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Health and Social Resources Planning Based on
Activity Analysis – A Québec Experience in the
Long-Term Care and Services Sector for the Elderly

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Abstract

Attempting a diagnosis of the problems of the Québec system of health and social services for the elderly, we identified two main vicious circles (positive feedback loops), the first one resulting in the admission in institution of non-eligible persons, the second one giving rise to a functional deterioration of people living at home. We came to the hypothesis that the positive feedback loops at work could be destroyed if and only if mechanisms were put in place in order to ensure that the right client received the right health and social services at the right time. To reach that goal, it was necessary to plan/program/budget the system in relation with needs and to control the utilization of resources. We present here the results of a research project that was conducted in these directions. In particular, we present a need assessment system structured around the concepts of autonomy – services – resources – programs. This system was designed to support utilization review, planning, programming and budgeting.

Angebotsplanung mit Hilfe der Aktivitätsanalyse – Erfahrungen in Québec mit Sozialleistungen für die Betagten

Zusammenfassung

Den Ausgangspunkt dieser Studie bildet eine Diagnose der Hauptprobleme, denen sich die Versorgung der betagten Bevölkerung Québec's mit medizinischen und sozialen Dienstleistungen gegenübersteht. Dabei zeichneten sich zwei Beziehungen mit positiver Rückkoppelung als eigentliche Teufelskreise ab: Der erste resultiert in einer Verschlechterung der Wohnbedingungen derjenigen Personen, welche nicht in ein Altenheim aufgenommen werden können. Der zweite führt zu einer Verschlechterung des Gesundheitszustandes derjenigen Betagten, welche in ihrer eigenen Wohnung bleiben. Dieser Teufelskreis läßt sich nach unserer Auffassung nur unter der Bedingung durchbrechen, daß die richtige Person die richtigen medizinischen und sozialen Dienstleistungen zur rechten Zeit erhält. Um dieses Ziel zu erreichen, mußte eine Planung, Programmierung und Budgetierung des Versorgungssystems im Hinblick auf die zu deckenden Bedürfnisse eingerichtet und der Einsatz der Mittel überwacht werden. Dieser Beitrag enthält die Ergebnisse eines Forschungsprojektes, das der Erarbeitung der entsprechenden Grundlagen diente. Insbesondere wird ein System der Bedarfsabklärung vorgestellt, das auf den Begriffen Autonomie, Dienstleistungen, verfügbare Mittel und Leistungspakete aufbaut. Dieses System erlaubt eine Beurteilung der Frage, ob die richtigen Betagten in den Genuß der Leistungen kommen, und gibt den Anstoß zu Revisionen der Planung, Programmierung und Budgetzuteilung.

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I. Resources in the Long-Term Care System for the Elderly

The system of *institutional resources* for the elderly (65 years and over) in Québec includes two basic types of facilities: nursing homes (NH) and skilled nursing facilities (SNF). According to law, acute care hospitals (ACH) must keep 10% of their beds for long-term care purposes. In 1981, there were 28,546 NH beds in Québec, that is, five beds per 100 persons aged 65 years and over (PA 65+) and 13,559 SNF beds (including the 10% ACH beds), that is, 2.4/100 PA 65+.

Historically, SNF and NH have had different vocations. The NH's task was to receive persons 65+ suffering from isolation or feeling disoriented but having few or no functional disability problems as far as daily activities are concerned. Also, NH had few health care resources available since their residents theoretically did not need skilled care and assistance on a long-term basis. Cultural customs dictate that, whoever wished to do so could, at the age of 65, have access to a NH bed.

Access to a SNF was reserved to persons suffering from a loss of autonomy and requiring substantial quantities of care and assistance. Consequently, the nursing care and assistance personnel was much more important in the SNF whose budget per bed was approximately triple that of the NH. By the end of the seventies though, things changed. As we shall see, the original vocation of the NH was progressively modified.

Home care and services are provided by Neighborhood Health and Community Centres (NHCC). The resources of the home care and services programs are much fewer than those of the institutional programs. In 1983, the home care and services programs in Québec were allotted a budget of 65 million dollars. This represents the equivalent of 1,600 full time jobs. By comparison, NH and SNF (including the long-term care ACH beds) were allotted a budget of over 1000 million dollars.

Intermediary resources such as day centers and day hospitals, shared housing, supervised housing, boarding homes and foster family programs are still at the development stage.

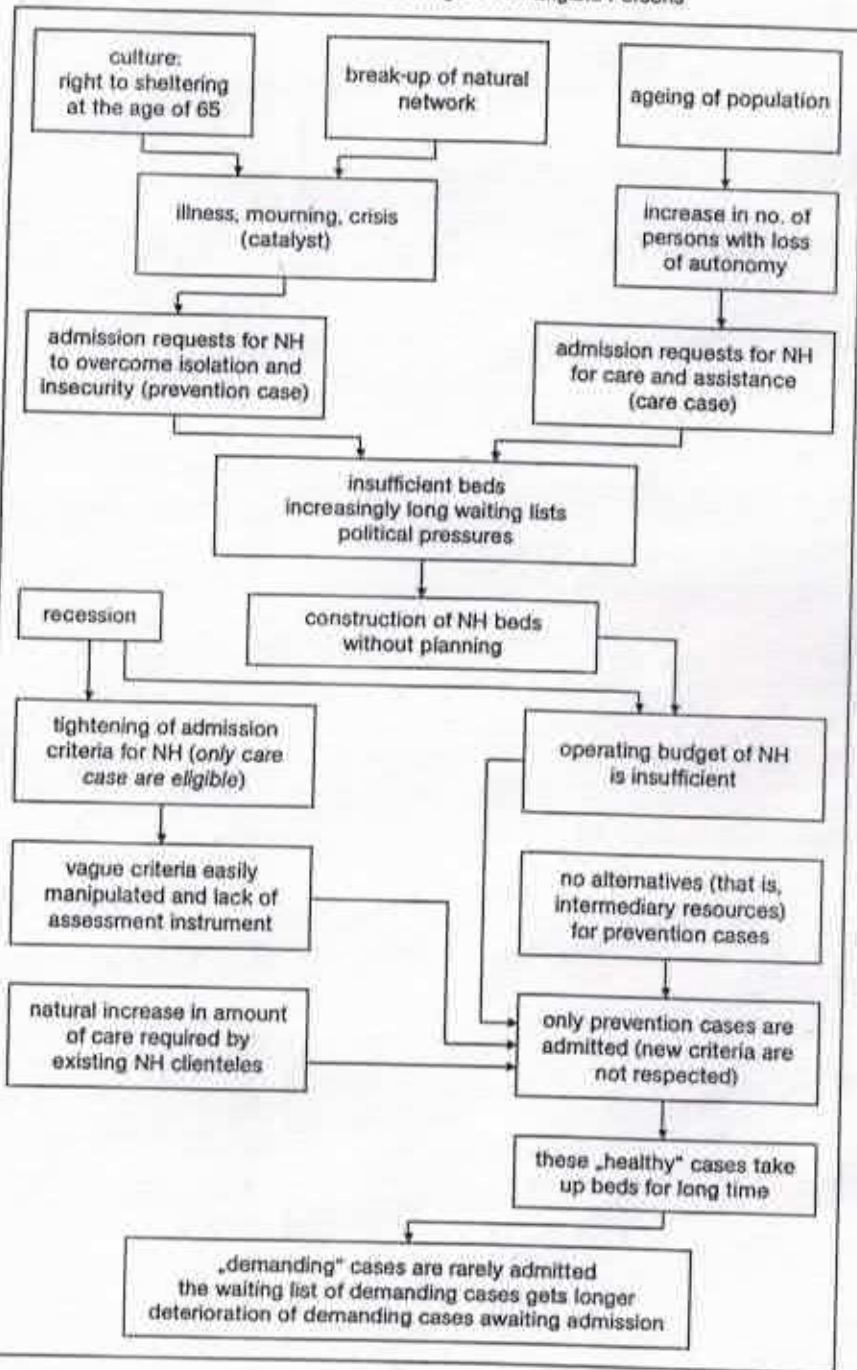
II. Vicious Circles Caused by the Improper Use of Resources

The ageing of the population along with the disintegration of natural networks have led to a considerable increase in the demand for long-term sheltering and hospitalization. The Department of Social Affairs responded by creating, rapidly but without much planning, a large number of new beds. Between 1976 and 1981, the number of places available in NH increased by 18.5% while SNF beds (including the transformation of 10% of the ACH beds into long-term care beds) increased by 37%. This did not stop the NH waiting lists from getting longer. The sustained pressure led the Department of Social Affairs to tighten the admission criteria to NH. The latter's initial vocation was to admit only autonomous persons (or, at most, those suffering from a slight loss of autonomy) requesting admission because they were living in an inadequate environment (slum, no services, unsafe or accessibility problems) or to overcome isolation, insecurity, anxiety ("prevention" cases). The department now decided that only those elderly persons suffering from a significant loss of autonomy ("care" cases) would be admitted. However, mentalities are not as quick to change as rules may be. Autonomous elderly persons continued to demand admission to NH following the message that had been conveyed for years stating that this was a person's fundamental right. They were encouraged by health professionals and social workers who often saw this as the only solution to lighten their case-load which was increasingly heavier and as a means of avoiding the pressures directed at them from the elderly, their families or other professionals.

The increase in the number of beds and the changes in the admission criteria for NH took place during a recession (1976-1981). NH therefore found themselves in the paradoxical situation where they were asked to admit more demanding clients but were not given the budget needed to deal with the heavier case-load.

Consequently, NH were not very cooperative in the implementation of the new directives requesting them to increase their case-loads. They actually continued to select from their long waiting lists those persons suffering from a slight loss of autonomy. This tactic was considered even more legitimate since the persons they had admitted five, ten or fifteen years ago in an autonomous condition now manifested a relatively great loss of autonomy and could not be transferred to SNF beds which were themselves over-crowded. Considering the freezing of re-

Figure 1 The Vicious Circle of the Sheltering of Non-Eligible Persons



sources available, they could not see how they could possibly have cared for a more demanding clientele when the resources available were barely sufficient to deal with their existing clientele which was becoming increasingly more demanding.

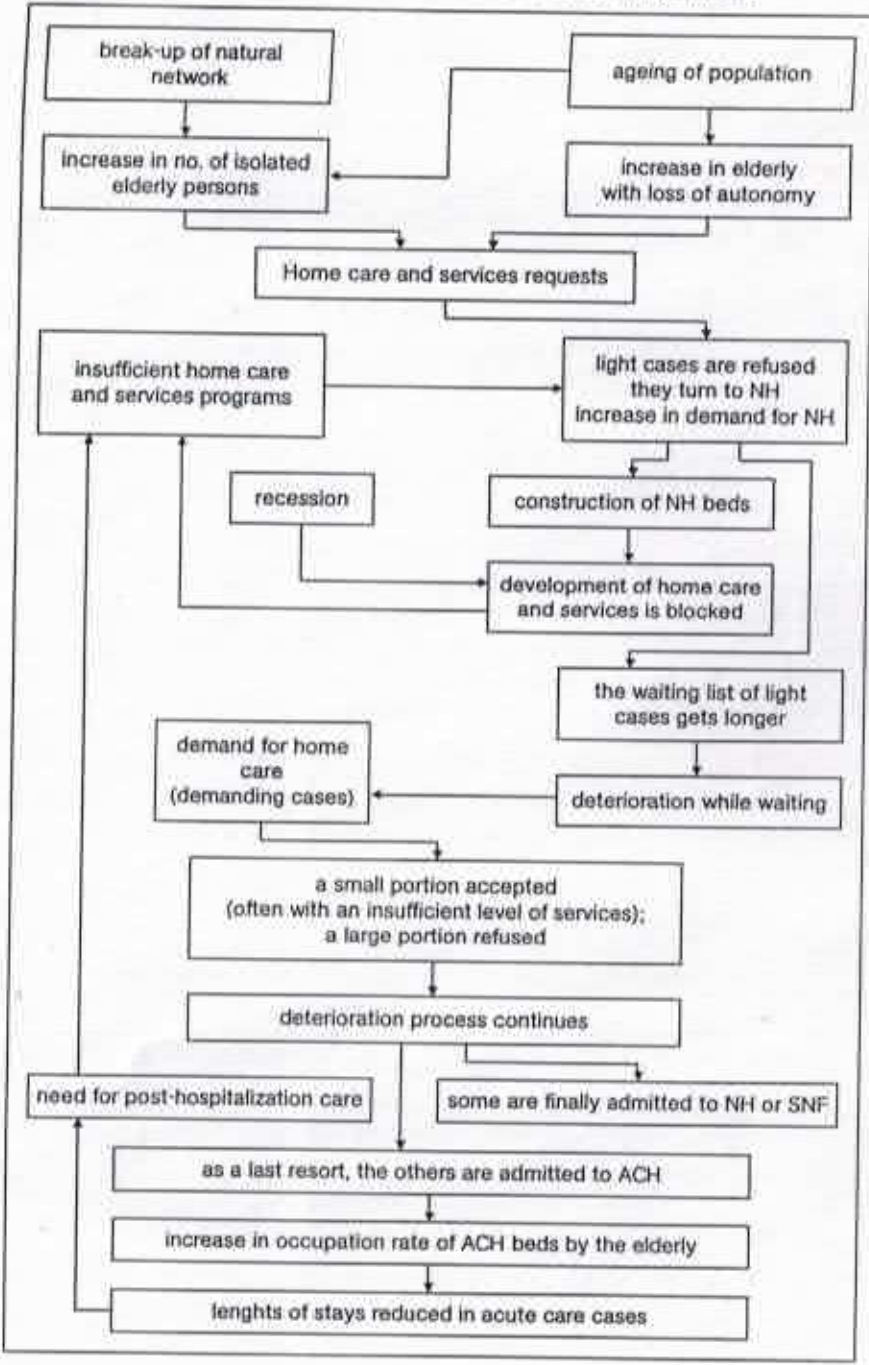
In fact, despite the directives issued, autonomous or quasi-autonomous persons continued to be admitted to NH. This decision had significant implications for the system's future development since the beds thus allotted were allotted for a long-time. Meanwhile, the least autonomous persons who were waiting to be admitted were slowly deteriorating. They sometimes turned to home care and services programs. However, these programs were themselves underdeveloped and unable to meet the demand due to a shortage of resources. Not only were these programs unable to care for a part of the least autonomous elderly, they were also unable to meet the demands (or if they did, it was insufficient), of quasi-autonomous persons, whose needs were not considered a priority, thereby contributing to the progressive deterioration of their condition.

The dynamics of the system therefore arranged it so that one could hope to receive home care and services only in cases of loss of autonomy and only if resources were still available. Otherwise, the client that could no longer remain at home without home care and services had to demand admission to a SNF. With a little luck and patience, he was eventually admitted but in such a deteriorated state that his rehabilitation potential was greatly reduced. And even when the potential existed, due to a shortage of resources, the SNF was unable to provide all rehabilitation services required.

After having had the NH doors closed on him, having exhausted the resources of the home care and services programs and being unable to gain admission to a SNF, the client turned to ACH as a last resort. Most of the time, these had no choice but to admit him given the client's advanced state of deterioration and the absence of any other alternative. Thus, in some regions, up to 80% of the clients had passed through an ACH before being admitted to a NH or a SNF. The ACH which, according to ministerial directives, had to keep 10% of their beds for the elderly, often had 15, 20 or 25% of their beds occupied by persons waiting to be housed in NH or hospitalized in SNF.

In addition to resulting in the improper use of costly resources, this phenomenon aggravated the problems of the health care system for the elderly. On the one hand, the ACH, feeling frustrated by the situation and seeing it as a threat to their vocation, refused to give their temporary patients more than strictly custodial care. There was no question of encouraging the use of ACH as buffers between supply and demand of long-term health care. The client's rehabilitation potential was therefore not worked on more at the ACH than it was at home and when he was finally admitted to a NH or a SNF, it was too late to do anything. On the other hand, seeing their capacity reduced by the presence of the elderly awaiting admission to NH or SNF, the ACH tried to use their remaining beds for acute care in a more efficient manner by reducing the lengths of stays through the use of pre-admission examinations and by sending patients home earlier with a prescription for post-hospitalization care and services. This care was to be provided by the

Figure 2 The Vicious Circle of the Deterioration of Persons Living at Home



home care and services programs. Their diminished resources for the elderly suffering from a loss of autonomy were thus further reduced. This short description is the authors personal view of the dynamics of the health and social services for the elderly delivery system. It has been built from their multiple contacts with professionals and administrators working in that system.

III. Diagnosed Problems and Solution Hypotheses

The preceding analysis of the deteriorating state of health care and services offered to the elderly has led us to the diagnosis of the following problems:

A. Problems at the Planning/Programing Level

The system was neither planned nor programed according to needs. Moreover, the magnitude and nature of the needs remained unknown. It was therefore difficult to define a set of appropriate programs and to specify the number of places required for each program and for each sub-region. The development of new types of programs was more often the result of a tendency to imitate what appeared to be successful elsewhere than the result of a study on the relevance and need of these programs in the Québec context. Although resources were increased in the traditional programs, this was more a response to political demands (campaign promises) than rational ones. Moreover, these investments were made without asking whether they could later be supplied with a satisfactory level of resources. New beds were therefore created without asking how they would be provided with personnel.

B. Problems at the Budgeting Level

Given the system's incapacity to qualify and quantify the needs which its programs were to meet, the budgets that were obtained from the Finance Department by the Department of Social Affairs depended more on the power struggle taking place within the Council of Ministers than on the levels of resources needed to meet the clients' needs. In fact, the budgets changed much more according to the highs and lows of the recession than according to the increase in case-loads. Moreover, they were distributed among the various programs on the basis of criteria whose reliability and validity were questionable. The relative generosity of the budgets was therefore essentially the result of the bargaining power of the person responsible for each program.

C. Problems at the Level of the Review of the Utilization of Resources

In each socio-sanitary region (there are ten in Québec), the NH admissions procedures was centralized in the sense that all admission requests were sent to the Social Services Center (SSC) and the social workers representing the SSC were members of the admissions committee of each facility. However, due to the lack of precision in the admission criteria, it was difficult for them to have a case admitted if the facility concerned refused admission. Criteria were formulated in qualitative terms (bio-psycho-social prototypes) or based on unreliable and unvalidated scales, in other words, not very credible. They lent themselves to all sorts of interpretations and manipulations. The situation would not have been any different had there been no admission criteria at all.

In such a situation, the social worker was very open to pressures from the client and his family, from the ACH physician wanting to free his beds rapidly and from his colleague wanting to lighten his case-load. In practice, the acceptance or refusal of admission was more the result of a bargaining process among those concerned than of the use of rational criteria regarding the utilization of NH beds.

It was not in the SSC's interest either to reduce the lists of clients waiting for a NH bed since these lists were used as a means of pressure in their demand for more beds. In fact, these lists sometimes contained the names of persons already admitted to a SNF or having deceased or persons who had asked to be admitted to a NH at a time of crisis but who, once the crisis was resolved, no longer wished to be housed.

Moreover, there was a total lack of coordination in admissions to SNF and to home care and services programs and the admission criteria at these levels suffered from the same inadequacies as the criteria used by the NH. In fact, they admitted whoever they felt like admitting¹.

The situation was similar with regards to discharges/transfers of clients from one program to another or to their home.

D. Problems at the Needs Assessment Level

There existed no validated and standardized needs assessment instruments/protocols. Everyone used the instruments they wanted or limited themselves to the questionnaires required by the Ministry. These questionnaires were not true needs assessment instruments but "administrative" files or eligibility certificates.

The present analysis has led us to formulate the hypothesis that the available resources were probably globally sufficient and that most of the problems would

¹ Deschamps, D., Lebeau, A. et al.: L'aide à domicile dans le territoire de Maisonneuve-Rosemont: Un suivi de la demande. 4 cahiers D.S.C. de Maisonneuve-Rosemont 1982-1984.

be solved if *the right client was admitted to the right program at the right time*. To attain this end, the following steps would have to be followed:

- 1) to develop reliable and valid needs assessment instruments/protocols allowing to accurately describe the client;
- 2) to develop reliable admission criteria allowing to determine which program would best meet the client's needs;
- 3) to coordinate the admissions procedures thus allowing their review and accelerating the process (admission at the right time) while ensuring a standard and neutral interpretation of the client's needs with respect to the admissions criteria;
- 4) to budget the programs according to the needs of the clients whom it was their task to admit;
- 5) to make sure that each region's system would provide all the programs required to meet the clients' needs in terms of space and time (planning – programming according to needs).

Let us now look at what was actually done with respect to each of these steps.

IV. Needs Assessment

- 1) In order to fulfill the planning – programing – budgeting requirements when used in studies on a population's needs, the needs assessment protocol had to:
 - o allow to define the whole range of programs and consequently, to identify all the different programs required to meet the population's needs;
 - o allow to determine the number of places required in each program to meet the needs of the population;
 - o allow to determine the amount of human resources: medical, paramedical (nurses, occupational therapists, social workers, physical therapists) and lay resources required by the average client for each program.
- 2) In order to meet the requirements of the resources utilization review when used to assess the needs of a specific client, the needs assessment protocol had to:
 - o allow to determine the program required by the client taking or not taking into consideration the aid available to him through his natural network;
 - o allow to select the organization best able to meet the client's needs;
 - o allow to measure the gap between the program offered the client by the organization and the program required.

Given all these requirements, it was not sufficient to limit the protocol to a traditional needs assessment, that is, an assessment of the bio-psycho-social functions and a medical assessment. The protocol also had to allow to identify the basic services the client required and to measure the amount of (human) resources required to provide these services in order to be able to determine the program the client required and the organization offering such a program. We will now explain how this assessment was put into operation at the five levels: functional/medical, services required, human resources required, required program and receiving organization^{2,3,4}.

² Tilquin, C., Sicotte, C. et al.: CTMSP: L'évaluation de l'autonomie et l'évaluation médicale du bénéficiaire. Université de Montréal. Montréal 1982.

³ Tilquin, C., Sicotte, C. et al.: CTMSP: La détermination des services requis et la mesure des ressources requises par le bénéficiaire. Université de Montréal. Montréal 1982.

⁴ Tilquin, C., Sicotte, C. et al.: CTMSP: L'orientation du bénéficiaire dans le réseau. Université de Montréal. Montréal 1983.

A. The Functional/Medical Assessment

This section of the assessment was formulated using the concepts of illness-deficiencies-disabilities-handicaps proposed by the WHO¹. The medical assessment focuses on the client's illnesses/deficiencies. The functional assessment focuses on his disabilities and handicaps.

The medical assessment is in the form of a three-page questionnaire filled in by the client's physician. The main headings are:

- o illness or health problems
- o prognosis
- o present situation
- o brief assessment of functional autonomy (mobility, communication, attitude ...)
- o other data (allergies, wounds, lifestyle)
- o relevant examination and consultation reports
- o proposed interventions

The functional assessment questionnaire contains about twelve pages. It is filled in by a nurse or a social worker or an occupational therapist during an interview or a series of interviews with the client. The information collected is provided for the most part by the client himself (except if he is unable to answer) but also by a relative (if he lives at home) or by a person that is taking care of him and who knows him well (if he is already institutionalized: ACH, SNF or NH). The assessor is also asked to give his opinion throughout the questionnaire.

In cases where the client has the support of a natural network (friends and family), the capacities of this network to care for the client are also assessed.

The information is therefore generally provided by three sources and concerns the client as well as his natural network.

Since the system was created in 1976, there have been many changes in the format of the questionnaire. Among other things, these changes reflect the authors' hesitations between open and closed questions. They finally opted for closed questions, experience having shown that when a system is widely used (i.e. when it is no longer only a research instrument), the closed questions approach was the one that best ensured the validity and the exhaustivity of data.

The functional assessment questionnaire contains approximately 300 information items. These are grouped together under a number of themes and sub-themes.

The principal ones are:

- o identification
- o socio-demographic characteristics
- o residence
- o reason of admission
- o context of request

- o sensory capacity
- o physical mobility
- o functional autonomy
- o family and social support (client)
- o isolation
- o responsibilities (client)
- o family and social support (important person)
- o living habits
- o use of medical and paramedical services
- o family and social ties
- o financial situation / budget administration
- o living conditions
- o client's opinion regarding his situation and orientation
- o mental aptitudes, emotional state and behavior
- o assessment context
- o data exhaustivity
- o client's authorization
- o synthesis of problems and recommendations

B. Establishment of Required Services

The aim of this assessment is to identify the services required by the client in the following sectors:

- o support services such as meal preparation, housekeeping and shopping, supervision (lay), socialization (community activities, friendly visits, etc.);
- o nursing care and assistance (professional and lay) for feeding, hydration, elimination, respiration, hygiene, comfort, communication, medication, other treatments (dressings, ...) supervision and diagnostic activities;
- o occupational therapy services, physical as well as non-physical;
- o physical therapy services;
- o social services;
- o medical services.

Lists of service elements, were set up for each of these sectors by professionals in their respective fields. Altogether, the lists contain 220 different service elements grouped in six check-lists corresponding to the six categories of services enumerated above.

The task of establishing the service elements required by a client is assigned to a multidisciplinary team which includes a physician, a social worker, a nurse, a physical therapist and an occupational therapist. The team does not meet with the client; he is assessed on the basis of his functional and medical assessment. After having collectively analyzed the client's needs and agreed upon them, each member of the team fills in the check-list establishing the required services that correspond to his specialty. The team then eliminates repetitions and identifies

¹ Wood, P.: International Classification of Diseases. Disabilities and Handicap. Geneva 1980.

other elements of service capable of meetings needs which some members may have overlooked.

Let us note that the members of the team are not only asked to identify which services are required. They must also specify the frequency (per week for nursing care, per month for social services, . . .) at which these services are required.

Also, in cases where the client gets support from a natural network, the team must identify all the services required by the client (gross services) and the services which cannot be provided by his natural network (net services).

C. Measurement of Required Human Resources

The aim of this assessment is to measure the amount of human resources needed to provide the services required by the client.

The lists of service elements mentioned above are weighted: a value has been attributed to each service element in order to account for the time needed to provide the service element once. Once the frequency at which an element is needed is known, one can obtain the time needed to provide this element over the period over which is calculated the frequency (year, month, week or day) by multiplying the latter by the value of the service element. By adding all the times thus calculated with regards to the elements of service belonging to one resource (for example, occupational therapy), one can obtain the amount of this resource required by the client per unit of time. One can thus calculate the following required resources norms:

- o hours of nursing care/day
- o hours of professional nursing care/day
- o hours of lay nursing care/day
- o hours of respiration nursing care/day
- o hours of feeding and hydration nursing care/day
- o hours of elimination nursing care/day, . . .
- o hours of occupational therapy/week
- o hours of physical occupational therapy/week
- o hours of non-physical occupational therapy/week, . . .
- o hours of physical therapy/week
- o hours of physical therapy requiring specialized facilities/week
- o hours of physical therapy not requiring specialized facilities/week, . . .
- o hours of social work/month
- o hours of social work – psycho-social intervention/month
- o hours of social work – family therapy/month
- o hours of social work – information/month, . . .

Only the support and medical services resources are not measured in terms of time. The support resources are measured in terms of the number of contacts required annually. The medical resources are measured in terms of the number of visits required annually. It was recognized that the time of a physician visit may

greatly vary depending on the condition being treated, but it was felt unfeasible to establish a time schedule for the nomenclature of visits.

Once the services have been determined by the multidisciplinary team, the measurement of the required resources follows purely arithmetical rules.

In cases where the client gets support from a natural network, the team identifies the gross services as well as the net services required which allows for measuring the gross resources and the net resources required to provide these services.

We will come back to the last two levels of the needs assessment protocol, that is, the establishment of the required program and the choice of the organization that provide(s) this program. But first, let us explain how the programs were defined.

V. Defining the Programs

The protocol that we just described (the first three levels) was used to assess the needs of two samples of elderly persons: a sample of 1500 clients living in NH and SNF and a sample of 600 elderly persons living at home and selected at random. The sex and age variables were controlled (three age groups: 65-74; 75-84; 85+) to ensure an equal representation in each of the six cells (as compared with the general population, the men and the eldest persons were thus over-represented in this sample). This method was retained, it being the most likely to show the variety of needs and enabling to then identify the whole range of required programs.

These operations allowed us to set up a bank of the autonomy-services-resources profiles of 2100 elderly persons.

The 2100 resources profiles were analyzed using the clustering techniques (CLUSTAN program)⁶ and principal components analysis. These analysis enabled us to identify four⁷ discriminating resource variables (among the 39 variables which make up the client's resources profile - a partial list of these variables was given in section IV. C.), that is, variables that will enable us to define groups that are homogenous with respect to their individual members but heterogenous among themselves (minimization of the "within" variance and maximization of the "between" variance).

The results of these analysis were submitted to a panel of experts which were asked to express them in simple terms in such way they could be used operationally to classify clients. The experts identified three levels for the first and second variables, lay supervision and material organization, eight levels for the third variable, nursing care and four levels for the fourth variable, rehabilitation. These levels are as follows:

1) Lay Supervision (LASU)

The elderly person is supervised by a third party (a lay person) for his own security or that of others. (We are excluding the regular observation of a nurse or physician).

This variable has three possible values:

| Level | Interpretation |
|-------|---|
| 0 | Supervision not required |
| 1 | Supervision required for certain periods of time during the week (caretaking) |
| 2 | Constant or almost constant supervision required |

2) Material Organisation (MATOR)

This variable concerns meal preparation, shopping and light housework.

This variable has three possible values:

| Level | Interpretation |
|-------|--|
| 0 | Material organization not required |
| 1 | Material organization required but only for shopping, light housework (and maybe meal preparation but only once or twice a week) |
| 2 | Meal preparation required three times or more a week |

3) Total Nursing Care: Professional and Lay Care (TNC)

This variable considers the time required for professional and lay nursing care (direct and indirect care) as regards respiration, feeding and hydration, elimination, hygiene, mobilization, communication with patients, treatment and diagnostic activities required by the client.

The time required is listed in terms of hours of care / 24 hours.

| Level | Interpretation |
|-------|----------------------------------|
| 0 | $x = 0$ hours of care / 24 hours |
| 1 | $0 < x \leq 0.625$ |
| 2 | $0.625 < x \leq 1.375$ |
| 3 | $1.375 < x \leq 2.125$ |
| 4 | $2.125 < x \leq 2.875$ |
| 5 | $2.875 < x \leq 3.625$ |
| 6 | $3.625 < x \leq 4.375$ |
| 7 | $4.375 < x$ |

4) Rehabilitation (REHAB)

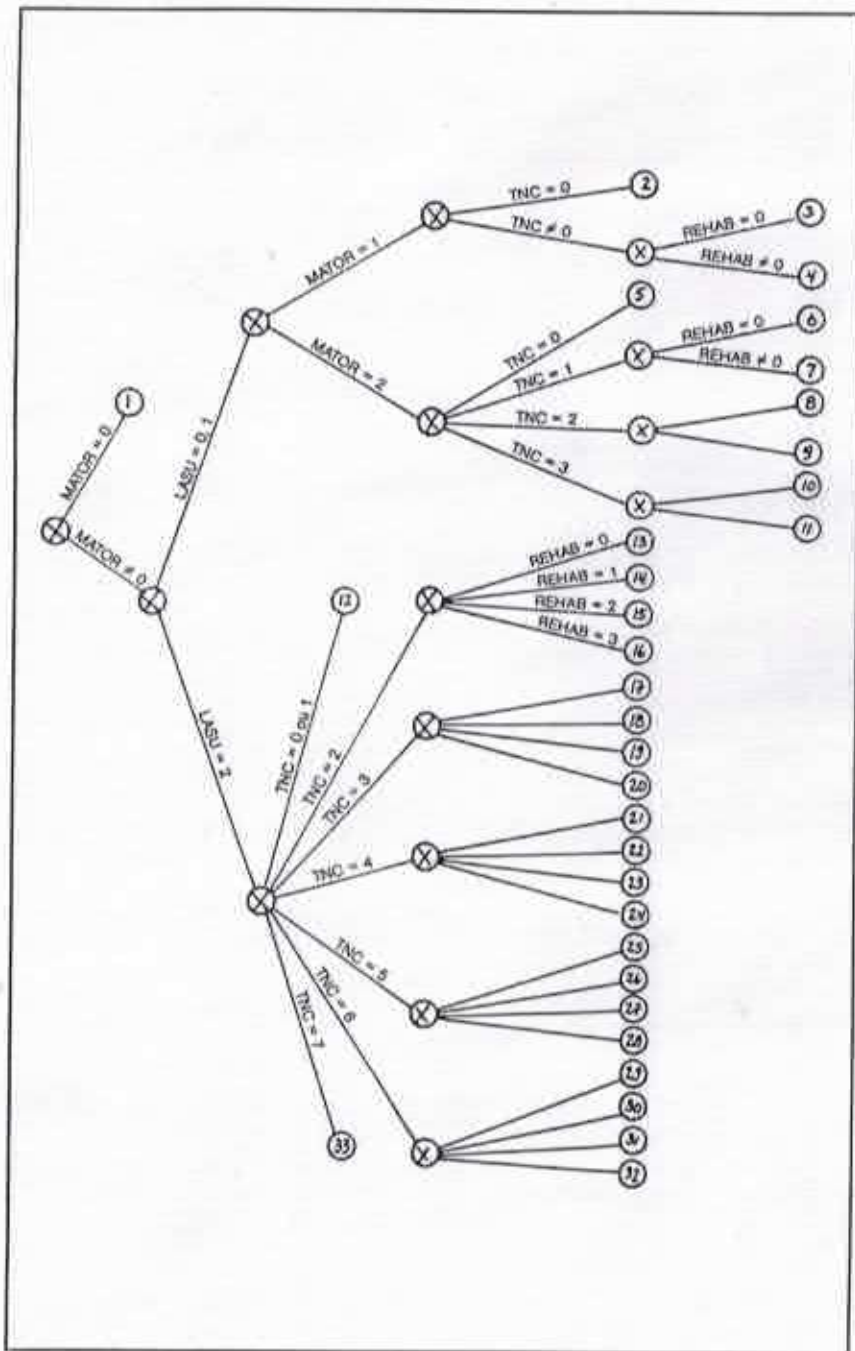
This variable accounts for the hours of physical therapy and occupational therapy required by the client.

| Level | Interpretation |
|-------|--|
| 0 | Neither physical therapy nor occupational therapy required |
| 1 | Occupational therapy required; physical therapy not required |
| 2 | Occupational therapy not required; physical therapy required |
| 3 | Occupational therapy and physical therapy required |

⁶ Wishart, D.: CLUSTAN User Manual, 3. edition, Edinburgh University, St-Andrews 1978.

⁷ Tilquin, C., Sicotte, C., et al.: CTMSP: L'orientation ..., 4.4.0.

Figure 3 Programs Classification Scheme



Theoretically, there are as many different groups of clients as there are combinations of levels of variables, that is:

$$3 \times 3 \times 8 \times 4 = 288$$

However, certain combinations are impossible (for example, MOTOR = 0, TNC = 7) while others are so rare (that is, very few clients correspond to them) that it is necessary, for operational purposes, to group them together. Experts were again called upon to establish these groupings.

We were thus able to identify only 33 groups or classes among the possible 288. Figure 3 shows these groups in the form of a decision tree. Each branch corresponds to a group whose number appears at the endpoint of the branch. Note that MOTOR appears as the first variable in the tree to avoid creating a class (LASU = 2, MOTOR = 0) which would have been almost empty.

The classes thus established are the programs that the health care/social services system for the elderly should offer and that are likely to be required by the system's clients. Each program groups together clients that are very similar with regards to their need of human resources for supervision, material organization, nursing care and rehabilitation. We also made sure that the clients' autonomy profiles were close to each other within the same group and significantly different from one group to another.

The 33 programs were therefore empirically defined from the profiles of human resources needs of a sample of elderly persons. We will now explain how this classification was used.

VI. Review of the Utilization of Resources

By utilization review, here we mean essentially admission certification and recertification of the appropriateness of the continuous stay of a client in a program. As said before, certification of admission was almost non-existent in Québec due to the lack of reliable valid need assessment protocols, of admission criteria and of an effective coordination of admissions.

These problems have been solved as follows:

A. Admissions Coordination

A central admissions committee in each sub-region reviews all the admissions to nursing homes (NH) and skilled nursing facilities (SNF). The individual facilities are represented on the central committee. At the present time such admission committees operate in four regions of Québec, including the two larger: Montreal and Québec City. Their establishment in the other regions will be accomplished in 1985-1986.

B. Admission Criteria

The admission criteria must specify in which organization (institutional, intermediary, home care) is offered each program. This problem could have been solved for the whole province by specifying, for example, that NH would be responsible for programs 12 to 18 (from the 33 programs mentioned above - see section V.). But it would have been difficult to apply this solution given the great disparities that exist between regions and sub-regions. Some regions, for example, have an abundance of NH beds but few SNF beds. In other regions, the situation is reversed.

It was preferred to let each *sub-region* establish its own admission criteria and determine which programs each organization would offer. However, a number of general orientations can be formulated for each region.

In cases where there are sub-regional disparities, mechanisms must be included allowing the exchange of resources from one sub-region to another or recognizing the regional vocation of certain organizations.

Two years after the implantation of the system in the eight sub-regions of the Montreal Metropolitan area, an evaluation project has just started. Among other things, it will permit to know how each sub-region has defined its admission criteria, if they have changed during these two years, to measure discrepancies between subregions (id est one using program 8 to 24 for NH admissions, while an other would use instead programs 12 to 18).

C. Needs Assessment

The needs assessment protocol described in section IV is applied to all persons requesting long-term care and/or services.

D. Certification and Recertification Processes

Taking into consideration what has already been said, the certification of admissions works in the following manner: the client living at home and requesting some service is submitted to a pre-assessment of his needs by telephone. He may be refused admission or referred elsewhere. If not, a nurse or social worker meets him at his home to assess his autonomy.

Based on this assessment, a multidisciplinary team from the home care organization concerned, decides whether the shelter or hospitalization request is justified. If it is not, the team determines which services are required and allots them. If the request is considered justified, a physician (the client's preferably) is asked to proceed to the medical assessment of the client.

The client's file (functional and medical assessments) is then handed to the person in charge of coordinating the admission certification process (known as the orientation coordinator) at the sub-regional level.

The orientation coordinator presents the file to the sub-regional multidisciplinary team who determines which services (gross and net) are required. If the team deems that the assessment record is incomplete, it can request further data or, if the case is not "clear" (for example, when it is unclear if the client need lay supervision or not, or if the client requires rehabilitation services. In such case it would be impossible to classify the client as one or more variables requested to predict the program required is (are) missing), it can request that the client be assessed in an assessment unit (day center of NH, day hospital of SNF).

Based on the services approved by the multidisciplinary team, the orientation coordinator considers the resources required (gross and net) and identifies the required programs (in terms of gross and net needs).

The client's file (functional and medical assessment, required services profile, required resources profile, required program) is then handed to the admissions committee which has its own set of admission criteria that have been established for each organization whose admissions it reviews. The committee also processes data on the availability of resources in each organization. For making a decision, the committee considers all this information. It must then be understood that in such system, the final decision regarding the client orientation is with the committee not with the client except that the later may always decide not to receive the services proposed by the committee. As far as equity and availability of resources allow, the committee will nevertheless take into account the client preferences as he expressed it at the time of the assessment of his functionality.

A *recertification* is undertaken when a client asks to change program or, as is more often the case, when a professional, under whose care the client is placed (physician, nurse, social worker), considers that, the client is no longer "in the right place". Once set in motion, the recertification process follows, for the most part, the same course as the certification process described above except for a few changes designed to simplify the process.

VII. Programing and Planning

A. Introduction

The aim of programing is to establish, in each area (in this case, the sub-region) and at a given point in time, the most appropriate balance possible between the places required in each program to meet a population's needs and the places available in the organizations for each of the programs given the total available resources.

A perfect relation is never attained since it supposes perfect planning. The objective of planning is to ensure that the human and material resources needed to enable appropriate programming are developed in due course.

The planner therefore tries on the one hand, to make long-terms predictions (five to ten years) about a population's needs and on the other hand, to find the means to ensure that during this period there is a congruence between supply and demand, in other words, that needs are met.

The planner's task is even more difficult when the initial situation is one of disequilibrium between supply and demand. This is the case in the sector we are dealing with where there is an excess of institutional resources and a shortage of intermediary and home care resources.

Let us now look at what has been done and how, and what remains to be done. In section V., we discussed the needs assessment protocol as applied to a random sample of 1,500 patients housed or hospitalized in 17 NH and 21 SNF selected by the Department of Social Affairs as representative of the system. The selection was based on such criteria as size (number of beds), geographical setting (rural or urban) and corporate status (private or public) of the facility. This assessment contributed to the identification of the range of needed programs (see section V.). It also supplied information which was used as the basis for programing/planning at the provincial level.

B. Actual versus Required Resources; Implications for Manpower Planning and Resources Allocation

These operations thus allowed to draw a profile of the average NH and SNF client in terms of required amount of resources (Table 1).

Table 1 Average NH and SNF Client in Terms of NET Amount of Required Resources

| Resource | Average level | | % of clients requiring the resource |
|--|---------------|------|-------------------------------------|
| | NH | SNF | |
| 1) Supervision (lay) ^{a)} | 12.7 | 20 | 72 |
| 2) Material organization ^{b)} | 976 | 1105 | 99 |
| 3) Total nursing care ^{c)} | 1.33 | 2.68 | 95 |
| 4) Physical therapy ^{d)} | 0.7 | 1.0 | 34 |
| 5) Occupational therapy ^{e)} | 0.5 | 0.9 | 32 |
| 6) Social services ^{f)} | 0.9 | 0.9 | 26 |
| 7) Medical services ^{g)} | 9.3 | 11.4 | 99 |
| 8) (3) + (4) + (5) + (6) ^{d)} | 1.53 | 2.98 | - |

^{a)} hours of supervision/24 hours

^{b)} contacts/year (including meal preparation with a maximum value of $3 \times 365 = 1095$ contacts/year)

^{c)} hours of care/24 hours

^{d)} hours of care/week

^{e)} hours of service/month

^{f)} visits/year

N.B. Hours appearing in this table are NET care and services hours. They do not take into account the time required for administrative, maintenance and travelling activities, nor non productive time and social benefits.

Table 1 shows that the average SNF client requires more supervision than the NH client and that the two clienteles are relatively the same with regards to the material organization services they would need if they remained in their homes. The SNF clientele requires twice as much nursing care as that of NH. The situation is the same for occupational therapy. For physical therapy, the difference is smaller and for social services, there is no difference. There is very little difference with regards to medical care. Table 1 shows also that 99% of NH and SNF clients required medical and material organization services, 95% some form of nursing care, 72% some degree of lay supervision, 34% physical therapy services, 32% occupational therapy services and 26% social services.

The same study results indicate also (Table 2) that professional/lay nursing staff ratio should be higher in NH ($25/75 = \frac{1}{3}$) than in SNF ($20/80 = \frac{1}{4}$). The fact is that, even though he requires twice as much nursing care as the NH client, the SNF client requires proportionately more basic care and less technical care. As seen in Table 2, 86% of care time is devoted to basic care in SNF while this percentage

falls to 78% in NH, with a corresponding increase in the percentages of communication and technical nursing times.

This finding is at the opposite of the actual situation in Québec where SNF have a considerable amount of professional nursing resources while NH have almost none. Since, it has been double-checked in other studies using the same assessment tools but with other client samples and other multidisciplinary teams.

Table 2 Distributions of Required Nursing Care Time per Client-Day in NH and SNF. (1) by Category of Staff; (2) by Category of Activities

| | NH | | SNF | |
|--|-------|-----|-------|-----|
| | Hours | % | Hours | % |
| Professional nursing care | 0.33 | 25 | 0.52 | 20 |
| Lay nursing care | 1.00 | 75 | 2.16 | 80 |
| Total | | 100 | | 100 |
| Basic nursing care (hygiene, comfort, feeding, elimination) | 1.03 | 78 | 2.30 | 86 |
| Communication nursing care | 0.15 | 11 | 0.21 | 8 |
| Technical nursing care (medication, treatment, respiration, diagnostic activities) | 0.15 | 11 | 0.17 | 6 |
| Total | | 100 | | 100 |

At the time (1980) the data was collected, actual resources were 2.4 times higher in a SNF than in a NH: 3.99 paid hours/client-day versus 1.66 paid hours/client-day (Table 3)⁸ while the study suggests that required resources were only 1.7 time higher in SNF than in NH: 4.497 versus 2.666 paid hours/client-day. In other words, the allocation of human resources between SNF and NH appeared inequitable.

With regard to nursing, the gaps between actual and required resources were respectively 25.3% and 2% in NH and SNF. There was a need for .562 additional paid hour/client-day in NH while the same need was only .080 in SNF. This difference accounts for much of the above mentioned inequity.

Required resources in physical and occupational theory were about the same in the two types of institutions but there was no such resources available in NH (gap of 100%) when they were present but too sparse in SNF (gaps of 71.7 and 87.6%). An important lack of social resources was exhibited both by SNF and NH (respectively 96.6 and 71.1%).

⁸ Boyle, P., and Sicotte, C.: Application du système CTMSP à une clientèle institutionnalisée. In: Proceedings of SYSTED 83. International Conference on Systems Science in Health and Social Services for the Elderly. Montréal 1983. Montreal 1985, pp. 805-812.

Table 3 Gap between Required and Actual Resources

| | Average paid hours/ client-day* | | Gap | |
|----------------------|------------------------------------|--------|-------|------------------|
| | Required | Actual | % | Hours/client-day |
| 1) NH | | | | |
| Nursing care | 2.222 | 1.66 | 25.3 | 0.562 |
| Physical therapy | 0.207 | - | 100.0 | 0.207 |
| Occupational therapy | 0.199 | - | 100.0 | 0.199 |
| Social service | 0.038 | 0.0013 | 96.6 | 0.037 |
| | | | | } 0.443 |
| Total: | 2.666 | 1.6613 | 37.7 | 1.005 |
| 2) SNF | | | | |
| Nursing care | 3.957 | 3.88 | 2.0 | 0.080 |
| Physical therapy | 0.251 | 0.071 | 71.7 | 0.180 |
| Occupational therapy | 0.251 | 0.031 | 87.6 | 0.220 |
| Social service | 0.038 | 0.011 | 71.1 | 0.027 |
| | | | | } 0.427 |
| Total: | 4.497 | 3.993 | 11.2 | 0.504 |
| 3) NH + SNF | | | | |
| Nursing care | 2.88 | 2.50 | 13.2 | 0.38 |
| Physical therapy | 0.224 | 0.027 | 87.9 | 0.197 |
| Occupational therapy | 0.219 | 0.012 | 94.5 | 0.207 |
| Social service | 0.038 | 0.005 | 86.8 | 0.033 |
| | | | | } 0.437 |
| Total: | 3.361 | 2.544 | 24.3 | 0.817 |

* The needs assessment process allows to measure NET care hours. To calculate the hours which should be PAID to provide NET care hours, one takes into account: 1) time required for administrative, maintenance and travelling activities; 2) non productive time: waiting, personal, coffee breaks, ...; 3) social benefits. For nursing for example, the formula to obtain PAID hours (y) from NET hours (x) is the following:

$$y = (x + 0.4) \times 1.075 \times 1.195$$

where 0.4 is the standard for administrative/maintenance/travelling activities set by a panel of experts; 1.075 is the multiplication factor for non productive time set by a panel of experts; 1.195 is the multiplication factor for social benefits set from the Ministry of Social Affairs data for 79-80. Similar formulas have been derived for physical therapy, occupational therapy and social services⁹.

In NH, the gap of nursing resources represented 56% of the global resources gap while in SNF that percentage fell to 16%.

NH and SNF data were combined taking into account the relative numbers of clients in each type of institutions in 1980: NH: 62% - SNF: 38%. Results are reported in the last section of Table 3. It is shown that to fill a gap of 13% in nursing resources or a gap of about 90% in physical therapy, occupational therapy and social services taken together, would cost about the same: 0.38 versus 0.44 hours/client day.

⁹ Boyle, P., and Sicotte, C.: Application du ..., a.a.O.

These findings therefore called for a development of human resources guided by two priorities: NH on the one hand and physical therapy, occupational therapy and social resources on the other hand. The Ministry of Social Affairs was successful in obtaining the funds to bridge 60% of the 0.817 paid hours/client-day gap. Most of that money went to NH but due, to a lack of available manpower in the social and rehabilitation fields, unfortunately the funds were used mainly to reduce the least important gap, that in nursing care.

C. Excessive Institutionalization; Implications for Strategic Planning

This operation also allowed to check if the required programs and the required numbers of beds in these programs were available and if the resources were properly used.

The analysis of the levels of required care in each program led us to postulate that the persons requiring nursing care level 0 or 1 did not require an institutional program, regardless of the level of care required in rehabilitation, supervision and material organization. This was also the case for persons requiring nursing care level 2 and not requiring any supervision. These two groups represented 46.3% of the NH and 14.1% of the SNF population. Taking into account the proportions of NH (62%) and SNF (38%) beds, this is equivalent to assume that 34% of all institutionalized persons in Québec do not require that type of program.

In order to check the predictive validity of these criteria, multidisciplinary teams were asked, at the same time as determining the service requirements for the clients, to identify, from a subsample of 473 clients, those that could be cared for by an intermediary program or at home. The results were that 14.66% of SNF clients and 34.7% of NH clients should be cared outside these institutions and the above criteria were met in 83% of these cases. In other words the percentage of false positive and false negative was only 17% which led us to conclude that the proposed criteria were acceptable as screening tools.

A third study conducted internally by the Ministry of Social Affairs led to the same conclusion as to the percentage of clients misplaced in NH and SNF.

Most of these persons though will remain where they are. However, the resources utilization control which has been implemented (see section 6) theoretically guarantees that, in the future, clientele having the same profile will no longer be admitted to NH or SNF. These clients occupy about 13,000 NH or SNF beds¹⁰. It was now a matter of checking to see if persons now at home needed these beds. A second study was undertaken using a stratified random sample of 650 elderly persons living at home. The results indicated that 3.1% required care that justified their admission to a NH or a SNF but that only 0.4% needed to be admitted since the remainder (2.7%) could be cared for by the family. At the provincial level, this figure (0.4%) represents a demand of about 2200 beds which is nowhere near

¹⁰ Boyle, P., and Sicotte, C.: Application du ..., a.a.O.

the 13,000 improperly used beds. A third study¹¹, based on a sample of 100 elderly persons having requested housing in NH, indicated that only 7% required such housing. This figure must be interpreted with caution though given the size of the sample. Nevertheless, it is much lower than the previous figure of 2,200. Considering the length of the waiting lists, it corresponds to approximately 600 beds for the whole of the province, requested by eligible clients waiting to be accommodated.

These studies therefore indicate that there are actually too many NH and SNF beds and that, even considering the increasing number of elderly persons, the existing beds would be sufficient for at least the next fifteen years, as long as measures are taken to improve the functional aspect of these facilities and the equipment in some of the older or badly conceived facilities which are not ready to accommodate the eligible clientele according to the new admission criteria.

Given the virtual non-existence of intermediary resources and the under-development of home care and services, it was impossible, at least in the short term, to disinstitutionalize a large portion of the 13,000 non-eligible NH and SNF clients. These clients did have, after all, important needs and they could not be discharged without a support network. Four years later, this network is still at the early development stage.

D. Overlapping of Clientele; Implications for the Definition of Programs Vocation

The assessment protocol applied to 1,500 NH and SNF clients was also designed to deal with the question of the specificity of the respective clientele of the two types of facilities. The study showed that the average SNF client requires a higher level of care than the NH client (Table 1), that the clientele of the two types of facilities are greatly diversified and that there is a significant overlapping of clientele. Table 4 illustrates this non-specificity on the basis of two of the variables that were used to define the programs: TNC (total nursing care) and REHAB (rehabilitation). For each cell, the table gives the cumulative % of NH clients and SNF clients belonging to this cell as well as the indicator of overlapping of these clientele. This indicator is listed and calculated as follows:

if % of NH > of SNF, then indicator \bar{x} = % NH/% SNF

if % of SNF > % of NH, then indicator \bar{x} = % SNF/% NH

The closer \bar{x} or \bar{y} is to 1 in a cell, the greater is the overlap between NH and SNF clientele. As we can see in Table 4, there is considerable overlapping at levels of nursing care 2, 3 and 4. One could argue that these clientele although similar as

long as the quantity of nursing care they require is concerned, are different when one considers their profiles of nursing needs. This assumption was also checked and had to be rejected.

Table 4 Non-Specificity of NH and SNF Clientele

| NH cumulative % SNF cumulative % Indicator of overlapping | REHAB | | | | Total |
|--|--------------|--------------|--------------|--------------|----------------|
| | 0 | 1 | 2 | 3 | |
| TNC = 0, 1 | 23.9 3.9 | 4.0 1.0 | 5.9 1.0 | 1.9 0.4 | 35.6 6.4 |
| | <u>6.1</u> | <u>4.0</u> | <u>5.9</u> | <u>4.75</u> | <u>5.6</u> |
| 2 | 14.2 4.0 | 5.2 2.3 | 5.1 3.9 | 2.7 3.4 | 27.1 13.6 |
| | <u>3.5</u> | <u>2.3</u> | <u>1.3</u> | <u>1.3</u> | <u>2.0</u> |
| 3 | 5.5 4.3 | 3.1 2.5 | 1.9 3.4 | 2.5 4.2 | 13.0 14.3 |
| | <u>1.3</u> | <u>1.2</u> | <u>1.8</u> | <u>1.7</u> | <u>1.1</u> |
| 4 | 2.7 4.2 | 1.2 1.8 | 0.9 1.7 | 2.4 7.0 | 7.2 14.7 |
| | <u>1.6</u> | <u>1.5</u> | <u>1.9</u> | <u>2.9</u> | <u>2.0</u> |
| 5 | 3.5 6.8 | 0.9 2.6 | 0.8 2.9 | 1.1 5.2 | 6.3 17.4 |
| | <u>1.9</u> | <u>2.9</u> | <u>3.6</u> | <u>4.7</u> | <u>2.8</u> |
| 6 | 3.8 11.0 | 0.7 2.3 | 0.7 2.2 | 1.2 3.0 | 6.1 18.6 |
| | <u>3.0</u> | <u>3.3</u> | <u>3.1</u> | <u>2.5</u> | <u>3.0</u> |
| 7 | 2.8 9.1 | 0.1 0.8 | 1.3 3.4 | 0.4 1.8 | 4.7 15.1 |
| | <u>3.2</u> | <u>8.0</u> | <u>2.6</u> | <u>4.5</u> | <u>3.2</u> |
| Total | 56.1 43.2 | 15.2 13.4 | 16.6 18.4 | 12.1 24.9 | 100.0 100.0 |
| | <u>1.3</u> | <u>1.1</u> | <u>1.1</u> | <u>2.1</u> | |

¹¹ Pelletier, J., Boudreau, R., and Tilquin, C.: Evaluation des besoins de deux clientèles âgées sur le territoire du département de santé communautaire de Rivière-du-Loup. In: Proceedings of SYSTED 83. International Conference on Systems Science in Health and Social Services for the Elderly. Montreal, 1983. Montreal 1985, pp. 853-858.

E. Conclusion

All this data enabled the rethinking of programming and planning of the long-term institutional care system for the elderly. There still remains much to be done and it will depend on the one hand, on the existence of a political will (to resist the pressures for the development of institutional resources to the detriment of intermediary and home care resources) and in the others, on the system's capacity to use all the data produced by the resources utilization review procedure (certification and recertification) that was set up. At the present time, a coherent information system, capable of using this data for planning and programming does not exist.

VIII. Budgeting

As we have just seen, the study results have shown an improper use of existing resources and an absence of needed resources. Under these circumstances, the budgeting of organizations according to the clientele that should be accommodated in virtue of the new admission criteria is more of a theoretical exercise and potentially as harmful (as much from the viewpoint of the quality of services as from that of the appropriate utilization of resources) as the "traditional" practice of budgeting the organizations on the basis of a virtually fixed daily rate for each type of program (for example, \$ 40/client-day for NH and \$ 120/client-day for SNF).

In the present context, the only possible solution seems to be that of budgeting the organizations according to the actual levels of care required by the clientele. Using a simplified assessment process (but one congruent to that described in section IV), one measured the level of professional and lay nursing care required by the totality of NH and SNF clients in Québec. The assessment process will later be extended to intermediary and home care resources and to social service, physical and occupational therapy services. One began by measuring the levels of nursing care since, as we have seen, these correspond to 87% (1.33/1.53 hours - see Table 1) of the required hours of care in NH and 90% (2.68/2.98) in SNF. 20280 clients in 286 facilities (NH and SNF) have already been assessed. Table 5 outlines the results by socio-sanitary region and type of facility. The unit of observation is then the institution. They are classified according to the amount of nursing care (hours of care/day) required by the average client. Thus, in region four for example, one finds 9 NH with a total of 563 clients whose average hours of care/day lies between 1.5 and 2.0 hours. The last column of Table 5 also gives the average amount of care per NH and SNF client for each region as well as the number of clients used to calculate this average.

Table 5 shows the important variations in amounts of care between facilities, for both NH and SNF, and the overlapping of clienteles existing in the two types of facilities. No data exists enabling us to set up a similar table regarding the budgets available for these facilities. However, the fragmentary data that we do possess, indicates that the relation is very weak between budgeted and required hours of care.

Table 5 Number of Facilities and (Total Number of Clients) in the Different Ranges of Levels of Care by Region and Type of Facility

| Region | Type | 0-0.5 | 0.5-1.0 | 1.0-1.5 | 1.5-2.0 | 2.0-2.5 | 2.5-3.0 | 3.0-3.5 | 3.5-4.0 | 4.0-+ | Net Hours of care/day (no. of clients) |
|--------|------|------------|---------------|---------------|------------|------------|------------|------------|-----------|-------|--|
| 1 | NH | | 6 (274) | 4 (510) | 3 (170) | | | | | | 1.2 (954) |
| | SNF | | 1 (4) | | 1 (3) | 3 (329) | 6 (227) | 3 (24) | 1 (62) | | 2.6 (649) |
| 2 | NH | 3 (108) | 13 (834) | 3 (167) | | | | | | | 0.8 (909) |
| | SN | | | | 3 (382) | 1 (30) | 4 (197) | | | | 2.2 (605) |
| 3 | NH | 1 (58) | 13 (775) | 11 (759) | 4 (370) | 1 (74) | | | | | 1.7 (2 036) |
| | SN | | | | 1 (291) | 4 (349) | 9 (408) | | | | 2.8 (1 048) |
| 4 | NH | 2 (22) | 4 (361) | 9 (563) | | | | | | | 1.6 (1 149) |
| | SNF | | | | | | 3 (87) | 6 (478) | 1 (20) | | 3.3 (585) |
| 5 | NH | 4 (324) | 20 (1 358) | 18 (1 162) | 6 (403) | 2 (330) | | | | | 1.6 (4 077) |
| | SNF | | | | 1 (145) | 8 (521) | 4 (528) | 2 (139) | 1 (73) | | 3.1 (1 406) |

Table 5 (continued)

| Region | Type | 0-0.5 | 0.5-1.0 | 1.0-1.5 | 1.5-2.0 | 2.0-2.5 | 2.5-3.0 | 3.0-3.5 | 3.5-4.0 | 4.0-+ | Net Hours of care/day (no. of clients) | |
|--------|-------|------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------|-----------|--|----------|
| 6 | NH | | 2 (72) | 8 (901) | 17 (1 269) | 14 (1 189) | 2 (193) | 1 (24) | | | 1.9 (3 648) | |
| | SNF | | | | 1 (35) | 1 (70) | 8 (832) | 5 (240) | 6 (286) | | 3.0 (1 463) | |
| 7 | NH | | 6 (341) | 5 (594) | 1 (47) | | | | | | 1.6 (982) | |
| | SNF | | | | 1 (7) | 3 (222) | 4 (285) | | | | 2.9 (514) | |
| 8 | NH | | 5 (154) | 2 (97) | | | | | | | 0.8 (251) | |
| | Total | 3 (108) | 33 (1 538) | 60 (4 510) | 63 (5 017) | 29 (2 212) | 5 (597) | 1 (24) | | | | (14 006) |
| ALL | SNF | 1 (4) | | | 6 (427) | 7 (865) | 36 (2 435) | 31 (1 963) | 10 (507) | 1 (73) | | (6 274) |
| | | 3 (108) | 34 (1 542) | 60 (4 510) | 69 (5 444) | 36 (3 077) | 41 (3 032) | 32 (1 987) | 10 (507) | 1 (73) | | (20 280) |

Budget readjustments according to amounts of care actually required have been going on for a year. The reassessment of clientele has now begun. In the future, a periodical reassessment should take place at least once a year and budgets allotted accordingly.

IX. Conclusion and Extensions

We have here described the main results of an action-study begun in 1976 which can be summed up as follows:

- o conception and development of a needs assessment system based on the concept of autonomy – services – resources – programs – organizations;
- o application of this system in a system of resources utilization review (certification and recertification). The system is presently applied in 75% of cases of long-term hospitalization and sheltering requests. All cases should be included by the end of 1985 as the system has been chosen (not imposed) in 1984 by the Ministry of Social Affairs of Québec which partially supports its utilization costs.
- o the utilization of the system in studies which were mainly used in planning/programming/budgeting institutional resources. The main results were: 1) a change of emphasis in the development of these resources, the emphasis now being placed on intensive rather than extensive development (that is, to admit more demanding clients rather than admitting more clients); 2) a flexible and dynamic budgeting according to the actual needs of the clientele.

The next stages of the study will deal more specifically with the intermediary and home care programs and with the establishment of a true management information system that will integrate the data provided by the certification/recertification process and the data describing the system's everyday operations in order to feed the planning/programming process at the national, regional and sub-regional level. The P.P.B. and utilization problems diagnosed in the long-term care and services system for the elderly seem not to be proper to that specific system. The same problems are also prevalent in Québec in the field of mental health services and the field of services for psycho-socially disabled children (like children 6–18 years needing protection, exhibiting behavioral problems, delinquents, ...). Numerous studies have documented these facts.

We were asked by the Ministry of Social Affairs of Québec to examine the feasibility of realizing for the area of mental health a system similar to the system presented in this paper. Our study¹² concluded to the feasibility and the necessity of developing such a system. The Ministry has not yet taken any formal step in that direction.

Research is much more advanced in the area of services for psycho-socially disabled children. For the last two years, we have worked on the development and validation of children and families needs assessment tools and protocols along the concepts of adaptation – services – resources – programs. We expect to complete that first part of the research by the end of 1985 and then to start next year to use the system for P.P.B. and utilization control.

Professionals, administrators, associations of institutions and policy makers have been involved in the development of the system since the start and seem to be very interested. It is nevertheless still too early to predict what could be their reactions to results shown by the application of the system.

¹² Pelletier, J., Boudreau, R., and Tilquin, C.: Evaluation . . . , s.a.O.