0	50
Average T-score for all vocational / training closures		48
Psychosocial		
2	0	50
4	0	50
9	-1	40
14	-1	40
Average T-score for all psychosocial closures		45

Client	Closure score	Standardised <i>T</i>-score
Home / self-care		
2	0	50
5	0	50
Average T-score for all home / self-care closures		50
Rest / sleep		
9	1	60
Average T-score for all rest / sleep closures		60
Recreation		
14	0	50
Average T-score for all recreation closures		50

Summary of the GAS data analysis

The quality of the data provided by rehabilitation providers through the modified DVA rehabilitation forms was generally very high. There were some cases where definition of outcomes could have been more precise, and there were some outcomes or goals that appeared to be misclassified; however, overall the feasibility of the providers implementing GAS with DVA clients was demonstrated through the trial.

The data provided through the DVA Rehabilitation Plan, the 6-month Report and the Closure Report provide potentially useful information to DVA. At its simplest level, a single mean GAS score (*T*-score) provides DVA with a single figure summary of the extent to which the intended outcomes of rehabilitation services have been achieved or not. With relatively small additional effort the information can also allow DVA to describe the kinds of goals that have been addressed through rehabilitation services with more accuracy than the simple division between “return to work” (RTW) and “non-return to work” (NRTW). Rather than allocating each client to either or of these categories, representation of the goals in the eight categories described in the rehabilitation plan provides a more accurate representation of the complexity of interventions being delivered. Given the biopsychosocial model of rehabilitation that DVA is committed to under the MRCA and SRCA, the capacity to have a better understanding of the kinds of goals that have been addressed and the extent to which they have been achieved through implementation of the GAS approach is demonstrated through the trial.

Section 4: Analysis of the LSQ

From August 2009 to September 2010, a total of 74 LSQ forms were received with initial GAS plans (n=82). Seven LSQ scores were received with GAS closure reports (five included the actual LSQ form, whilst the remaining two simply completed the LSQ table in the closure report. Refer to Figure 4).

Figure 4: LSQ table in the rehabilitation closure report

SATISFACTION MEASURE (Life Satisfaction Questions)			
[N.B. DVA is currently trialling the use of a measure of personal satisfaction with different aspects of life, to be collected from each client at the start of each rehabilitation plan period, and at 6-monthly intervals until plan closure. The intent of the trial is to establish the usefulness of a self-report measure in assessing the outcomes of rehabilitation.]			
	Score at rehab assessment	Score at 6 months	Score at closure
Q13. Overall satisfaction with life (score between 0–10)			
Employment status (employed or not employed)			
Q14. Overall satisfaction with job (score between 0–10)			
List any domains where the client ranked satisfaction < 6			

Providers were told during training (and in the Instruction Manual for Service Providers) that the LSQ was not mandatory for clients, and that clients could choose to answer all, some, or none of the questions. Providers were to give the option of completing the LSQ at plan open, 6-month progress, and plan close. Making the LSQ optional to complete was deemed to be necessary because some providers believed that there would be clients for whom the information may be too intrusive (for example, if they had “simple” issues being addressed through rehabilitation, such as preparing a CV, or other limited vocational support), or for whom it may be too distressing (for example, if they had complex co-morbid conditions with extensive psychosocial problems). The actual rate of use of the LSQ was very high (74 out of 82=90%), suggesting that it was generally feasible to use.

Table 19 below presents the average scores for each of the LSQ questions at open and close for all clients with a plan and for those who completed LSQs at both time points (n=5). Note that higher scores indicate increased feelings of satisfaction. These results are also presented in Figure 5 below.

Table 19: Average scores for LSQ at plan open and plan close

Satisfaction with things in your life			
Question	Average Score		
	Open	Open	Close
N	75	5	5
Q1. The home in which you live	6.5	7.6	7.0
Q2. Your employment opportunities	3.3	5.0	8.3

Satisfaction with things in your life			
Question	Average Score		
	Open	Open	Close
N	75	5	5
Q3. Your financial situation	4.5	5.6	6.0
Q4. How safe you feel	6.1	7.8	8.6
Q5. Feeling part of your local community	4.6	6.6	8.0
Q6. Your mental health	4.9	7.2	7.8
Q7. Your physical health	3.9	6.2	7.0
Q8. Your current sleep pattern	3.6	6.4	7.4
Q9. The neighbourhood in which you live	6.9	7.4	8.2
Q10. The amount of free time you have	6.0	7.4	7.4
Q11. Your relationship with your spouse or partner	6.9	8.0	8.7
Q12. Your relationship with your children	7.2	7.0	9.0
Q13. How satisfied are you with your life?	5.2	6.6	7.4
Satisfaction with employment			
	Open (all)	Open (n=1[^])	Close (n=3[*])
QA. Your total pay	4.3	n/a	5.7
QB. Your job security	4.9	n/a	6.7
QC. The work itself (what you do)?	5.8	n/a	8.0
QD. The hours you work?	3.5	n/a	8.0
QE. The flexibility available to balance work and non-work commitments	5.1	n/a	8.7
QF. How satisfied are you with your job?	4.7	n/a	8.0

[^] The 1 client with job satisfaction scores at plan open did not have any score at plan close, although their rating of satisfaction with employment opportunities went from 6 to 7.

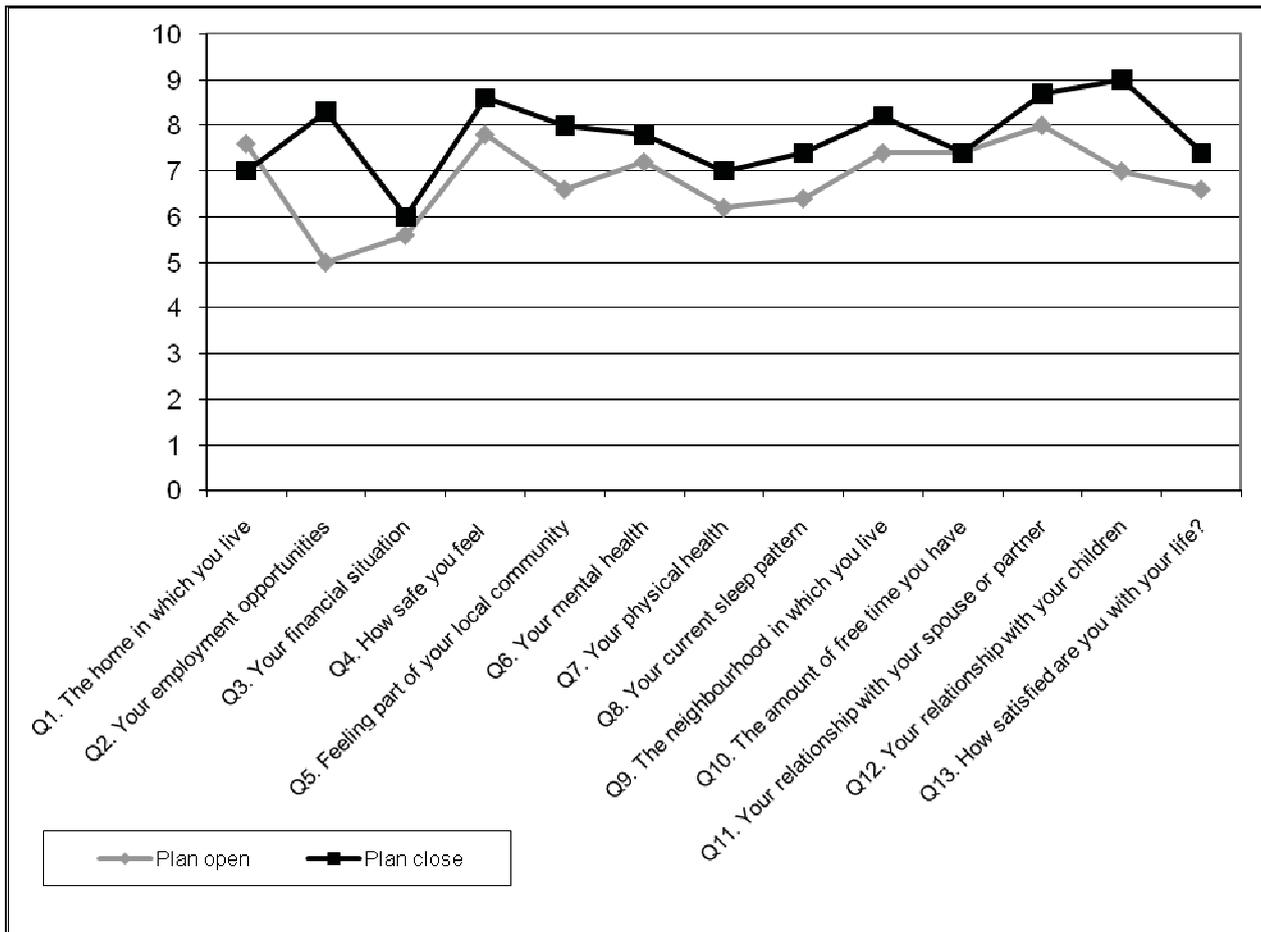
^{*} The 3 clients with plan closure job satisfaction scores did not have open plan scores as they were not in paid employment at that time.

For all data, there were some quite low LSQ scores in some domains in the open plan forms, which have the potential to raise concern to DVA and rehabilitation providers, particularly the very low mean rating for “your sleep pattern”.

As can also be seen from the table above, and from Figure 5 below, scores relating to life satisfaction increased from plan open to plan close for most questions for the five clients whose data is available. The question regarding employment opportunities (Q2) showed the biggest positive change from open to close.

For the cases for whom there was data from both plan open and plan close forms, all scores were six or above, suggesting a generally positive level of life satisfaction. Overall, clients' satisfaction with their life (Q13) rose from 6.6 to 7.4. It is worth noting though that there were only five LSQs completed at closure so these results should only be interpreted cautiously as an indication of overall success of rehabilitation during the trial. The data are provided primarily to demonstrate the feasibility and potential usefulness of the LSQ as a component of measurement for DVA rehabilitation cases.

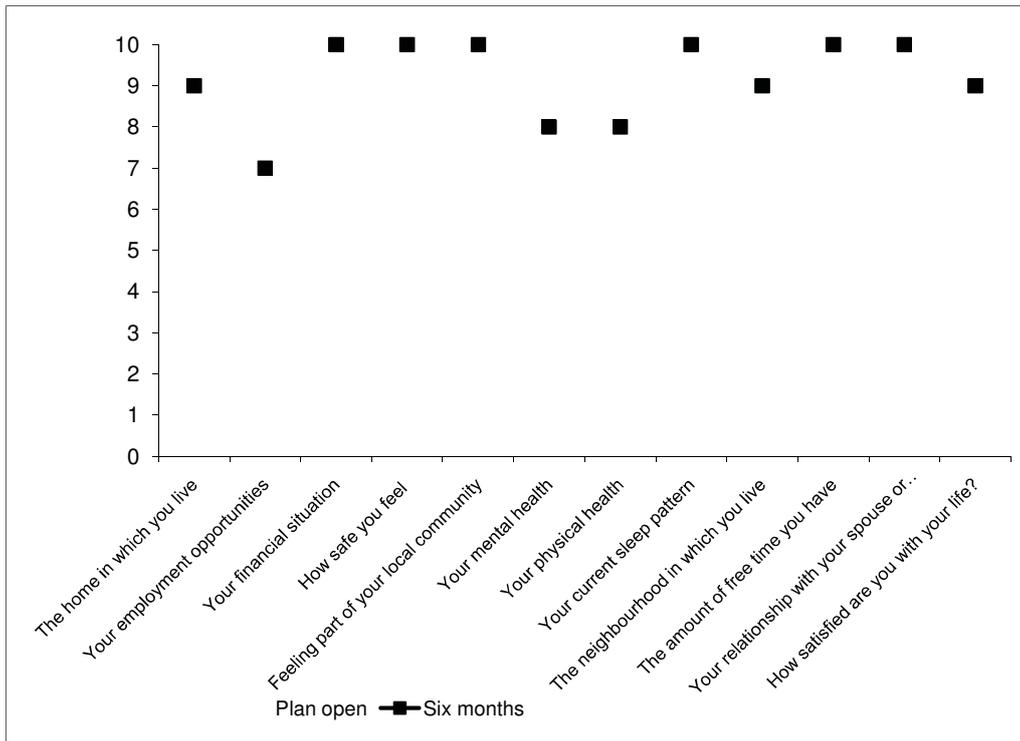
Figure 5: Life satisfaction average scores at plan open and plan close (n=5)



With regard to 6-month progress reports, three clients completed the LSQ both at plan open and again 6-months into their rehabilitation plan. For these three examples, Figure 6, Figure 7 and Figure 8 present the LSQ scores at open and at the 6-month progress time point (note that none of these three clients were employed at the time of completing the LSQ therefore the questions regarding employment are omitted).

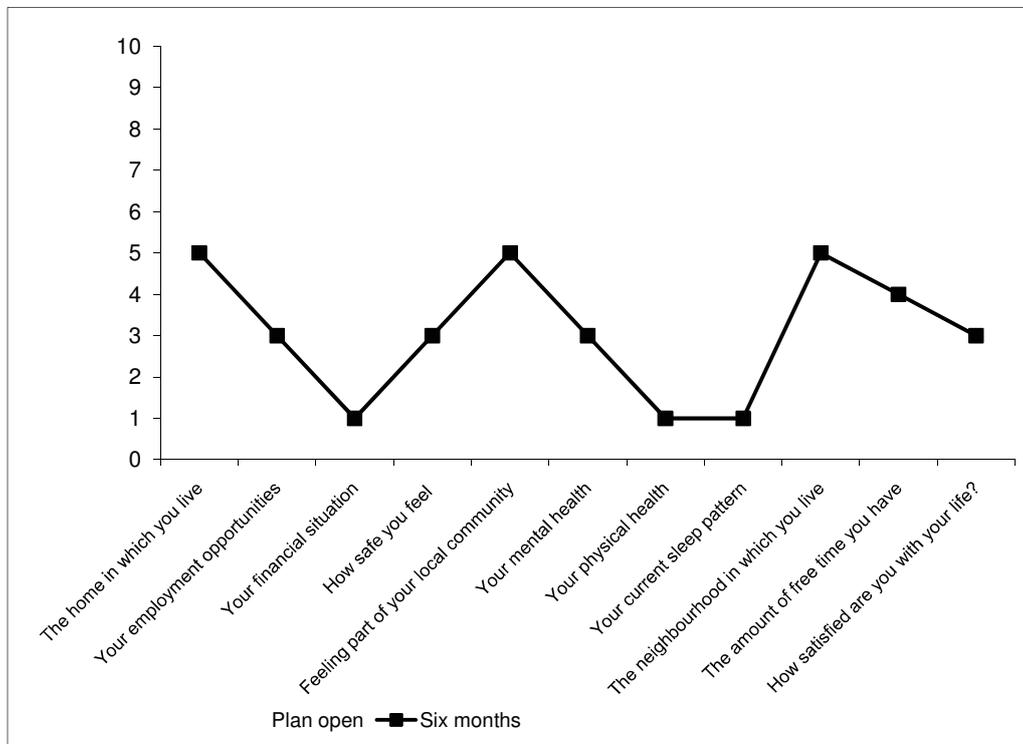
Information such as that presented in the three charts below is potentially useful both for DVA and for rehabilitation providers as a simple 'snapshot' of the client's overall status six months into the rehabilitation plan. It also provides an opportunity to discuss any areas of concern and potentially amend the rehabilitation plan to address needs that have arisen or developed since the plan opened.

Figure 6: Client 1 LSQ at open and 6-months*



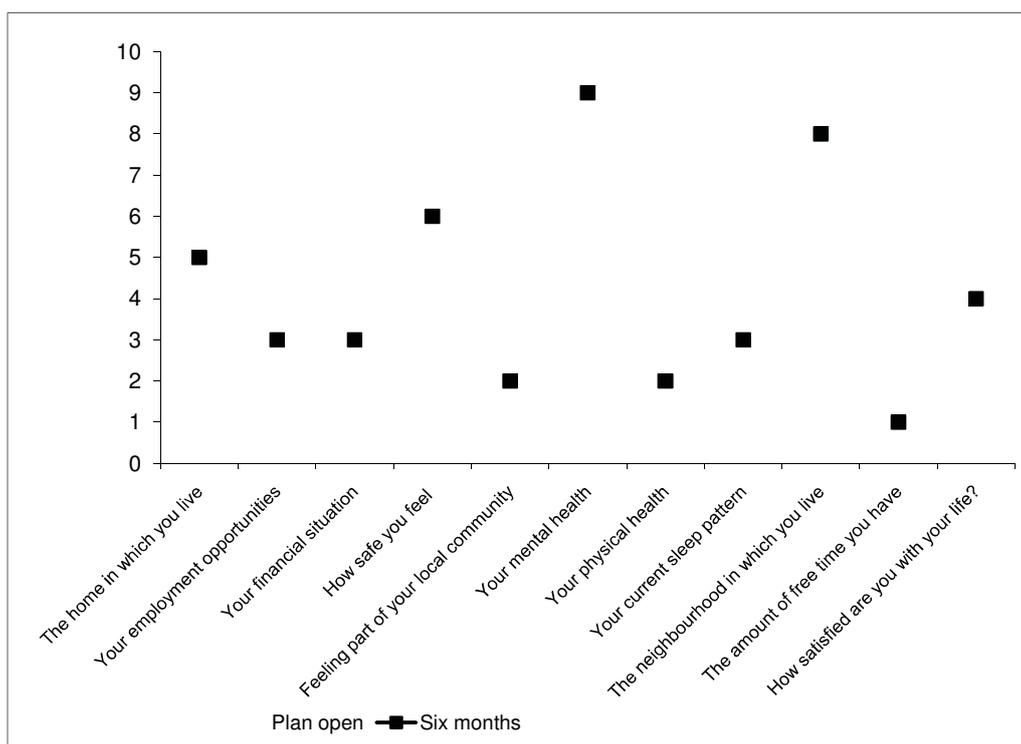
*Note that question regarding relationship with any children was not applicable and so is omitted.

Figure 7: Client 2 LSQ at open and 6-months**



** Note that questions regarding relationships with spouse or children were not applicable and so are omitted, also note that client did not respond to overall life satisfaction at plan open.

Figure 8: Client 3 LSQ at open and 6-months***



*** Note that questions regarding relationships with spouse or children were not applicable and so are omitted.

Presenting LSQ data in summary

Should DVA decide to continue with the voluntary collection of LSQ data, summary data could be reported at different levels, as is suggested for the GAS scores.

The addition of two data fields into data systems could capture the overall life satisfaction and the overall job-satisfaction scores when a plan opens, with another two data fields could be added for the same information when a plan closes. This would allow DVA to report a simple mean in routine reports (see Table 20).

Table 20: Representing LSQ mean scores in DVA Reports

Measure	2004/2005	2005/2006	2006/2007	YTD
				2007/2008 to 31 Mar 08
MRCA Assessments completed	16	66	268	273
MRCA NRTW cases opened	6 (38%)	19 (29%)	71(26%)	94 (34%)
Overall Life Satisfaction Questionnaire (LSQ) score at plan open				
MRCA – average goal attainment score (T-score) for non-vocational goals: (and				

Measure	2004/2005	2005/2006	2006/2007	YTD 2007/2008 to 31 Mar 08
Number of clients with at least one goal in this category)				
• Medical compensable				47 (6)
• Medical non-compensable				
• Psychosocial				45 (4)
• Home/Self Care				50 (2)
• Aids and Appliances#				
• Recreation				50 (1)
• Rest/Sleep				60 (1)
MRCA RTW cases opened	6 (38%)	32 (48%)	149 (56%)	135 (49%)
Job-related LSQ score at open				
MRCA RTW cases closed	2	9	45	60
MRCA - % successful RTW	100%	40%	49%	72%
Job-related LSQ score at close				
MRCA – average goal attainment score (T-score) for:				
• vocational goals (and Number of clients with at least one goal in this category)				48 (6)
MRCA – average goal attainment score (T-score)* - all goals				50 (20)
Overall LSQ score at plan close				
Total new NRTW cases	670	692	719	555
Total new RTW cases	582	530	512	346

A more detailed summary by content area could be provided if the score for each life satisfaction domain was entered at plan open and plan closure for all clients. This could be summarised as in Table 19 and/or Figure 5 above.

Summary of the GAS data analysis

The LSQ data provided by rehabilitation providers through the modified DVA rehabilitation forms was reasonably comprehensive, with only a small number of clients who appeared to elect not to answer some or all questions. The feasibility of the providers implementing LSQ with DVA clients was demonstrated through the trial.

The LSQ data provided through the DVA Rehabilitation Plan, the 6-month Report and the Closure Report provides potentially useful information to DVA. At its simplest level, a single mean overall life satisfaction score at plan open and plan close provides DVA with a single figure summary of the general wellbeing of a client at the beginning of rehabilitation and at the point that the rehabilitation intervention has finished. Analysis of the data in more detail – by providers and DVA staff – would also have the potential to identify further areas of unmet need where DVA may be able to provide additional assistance or support to individual clients. Ongoing review of these data at an aggregate level may also provide feedback about potential gaps in services or identify areas where DVA may be able to intervene in other ways to increase the health and wellbeing of clients.

Section 5: Rehabilitation provider feedback

In April 2010 rehabilitation providers who were participating in the GAS trial were invited to complete an anonymous online survey asking about their experiences using the tool (refer to Appendix 6 for the questions). A total of 19 providers responded, with almost half (n=9) located in Queensland (refer to Table 21). **Note that, while the total number of respondents to the survey is small, for ease of interpretation Tables and discussion include percentages.**

Table 21: Location of providers who responded to the online survey

State	N	%
New South Wales	0	0
Queensland	9	47
South Australia	4	21
Tasmania	0	0
Victoria	6	32
Total	19	100

The majority of providers responding to the online survey identified themselves as Occupational Therapists (refer to Table 22). The length of time working in rehabilitation ranged from 3 months to over 20 years with a mean of 6.2 years.

Table 22: Occupational categories of providers who responded to the online survey

Occupation	N	%
Psychology	4	21
Rehabilitation	3	16
Social Work	3	16
Occupational Therapy	7	37
Nursing	0	0
Physiotherapy	1	5
Other (please specify)*	1	5
Total	19	100

* specified as "exercise psychologist"

Providers had been working with DVA clients for an average of five years (although the range of time was significant: from three months to 18 years). Forty percent (n=7) of providers indicated that they were currently working with five or less DVA clients, with a further 42% (n=8) indicating that they were currently working with more than 10 DVA clients. Only two providers indicated that there were not currently working with any DVA clients. With regard to total client load, 63% of providers (n=12) indicated that half (or less) of their clients were DVA clients.

With regard to undertaking training on the GAS, providers were asked if they had attended one of the GAS training sessions run by ACPMH in 2009. Forty-four percent (n=7) of providers indicated that they had attended this training, with 56% not attending (n=9; 3 providers skipped this question). For the nine providers who indicated that they did not attend the ACPMH training, they were further asked how they learnt to use the GAS forms. Results are shown in Table 23 below.

As can be seen in the table below, the majority of providers used the Instruction Manual for Service Providers. Further analysis revealed that providers who used the Instruction Manual also had a colleague at work or a manager show them, and that they further worked it out as they went through it with a client (providers were able to respond to multiple choices on this question).

Table 23: How providers were trained to use the GAS when they didn't attend the ACPMH training

	N	%
Colleague at work showed me	2	22
My manager showed me	3	33
I read the GAS Instruction Manual for Service Providers	5	56
I worked it out as I went through it with a client	3	33
Other (please specify)	2	22
<i>Have not been shown yet</i>		
<i>I am unaware of it</i>		
n=9		

For the seven providers who indicated that they had attended one of the ACPMH training sessions, they were asked about their ability to use the GAS with their clients. The majority (71%, n=5) indicated that the training was useful but that they needed some help to complete their first GAS with a client. This same group of providers (n=7) were asked if there was anything in particular that was not covered in the training that would be useful. Suggestions included:

- More 'real life' examples
- More understanding about how to use this tool for household services
- Scheduling of a 'refresher' training session including feedback of what others are doing

Ten out of 15 of the providers who responded to the survey indicated that the Instruction Manual for Service Providers (user guide developed by ACPMH and distributed at training sessions) was a useful reference tool for them to have.

At the time of this survey, providers had completed up to 11 GAS forms each with clients (ranging from 0 to 11), with 22% (n=4) using the GAS process with all of their DVA clients. Of the remaining 78% (n=14) who

indicated that they did not use the GAS with all of their DVA clients, they were prompted to explain why. Responses can be categorised into the following:

- Not used for clients who commenced rehabilitation prior to the trial (n=7)
- Not used for household services, aids, and equipment (n=2)
- Have not had opportunity to yet (n=2)
- Client declined to participate or GAS process was forgotten (n=1)

Providers were then asked a number of questions regarding their opinions of the GAS tool. Six out of 13 providers (46%) believed that the GAS process provides a better service for DVA than what they were doing previously, and seven out of 11 (64%) thought that it provided a better service to DVA clients than previously. Further information was sought regarding the extent to which the GAS process:

- Helps providers engage with clients (4 more than before, 8 same as before)
- Facilitates a better rapport between provider and client (4 more than before, 8 same as before)
- Allows providers to develop a clearer and more comprehensive plan for clients (9 more than before, 3 same as before)
- Caters to all areas of need for clients (4 more than before, 7 same as before, 1 less than before)

With regard to client's who had participated in the GAS trial, providers noted that:

- Clients respond well to working through the GAS (7 agree, 6 disagree)
- Clients like working through their rehabilitation goals in this format (6 agree, 7 disagree)
- Clients have a clear understanding of what is required of them due to this process (9 agree, 4 disagree)

In-depth analysis revealed that there was one provider who indicated that the GAS approach to developing a plan with clients was not any different (or possibly worse) than what they were doing previously and that their clients did not particularly like the GAS. This provider had only been working with DVA clients for 3 months and had not attended or undertaken any training on the GAS tool. It is possible that this individual may have found the process difficult (and therefore not rated it highly) due to insufficient training in the tool, and/or limited experience with DVA clients (e.g., see Bowens et al., 2009 for a discussion about the level of skill required to implement GAS).

It is also worth bearing in mind that this was a trial of a new system for rehabilitation providers and it would be expected that both providers and clients have a learning curve to follow before they are completely at ease and experienced with the tool. Discussions that took place with providers through the course of the trial indicated that they were generally supportive of continuing to use the GAS with clients, but that it took a little bit of time to get used to it. They further noted that once 'you got the hang of it' the tool was very useful and facilitated discussions between providers and clients. This would suggest that some less than positive comments may be related more to lack of familiarity than reflecting a negative opinion after extensive use and consideration of the measures.

Overall it is important to highlight that, from the results of the online survey and the informal discussions with providers throughout the trial, the majority of providers reported that the GAS approach supports the development of a clear and comprehensive plan for clients and that by doing the GAS clients have a clear understanding of what is required of them. This supports the claims in the literature that the process of GAS is a useful mechanism for supporting comprehensive planning, for setting clear expectations of persons involved, and for facilitating discussions between clients and providers.

Providers were asked whether they thought that the GAS process resulted in more cost for DVA. Responses varied:

- The GAS process results in more expensive plans being produced for DVA clients AND doesn't provide a better service for DVA clients (2 agreed)
- The GAS process results in more expensive plans BUT provides a better service for DVA clients (4 agreed)
- The GAS process costs about the same as what we were doing before this trial (8 agreed)

It could be helpful for DVA to review their data and ascertain whether clients who participated in the GAS approach had more expensive rehabilitation costs (for setting up the plan or services received) than clients who did not take part in the GAS trial. It would be worth noting that it is plausible that the GAS plans may cost more, as they are likely to pick up on more varied needs of the client. However, a review of DVA's cost data would be needed before concrete conclusions could be made regarding any actual increased cost due to the GAS trial.

If this analysis is undertaken, it is also worth noting the likelihood that costs associated with the introduction of a new approach will decrease as it becomes more familiar: time factors should be taken into account. Any cost benefit analysis of the implementation of the GAS (and LSQ) also needs to be able to consider the potential additional benefit to clients of the client-focussed approach to goal setting, and the explicit recognition of goals other than vocational that comes through the approach. Providers reflected these issues/comments when asked about the particular factors that contributed to the process resulting in more expensive plans:

- Increased time spent to develop goals / write out plan (although some noted this would decrease as experience with the tool increased)
- Developing programs for clients who in the past did not require ongoing interventions (e.g. provision of aids and appliances – note that this is a particular issue that was raised earlier in the Report and is addressed in the Discussion section)

One provider specifically commented that *“the GAS process actually allows and encouraged a broader scope in the planning of a Rehab Plan, to better cover and explore all areas of rehab needs assistance, rather than just the usual ORP RTW focus. The GAS has been a helpful prompt to ensure a more holistic plan for rehab servicing for these clients.”*

Open-ended comments

A series of open-ended questions allowed providers to comment on instances where they found it difficult to use the GAS process (or where they thought it may not be applicable), if they had any suggestions for improvement or modification to the forms or process, and whether they had any ideas regarding how the GAS process could be rolled out nationally if DVA chose to do so (to ensure adequate knowledge transfer, provider uptake, and understanding of the process). A number of themes emerged across all of these questions.

Issues with the client's perceived capacity to participate in GAS process:

- *"Clients with severe mental health [problems] not ready to focus on all the various aspects of the GAS goals required to be discussed."*
- *"When clients lack motivation or are uncertain about what the rehabilitation process involves. This needs to be clarified first, ideally by MCRS not the provider."*
- *"Clients generally find it hard to quantify their outcomes"*
- *"Particularly [difficult] with difficult clients who find it unnecessary to choose goals. Therefore goals are suggested and essentially developed by the RP - and may not be necessarily the best way to go about rehab."*
- *"I have had a client who refused to sign the eventual Rehab Plan, and thus not participate in his proposed Rehab and this GAS process - he was a very angry client, and nothing would have appeased him. The additional paperwork for the trial was just another point of triggered anger!"*

Issues with the GAS method:

- *"Some rehabilitation goals are very specific and the breakdown of possible outcomes (+2, +1 etc) was therefore difficult." (Later suggested that procedure be modified: "Break down the measuring scale from 5 points to 3.")*
- *"After the information gathering interview (which takes a long time), the additional time taken to do the plan especially if all the 5 outcomes per goal are filled in is too long & clients are over it by then! Ideally i would do the assessment & plan over 2 appointments but this is not feasible when i travel some distance to meet clients."*
- *"Wherever a plan was needed it was relevant. However, I found it time consuming and wordy."*
- *"Some goals cannot be appropriately measured from -2 to +2. Especially with two essentially being worst case scenario."*

Issues with using the GAS for "aids and appliances"

- *"In household services assessments (as mentioned previously) the GAS does not seem applicable as these cases are only open for a few months and client's are only assessed on one occasion."*
- *"I believe that a different process is required to capture outcomes for assessments that involve aids / equipment / household services."*

Issues specific to the trial (and future implementation in some cases)

- *“Difficulty with removing client's identifying information made sending copies time consuming and meant that I probably did not forward all the forms I completed.”*
- *“When reporting at 6 months - it was unclear if I should be including all the current rehabilitation goals, or just those that were developed 6 months ago. By the time the 12 month reporting period came around, there would have been some goals that were developed 11 months prior. This was not clear in the instruction manual.”*
- *“After the initial training session, it would be good to have some formal short review after say 2 months so rehab providers can check that what they have been doing is correct & clarify things that come up once it has been used.”*
- *“Ongoing training/seminars for newcomers would be beneficial. Also the provision of examples of best practice plans.”*

Issues reflecting potential misunderstanding of or lack of clarity in GAS procedure

- *“Some goals & objectives get repeated. e.g improve mental health & improve ankle condition, lose weight may be 3 separate goals, but one of the objectives used for all is a gym program so it becomes repetitive.”*
- *“With return to work cases, the focus is on vocational outcomes, therefore the ability to assist with sleep or leisure interests (for example) when they are identified on the GAS is limited.”*
- *“I had one client who the goals were (in addition to medical management) to identify a vocational goal and find suitable employment. After the plan was made, the Psychologist indicated this person was not fit for work, did not agree to vocational counselling, and he was unable to foretell when the person might be ready for employment. I was then unsure if new goals needed to be made.”*

Comments about the usefulness of GAS

- *“This process could be implemented nationally with little difficulty in my opinion.”*
- *“Developing a process that works with these [household services / aids / equipment] clients is my main concern. Perhaps having a number of providers together that perform this type of work regularly, along with a few MRCG rehabilitation coordinators would be the first step. I would be very concerned about the current GAS process being rolled out nationally.”*
- *“I would really like the opportunity to use the GAS with my clients to be able to discuss further”*
- *“The GAS process is actually a positive shift away from the strong RTW focus of ORP, and allows us as health professionals to return to the holistic, needs based service provision that we all wished to do in the first place. I think an emphasis on this as an introduction will ensure that the GAS process is not viewed as 'one more bit of paperwork' that needs to be done for the rehab process”*
- *“I would be happy to continue using this system for all DVA clients in the future.”*
- *“Overall - I think it is a good idea and a better way to monitor outcomes. I have however found it more time consuming, with this time not captured in billable hours.”*

Provider feedback on the LSQ

The online survey also asked providers about their opinions on the LSQ as part of the rehabilitation process. The results of this feedback are presented in Table 24 below. As can be seen, the majority of providers surveyed indicated that the LSQ helped them to identify potential areas of concern with clients. Providers also agreed that the LSQ helped them to open discussions with the client and assisted with the generation of the rehabilitation goals. Few providers noted that the LSQ wasn't necessary or that they didn't understand the point of it.

Table 24: Provider feedback on the LSQ

	Strongly Agree	Agree	Disagree	Strongly Disagree	Not sure
Having clients complete the LSQ helped me to identify potential areas of concern with them	3	8	0	1	2
The LSQ helped to open discussion about how a client felt about aspects of their life	4	5	2	1	2
The information obtained in the LSQ helped with generating client goals	1	8	2	1	2
The LSQ isn't really necessary to include in the GAS process	1	2	6	2	3
The point of the LSQ in this process wasn't really clear to me	1	3	6	3	1

Providers were also given the opportunity to make further comments regarding their perceptions of the LSQ. Four providers gave a response to this open-ended question:

- *"This was the main positive addition to the rehab assessment process for me, within the GAS trial, because I had found the LSQ opened up many additional areas of discussion or encouraged the exploration of assessment discussion at another level"*
- *"Useful as it's short but helps check if any areas have been missed & quantifies where a client is at in different aspects of their life"*
- *"Many clients chose not to complete the LSQ"*
- *"I had a client comment that he found these questions very personal. It contributed to breaking down the rapport with this particular individual. Both this and another client could not understand why this information was required, although I was able to provide reasons for the importance of this following their comments"*

It is worth noting again that providers were instructed to tell clients that the completion of the LSQ was not mandatory (and also worth noting that the LSQ form itself lets clients know that they do not have to complete the form if they choose not to) and therefore the last comment presented above regarding indicates a lack of understanding of this on the part of the provider.

Summary of Rehabilitation Provider feedback

The feedback from providers about the measures used in the trial was generally positive. There were some issues raised in relation to the GAS procedure, but these related primarily to matters that could be addressed by providing ongoing training resources that could be used when new providers start to use the GAS and LSQ. There was a reasonably high turnover in the providers who were providing services to DVA clients – either through internal movement of staff within contracted companies or when staff left their employer. The face-to-face training was provided only once for most providers involved in the trial with the Instruction Manual for Service providers being the mechanism for ongoing training. Future training could be effectively and economically delivered through an on-line or CD-based training package.

One of the elements of routine outcome measurement to be stressed in training if the GAS and LSQ are rolled out nationally is that of flexibility: for example, while it is considered desirable to define more than the 0 outcome when developing the GAS, throughout training the need to adapt to meet the client's particular circumstances was stressed. It was made clear that providers should not allow the outcome measurement procedure to affect the client-provider relationship. This relates also to the use of the LSQ, where training and communication with providers made it clear that this was not a mandatory requirement, and that clients should be allowed to complete as much or as little (including none) of the LSQ questions as they wished. Given the generally positive feedback about the measures and the quality of the data provided, it is unlikely that allowing such flexibility will undermine the usefulness of the GAS and LSQ: there is unlikely to be a lot of missing data through reinforcing the need to be flexible and use professional clinical judgement about when not to use the measures.

The issue of applicability of the GAS to clients who were referred for "Aids and Appliances" was raised in the provider survey, as it was in training and through ongoing informal communication with providers. This issue is one that requires modification of the procedure that was adopted for the trial. Further discussion and potential solutions to the issue are provided in the final section of the Report: Discussion and Recommendations.

Section 6: Discussion and Recommendations

Feasibility of the GAS and LSQ as a routine outcome measure

Evidence from the trial of the use of Goal Attainment Scaling and a Life Satisfaction Questionnaire as routine outcome measures for DVA rehabilitation cases generally supported their feasibility and potential usefulness.

The GAS approach was seen by providers to support a client-focused approach to rehabilitation. The data that can be extracted from the GAS and LSQ are potentially useful at a number of levels: for the provider in their professional relationship with the client; for DVA rehabilitation coordinators to assess the extent to which purchased services have met the needs of clients; for DVA rehabilitation coordinators to consider the extent to which providers are able to set appropriate goals and support clients to achieve them; for the Rehabilitation group and DVA senior executives to report to their stakeholders on the overall success of rehabilitation provided to DVA clients.

While the trial was not designed to closely interrogate the data collected, preliminary analyses indicate that there is a great deal of potentially useful information available through the application of the GAS approach and the collection of LSQ data. Analysis of the data over time may assist with identifying gaps in services, and building up evidence about the kinds of interventions that may be most beneficial to clients with particular kinds of problems.

Recommendation 1

It is recommended that DVA adopt the Goal Attainment Scale (GAS) approach as a routine outcome measure for rehabilitation for all referrals leading to a rehabilitation plan.

The optional use of the Life Satisfaction Questionnaire (LSQ) is also recommended.

It is noted that DVA clients were one group of stakeholders not directly asked about their perceptions of the benefits of GAS and LSQ. The feasibility trial relied on the reports of providers for the perceived benefits (and costs) to DVA clients of these methods of measuring outcomes of rehabilitation services. It would be possible to undertake a study of DVA clients' subjective experiences of the use of the GAS and LSQ if this information would be helpful to DVA. There does not appear to be evidence through this trial to suggest that the experience of consumers would lead to a reappraisal of the feasibility of the use of GAS and the LSQ.

Proposed modifications to the GAS and LSQ

While the overall feasibility and potential usefulness of the GAS and LSQ are established, there were some issues with particular aspects of the forms that would need to be addressed if they are to be rolled out nationally and adopted as routine practice.

Modifications to be made to the forms include:

1. There needs to be a modification to the table used to summarise the GAS scores in the closure report. At present there is some confusion about whether or not to score those goals that were achieved in a period prior to the closure report. The reference to “prior to closure” scores has not been understood by some providers as a reference to GAS scores from previous 6-month reports.
2. Including a space to write the outcome that was achieved next to the GAS score in the 6-month and closure reports may be of benefit in reviewing the status of cases by DVA rehabilitation coordinators.

6-monthly Report (Used at 6m, 12m, 18m etc.)

Rehabilitation Goals	Goals scored at 6 months	Goals scored at 12 months	Specific outcome achieved (taken from GAS plan open: definition of score)
1.			
2.			
3.			
4.			
<i>Total GAS raw score</i>			
Overall standardised GAS score (T-score)			

Closure Report

Rehabilitation Goals	Previously scored goals	Scored at Closure	Specific outcome achieved (taken from GAS plan open: definition of score)
1.			
2.			
3.			
4.			
<i>Total GAS raw score</i>			
Overall standardised GAS score (T-score)			

Managing household services and aids and appliances

The most important question to arise throughout the trial was the way in which DVA and rehabilitation providers manage household services and aids and appliances for clients. As indicated in this Report, there were questions raised about how to manage these kinds of services in the initial training. In general, the question was whether or not a GAS/LSQ had to be completed for someone who was “just” having a service provided (e.g., lawn mowing or meals on wheels) or an aid/appliance installed or provided (e.g., mobility equipment or installation of supports in the home). The response of DVA Policy staff and the research team was that even services like these have an intended positive outcome for clients that goes beyond simply receiving the service. That is, lawn mowing should lead to ongoing pride and comfort in a client’s home

environment, mobility equipment should be comfortable and increase the client's mobility. Rather than assuming that such services always lead to positive results, the recommendation was that someone should be following up with the client to ensure that the intended benefit had occurred.

While this recommendation seemed reasonable in principle, in practice, there were issues with its implementation. Many of the DVA offices use a different form to refer clients for these kinds of services. In particular, a full assessment is not required, and a plan is not developed. Furthermore, it appeared that there was no current process in place for routine follow-up to ensure that a service had been provided: the receipt of invoices for services is taken as indication that the service has been provided. There may be issues with workforce capacity and/or cost in requiring some kind of follow-up for any services provided to clients, but it would appear to be good practice to ensure that the services have led to the intended consequences. A draft revised "Referral to Provider" Form is provided at Appendix 7 for consideration by DVA. This form includes a brief GAS – with definition only of the intended outcome for the client of the provision of services, and a place to record follow-up and achievement of the goal.

Recommendation 2

It is recommended that DVA give further consideration to using a brief form of GAS for services provided without assessment or a rehabilitation plan. This would include identifying the most appropriate individual (DVA or rehabilitation provider) to follow-up with clients to ensure that the intended outcome has been achieved.

Supporting the use of GAS and LSQ as routine outcome measures

If DVA decides to either extend the trial of the GAS and LSQ, or to implement them nationally as routine outcome measures for rehabilitation services, it is necessary to provide sufficient support to providers and DVA staff to ensure their ongoing usefulness.

Training for Providers

Goal attainment scaling is a particular highly developed area of activity that requires training and support to implement. While consistent with best practice for rehabilitation, the extent to which current DVA contracted providers are experienced and skilled at setting goals may impact on the potential usefulness of GAS as a routine outcome measure. The evidence from the current trial reinforces the view in the literature that successful use of the GAS approach requires a certain level of professional skill and expertise. There is an additional time commitment involved in developing the outcome levels, though this is less of an impact if such discussion is part of the practice approach. Training may assist with ensuring that introduction of the GAS and LSQ does not result in increased costs for DVA.

Evidence from the trial supports the need for training to be available to rehabilitation providers in a form that allows them to manage frequent staff turnover and movement that is a characteristic of the industry.

Recommendation 3

It is recommended that DVA provide training to providers in the use of the GAS and LSQ, and that this be provided in a format that can be accessed easily by providers when they have changes in personnel. An on-line format or training CDs would be most appropriate. DVA would need to ensure through liaison with contracted providers that staff are up-to-date with recommended procedures.

Training for DVA staff

Any procedures or processes that DVA mandates or requires of its providers are necessarily supported by DVA rehabilitation staff who have responsibility for ensuring that providers contracted by DVA are meeting the needs of clients and DVA as a service purchaser. During the trial of the GAS and LSQ, DVA staff were not required to take an active role, although they were kept informed about the trial. If the GAS and LSQ become part of routine practice, DVA staff will need to be familiar with the underlying principles their use and will need to understand their own potential to influence the ongoing usefulness of the measures. The GAS and LSQ provide additional information to support DVA staff in their current roles as managers of rehabilitation services for DVA clients; the information provided through the modified rehabilitation plans and 6-month and closure reports, should assist DVA staff to assess the value of the services being purchased and be able to determine if clients' needs have been met, or whether other actions may be required.

Recommendation 4

It is recommended that DVA provide basic training to DVA staff in the background, intent, and practicalities of the GAS and LSQ, and that this be provided in a format that can be accessed easily by offices when they have changes in personnel (e.g. online, self-directed learning modules). DVA staff should understand the requirements on providers in relation to the GAS and LSQ, and be able to provide the necessary guidance and support around the application of the measures in a flexible and appropriate manner.

Maximising the usefulness of GAS and LSQ as routine outcome measures

While there are perceived benefits in the implementation of GAS (and LSQ based on the current trial) for the delivery of rehabilitation services to clients (see Introduction), the principle reason for DVA to introduce the GAS and LSQ is to be able to provide ongoing routine indicators of the "success" of rehabilitation programs and services. The current trial has demonstrated a number of ways in which the data from the GAS and LSQ can be summarised at a level that provides a simple indication of achievement of intended goals, as well as at more detailed levels for different areas of DVA involved in rehabilitation.

Recommendation 5

It is recommended that DVA consider ways to incorporate the use of the GAS and LSQ data into existing systems, including the addition of a minimum number of fields to data systems and creation of a simple data base that could be used to capture GAS/LSQ data in an ongoing way, or through routine audit of sequential rehabilitation plans (such as might take place for continuous quality improvement).

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