

Decanting Geriatric Institutions: Development of a Patient Assessment Methodology¹

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Many elderly people in both developing and developed countries are institutionalized—often irrespective of whether their ability to function requires it. Increased attention is now being given to prospects for decanting geriatric institutions and planning new forms of care. However, methodologic difficulties exist, it being hard to determine how much of the institutionalized elderly population could be effectively accommodated by alternate forms of care requiring certain levels of social, physical, and mental capacity. The procedure described in this article, based on work performed in Barbados, seeks to assess the eligibility of an existing institutionalized geriatric population for alternate types of care, thereby laying the groundwork for future planning.

Until quite recently, especially in many industrialized countries, aging implied forced retirement, loss of physical functions, mental incapacity, and often the individual's isolation from normal social activities. Old people were deemed to be suffering from irreversible illness and were treated like sick children, making "old age" a diagnosis in its own right.

The United Kingdom affords a good example. A 1981 editorial in the *British Medical Journal*, commenting about a long-awaited white paper on future elderly care patterns (1), observed that "from the sixteenth century to the forma-

tion of the NHS [National Health System], the elderly poor in need of care were placed in the workhouse or poor law infirmaries" (2). Even after formation of the NHS in 1948—not surprisingly, perhaps, in a society with a four-hundred-year history of putting the old in workhouses—the aged sick were at first dumped into empty wards of isolation hospitals and tuberculosis sanatoria.

Since then, in many countries the situation has improved. Today, at its best, geriatric medicine brings special skills to care of the elderly, skills that minimize chronic dependence and hasten rehabilitation. However, as the writer Simone de Beauvoir has pointed out (3), the poverty of the elderly diminishes them in our eyes; and one can go further, as Acheson does when he says that the term "geriatric" makes him reflect "that in some ways our attitude to the elderly is now not unlike that of our great-grandparents to the institutionalized poor" (4).

PAHO, in its plan of action for the year 2000, identified a number of steps needed to improve health care for the elderly: assessment of the situation in

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member countries and adoption of policies for delivering health care to elderly population groups; development of comprehensive elderly care within general health services; promotion and development of community action programs; and development of human resources (5).

More specifically, WHO has listed goals for *services* to the elderly, these being:

- to prevent unnecessary loss of functional ability;
- to maintain the quality of life;
- to keep old people in their homes if that is what they wish;
- to provide support for the families of elderly people;
- to provide good-quality long-term care; and
- to help elderly people have a good death as well as a good life by providing sensitive and appropriate terminal care (6).

Clearly, a continuous process should be built into care systems to assess the needs of the elderly and to measure progress toward achieving desired aims.

For many countries, especially moderately developed ones with large institutionalized elderly populations, the question is where to start. Most international recommendations on services for the elderly imply that there should be a broad spectrum of elderly care services, and that an elderly person should receive care which is most appropriate to his or her needs. While this approach is correct, it does nothing to assist national planning processes—processes directed both at immediate provision of services and at enlightened future modification of those services.

Within this context, it should be noted that many of the institutionalized elderly,

in the manner of psychiatric patients in moderately developed countries, have gone through a long and debilitating hospitalization experience. Hence, their ability to carry out normal daily activities is questionable; and if they do not remain hospitalized, they will have a critical need for alternate forms of supervised community and residential care.

THE ASSESSMENT PROCESS

When assessing geriatric inpatient populations for possible discharge to alternate forms of care, it is especially important to evaluate their ability to carry out normal daily activities (“activities of daily living,” or ADL). In addition, alternative care sites—whether nursing homes or the homes of relatives—may not provide close supervision or have broad tolerance of aberrant behavior; so it is important to assess the patients’ social and mental behavior.

Much of the recent literature on this subject has focused on developing “disability indices” for use in investigating chronic diseases and rehabilitation (7–14). These have usually been derived from inventories of ADL. In more recent years, construction of such indices has been the subject of some theoretical and methodologic debate, but this has mainly involved combining the component items (15–17).

The work reported here was not directed at testing the validity of particular procedures. Rather, it was directed at constructing a tool to help measure the incidence of physical, social, and mental disability within a given patient population, for planning purposes—thereby providing information about the current need for different types of care. It should be emphasized that this tool has been developed solely for group planning purposes, and that any decision based upon it with respect to any particular individ-

ual would require detailed clinical review.

Two questions are central: (1) What are the functional levels of the existing institutionalized population? and (2) According to that functional ability, could they be more suitably located within another form of care facility; or should they remain in a chronic care hospital; or, indeed, could they return home if the necessary support services were in place?

THE PATIENT ASSESSMENT FORM

Many countries with large institutionalized geriatric populations need to make planning decisions about that population's future but have scant information. At the start of the work described here, Barbados was no exception. To deal with that situation, extensive discussions were carried out at the hospital level, and an approach was adopted that was based on two assumptions. These were (1) that eligibility criteria for admission to alternate forms of care could be stated in behavioral terms, and (2) that a patient's ability to carry out activities of daily living (ADL), in combination with his social behavior, could be used for planning purposes to indicate a need for those alternate forms of care.

Within this context, the team performing the work listed four alternate, hypothetical types of care that were felt suitable for Barbados in the future. (Clearly, other countries might develop a different list.) These types of care were as follows: (1) chronic care; (2) care in a senior citizens' home; (3) care in a nursing home; and (4) care at one's own or a relative's home.

The patient assessment form developed by the study team, a form that proved easy to administer, is shown in Annex 1. This form was also used for a parallel study in a psychiatric hospital (18).

Nurses from each of five hospitals who would be conducting the patient assessments were given a half-day theoretical and practical training session (in retrospect, the second part of this session could have been longer). Written instructions provided to these nurse-assessors to help them complete the patient assessment form appear in Annex 2.

Following this preparation, over a two-week period in March 1986 the nurses administered the forms to all 780 patients at Barbados' main geriatric hospital and at four district hospitals which contained only geriatric patients.³ An additional three weeks were needed to complete the forms in cases where omissions had occurred.

DECISION ALGORITHM

In devising the assessment form and the method to use in scoring the results, the study team established combinations of behavioral criteria that patients would have to meet in order to be eligible for each of the four forms of care. This was done by indicating ratings for the individual elements of the patient assessment form in Annex 1. However, because of the complexity of these behavioral combinations and the large number of patients assessed, an IBM PC XT micro-computer with a dBase III package⁴ was employed to scan the data base using the following algorithm:

³This accounted for the bulk of the elderly people receiving institutional/hospital care in Barbados at the time of the survey. An additional 230 people were occupying private nursing home beds. In all, 88% of those surveyed were over 65 years old; the remainder were mostly stroke patients, who were generally in their late fifties or early sixties.

⁴From the PAHO/WHO Office of the Caribbean Program Coordinator. A copy of the program developed is available upon request but would only be useful if the same care alternatives were being considered.

A. General Instructions

- (i) Ignore vision and hearing items immediately after the Section C heading (it was decided retrospectively that the glasses and hearing aid items were of little importance).
- (ii) Similarly, ignore the five items immediately after the Section D heading, starting with "uses cane" (it was felt after the fact that these items were not important).
- (iii) Score "not impaired" through "most impaired" as 1 through 5, respectively.

B. Institutional Care Eligibility

Scan total data set and include patients who score:

- (i) 5 on any item in D (with exception cited on next line).
- (ii) For those only scoring 5 in D (iii)-(vi), include them if they also score "intolerable" in F on any item.
- (iii) Cut those eligible for institutional care away from the group.

C. Eligibility for Care in Senior Citizens' Home or in Patient's Own or Relative's Home

Scan data set of remaining persons and include patients who score across all items in the following combination:

- (i) Section C (iii) understanding—1, 2;
- (ii) Section D (i) ambulation—1, 2, 3, 4;
Section D (ii) bathing—1;
Section D (iv) dressing—1, 2;
Section D (v) grooming—1, 2, 3;
Section D (vi) eating—1, 2, 3;
Section D (vii) bladder—1;
Section D (viii) bowel—1;
- (iii) For those answering J (ii) "very much" or "yes," J (iii) "own home" or "family home," and J (iv) "yes,"

cut away into eligible for own or relative's home.

- (iv) For others, those answering J (ii) "very much" or "yes," providing any answer to J (iii), and answering J (iv) "no," cut away into eligible for senior citizen's home.

D. Eligibility for Nursing Home Care

All remaining patients are eligible for this category of care.

• • •

Given the all-encompassing nature of this algorithm, no patient was left outside of the four predetermined groups.

The last item on the patient assessment form (the assessor's recommendation) was included in order to test, albeit in a crude way, the degree of agreement between the algorithm allocation and an allocation based on individual "clinical" decision-making. Some problems were encountered completing this item as a result of unclear training instructions; that is, assessors either tried to outguess the scoring system or else left the item blank because they felt unable to do otherwise. Where answers were given (for 63% of the patients) the correlation (R) was 0.78.

Another question frequently raised is why diagnoses were not noted. The study team specifically avoided mentioning diagnoses for several reasons. First, it was felt that doing so might overtly influence completion of the assessment form by reinforcing stereotypes of expected behavior. Also, with patients who had been hospitalized, many for long periods, present behavior was felt more important than prior diagnoses in anticipating future care requirements. Finally, if diagnoses were not cited, the nurse-assessors would not require sophisticated training to use the form.

RESULTS

The results obtained by processing the assessment form data in the described manner are shown in Table 1. It should be noted that 494 patients appeared to require chronic care hospital beds. Considering the population of Barbados (247,129 in 1980), this works out to 19.98 chronic care beds per thousand inhabitants 65 and over, a rate considerably higher than the U.K. norm of 10.0 per thousand. This could be largely accounted for by past failure to establish a progressive geriatric service emphasizing both preventive care and rehabilitation. Conversely, the data point to a need for 19.50 senior citizen home and nursing home beds per thousand inhabitants 65 and over (including 230 beds existing in the private nursing home sector), which is within the U.K. range of 18–25 per thousand. Overall, the data suggest that many elderly patients in Barbados have had an unduly long stay in chronic care facilities, or else that they were misdirected to those facilities in the first place.

CONCLUDING REMARKS

The method presented here appears satisfactory, but only up to a point. Essentially, it deals with an existing population and assumes that if no changes in the geriatric care delivery system are

made, then the proportions of patients requiring certain types of care will not vary over time. It should be regarded, therefore, as a gross planning tool that gives preliminary indications of the size of the problem confronting policy-makers, resource allocators, and clinicians. It should not be viewed as providing data that will remain valid after changes have been implemented. Nevertheless, given the method's low cost, ease of administration, and beneficial side-effect of sensitizing nursing personnel to patients' capabilities, it appears to provide a useful tool for planning geriatric care services.

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Table 1. Allocation of types of care indicated by the algorithm for the 780 study subjects.

Type of care	Study subjects found eligible	
	No.	(%)
Chronic	494	(63.2)
Nursing home	87	(11.2)
Senior citizens' home	165	(21.2)
Home/relative	34	(4.4)
Total	780	(100)

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ANNEX 1. The patient assessment form devised by the study team that was administered to 780 patients in the main geriatric hospital and four district hospitals in Barbados.

RECORD NO.

PATIENT ASSESSMENT STUDY

A. DEMOGRAPHIC

1. HOSPITAL CODE 2. AGE 3. SEX: MALE

FEMALE

4. MARITAL STATUS

SINGLE VISITING COMMON LAW MARRIED DIVORCED
 SEPARATED WIDOWED

5. YEAR OF FIRST ADMISSION

6. YEAR OF CURRENT ADMISSION

7. NUMBER OF PREVIOUS ADMISSIONS

ASSESSOR'S NAME: _____
WARD OF PATIENT _____
NAME OF PATIENT: SURNAME: _____ FIRST NAME: _____

B. MEDICAL

(MARK IF CONDITION IS PRESENT)

LIMB AMPUTATION MILD DIABETES INSULIN DEPENDENT DIABETES
 EPILEPSY: CONTROLLED EPILEPSY: UNCONTROLLED DISABLING ARTHRITIS
 CHRONIC LEG ULCERS CHRONIC RESPIRATORY CONDITION ADVANCED MALIGNANT DISEASE
 HYPERTENSION: CONTROLLED HYPERTENSION: UNCONTROLLED SUICIDAL
 PARALYSIS: UPPER LIMB—LEFT PARALYSIS: UPPER LIMB—RIGHT
 PARALYSIS: LOWER LIMB—LEFT PARALYSIS: LOWER LIMB—RIGHT

C. COMMUNICATION

WEARS GLASSES USES HEARING AID

(i) **VISION** UNIMPAIRED ADEQUATE FOR PERSONAL SAFETY DISTINGUISHES ONLY LIGHT OR DARK
 BLIND—SAFE IN FAMILIAR LOCALE BLIND—REQUIRES ASSISTANCE

(ii) **HEARING** UNIMPAIRED MILD IMPAIRMENT MODERATE IMPAIRMENT BUT ADEQUATE FOR SAFETY IMPAIRED—INADEQUATE FOR SAFETY TOTALLY DEAF

(iii) **UNDERSTANDING** UNIMPAIRED UNDERSTANDS SIMPLE PHRASES ONLY UNDERSTANDS KEY WORDS ONLY UNDERSTANDING UNKNOWN
 NOT RESPONSIVE

D. ACTIVITIES OF DAILY LIVING

USES CANE USES WALKER USES CRUTCHES USES WHEELCHAIR
 OTHER PROSTHESIS OR AID

(i) **AMBULATION** INDEPENDENT IN ENVIRONMENT INDEPENDENT ONLY IN EXISTING ENVIRONMENT REQUIRES SUPERVISION REQUIRES OCCASIONAL OR MINOR ASSISTANCE
 REQUIRES SIGNIFICANT OR CONTINUED ASSISTANCE

(ii) **TRANSFER** INDEPENDENT SUPERVISION FOR: INTERMITTENT ASSIST CONTINUED ASSIST COMPLETELY DEPENDENT FOR ALL MOVEMENT
 BED BED BED
 CHAIR CHAIR CHAIR
 TOILET TOILET TOILET

ANNEX 1. (continued)

- (iii) **BATHING** INDEPENDENT IN BATH OR SHOWER INDEPENDENT WITH MECHANICAL AIDS REQUIRES MINOR ASSISTANCE OR SUPERVISION REQUIRES CONTINUED ASSISTANCE RESISTS
- (iv) **DRESSING** INDEPENDENT SUPERVISION AND/OR CHOOSING OF CLOTHING PERIODIC OR DAILY PARTIAL HELP MUST BE DRESSED RESISTS
- (v) **GROOMING/HYGIENE** INDEPENDENT REQUIRES REMINDER MOTIVATION AND/OR DIRECTION REQUIRES ASSIST WITH SOME ITEMS REQUIRES TOTAL ASSISTANCE RESISTS
- (vi) **EATING** INDEPENDENT INDEPENDENT WITH SPECIAL PROVISION FOR DISABILITY REQUIRES INTERMITTENT HELP MUST BE FED RESISTS
- (vii) **BLADDER CONTROL** TOTALLY CONTINENT ROUTINE TOILETING OR REMINDER INCONTINENCE DUE TO IDENTIFIABLE FACTORS INCONTINENT LESS THAN ONCE PER DAY INCONTINENT MORE THAN ONCE PER DAY
- (viii) **BOWEL CONTROL** TOTALLY CONTINENT ROUTINE TOILETING OR REMINDER INCONTINENCE DUE TO IDENTIFIABLE FACTORS INCONTINENT LESS THAN ONCE PER DAY INCONTINENT MORE THAN ONCE PER DAY

E. MENTAL HEALTH

COMPREHENSION

GOOD FAIR POOR

MEMORY

GOOD FAIR POOR

REALITY ORIENTATION

GOOD FAIR POOR

F. SOCIAL BEHAVIOR

	NO PROBLEM	SOME PROBLEM	INTOLERABLE
(i) PHYSICALLY ASSAULTIVE (people and things)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(ii) VERBALLY SCREAMING/THREATENING	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(iii) INAPPROPRIATE UNDRESSING/EXPOSURE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(iv) OVERACTIVITY (manic)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(v) UNDERACTIVITY/SOCIAL WITHDRAWAL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(vi) BIZARRE MANNERISMS/SPEECH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

G. WORK PERFORMANCE

DOES THE PATIENT WORK? ANY? YES NO

WITH NO SUPERVISION BECAUSE? THEY CANNOT
 WITH SOME SUPERVISION THEY WILL NOT
 TOTALLY SUPERVISED NO WORK AVAILABLE

H. SOCIAL ACTIVITIES

	NEVER	OCCASIONAL	REGULAR
(i) RECREATION/SPORTS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(ii) CULTURAL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(iii) CHURCH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ANNEX 1. (continued)

J. MISCELLANEOUS

- (i) DOES PATIENT HAVE REGULAR VISITORS? NO RELATIVES FRIEND(S)
(at least weekly)
- (ii) DOES PATIENT WANT TO LEAVE HOSPITAL? VERY MUCH YES NO (go to J(iv))
- (iii) LOCATION DESIRED? OWN HOME FAMILY HOME PRIVATE NURSING HOME HOME FOR THE ELDERLY
- (iv) IS THERE A DOMESTIC HOME TO WHICH THE PATIENT CAN GO? YES NO

ASSESSOR'S RECOMMENDATION (ONE CHOICE ONLY)

PATIENT IS ELIGIBLE FOR

- RETURN TO OWN HOME
- RETURN TO HOME OF FAMILY
- NURSING HOME CARE
- SENIOR CITIZEN/GROUP HOME CARE
- HOSPITAL CARE ONLY

ANNEX 2. Instructions provided to assessors for completing the form shown in Annex 1.

INSTRUCTIONS TO ASSESSORS

RECORD NO.: Each form has been precoded. Do not change code.

ASSESSOR AND PATIENT DETAILS: Fill in accurately in order that if there are queries a check can be made.

A. DEMOGRAPHIC

ITEM 1: HOSPITAL CODE

Code appropriately as follows:

- 01 Psychiatric Hospital
- 02 Geriatric Hospital
- 03 St. Philip District Hospital
- 04 Christ Church District Hospital
- 05 Gordon Cummins Hospital
- 06 St. Lucy District Hospital
- 07 Evalina Smith Ward
- 08 St. Andrew's Hostel

ITEM 2: AGE

Right justify as follows:

e.g., for age 85 years

0	8	5
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ITEM 3: MARITAL STATUS

Be as accurate as possible. Whilst the inpatient population would not have responded to the census, think of the options presented in this way.

ITEM 4: YEAR OF FIRST ADMISSION

ITEM 5: YEAR OF CURRENT ADMISSION

ITEM 6: NUMBER OF PREVIOUS ADMISSIONS

These data should be ascertained from ward records, not directly from the patient.

ANNEX 2. (continued)

B. MEDICAL

Ascertain this information from the nurse-in-charge of the ward, and check, where necessary, with the record.

C. COMMUNICATION

D. ACTIVITIES OF DAILY LIVING

E. MENTAL HEALTH

F. SOCIAL BEHAVIOR

These will form the principal subjects of the training session but:

Please beware of automatically classifying patient function at its worst just because the individual is in a hospital.

G. WORK PERFORMANCE

Note here the branch line of responses for "YES" and "NO." A subsequent question is asked in each case.

H. SOCIAL ACTIVITIES

"Cultural" can be separated from "Recreation" by defining it as involving art, reading, etc. as opposed to dancing, biñgo, etc.

"Church" is a loose expression, but is meant to indicate the patient's involvement in religious practices at any place.

J. MISCELLANEOUS

(i) Note, visitors must come at least weekly and either "no," or "relatives," or "friend(s)," or "relatives" and "friends" can be answered.

Ward staff should assist with this question.

(ii) (iii) Please ensure it is the patient, *without influence*, who answers these questions.

(iv) Answer, in consultation with ward staff.

ASSESSOR'S RECOMMENDATION (ONE CHOICE ONLY)

This recommendation must *assume* the existence of a variety of options even though they do not occur in Barbados at the moment.

Consult with ward staff before making a final determination.
