INTERNATIONAL JOURNAL OF GERIATRIC PSYCHIATRY
Int J Geriatr Psychiatry 2008; **23**: 949–956.
Published online 8 April 2008 in Wiley InterScience
(www.interscience.wiley.com) **DOI**: 10.1002/gps.2016

Longitudinal assessment of psychotherapeutic day hospital treatment for elderly patients with depression

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SUMMARY

Objective Although previous studies suggested that psychiatric day hospital care is a valuable alternative to inpatient treatment, its effectiveness for elderly patients is disputed. Small number of cases, poor definition of the psychotherapeutic setting, and absence of systematic assessment at different time points may explain the observed discrepancies. We performed an assessment of a psychiatric day hospital treatment combining individual and group psychotherapy in a series of 122 elderly depressed outpatients.

Methods The Geriatric Depression Scale, Short Form Survey, as well as a Therapeutic Community Assessment Scale and Group Evaluation Scale were repeated at admission, 3, 6, 12 months and discharge. The day hospital program was based on psychotherapeutic treatment combining individual and group settings. All patients presented with major depression or a depressive episode of bipolar disease. Variables included severity of depressive symptoms, quality of life, adhesion to therapeutic community treatment and progress in groups of psychotherapy, art-therapy, and psychomotricity.

Results There was a significant reduction of depressive symptoms, and improvement in mental quality of life across all time points studied. Adhesion to therapeutic community increased from admission to discharge. This was also the case for the progress in group therapy for all three groups used, yet the evolution of this parameter at intermediate time points was highly variable. Neither demographic characteristics, nor pharmacological treatment or presence of stressful life events predicted the clinical improvement.

Conclusions Psychotherapeutic care program in day hospitals may improve clinical status and quality of life in elderly depressed patients. Copyright © 2008 John Wiley & Sons, Ltd.

KEY WORDS — day hospital; depression; effectiveness; elderly; group psychotherapy; psychiatric treatment

INTRODUCTION

Day hospitals for mentally ill adults usually include a wide variety of clinical interventions such as support to intensive outpatient care, short-term acute symptom relief, post-hospitalization care, and long-term rehabilitation programs (Marshall *et al*., 2001; Kallert *et al*., 2004a; Seidler *et al*., 2006). These structures are thought to represent a reliable alternative to hospitalization both in terms of cost and adherence to treatment (Eikelmann and Reker, 1993; Sledge *et al*., 1996a, 1996b; Creed *et al*., 1997; Horvitz-Lennon *et al*., 2001; Kallert *et al*., 2004b; Priebe *et al*., 2006). In particular, the management of acute psychiatric symptoms such as suicidal thoughts or delusions in day hospitals has a lower cost/effectiveness compared to inpatient care. In contrast, their utility in replacing outpatient settings for treatment-resistant patients is still matter of debate (for a review see Marshall *et al*., 2001). Recently, it has been shown that day hospital care programs for adults have a comparable efficiency in terms of symptom improvement, level of satisfaction and quality of life but allowed for a better social

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Received 8 September 2007
Accepted 15 February 2008

functioning compared to hospitalization (Kallert *et al*., 2007). Despite this overall positive assessment, the heterogeneity of the therapeutic concepts renders the definition of day hospital care models quite hard. In particular, the type of psychotherapeutic setting in day hospitals was not consistently defined and only one-third among them can be designated as predominantly psychotherapeutic (Kallert *et al*., 2004a; Seidler *et al*., 2006).

This difficulty in conceptualizing an intervention model is even more present in psychiatric day hospitals for elderly individuals. Although they have drawn traditionally less attention than those for adults, the issue of their efficiency was already addressed in early 90's with conflicting results. Some authors argued that day hospitals are expensive and disrupt home routines, increasing caregiver burden (Fasey, 1994). In contrast, others suggested that day hospital programs prevent inpatient admissions, facilitate earlier discharge, improve clinical symptoms and allow for longer maintenance at home (Howard, 1994; Rosenvinge, 1994; Hoe *et al*., 2005). For instance, they make it possible a significant reduction of depressive symptoms in elderly patients with mood disorders, improve their functional level and quality of life, and promote social contacts (Bramesfeld *et al*., 2001; Mackenzie *et al*., 2006). Several methodological problems such as small number of cases, poor definition of the psychotherapeutic setting, and absence of systematic assessment at different time points limit the validity of these observations. We aimed to explore the impact of a psychotherapeutically-oriented day hospital program on the outcome of depression in a community-based series of elderly patients. To address this issue, we assessed at five time-points (from admission to discharge) a series of 122 elderly depressed outpatients who participated to a psychiatric day hospital program combining individual and group psychotherapy. Outcome measures included changes in severity of depressive symptoms, quality of life, assessment of adhesion to the therapeutic community by patients and caregivers as well as patient self-rating of group progress.

METHODS

Treatment setting

The psychiatric day hospital of Geneva, Switzerland, was created in 1999 and hosts a maximum of 30 patients older than 62 years living at home. Inspired by the semi-residential therapeutic community model of Jones (1968), the day hospital offers intensive psychiatric care and psychotherapeutic treatment performed by a multidisciplinary team. Based on a holding experience containing anxiety and providing hope, it facilitates expression of difficult emotions and thoughts as well as improvement of interpersonal relationships, self-efficacy and autonomy. It allows for differentiation and individualization, identification through shared emotional experiences, confrontation of attitudes to ageing and disease, and facing death and dying.

The multidimensional approach of the day hospital is based on group and individual therapies, pharmacological treatment, as well as family and liaison meetings. All possible admissions undergo an initial evaluation aiming to assess their ability to participate in the whole day hospital program. Cases with psychomotor agitation or acute psychiatric symptoms not compatible with outpatient care are systematically excluded. After their formal admission, all patients attend the therapeutic community two to three times per week for a 6 hour day, including lunch. During each attended week, each patient participates to all four gender mixed groups of small size, completed by a weekly administrative and organizational meeting including patients and staff members. The selection of these groups was based on previous meta-analyses showing that dynamic group psychotherapy is highly effective for the treatment of depression (Truax, 2001; Montgomery, 2002). *The art-therapy group* encourages patients to express and understand emotions through artistic expression and creative processes. Providing critical insight into emotions, thoughts and feelings, it enhances empowerment, self-awareness, increases self-esteem and reduces stress. *The psychomotricity group* emphasizes free movement to the rhythm of music. It uses movement and dance to express and deal with feelings and experiences. It helps to develop communication skills, learns balance and coordination and encourages elderly patients with physical deficits to develop a positive self-image. *The psychodynamic psychotherapy group* encourages patients to share their emotions, thoughts and behaviours by means of verbal and non-verbal communication. Cultivating honesty and mutual respect, tolerance and flexibility, the group is based on free-floating discussions where psychological symptoms are thought to reflect disturbed relationships. Finally, *the sociotherapy group* emphasizes modification of the environment and improves social relationships rather than intra-psychic factors, enhancing autonomy and encouraging social activities. It assures an opening of the community towards external relays and neighborhood activities.

DOI: 10.1002/gps

Completing group approaches, patients' personal goals and achievements, therapeutic progress and drug management are discussed weekly in individual interviews. Additional family interventions focus on family dynamics and communication patterns and their evolution over time. They offer relief for caregivers' burnout and opportunities for families to formulate a request for help. Anxiety and outbursts may be used to make all family members fully involved in the treatment, avoiding an isolation of the patient. Liaison meetings assure the coordination of professional caring networks and provide continuous assessment and advice necessary for the success of a shared project. The caring team meets weekly to discuss each patient's individual therapeutic project and regulate the staff's own group dynamics. Community psychiatric models and caring networks permit to share common knowledge about psychiatric disease and allow for the creation of a common therapeutic attitude directly involving the patient and his/her caregivers.

Participants

From the beginning of this episode-related study (1 February 2004) to its end three years later (1 February 2007), we assessed 122 depressed patients who were consecutively admitted to the day hospital, including 15 readmissions. During the same period, a total number of 147 patients were admitted to the day hospital program. Twenty-five cases presented with other psychiatric diagnoses and were not considered in order to guarantee the clinical homogeneity of the sample. All patients included in this study presented with major depression (75%, $n = 92$) or depressive phase of bipolar illness (25%, $n = 30$) according to ICD-10 criteria (World Health Organization, 1993) diagnosed by two independent senior psychiatrists blind to the scope of the study. In addition, all patients were checked for absence of dementia according to ICD-10 criteria and Clinical Dementia Rating score < 0.5 (Hughes *et al*., 1982). Demographic data are summarized in Table 1. The vast majority of patients (93%, $n = 114$) presented at least one current stressful life event (such as contentious relationships, physical illness, or retirement) at admission. At discharge, remission of depressive mood was observed in all patients. Only cases with a diagnosis of mood disorder at admission and remission at discharge confirmed by both psychiatrists were included in the present study.

Regarding main referral patterns, 49% ($n = 60$) of the patients were admitted at the end of inpatient psychiatric treatment, 24% ($n = 29$) were addressed by their primary care physician, and 27% ($n = 33$) by outpatient psychiatric services. Treatment in day hospital lasted a median time of 99 days (SD = 129). Fifty-one patients were still present at 3 months, 32 at 6 months and nine at 12 months. At discharge, 53% of cases ($n = 65$) were transferred to outpatient psychiatric services or private psychiatrists at discharge. Among the remaining cases, 21% ($n = 26$) needed no further treatment and 19% ($n = 23$) were followed up by their primary care physician or admitted to the general hospital for somatic care. In agreement with previous observations in younger cohorts (Mosher-Ashley, 1994), the number of readmissions to an inpatient psychiatric ward and drop out were very low ($n = 6$, 5% and $n = 2$, 2% respectively).

Outcome measures

Outcome measures included the Geriatric Depression Scale (GDS; Sheikh and Yesavage, 1986), the Short Form Survey (SF-12; Ware *et al*., 1996), a therapeutic community assessment scale formed by a self-report (Client Assessment Summary, CAS) and staff evaluation (Staff Assessment Summary, SAS) (Kressel *et al*., 2000) as well as a Group Evaluation Scale (GES; Weiner and Weinstock, 1979). The GDS, SF-12 and GES were selected since they have been previously validated in elderly cohorts. The CAS and SAS were selected since they are the only instruments with a good acceptability in our setting and have been previously used to assess therapeutic community treatment. The 15-item self-rated GDS is derived from the 30-item form and assesses the presence or absence of 15 depressive symptoms, a cut-off score of 5 indicating the presence of depression. The GDS is a reliable and valid self-rating depression screening scale, which has been designed specifically for elderly populations (Yesavage *et al*., 1982; De Craen *et al*., 2003). The SF-12, a self-report tool derived from the SF-36, measures various aspects of functioning and provides reliable and valid measures in clinical and population-based applications. Based on physical and mental health summary scores, it has been shown to be useful for monitoring the functional health (quality of life) of elderly patients (Pettit *et al*., 2001; Resnick and Nahm, 2001). The CAS and SAS measure client self-report and staff evaluation of the patient's clinical progress in therapeutic community treatment, exploring 14 domains of behavior, attitude and cognitive change, grouped into four dimensions (developmental, socialization, psychological and community member).

DOI: 10.1002/gps

Table 1. Demographic data in the present series ($n = 122$)

Gender	Men = 40 (33%) Women = 82 (67%)
Age	Mean: 74.82 years (SD = 7.03) (range 62–95)
Educational level	Primary school: 29 (24%) Secondary school: 27 (22%) Technical training: 48 (39%) University: 18 (15%)
Profession before retirement	Housewife: 21 (17%) Employee: 64 (53%) Freelance: 21 (17%) Workman: 16 (13%)
Civil status	Single: 12 (10%) Married: 51 (42%) Widowed: 35 (29%) Divorced: 24 (19%)

Derived from an original 98-item self-report they have been originally applied in drug rehabilitation programs in younger adults (Kressel *et al*., 2000). Both CAS and SAS assess multidimensional changes that reflect the complexity of an individual recovery progress by means of a therapeutic community treatment. The Group Evaluation Scale (GES) developed by Weiner and Weinstock (Weiner and Weinstock, 1979) assesses group progress in the elderly. It consists of 17 items, rated on a five-point scale, that evaluate patients' satisfaction, perception of the group's purpose, relevance, affective climate, cohesion, quality of interaction, as well as personal involvement and adhesion to group treatment.

Following admission, all instruments were re-administered after 3, 6 and 12 months, as well as at discharge in all patients. The GES was repeated at each time point for the psychodynamic psychotherapy, psychomotricity and art therapy groups. All investigations were part of the routine clinical assessment in the day hospital. Use of the data (under anonymous form) was consistent with the rules of the local Ethics Committee.

Statistical analysis

Univariate changes between admission and discharge were assessed by the McNemar test when dealing with binary variables (change in drug prescription, absence or occurrence of life events) and the Student paired *t*-test when continuous variables (outcome measures) were involved. Cross-sectional time-series linear regression models controlling for age, gender, pharmacological changes, life events and duration of treatment were built to assess the evolution of all outcome measures at admission, 3, 6 and 12 months and discharge (Twisk, 2003). Spearman correlation coefficients were calculated to assess the relationship between SAS and CAS at each time-point.

RESULTS

The majority of patients (85%, $n = 104$) were treated with psychotropic drugs. Changes in psychotropic drug prescription from admission to discharge are described in Table 2. The majority of patients took antidepressant and anxiolytic drugs throughout their entire day hospital treatment (no change), using very few neuroleptics, hypnotics or mood stabilizers. Admission versus discharge comparisons revealed no significant changes in drug treatment, pointing to the fact that our patients were addressed mainly for psychotherapeutic care in the absence of sufficient response to psychotropic drugs.

Besides the physical dimension of quality of life (SF-12 PCS), all other outcome measures displayed statistically significant differences between admission and discharge (Table 3). The mean GDS total score decreased whereas mean total CAS and SAS scores as well as mental component summary score of quality of life (SF-12 MCS) displayed significant increases at discharge. Although the observed GDS standard deviation suggests that some patients have reported no depressive symptoms at admission, two independent psychiatrists blind to the GDS patient self-ratings confirmed both the presence of clinically overt

Table 2. Changes in drug prescription from admission to discharge ($n = 122$)

	Drug prescribed after admission	Drug removed after admission	No drug	No change in drug prescription
Antidepressant	10 (8%)	3 (3%)	30 (24%)	79 (65%)
Anxiolytics	8 (7%)	8 (7%)	42 (34%)	64 (52%)
Neuroleptics	5 (4%)	11 (9%)	71 (58%)	35 (29%)
Hypnotics	10 (8%)	19 (16%)	62 (51%)	31 (25%)
Mood stabilizer	7 (6%)	1 (1%)	97 (79%)	17 (14%)

Data represent number of patients (and corresponding percentages) as a function of drug type. McNemar test comparisons revealed no significant differences in drug prescription from admission to discharge.

DOI: 10.1002/gps

Table 3. Comparison of outcome measures between admission and discharge ($n = 122$)

	Admission Mean (SD)	Discharge Mean (SD)	*P*
GDS	6.69 (3.61)	4.90 (3.60)	<0.001
CAS	48.72 (6.13)	51.92 (4.73)	<0.001
SAS	45.16 (6.72)	51.32 (3.88)	<0.001
SF-12 PCS	44.17 (5.80)	44.07 (4.45)	0.889
SF-12 MCS	42.46 (5.34)	45.42 (5.24)	0.005
GES psychotherapy	3.25 (0.50)	0.52 (0.46)	0.015
GES art-therapy	3.49 (0.38)	3.73 (0.28)	<0.001
GES psychomotricity	3.57 (0.33)	3.84 (0.24)	<0.001

Statistical analysis was performed with student paired *t*-test.
CAS = Client Assessment Summary; GDS = Geriatric Depression Scale; GES = Group Evaluation Scale; SAS = Staff Assessment Summary; SF-12 MCS = Short Form 12 Mental health Component Summary; SF-12 PCS = Short Form 12 Physical health Component Summary.

depression at admission as well as its remission at discharge. Linear regression analysis showed that the GDS score decreased whereas CAS and SAS scores increased significantly across the different time points of the day hospital treatment (Table 4). The mental (but not the physical) quality of life (SF-12 MCS) displayed a continuous increase across the five time points (Figure 1). These changes remained significant when demographic variables, and life events (presence or absence) were also considered in multivariate models (GDS regression coefficient: −0.0012, $z = -2.86$; $p < 0.005$; CAS regression coefficient:

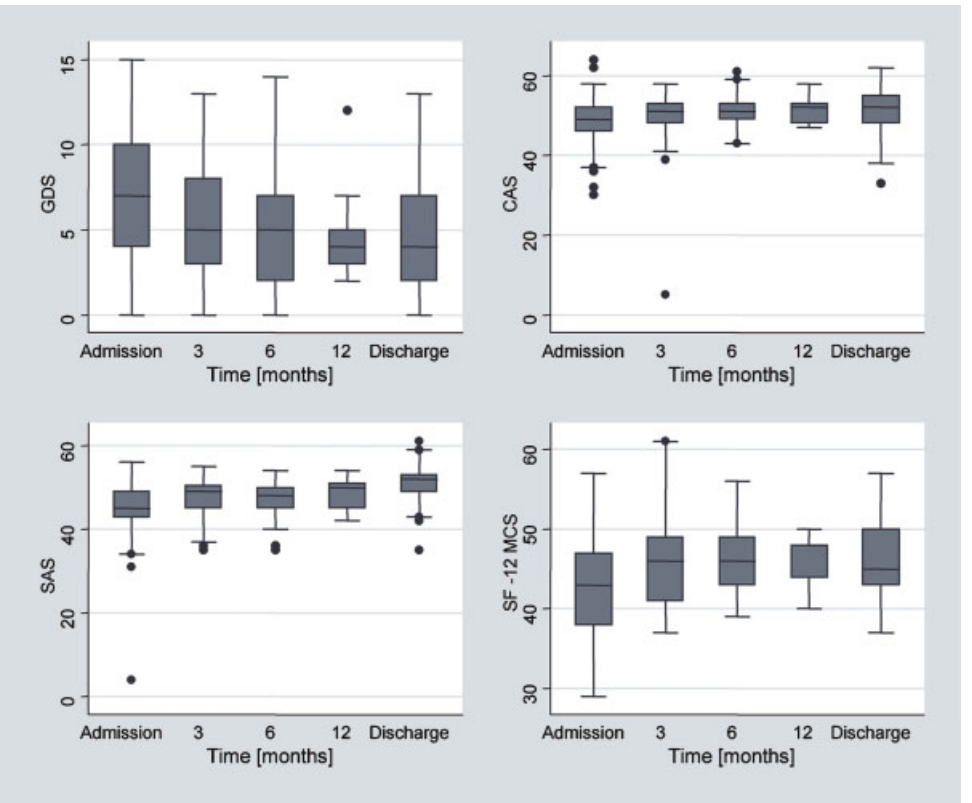

Figure 1. Boxplot illustrations of GDS, CAS, SAS and SF-12 MCS evolution at the time points studied. Note the continuous decrease of GDS values as well as the significant increase in CAS, SAS and SF-12 MCS values from admission to discharge. See text for details.

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Table 4. Linear regression analysis for outcome measures at admission, 3, 6, 12 months and discharge ($n = 122$)

	Coefficient	z	*P*
GDS	−0.0007	−2.11	0.035
CAS	0.661	3.16	0.002
SAS	0.887	5.23	<0.001
SF-12 PCS	0.0005	0.20	0.840
SF-12 MCS	0.369	1.98	0.048
GES psychotherapy	0.0003	0.26	0.794
GES art-therapy	0.0002	1.63	0.103
GES psychomotricity	−0.0002	−1.90	0.063

Statistical analysis was performed with cross-sectional time-series linear regression.
CAS = Client Assessment Summary; GDS = Geriatric Depression Scale; GES = Group Evaluation Scale; SAS = Staff Assessment Summary; SF-12 MCS = Short Form 12 Mental health Component Summary; SF-12 PCS = Short Form 12 Physical health Component Summary.

1.05, z = 2.69, $p < 0.01$; SAS regression coefficient: 1.69, $z = 6.70$, $p < 0.001$, SF-12 MCS regression coefficient: 0.01, z = 2.26, $p < 0.05$). CAS and SAS scores were significantly related at admission ($r_s = 0.261$; $p = 0.017$) and discharge ($r_s = 0.295$; $p = 0.012$) but not at 3, 6 or 12 months. Mean GES scores increased significantly from admission to release for all three groups used (Table 3). The evolution of these scores at intermediate time-points was highly variable. Both art-therapy and psychomotricity groups showed high GES scores from admission to 6 months with a subsequent decrease by 12 months. In contrast, GES scores for psychodynamic psychotherapy were low at admission but increased by 12 months of care. These tendencies did not reach statistical significance (Table 4).

CONCLUSION

Strengths of the present study include the large number of elderly depressed patients, analysis of a specific model of day hospital treatment, assessment of outcome at multiple time points during the day hospital treatment, and control for both pharmacological treatment changes and life events from admission to discharge. Overall, the proposed day hospital care is accompanied by a significant reduction of depressive symptoms, improvement in mental quality of life, better adhesion to therapeutic community treatment and progress in patients' self-rating of group therapy.

The significant amendment of depressive symptoms was present not only at discharge, but also at intermediate assessments supporting the progressive impact of the psychotherapeutic process in this particular setting. As one could expect, this amelioration was associated with increased rating in the assessment of mental aspects of quality of life (Pyne *et al*., 1997; Bramesfeld *et al*., 2001). Our findings parallel the few earlier reports showing that elderly patients with moderate depression can be effectively treated in a day hospital settings (Plotkin and Wells, 1993; Bramesfeld *et al*., 2001; Mackenzie *et al*., 2006). However, most of the previous studies remained ambiguous in respect to the relative contribution of concomitant medication changes and life events, and provided no details about the model of care used. The majority of our patients received already antidepressant and anxiolytic treatment before admission. Most importantly, no significant changes in drug prescription were made during the day hospital treatment, suggesting that medication had no or marginal effect on the observed clinical changes. In the same line, the absence of relationship between life events and outcome measures precludes a major effect of this parameter on the observed clinical evolution.

The present empirical data on a large sample of patients confirm the observations of Schwartz (2004), who postulated that concurrent group and individual psychotherapy improve depression in a psychiatric day hospital for elderly patients. In addition, our results show that patients' perception of group progresses for all three types of group therapy between admission and discharge. In this latter time point, all groups were rated as moderately to highly effective. However and as one could expect, patients' perception of group work is highly variable across the time points studied both for verbal and non-verbal groups.

To our knowledge, this is the first study that reports an assessment of the therapeutic community approach in elderly psychiatric outpatients. Consistent with previous observations in younger adults (Kressel *et al*., 2000), therapeutic community staff ratings of patient progress were consistently lower than patient self-ratings. However, this difference decreased with

DOI: 10.1002/gps

longer duration of treatment supporting the hypothesis of therapeutic community recovery (i.e. patients are more likely to make accurate and realistic self-appraisals the longer they remain in treatment; De Leon, 2000). Interestingly, there was a positive relationship between patient and staff ratings both at the beginning and termination of the day hospital treatment. This shared point of view makes it possible to fix common care objectives for the future therapy, as well as for the after-treatment period.

Several limitations should be taken into account when interpreting our data. First, the present series includes only depressed patients without substantial cognitive impairment and is thus not representative of the whole spectrum of day hospital indications in the elderly population. Second, since the clinical tools available for assessing group therapy in elderly individuals are still poorly developed, our assessment was mainly based on self-rated instruments and needs to be completed by observer-based instruments. Third, the present naturalistic assessment is based on a therapeutic program corresponding to up to 18 hours of weekly presence in the day hospital. This may not easily transferred to other care systems in old age psychiatry. Most importantly, in the absence of an appropriate control group, we cannot exclude that placebo effect may contribute to the clinical improvement as already described for psychotherapeutic treatments in depression (Wampold *et al*., 2005). From this point of view, our evidences supporting the usefulness of the proposed psychotherapeutic model for day hospital care in the elderly need further confirmation in future randomized placebo controlled studies.

CONFLICT OF INTEREST

None known.

KEY POINTS

- Psychotherapeutically oriented day hospitals may provide an effective treatment alternative in elderly depressed outpatients.
- Day hospital treatment significantly reduces depressive symptoms, improves quality of life and enhances adhesion to therapeutic community in a geriatric population.
- Clinical outcome of psychotherapeutic day hospital treatment is not determined by pharmacological treatment, demographic criteria or concomitant life stressors.

ACKNOWLEDGEMENTS

We would like to thank deeply all the members of the caring team of the day hospital for their precious help in the data collection.

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DOI: 10.1002/gps