

Health Systems Research

Competition: winning article

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Improving the quality of service in long-term care institutions for the elderly

An investigation into the quality of service in nine Israeli institutions for the long-term care of the elderly revealed many shortcomings. Two government ministries have adopted an experimental programme to upgrade the quality of care by improving the regulatory system. Instruments have been prepared and tested, supervisors and institutional staff have been trained, and baseline data have been gathered for use in programme evaluation. Advances have been made in the enforcement of regulations and in the identification of deficiencies. Both government supervisors and institutional administrators have welcomed the opportunity to participate in the programme and to contribute to the betterment of life in old-age homes.

Life in old-age homes in Israel is profoundly affected by the regulations under which they operate. If facilities fall short of government standards the well-being of the residents is jeopardized.

The percentage of elderly Israelis, including both Arabs and Jews, rose from 3.9% in 1950 to 8.4% in 1982, and is expected to approach 10% by 1990. Furthermore, it is predicted that the number of Jewish people aged 75 or over will increase more than twofold between 1983 and 2000 (1, 2). These trends have serious implications for long-term care. Of the 361 000 elderly Israelis in 1983, 4.1% were living in nursing homes and hospitals for the chronically ill (3).

Studies in the late 1970s indicated a number of areas in which the quality of institutional

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care was deficient (4–6); government supervisors graded 40% of the long-term care facilities as mediocre or poor.

In response to public demand for improved care, the Brookdale Institute of Gerontology initiated a study aimed at developing methods and instruments for the identification of shortcomings in the provision of care, and their causes.

Representatives of the Ministry of Labour and Social Affairs and of the Ministry of Health were involved as members of a steering committee. They helped to focus the study on the needs of their agencies, assured the cooperation of field units, and provided feedback. This cooperation between researchers, policy-makers and service-providers ensured that the results would be accepted in the field.

Quality-of-care study

The study involved using the tracer method (7) for examining the quality of institutional care. A tracer is a well-defined medical, nursing or psychosocial problem that occurs frequently, has a defined diagnosis, a significant impact on the well-being of the elderly, and an established treatment, and can be used to represent the general quality of care.

The study encompassed a wide range of domains and took into account processes and outcomes as well as structural indicators. The medical tracers included hypertension, visual difficulties, hearing difficulties, and oral health problems. The nursing tracers included mobility problems, difficulty in washing, dressing, and brushing the teeth, and urinary incontinence. The psychosocial tracers included feelings of loneliness and lack of autonomy. Poor quality of care was defined as unawareness by staff of the existence of problems, lack of treatment, or unsatisfactory treatment.

The data were collected by a multidisciplinary team that included a physician, a nurse, an occupational therapist and an oral epidemiologist. Interviews and examinations were conducted with samples of residents. The staffs of the institutions were interviewed about these samples and about the institutions' policies. Observations were made and the residents' records were reviewed.

The study was conducted in four private and five public institutions. Two of the units were for semi-independent elderly people who had difficulties in housekeeping but were ambulatory, three were for frail elderly people who had difficulties in bathing and dressing, and four were nursing units for subjects who were bedridden, generally incontinent, and, in many cases, disabled. The samples totalled 136 people, amounting to 36% of the residents. Since no independent evaluation of the quality of long-term care facilities existed at the time of the study, government supervisors were asked to assess the quality of all such institutions in Israel. Five of the units studied were chosen from ones assessed as "good" and four were selected from units assessed as "poor".

The study revealed many shortcomings in the care provided, even in units previously graded as "good" (Table 1).

Prevalence of problems

Residents with low levels of functioning were found in units designed for more independent people. Thus, 57.4% of the residents in units intended for semi-independent and frail elderly persons required help in washing, 41.1% needed help in walking, and 31.3% suffered from partial or total urinary incontinence. Between 80% and 100% of residents in

nursing units needed help in washing, dressing, and getting about. Visual problems were suffered by 59.6% of residents in "good" units and by 69.5% in "poor" units, while hearing problems affected 60.6% and 46.5% of residents in the respective categories of institution. In "good" wards, dentures were defective in 54.0% of people who used them; the corresponding figure in "poor" wards was 95.0%.

Over half of the residents in "good" wards and more than three-quarters of those in

"poor" wards suffered from feelings of loneliness. Of the residents in "good" wards, 19.3% suffered from lack of autonomy, as opposed to 38.9% in "poor" wards, autonomy being the extent to which institutional regulations allowed freedom and privacy.

Staff awareness

In "poor" wards, staff awareness of patients' problems was 50% or less for a number of tracers. Physicians and nurses were largely

Table 1. Selected medical, nursing and psychosocial indicators of tracers by ward quality^a

Indicators		% of residents	
		Good wards	Poor wards
Medical tracers			
Hypertension	Inadequate follow-up ^b	34.2*	75.1*
Visual problems	Staff unawareness ^c	65.9	53.7
Hearing problems	Staff unawareness ^c	72.8	69.6
Oral health problems	Inadequate treatment/denture repair ^d	54.8*	96.7*
Mobility problems	Inadequate treatment ^e	41.7*	95.0*
Nursing tracers			
Mobility problems	Inadequate help ^f	30.6	55.0
Difficulty in washing	Inadequate cleanliness ^g	27.2*	74.6*
Difficulty in dressing	Unsatisfactory clothing ^h	12.0*	60.8*
Difficulty in brushing teeth	Poor oral hygiene ⁱ	21.9*	75.0*
Urinary incontinence	No rehabilitation programmes	73.8	94.4
Psychosocial tracers			
Feeling of loneliness	Inadequate treatment ^j	60.1*	78.7*
Lack of autonomy	Degree of lack of autonomy ^k	19.3*	38.9*
General dissatisfaction ^l		13.5*	39.3*

^a According to assessments by national supervisors.

^b Percentage of cases where the follow-up of hypertensive residents was defined as inadequate.

^c The score given to each unit was calculated as the summed scores of all residents (0 = awareness by doctor and nurse, 1 = unawareness by one of them, 2 = unawareness by both), and expressed as a percentage of the maximum possible ward score (2 x the number of residents suffering from the problem in each ward).

^d Number of cases in which dentures were unsatisfactory, had not been repaired, or were recommended but not supplied, expressed as percentage of the total number of denture-wearers of edentulous residents.

^e Number of cases in which rehabilitative treatment was not given to residents, expressed as percentage of the total number of residents in need of such treatment.

^f Number of residents who did not receive help with mobility, expressed as percentage of all residents (not bedridden or chairbound) with mobility problems and requiring care.

^g Number of residents in a state of unsatisfactory cleanliness, expressed as percentage of those needing help in washing.

^h Number of residents wearing unsatisfactory clothing, expressed as percentage of those needing help in dressing.

ⁱ Number of residents with poor oral hygiene, expressed as percentage of the total number of residents (including semi-independents) with difficulty in brushing their teeth.

^j Percentage of residents for whom at least two of the following conditions were not met: participation in activities, meeting of family with institutional staff, receipt of individual treatment from social worker.

^k The ward scores were calculated from the average residents' scores, which were based on residents' answers to autonomy-related items. The score of lack of autonomy was defined by the percentage of items for which each resident mentioned restrictions.

^l Ward scores were calculated as the summed scores of all residents (2 = dissatisfaction, 1 = moderate satisfaction, 0 = full satisfaction) and were expressed as a percentage of the maximum possible dissatisfaction score per ward.

* Significant with alpha = 0.5 in a chi-square test.

unaware of visual, hearing and oral health problems, and of partial urinary incontinence. In about two-thirds of cases, social workers and nurses were unaware of feelings of loneliness. The situation was similar in “good” units, where staff unawareness was most evident regarding hearing, visual and oral health problems, partial urinary incontinence, and loneliness. Staff in all wards were more aware of difficulties in dressing, brushing teeth, mobility and washing.

A higher rate of awareness of hearing difficulties was found in nursing units than in those for semi-independent and frail people. Physicians were aware of hearing difficulties in 32% of nursing patients, as opposed to 28% of semi-independent and frail residents. Nurses were aware of feelings of loneliness in 41% of residents who required nursing but in only 28% of semi-independent and frail residents. One possible explanation of these differences is that staff in nursing wards were more exposed to residents’ problems than were staff in units for more independent elderly people with whom contact was relatively sporadic.

Treatment

Awareness of a problem is a precondition for the provision of care. Where low rates of staff awareness exist, much of the required care is not provided.

High rates of non-treatment or inadequate treatment occurred for the various tracers.

- Follow-up of hypertensive residents was inadequate in 34.2% of cases in “good” wards and in 75.1% in “poor” wards.
- Of residents with visual problems, 62.7% in “good” wards and 86.8% in “poor” wards had either no spectacles or ones that were ineffective. The situation was

particularly critical in the “poor” nursing wards, where 93.7% of residents with visual problems were in one or other of these predicaments.

- Of the residents with hearing problems in “good” wards, 68.1% had not visited an ear specialist during the past year, as opposed to 98% in “poor” units. Of the residents with hearing problems who were frail or being nursed, 73.5% had not been seen by an ear specialist during the past year.
- Over 96% of residents in need of oral health care in “poor” units had not received treatment.
- Approximately 42% of residents with mobility problems in “good” units, and 95% in “poor” units, had not received physiotherapy.
- Staff dealt only in part with the problems of loneliness.
- In “good” wards, 74.7% of the residents participated in activities organized by the institutions, whereas only 34.1% did so in “poor” wards.

Structural components of care

Serious deficiencies in structural components of care included:

- staffing levels below government requirements;
- noncompliance with medical, nursing and social record-keeping procedures;
- substandard furniture;
- unsafe conditions, e.g., poor lighting;
- lack of fixed arrangements with eye, ear, and oral health specialists.

All of these deficiencies were commoner in “poor” than in “good” units.

Overall quality of care assessment

Table 2 gives summary and comprehensive indices of the quality of care in "good" and "poor" facilities. The summary indices for "poor" units indicate that, in general, less than half of the residents received adequate care; in "good" units about two-thirds did so. It should be noted, however, that there was some statistical evidence that the number of medical tracers was inadequate to reflect the overall state of medical care.

Factors influencing quality of care

An appreciation of the deficiencies in care-giving was gained through on-site observations, interviews with staff, and meetings with service providers, government supervisors, and directors of old-age homes. External or system factors and internal institutional factors affecting the quality of care can be distinguished.

The system factors included:

- effectiveness of government supervision;
- reimbursement policy;
- provision for staff training;
- referral policy.

These factors have a direct bearing on the following internal elements:

- poor administration;
- deficient record-keeping;
- poor physical and structural conditions;
- insufficient professional knowledge and inadequate staffing;
- lack of family involvement in the institutions;
- inappropriate placement of residents based on their functional status.

Table 2. Summary and comprehensive indices by ward quality^a

Indices ^b	Good	Poor	Student's <i>t</i>
Summary medical	46	22	1.85
Summary nursing	77	34	6.71*
Summary psychosocial	69	48	9.00*
Summary structural	90	59	2.55*
Comprehensive index A ^c	71	41	4.06
Comprehensive index B ^d	64	34	6.05*

^a According to previous assessments of national supervisors.

^b Each medical, nursing and psychosocial summary index expresses the average percentage of elderly people who are suffering from identified problems and who have received adequate care for them.

^c Arithmetical average of the first four indices.

^d Arithmetical average of the first three indices.

* Significant at the 0.1% probability level.

Experimental programme for improving the regulatory system

Based on these findings, an experimental five-year programme was devised to upgrade the quality of service in long-term care facilities by improving the government regulatory system. It is in its second year of operation in institutions regulated by the Ministry of Labour and Social Affairs, and in its first year in chronic care facilities regulated by the Ministry of Health. By enforcing compliance with government standards, the system significantly influences the quality of care.

The regulatory system has a body of legislation and standards at its disposal, the authority to impose sanctions and give rewards, expertise in the field of institutional care of the elderly, a systematic method for discovering deficiencies, and efficient record-keeping practices. The effectiveness of the system depends on the extent to which these resources are employed. Thus the more deficiencies that are discovered in an institution through the use of the new experimental instruments,

the more effective will be the regulatory system (8, 9).

The regulatory system also depends on the institutions' willingness to comply with demands for improvement, the availability of information within the institutions, their willingness to share it, and staff recognition of the importance of surveillance in improving the quality of care.

Factors beyond local control which can influence the effectiveness of the regulatory system include:

- shortage of supervisory staff;
- budgetary limitations on the possibility of making improvements;
- shortage of beds for frail and independent residents, limiting the options for closure of substandard facilities or for ceasing referrals;
- lack of coordination between government agencies;
- pressures of conflicting interest groups representing patients, their families, and service providers.

The more these constraints can be overcome, the more effective will be the results of surveillance. The regulatory system should, for example, endeavour to create a coordinating body linking the various government agencies involved in serving the aged.

The programme attempts to address the following deficiencies in the government surveillance system:

- evaluations by government supervisors based mainly on structural considerations and only partly on defined care processes and their outcomes;
- lack of teamwork and communication between nursing and social work supervisors;

- inadequate centralized information about institutions and their residents;
- lack of reliable, comprehensive and standard regulatory instruments;
- insufficient reporting and follow-up regarding institutional deficiencies, and inadequate enforcement of regulations;
- lack of quality-of-care standards based on process and outcome.

It is important to observe that the new regulatory method is being implemented with existing manpower resources. The specific aims of the programme are to:

- improve the ability to detect deficiencies in the provision of care;
- ensure that deficiencies are corrected;
- experiment with the tracer method as a surveillance instrument;
- create a nationwide data bank to allow monitoring of changes resulting from the experimental programme, and to facilitate further interventions, policy-making and research;
- enhance cooperation between the Ministry of Health and the Ministry of Labour and Social Affairs in, for example, the supervision of facilities.

To achieve these goals the following innovations have been introduced.

New methods and instruments for surveillance

The new regulatory method includes some of the medical, nursing and psychosocial tracers developed in the study on the quality of care.

Additional indicators are also being examined: drug distribution; medical and

nursing records; condition of medical equipment; follow-up of chronic diseases; periodic physical examinations and laboratory tests; periodic assessments of activities of daily living; food; crowding; social activity; social recording and follow-up; ward division; admission procedures; staff skills; and training.

Data collection

Under the new method, data collection distinguishes between the individual, the ward and the institution, whereas previously no structured sources of information were employed.

The information-gathering agents include regional social work supervisors and head nursing supervisors representing the Service for the Aged. Information on the institutions is acquired by:

- obtaining reports from directors, head nurses, physicians, social workers, and housemothers;
- interviewing residents and staff;
- reviewing medical and social records;
- examining residents;
- making on-site observations.

This involves joint visits and assessments by nursing and social work supervisors. All supervisors employ a standard set of questionnaires with clear criteria for identifying deficiencies.

Reporting and follow-up

The supervisors' findings are systematically reported to the institutions and there is computerized follow-up on the correction of deficiencies.

Setting standards

At the national level, an improved information system will help to define standards on the basis of data relating to performance.

The eight stages in the implementation of the experimental programme are detailed in Table 3.

Evaluation of the programme

A baseline evaluation was performed before the programme's inauguration, and an annual follow-up over a five-year period will be conducted. The initial evaluation employed data collected during surveillance, as well as interviews with government supervisors, institutional directors, and staff.

Evaluation is based on the following criteria.

- *Implementation* — whether the supervisors carry out all activities according to the instructions they receive.
- *Reliability* — variability between supervisors will be examined.
- *Validity* — institutions will receive independent ratings based on additional tracers and areas of care in order to

Table 3. Stages of tracer method implementation

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1. Preparation of instruments.
 2. Training sessions for supervisors.
 3. Training sessions for directors and senior institutional staff.
 4. Pre-testing of surveillance method, testing of instruments and data-collecting method.
 5. Implementing the method on a national basis.
 6. Improving the method by developing process and outcome standards based on the information collected in the institutions by the supervisors over a period of three to four years.
 7. Implementing the revised method.
 8. Continuing evaluation of the experimental programme.
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determine the validity of the new instruments. Examination will be carried out after the first year of implementation.

- *Effectiveness of the regulatory system*—the system's ability to detect deficiencies, and the degree to which the institutions comply with requests for improvement, will be examined before and after the implementation of the programme.
- *Quality of institutional care*—improvements in the treatment of various medical, nursing and psychosocial tracers, as well as some of the outcomes of care, will be considered. The examinations will be carried out annually by independent observers.
- *Perceptions of the experimental regulatory system*—the responses of the supervisors and directors will be compared before and after the inauguration of the programme in order to understand problems relating to the detection of deficiencies, the compliance of institutions with requests for change, and programme implementation.

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The tracer method has proved suitable for assessing the quality of care in long-term facilities. Quantitative and qualitative shortcomings have been found in medical, nursing and psychosocial care of the elderly in long-term facilities. However, some institutions were efficiently run and met the needs of their residents, suggesting that improvement would be possible elsewhere. Government supervision has been found to suffer from insufficient manpower and to lack appropriate methods and instruments.

The most important aspect of the quality-of-care study was its action-orientated approach. Researchers and care providers in the public sector utilized the findings to devise a system for improving

the quality of care nationally. The formula arrived at offers a step-by-step process for all aspects of the surveillance system.

Guidelines have been set out for all phases from the introduction of new instruments and the training of staff to the periodic evaluation of the programme. The formula has paralleled other work on improving regulatory systems, most notably that done in the field of residential health care facilities by the State of New York (10).

To date, our programme has prepared and tested the instruments, trained supervisors and institutional staff, gathered baseline data to be used in programme evaluation, and reached the implementation stage. The regulations are being enforced and deficiencies are being identified in a more standardized and effective manner than formerly. Both government supervisors and institutional administrators have welcomed the opportunity to be part of the new programme and to contribute to the betterment of life in old-age homes. □

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Said at the 41st World Health Assembly

WHO and the world

The adoption of the World Health Organization's recommendations was made easier in Hungary by the Organization's high reputation and admittedly outstanding professional competence.

—Dr J. Csehak (Hungary), Fourth plenary meeting, 3 May 1988.

In these days of financial stringency it is more important than ever that our Organization should have broad popular support—information of the public and promotion of not only health for all but of the Organization itself are invaluable.

—Dr J. van Londen (Netherlands), President of the 40th World Health Assembly, First plenary meeting, 2 May 1988.

The role of this Organization cannot be described only as operational and technical, it also fulfils a universal, moral and humanitarian mission.

—Professor J. Komender (Poland), Eighth plenary meeting, 5 May 1988.