Research Reports

Measurement of Social Restoration of the Mentally Handicapped by the General Adjustment and Planning Scale (GAPS)

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The work of a number of European investigators [1-3], reports by Freeman and Simmons in this country [4,5], and experience in the conduct and evaluation of sheltered work for mental patients [6-10] led the authors to question the convention of measuring outcome in isolated ways [11]. Length of hospital stay or length of community stay appear unsatisfactory as independent measures of social recovery. One long-stay mental hospital patient may work rather productively and reside on an open ward for most of the period of hospitalization; another may remain totally dependent (nonproductive) and reside on a locked ward most of the time. Similarly, a released married man with young children who for years simply sits around his home totally dependent on his family (or on welfare) ought not to be equated with a discharged patient who returns to, and remains in, regular competitive employment; yet evaluation studies continue to use time out of the hospital as a measure of success.

Since paid employment—for men, at least—is the norm in most if not all developed nations, a psychiatric patient's overall social adjustment more nearly approaches normal when he is able to participate in a paid-work situation regardless of his need for institutional care. However, certain mentally ill patients need extensive or even lifelong assistance in living placement and employment, and it is clear that these are interrelated areas. Commuting distance must be kept within reasonable limits. For hospitalized patients capable of working, all work must be brought to the hospital grounds. Some patients may be permitted off the grounds for limited periods of time, while others may live off the grounds but return for a kind of day-hospital care, participating in a sheltered workshop located on the hospital grounds.

Unfortunately, hospital discharge planning can sometimes operate in a

fragmented way leading to unnecessary social impairment of the former patient. The posthospital living arrangement—whether in the patient's own home or in a foster home—too often is incompatible with the posthospital employment capability. Psychiatric residuals in many patients prohibit regular employment, and facilities for commuting to a source of sheltered employment are often so deficient that total unemployment is inevitable.

Experience with sheltered work programs such as the Community-Hospital-Industry Rehabilitation Program (CHIRP) at the Brockton Veterans Administration Hospital and a series of evaluation studies of special employment over the past few years [6-8] have indicated that patients are not harmed by meaningful work experiences: there is no evidence either of technical improvement in mental status or of psychiatric deterioration; and the patient's socioeconomic status is, of course, advanced by a move from complete unemployment to even limited employment. Patients participating in the highest levels of a paid-work program have shown themselves capable of remarkably effective work performance despite the presence of severe psychiatric symptoms, although paradoxically, certain patients with minimal psychiatric symptoms appear to be unsuitable candidates for even the most sheltered types of employment. Just why this is so is unclear, but the observation that mental status appeared to be only weakly correlated with readiness for employment was a key element in the development of the General Adjustment and Planning Scale (GAPS), designed to measure levels of patient adjustment in living and in employment.

The first experimental four-point scale developed by the authors included two intermediate categories of sheltered living and work, or partial restoration. Foster home placement, for example, represented a higher level of adjustment than residence on a psychiatric ward but a lower level than independent living in the community. Similarly, sheltered employment was rated between total unemployment and regular competitive employment. A later version of the scale provided for rating mental status and recreational adjustment; but wide variation in rater estimate of degree of mental illness and similar difficulties in assessing recreational adjustment forced the elimination of these two variables from the GAPS. Work activities not associated with monetary reimbursement (or the equivalent) were excluded for the same reason, and the final scale (Fig. 1, pp. 154–55) was limited to the two areas that could be considered "hard" data: living placement and degree of employment. The overall social restoration (SR) score was established as the arithmetic average of the living restoration (LR) and employment restoration (ER) subscores.

The scale provided an objective method for recording the hospital–community living continuum and for measuring social restoration in terms of employment and living adjustment. It was an instrument simple enough to have meaning for and be usable by even those with little or no formal training in psychiatry (nursing assistants, patients' relatives, foster home sponsors); and it had the additional advantage of drawing together the practitioners of

INSTRUCTIONS:

1. *See definitions of* LIVING *and* EMPLOYMENT.
2. *The patient is rated for the past week. Changes in level within the week are handled by rating his most recent adjustment.*
3. *Dollar earnings must be known for recording degree of special employment. Volunteer -- i.e., non-paid -- work is reported in remarks.*

Column No.	1	2	3	
	LIVING Restoration Level	EMPLOYMENT Restoration Level	Add LIVING to EMPLOYMENT	Divide Total by 2 for SOCIAL RECOVERY (SR)
Level Observed Last Week				
Rater's Initials				If either Col. 1 or 2 unratable enter 999 in Col. 4
Rater's Field*				

*CODE:
Physician ..... A
Psychologist..... B
Social Worker..... C
Nurse ..... D
Rehab Therapist.... E
Nursing Assistant.. F
Other ..... G

Total weekly earnings: $ .00

Remarks:

Residence of patient (as of review date)

Review Date: Year 19

Current Diagnosis:

Present Tranquilizing Medications:

Patient Social Security No.

VA Form number applied for)
Jan. 1969

Fig. 1. General Adjustment and Planning Scale (GAPS), rating form and (facing page) definitions of categories.

various disciplines within the hospital, such as nursing, rehabilitation, and social service, in the effort to bring patients to their highest potential levels of social recovery.

Since only veterans were hospitalized at the study institution, it was assumed that all, or virtually all, the patients had functioned, at some time prior to hospitalization, at least at a minimum level of social adequacy. Military service qualified as independent living, or LR 100 percent; and despite low cash earnings, any branch of military service was considered equivalent to a regular job, or ER 100 percent. A released patient's return to regular employment, therefore, represented full, or 100 percent, restoration. The SR

LIVING

Degree of Living Restoration	Category	Definition
100%	Independent:	Maintained his own home in the community either by himself or with others.
80%	Sheltered:	Lived in a supervised living situation in the community, e.g., foster home, halfway house, etc
60%	Night Pass:	Had one or more overnight passes in his own custody last week (include LOAs here if patient was in his own custody).
40%	Day Pass:	In his own custody had one or more day passes last week.
20%	Privileged:	Had privileges but did not go out on pass in his own custody last week.
0%	Nonprivileged:	Had no privileges.
☐	*Check here any placement which should not be categorized in above scale and explain under remarks.*	(For computer, code 999)

EMPLOYMENT

Degree of Employment Restoration	Category	Definition
100%	Regular:	Held regular (nonsheltered) employment in the community.
80%	Sheltered:	Held paid work in the community under special supervision earning at least $30.00 last week.
60%	Protected:	Held paid work in the hospital earning at least $30.00 last week.
40%	Limited:	Held paid work in the hospital earning between $10.00 and $29.00 last week.
20%	Token:	Held paid work in the hospital earning between $1.00 and $9.00 last week.
0%	None:	Held no paid employment or earned a total of less than $1.00 last week.
☐	*Check here any placement which should not be categorized in above scale and explain under remarks.*	(For computer, code 999)

rating of 100 percent provided a description of the fully restored patient in a way that was meaningful to most laymen as well as to the trained mental health worker. In addition, the SR was a useful single-score indicator of the status of a patient at any particular point in time before, during, or after hospitalization. Thus a hospitalized patient who was permitted to leave the hospital on day passes in his own custody (LR 40 percent) and who earned $30 a week at sheltered work on the hospital grounds (ER 60 percent) had an SR of 40 + 60 = 100/2, or 50 percent. Such a patient was considered "midway" to full social restoration.

Some forty different combinations of living and employment levels are

possible, yielding a range of SR scores from 0 to 100. While it is not argued that a patient with an SR of, say, 40 is literally 40 percent restored, nevertheless if a series of SR scores for a patient are consistently at least 10 points higher (or lower) than his previous average, a meaningful change in his overall social adjustment can be inferred. It can be said, at the very least, that a score of 80 percent represents a higher degree of social restoration than a score of 60 percent, and so on.

GAPS RATING PROCEDURE

The GAPS rating procedure is standardized in the following way: For hospitalized patients, the head nurse of the patient's ward is usually the staff person best able to rate living level. When necessary, the physician's orders for the relevant time period are examined to learn whether the patient has privileges—whether he is authorized to leave the ward in his own custody and whether he is permitted off grounds in his own custody. If he is, the nurse determines from the nursing notes or other sources whether the patient has utilized his privileges within the review period and whether he has remained out of the hospital overnight in his own custody on authorized release status. The GAPS procedure thus compels the staff to note the progress or lack of progress of each patient, forestalling the possibility that, even in a highly staffed hospital, some quiet, cooperative patients may be overlooked.

Living adjustment rating is based on the preceding week, except in those cases where a radical status change, such as hospital discharge or readmission, has occurred. In such instances the most recent status level is used for the LR.

In-hospital employment status is based solely on the amount of weekly earnings credited to the patient's account if the work was sheltered employment on the hospital grounds. In those rare instances where the patient holds a regular job despite being hospitalized (sometimes called a "night hospital" program), the amount of earnings is not considered: an ER rating of 100 percent is arbitrarily assigned. Those patients who leave the hospital grounds on a daily basis to work in a community setting under a hospital paid-work program are assigned an ER rating of 80 percent if they earn $30 a week or more; if they earn less, their exact earnings determine the ER rating, as indicated in Fig. 1.

At the study hospital, a continuing review has been instituted of 300 male patients who were under the age of sixty on admission to the hospital and who are in sufficiently good physical health to engage in at least light work. The director receives a quarterly report on the current and average SR status of these patients by ward, together with information on length of stay, current diagnosis, and medication. The goal is 20 consecutive quarterly reviews on each evaluation patient. As patients are dropped from the file because of physical impairment or because of death or other loss to follow-up, eligible newly admitted patients are selected and followed. Much of this operation

Please complete the survey questions below and return this form in the enclosed self-addressed envelope which does not need a stamp.

1. Check below where you now live:

☐ Own Home ☐ Other institutional setting, please write its name and address below:

☐ Foster Home _____

☐ Nursing Home _____

2. During the past month did you hold any special employment or sheltered work (like CHIRP or Goodwill Industries) Yes ___ No ___
If yes, how much did you average?

1. $30 Per Week or More ☐ 3. $1-9 Per Week ☐
2. $10-29 " " " " ☐ 4. Less than $1 Per Week ☐

3. During the past month have you been employed in a regular job?
(Do not include CHIRP or any other sheltered work)
Yes ___ No ___

4. If you are not working at present and wish help in obtaining employment -- and live in the Brockton-Providence area -- please call or visit _____ of our staff, telephone number _____ at this hospital, as he may be able to get you work in or off the hospital grounds that may lead to a regular job.

Although not all VA Hospitals have special employment programs, the VA Hospital nearest to your home may be able to help you find sheltered work.

Remarks you may wish to make may be written on the reverse side.

Thank you very much.

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Fig. 2. Follow-up form used at Brockton Veterans Administration Hospital for evaluating discharged patients.

will soon be computerized, and eventually all inpatients will be assessed weekly by the GAPS while they are hospitalized.

Living status and employment status of discharged patients who are no longer in the care of the evaluating institution are determined by a quarterly one-page mail form (Fig. 2) that the former patient fills in himself. In the event that the patient fails to reply to mail follow-up, his most recent social worker is asked to contact him or his family to obtain the necessary information. Because of the difficulties associated with posthospital follow-up, only a fraction of the eligible patients are reviewed after release from the institution. The proportion to be followed will vary among institutions, depending on availablility of resources, the amount of research likely to be carried out with such follow-up data, and similar considerations.

Community living placements are arbitrarily divided into two levels: non-supervised placement (LR 100 percent) and any kind of placement off the hospital grounds with daily supervision, such as a foster home or halfway

house (LR 80 percent). In general, the less supervision the patient receives, the higher his placement on the LR scale.

If a former patient is in an employment situation in which reimbursement is in kind rather than in money, he is assigned an ER on the basis of equivalent dollar earnings. The guidelines suggested by the U.S. Internal Revenue Service for payment in kind are used in determining ER level. Thus a man regularly receiving only a "free" lunch in payment for his services would be assigned an ER rating of 20 percent, on the assumption that the lunch represents the equivalent of at least $5 but probably less than $10 per week. If a patient is known to be employed but his exact ER category is not known, he is arbitrarily assigned an ER of 50 percent, in order to minimize the number of either incomplete SR's or subjective ratings.

The upper earning levels in the ER scale (60 and 80 percent) represent a work schedule of at least half time (20 hours a week) at the present minimum wage of $1.60 per hour; or fewer hours of work per week at a higher rate with total earnings of at least $30 a week; or a schedule of more than 20 hours a week at a lower rate with total earnings of at least $30 a week. ER levels of 0, 20, and 40 percent represent lower levels of productivity measured by the combination of total hours of employment per week and the hourly rate of compensation.

In general, the greater the patient's economic contribution to the community as measured by his overall earnings and the less supervision he receives in employment, the higher his placement on the employment subscale. Earnings in excess of $30 a week, however, do not yield an increase in adjustment, since minimum self-support is accepted as the conventional $1500 a year, or approximately $30 a week, that theoretically differentiates poverty from nonpoverty.

Underlying the GAPS rating procedure is the question "What supervision does the patient receive?" Initially and during the early development of the scale, the question was conceived as "What supervision does the patient *need*?" The one-word difference between the questions reflects a world of difference in obtaining agreement among staff members. It was eventually decided to abandon the criterion of need—requiring an essentially clinical judgment—in favor of the simple rating of degree of supervision actually being received, regardless of its appropriateness. If a patient is leaving the hospital weekends in his own custody, it can be assumed in most instances that he is in fairly good remission from his psychiatric symptoms or that they have stabilized to the point where both the hospital staff and the general community are in implicit agreement that less constant supervision is required. A similar assumption can be made in regard to the patient who lacks privileges. Perhaps he *should* have them, but the fact that he does not is what is recorded in the hospital records. In short, the GAPS depicts the level of social adjustment a patient manifests within his specific sociocultural environment at the time of evaluation.

IMPLICATIONS

The authors suggest that complete social recovery of the hospitalized psychiatric patient be defined, in the quantitative terms made possible by the GAPS SR concept, as 20 consecutive quarterly reviews with SR scores of 100. (In conventional terminology this degree of restoration would be defined as five consecutive years of independent community living with essentially normal employment over that period.) Such a definition would call attention to the need to provide services for the great number of people who can live outside hospitals but who need posthospital care in the area of employment, especially in respect to sheltered employment. By the same token, periodic GAPS review of inpatients would focus attention on those patients who, given adequate sheltered living or sheltered employment opportunities or both, might be able to adapt successfully in the community [12], at a substantially lower cost for care.

Systematic review of treatment outcome cannot help but direct attention to "lost" patients and raise questions of quality control when average SRs by ward and by treatment program, for example, are compared, thereby contributing to improvement in the care and treatment of the mentally ill. Moreover, use of the GAPS to assess individual patients or key groups of patients can begin to give some idea of the comparative costs of different programs of psychiatric care, in line with the recently introduced concept of cost effectiveness in hospital psychiatry [13].

Barring severe physical disability, all adult patients who are under age sixty on admission to a psychiatric hospital can be considered potentially capable of full and lasting social recovery. (Provision can be made in the GAPS for women and students by accepting homemaking and full-time school attendance as equivalent to a regular job.) Released patients who fail to reach this level of restoration may reflect deficiencies in discharge planning, shortcomings in posthospital treatment efforts, inadequacies in community programs, or any combination of these failures, as well as the factor most commonly held responsible: the psychiatric illness.

Certain mental patients, hospitalized initially while still living at home dependent on their parents and growing to chronological adulthood in the hospital, may never have reached, prior to hospitalization, the level of social adjustment represented by an SR score of 100. A certain proportion of these patients may eventually become capable of holding some employment and living in the community with minimal hospital supervision or none, but others may always need sheltered living or sheltered employment opportunities, or both. For such patients the treatment goal may well be restoration to the highest level reached prior to admission. The SR concept might thus encourage more realistic discharge planning and improve morale by increasing staff satisfaction in outcomes that today are often regarded as limited gains and looked down upon as considerably less than "real cures."

The mentally retarded and inmates of correctional institutions are two other groups of socially handicapped persons who vary in both the amount of living supervision they receive from the community and the degree to which they are permitted and encouraged to contribute to society through their own efforts. The SR concept may be usefully applied to them, and modified scales similar to the GAPS may be used to record status changes and eventual outcome in terms of SR. It may be noted in passing that alcoholics and other addicts can be found in both these groups as well as in the psychiatric hospital category.

SUMMARY

A method of assessing the degree of social handicap of the severely mentally ill is described that yields an overall index of social restoration derived from two objectively determined subscores: (1) degree of living independence (freedom from supervision by mental health workers) and (2) degree of employment restoration (direct economic contribution to society by the patient's aided or unaided efforts). The index, readily adaptable to computer language, has potential use in analyses of prepathology, treatment outcomes, and comparative costs of various modalities of care in psychiatric hospitals, as well as in discharge planning and postdischarge follow-up.

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