

ENITH - ISRAEL



**The Use of Client Information
Systems in Israel**

Jerusalem

September, 1994

European Network
For Information Technology
And Human Services

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**The Use of Client Information
Systems in Israel**

by
Jan Steyaert
University of Antwerp

Published by
the

**Ministry of Labour
and Social Affairs**

Division of Research,
Planning and Training

with the cooperation of the
Department of International Relations

Jerusalem

September, 1994

**EUROPEAN NETWORK
FOR INFORMATION TECHNOLOGY
AND HUMAN SERVICES
ENITH**

Objectives of ENITH

1. To exchange and to promote the exchange of ideas, projects (successes or failures), problems and solutions, information and networking, descriptions of products and half-products in the field of information technology and Human/Social services.
In this way to maximize European resources and to emphasize the human issues and considerations in developing and applying Information Technology.
2. To (help) organize events, courses, congresses, seminars, training (models) regarding this subject.
3. To help develop a skillsbank (a databank of people with special skills regarding this subject) and a software directory.
4. To promote and facilitate research and evaluations (quality-labels) regarding IT-projects and IT-products (software).
5. To facilitate the development of Information Technology within each country, respecting national differences, and to 'energize' countries who are lagging behind, for instance by organizing in those countries a sort of mobile see-and-learn manifestation.
6. To provide possibilities to access a lot of material in an easy-to-use and systematic way, also for people with a different mother-tongue.
7. To use all available media, including paper (newsletter), correspondence (phone letters) and face-to-face meetings, as well as electronic networks.
8. To register ongoing activities, projects, etc. in this field.

INTRODUCTION

ENITH-ISRAEL was established in order to promote the exchange of information and know-how on the use of information technology (IT) within the human services. ENITH-ISRAEL members include representatives from government, universities, voluntary organizations and research and policy institutions who are interested in the uses of IT in the human services. ENITH-ISRAEL meet periodically to discuss and implement programs which fulfill the goals of ENITH.

The Use of Client Information Systems in Israel is the third of a series of publications regarding the use of information technology in the human services in Israel. The first publication, **Information Technology in the Social Service Departments in Israel**, appeared in January 1991. The second publication **Computer Technology for Children with Handicaps**, appeared in 1992. The goal of this publication is to describe the main developments in the use of client information systems in the personal social services in Israel and their possible relevance for personal social services in other countries.

The author of this publication Mr. Jan Steyaert is a sociologist and researcher at the department of political and social sciences of the University of Antwerp. Currently he is also secretary of ENITH (European Network for Information Technology in Human Services) and board member of HUSITA (Human Service Information Technology Applications). He has researched the use of IT for the Human Services and currently focuses on client information systems and comparative social welfare statistics.

The publication begins with a brief description of the structure of the Israeli social welfare system. Mr. Steyaert then presents a case study of four client information systems. The first case study concerns the development of a nation-wide information system for the social work departments of Israeli hospitals. This project was carried out by Ms. Miriam Cohen of the JDC-Brookdale Institute

and Dr. Gail Auslander. The second case study describes an information system for Israeli foster care agencies developed by Dr. Rami Benbenishty of the Hebrew University School of Social Work. The third case study is a presentation of a client information system being developed for Israeli rehabilitation centers. The last case study describes a decision support system for resource allocation in the Israeli Ministry of Labour and Social Affairs.

I would like to thank Mr. Jan Steyaert for his initiative in preparing this publication and for making the results of his research available to ENITH-ISRAEL and to the Belgian Friends of Hebrew University for providing Mr. Steyaert with a grant which made his research possible.

Yitzhak Berman

Director
 Department of Planning and Social Analysis
 Ministry of Labour and Social Affairs
 Jerusalem

INTRODUCTION

The aim of this text is to describe some of the main developments in the use of client information systems in the Israeli personal social services and their possible relevance for personal social services in other countries. This overview is based on the numerous publications by different Israeli authors on these information systems and on a number of interviews during the spring of 1994.

The concept of client information systems refers to any systematic gathering, processing and use of information about clients, treatments and outcomes. It can be oriented towards the practitioner, the managers or policy-makers. Although most of the case studies in this text involve computerized client information systems, it was not the intention to focus on technology as much as on functionality.

In the first part of the text, the historical background and the present structure of the Israeli social welfare system is described, in order to provide the context for the other information in this text. The second part provides four case studies, each one of them involving a specific use of CIS that is in some way (within Israel or compared to other countries) innovative. These case studies include the hospital social work departments, the foster care agencies, the rehabilitation centres and the Ministry of labour and Social Affairs. In the final section, the findings are discussed and the relevance of some of the developments for other countries outlined.

BACKGROUND: THE ISRAELI SOCIAL WELFARE SYSTEM

Israel has a large government based social welfare infrastructure, depending on the National Insurance Institute for services in cash and the local authorities social service departments for services in kind. Since 1977, however, the social welfare system in Israel has seen many changes. The seventies were characterized both by a changing coalition government and a declining economy and high inflation. Both elements caused Israel to look into some of the basic characteristics of the

existing social welfare structure. Two issues dominate the political debate at this time: the future organisation of health care and the privatisation of social services.

The link between the main health care actor (Kupat Holim Clalit) and the Federation of Labour Unions (Histadrut) and the resulting selective access to these services is under fierce discussion, due to a significant shift in membership characteristics of the Histadrut and the resulting economic situation of the Histadrut. Many young and healthy persons have joined other sick funds, thus leaving the Histadrut with a membership with less economical strength but higher health care consumption. Political debate now focuses on separating the Histadrut and its health care, the Kupat Holim, thus making the latter universally accessible and paid for by the government. This would, however, further weaken the membership base of the Histadrut. The new National Health Law enabling this separation passed Knesset on 15th of June 1994, creating a health tax of 4.8 % and free choice between sick funds. Sick funds would no longer be able to refuse to accept persons who wish to join. This is likely to weaken the Kupat Holim that tended to be selective regarding the health conditions of new members. It would also allow older and sick members of the Kupat Holim Clalit (Histadrut) to leave this sick fund. During the last weeks of the discussions on the bill, however, it became linked to another bill that establishes a union tax of 0.8 % on all incomes, even for those who are not members of a union (paragraph 71). The implementation of the National Health Law became conditional on the passing of this union tax, thus securing and probably improving the economic base of the Histadrut.

The privatisation of the social services calls for a separation of the function of service purchaser and service provider, such as is happening in other European countries, notably in Britain (Community Care Act). However, current debate goes well beyond this point and involves the transfer of service provision to for-profit agencies. This has already occurred with the home care services for the elderly under the long-term care insurance law that passed the Knesset in April 1986 and became fully operational in April 1988. Under the

pressure of a growing percentage of very old persons (75 years and more) and a shift in professional standards, this law was enacted in order to expand the existing community care for the aged and stabilize the use of the more expensive residential care. The services for the approximately ten thousand elderly dependent persons organized by the local authorities and largely provided by Kupat Holim Clalit were transferred to a wide range of private organisations, most of them for-profit. The assessment of need is made by a team consisting of a representative of the local social service department, the National Insurance Institute and the Ministry of Health, and that team makes the decision on what care is needed and which private agency will provide it. There is no direct cash transfer to the client, nor any 'market-behaviour' by him or her. This transfer and its de-stigmatising effect, together with out-reach activities, more than doubled the number of recipients of home care.

The other aspect of the privatization process is the transfer of service provision by the local authorities to non-profit agencies, often organized by the same local authorities. The advantage for the local authorities lies in more flexibility and avoiding tenure contracts with the employees of these agencies.

These developments illustrate a gradual change from the values of state responsibility for welfare towards values associated with neo-conservatism or new right (Karger & Monnickendam, 1992, Doron & Karger, 1993). This also shows from the tightening of the unemployment benefits regulation. The feasibility and benefits of the privatization process and its transformations are, however, not supported by everyone (Doron & Karger, 1993).

The local authorities' social services departments, together with some services provided directly by the Ministry of Labour and Social Affairs, and the increasing number of private organisations constitute the basis of present-day Israeli social work. The services organized directly by the Ministry include probation services, residential care for the mentally handicapped and services for juvenile offenders and delinquent youth. The

services of the local social services departments include services for children and youth, services for the retarded, services for the aged (long-term care being organized by the Ministry of Health), rehabilitation services and general community services and social services departments activities. These social services departments are organised by the local authorities, but are financed for seventy-five percent by the Ministry of Labour and Social Affairs. This Ministry has also an extensive regulatory influence on the local services. As these social services departments are still organized under the principle of local responsibility, there is a considerable variety as to the kinds of services offered in each locality. The departments total budget showed a significant rise during the seventies (from 86 Million NIS to 210 Million in 1980) but has declined slightly since (Kop, 1990). This decline is compensated for by a sharp increase of cash benefits during the same period, although there is no institutional link between the two developments.

The present day thus is characterized by three main 'systems' in social welfare. There is the Histadrut, organizing a major part of the health care and day care on a labour-affiliated basis (although less so than in the past), the National Insurance Institute organizing the social security and most of the cash benefits and the local social services departments organizing a whole range of different social services. Apart from these three main actors, there is a whole myriad of small organisations that are funded by the Diaspora. Although they belong to the Israeli social welfare system, they are in no way coordinated or part of the governmental social policy of Israel.

THE USE OF CLIENT INFORMATION SYSTEMS, FOUR CASE STUDIES

Both internationally and within Israel, the need for client information systems is both an old and new issue. It is old in the sense that from the beginning of the welfare services, practitioners have gathered and processed data on their clients in order to provide managers and policy makers with information. Client information systems have been

brought into focus again because they are part of the accountability issue of welfare services and the availability of new information technology appears to be able to help overcome some of the previous limitations. As outlined in the introduction, we do not wish to focus specifically on the use of the technology in these client information systems. However important this may be, our interest goes mostly towards the way information and data are gathered, processed and used by different actors in welfare services. These actors include the practitioners, managers and policy makers.

Hospital Social Work

The first case study to be reported here concerns the development and implementation of a nation-wide information system for the social work departments of the Israeli hospitals. It was organized by the three main actors in health care, the Ministry of Health, the Kupat Holim of the Histadrut and the Hadassah Medical Organisation. These organisations own 97% of the country's general care beds. The project was carried out by the JDC-Brookdale institute. The results have been reported in several publications (Auslander & Cohen, 1992, 1993, 1995 and Cohen & Auslander, 1995). After an initial development phase with pilot projects, the information system has now been purchased by nearly all Israeli hospital social work departments.

The **scope** of the project is the development and implementation of a country-wide information system for social work departments in general hospitals in Israel. In its full coverage, this includes 28 hospitals and about 500 social workers. Information is to be gathered in all social work departments by all social workers on all clients. As one of the main objectives of the information system is to become a clinical tool, no methods of sampling are being used, nor considered. Integration with information gathered from other sources is, however, being considered, specifically from hospital records, insurance records and patient surveys (Auslander & Cohen, 1993).

The **aims** of the information system are to provide relevant information to all levels concerned with

hospital social work, being the service providers, the supervisors and the local and national management. However, there is a strong focus in principal on quality assurance, rather than on decision support.

The procedures used in this client information system require social workers to record all their interactions with clients/patients on paper-based recording forms (providing a paper copy for their own file and a carbon copy for data entry) or directly onto the computer. While these forms were intended to replace all existing case records, their adoption for that purpose has been limited. Total integration would involve a more advanced and comprehensive use of information technology and a higher ratio of computers/social workers, which goes well beyond the aims of this project. However, the system goes beyond a mere recording of quantitative information on clients by including names and addresses of clients and allowing some information to be entered in free-text format. The forms are assembled and processed by using a uniform computer program run on microcomputers at the local hospital social work departments (Cohen & Auslander, 1995). This was developed in Magic, an Israeli data base program. It allows data-entry, printing of case reports, a set of pre-defined frequency distributions and extensive queries. Users can also include information on up to four 'free' variables, thus allowing for information entry and analysis on items particular to certain hospitals (e.g. data on Bedouin clients in the southern city of Beersheba). Finally, users will be able to decide on elaboration of some of the classifications used to make them more precise and valuable for clinical use. As most of the hospital social work is limited to the client/patient's stay in the hospital and therefore short-term, there are no considerable time gaps between the actual provision of the services and the entry of the data. This avoids a major cause of unreliability existing within other social services.

The information gathered centres around a few major issues (Auslander & Cohen, 1992) :

- Who are the clients being served?
- What are the psychosocial problems dealt with?

- What is the extent and nature of the care provided?
- How do clients reach social workers and to which agencies are they referred?
- What is the status of the client at discharge?
- What are the extents and reasons for discharge delays?

This implies data are gathered on clients (socio-demographics, medical and psychosocial), on hospitalization, on psychosocial care and on discharge and community care. When developing classifications for the variables, the efforts of other client information systems for hospital social work, mainly from U.S.A., were taken into account. These include the HSWIS, ASSIST and SWDB systems. At the present, the information gathered is mainly analyzed locally. However, as more hospitals begin to fully utilize the system, centralising the data and national analysis becomes possible. This would allow social work departments' and social workers' profiles to be generated in the near future. This kind of information would generate reference points, 'mirrors', that could be used by social work departments and individual social workers to compare their own profile with that of other departments of colleagues. The issue of whether this kind of profile-information should be anonymous or not has not yet been discussed, but will certainly be on the agenda in the coming months.

The output of this information system is two-layered (Auslander & Cohen, 1992). At first, reports with frequency distributions on the major items are provided. These reports not only provide important information themselves, but also are an important incentive to request additional data analysis and reports, which can then be provided. This two-layered strategy specifically aims to avoid an overwhelming stream of data beyond the capacity of the users. A second intriguing aspect of the hospital social work information system is the introduction of protocols for data use. Assuming the capability of users at service level to use the provided information to be rather limited, guidelines were drafted containing the selected issues being addressed, the data needed to answer them, the data analysis needed to get the

necessary information and the plausible responses on the service or managerial level (Auslander & Cohen, 1992). This issue is related to the quality assurance aim of the system, described hereafter.

Apart from the scope, procedures, information and output of this information systems, two items are important to note: the way the system is used for quality assurance and the way the issue of data reliability is addressed.

The issue of **quality assurance** is central to the development of the hospital social work information system and involves both the development and setting of professional standards for practice and monitoring and assessing them by using thresholds (Auslander & Cohen, 1993). These standards and their assessment are situated on three different levels, being the structural level, the level of processes and the level of outcomes. On each of these levels, the quality of (hospital) social work needs to be guaranteed in order to accomplish an acceptable overall quality level.

The development and implementation of the information system makes the assessment of professional standards possible. On the structural level, one such standard guarantees a social worker involvement in the hospital abortion committees. The information system can match cases where abortion is an issue against the actual social worker involvement in these committees, thus guaranteeing that the structural standard has been followed. On the level of processes, one standard requires the social worker to notify the child welfare officer of the local authority in case of suspected child abuse. Again, the information system can match the cases with suspected child abuse against those actually notified and issue a warning if this was not done. This warning can then either lead to a notification of the case, re-assessment of the diagnosis or correction of the administrative data. On the level of outcomes, the information system can generate reports on delays in discharge from hospital and provide further information if this becomes a substantial issue. The development of not yet existing professional standards also becomes possible because of the information system. On the structural level, the information system can e.g. illustrate the wide

variety of case loads among social workers and provide information on whether this variety is or is not linked to population characteristics or provided services. On the level of processes, a report can be generated on the timelines being involved and the amount of time social workers allow before making their first contact with patients. Again, the dissimilarity between social workers can be the ground for further data analysis and the development of standards. On the level of outcomes, e.g. information on needed aftercare services and the waiting lists for them can provide vital data for the development of standards on whom to assign which type of aftercare service.

The **reliability of data** from social work information systems is also an important issue, receiving some attention in the international literature. The importance of reliability was first clearly stated by J. Harrod (1987) when she presented her findings of a comparison between the data in clients files and the same data in the information systems. The differences were astonishing and alarming as much research and policy is based on data from information systems. In other more recent research, these findings were confirmed (Barnes, 1993, 1994).

The issue of reliability was addressed during the development and implementation of the hospital social work systems (Auslander & Cohen, 1995). During development, reliability was a core issue when designing the taxonomies of categories for the variables. Categories had to be exhaustive and mutually exclusive in order to cover all possible occurrences beyond doubt. To improve reliability at this stage, relatively gross categories were preferred to more detailed lists. This limited the relevance of the data for clinical usage, but was mainly seen as a temporarily phase. Furthermore, clear guidelines were defined regarding the different levels of reliability in identifying clients to be reported on, in reporting on variables with high face validity and variables with lower face validity. These guidelines included operational definitions, examples to be included as well as examples to be excluded. The reliability of the information system was tested by using 'case vignettes' and group discussion on different recordings of the data. Reliability

regarding case reporting proved to be between sixty-five and eighty percent, reliability on items with high face validity between seventy and one-hundred percent and on those with low face validity between forty-three and eighty-one percent for full details, see Auslander & Cohen, 1995)

Foster care

The information system for the Israeli foster care agencies resulted from the work done by Rami Benbenishty of the Hebrew University. It originated from a series of studies on the monitoring of interventions at the agency level, developed into a comprehensive information system for the foster care agencies in Israel and was further developed into the 'Integrated Information Systems' approach when applied to foster care agencies in Michigan, U.S.A.

The basic ideas and assumptions in the work for the Israeli foster care agencies can be traced back to a series of research projects in assessing and monitoring interventions within the Young Families Project of the social services departments in Jerusalem at the end of the eighties. Results and details of this research have been extensively reported (Benbenishty, 1988, 1989-a, 1991 and Benbenishty, Ben-Zaken & Yekel, 1991). Initial data for this study were gathered during 1986-1987 and expanded during the following years. The study aimed to assess the effect of different treatments given to young families that came to the social services departments with a range of problems, including financial difficulties, health problems (or the effect of), marital difficulties and problems with children. In order to deal with these families, the service providers selected a task-centred approach that emphasized change behaviours rather than improving insights and coping behaviour (Benbenishty, 1988). The treatment period was medium range, ranging from three to seven months, with a high rate of interactions between the service providers and the families.

In order to monitor and assess the effect of this approach, a research design was selected that could be incorporated within daily practice and did not call for additional research resources outside of

the agency, in order to gather the necessary data. The design combined elements of a single subject research and group approaches (Benbenishty, 1989a). Data were gathered on families under treatment some weeks after initial contact, at intervals of six weeks and at the termination of the treatment. In later replications of the first studies, follow-up data were gathered about nine months after treatment termination. Data gathering instruments included a socio-demographic questionnaire, intervention reports identifying ten basic techniques and their use on a scale of 1 to 5, two scales (the clinical rating scale and a goal attainment scale), the clients' perspective and full case reports. Across cases, a uniform single subject design was used. Although this urged weaker designs to be used (AB-design), it allowed for data aggregation at latter stages. These researches on monitoring clinical treatments already include at least three basic notions that can be found in latter applications. The first notion is that of incorporating research activities into daily practice, thereby not separating them from clinical work. The second notion is that of using a combination of single subject research and group research. The third notion is that of developing information systems that meet the needs of clinical professionals on the agency level, rather than the traditional focus on managerial or policy information. This notion also derives from the traditional approaches on the issue of 'learning from experience'. These approaches either focus on the creation of professional knowledge on an academic level, either done by research institutes of universities or professional organisations, or focus on the individual practitioner using single subject research methodology. In emphasizing the role of the agency, the notion of the 'learning organisation' rather than the learning profession or learning clinician is introduced. This study was replicated both within similar settings in Jerusalem (Benbenishty, Ben-Zaken & Yekel, 1991) and with adaptations in data gathering instruments in a different setting of child residential care in Michigan (Benbenishty, 1991).

The basic ideas from the described researches provided a starting base for the development of a clinical information system for foster care in

Israel (Benbenishty & Oyserman, 1991). The main aim of the development was to provide the professional social worker with an information tool that could be integrated in daily practice and make possible the monitoring of each case regarding clients' characteristics, interventions and outcomes. The system was to generate data for practitioners, supervisors, regional administrators and policy makers, although its main focus is on the front-line worker. The data gathering instruments included the historical background, the background to the current placement, information on the current situation, information on the foster parents, a report from the teacher, information on the biological parents and changes in placements. The unit of information gathering was the 'child in placement'. The system's output was situated both on the level of the individual child, providing necessary information for service provision, and on the aggregated level, providing information for management and policy uses. The information system was partly computerised but not on an agency level because of lack of equipment. Practitioners used paper-based forms that were mailed to a central processing unit and received output reports within days. These reports could be included in the client's file. The centralisation of data on individual clients allowed for aggregated analysis. Once beyond the experimental stage, the information system was taken over by the Ministry of Labour and Social Affairs and continued in all Israeli foster care agencies.

The experiences and results of both the earlier research and the development of the foster care information system have cumulated in the conceptual framework and methodology of the Integrated Information System, applied in the development of an information system for foster care agencies in Michigan. It accumulates and refines the approaches used in the previous information system developments. This integrated information system approach is, as a starting point, clinically oriented. It addresses the information needs of practitioners. These needs are situated on three levels, being monitoring, communication and learning from experience. Monitoring involves information on the current situation of the agency's work, thereby including information on clients, interventions and outcomes. Communication

involves the sharing of information with other agencies, e.g. during referral of clients. The learning from experience provides an empirical feedback loop on the agency's treatment programs and the matching of (sub)populations of clients with different interventions. As indicated earlier, this is situated on the agency's level, rather than on the level of the profession of the practitioner. The integrated information system approach integrated these three levels of information needs, as well as integrating the information needs of practitioners, managers and policy makers. The starting point is, however, the clinician. The rule is that 'if you want to harvest the fruits, you need to tend to the roots' (Benbenishty, 1994). No efficient and accurate data will be provided by an information system in a professional organisation if it does not take into account the needs and cost/benefit balance of the professionals. The software programme developed within this approach integrates the different functions of information gathering, storage, retrieval, processing and reporting. Each of these functions is extensively covered by the programme and integrated in daily practice. Assuming a high level of availability of computer hardware, it improves the cost/benefit balance for the practitioner by getting rid of some of the tedious paper work imposed on the agency by regulatory and funding organisations.

Rehabilitation Centre

Israel has about 18 rehabilitation centres, named **Keren**, providing vocational rehabilitation services for the mentally or physically disabled persons. Clients are referred to these centres by the National Insurance Institute, the Ministry of Absorption (new immigrants to the country) or the local authorities. The rehabilitation centres assess the capacities of clients, give the appropriate vocational training, try to find placements after the training and give up to six months of support during these placements. During training, clients receive some payments for the work being done. The length of treatment is between a few weeks up to one year. The total number of clients at any time is about 2,000 across the country.

The client information system currently being developed for the Israeli rehabilitation centres is supported by the Joint Distribution Committee of Israel, the Israeli Vocational Rehabilitation Fund, the Ministry of Labour and Social Affairs and the Hebrew University. System and software development and implementation is being tested as a pilot project in the rehabilitation centre of Ashkelon (on the Mediterranean coast) in close contact with the other centres. The features of the system and progress has been reported by Barak (1993, 1995) and Alon & Amara (1993).

The system, as it is conceptually developed, consists of five different modules. These are the social worker's module, evaluation module, workshop module, management module and the networking. Presently, the three first modules have been developed as prototypes. The management module awaits the development of the real database version of the first three modules and will provide the management of the rehabilitation centres with the necessary information to perform their planning activities, including statistical quantitative information about the clients, the interventions and the outcomes and data on an aggregated level. The networking module also needs to be developed in the near future and will enable access (consultation, updating,...) to the data from the different buildings of the rehabilitation centres. These include at least the social workers' offices, the evaluation department and the different workshops.

The existing prototype modules centre around the **social worker's module**. This gathers and structures all the information about clients from the initial intake until discharge. Information includes factual data, checklists, short descriptions and lengthy text reports. An important aspect of the checklists where the problem of the client is indicated is its graphical representation. One can not only indicate whether a problem is present or not, but also to what extend. This is easily done by pulling the graph with the mouse. In this way, one of the shortcomings of classifications in social work is avoided. The systems support a task-centred approach, by inducing a description of the problems, the desired ultimate and intermediate

outcomes, the interventions required and the time schedule within which these outcomes should be achieved. The information systems follows the client throughout the treatment process and requires follow-up data to be collected.

The **evaluation module** provides a tool to collect, process and analyze evaluation data about the client, again by using graphical presentation. The use of graphs makes it possible to grasp the client's problem profile very easy. Evaluation takes place during intake, but also at certain intervals between treatment and at discharge. A wide range of test batteries is available, allowing the testing of different skills for different tasks and jobs, such as calculating, proofreading, drafting, census interviewing, tile sorting and weighing. The test themselves are not necessarily done by use of the computer. The evaluation module is more an administration of text results.

The **workshop module** is aimed for use in the workshops, the actual treatment process. It provides a tool to make a good match between the tasks to be performed in the workshop and the treatment goals of individual clients, as well as monitor clients' progress during treatment. Throughout the three modules, reports can be generated by the information system. These reports can be used in the client's file and in the placement process with external organisations. Aggregated data are not yet available, as the management module is still under development.

Ministry of Labour and Social Affairs

As outlined in the section on the Israeli social welfare state, personal social services are organized by the local authorities through their social services departments. However, these services are largely paid for (75%) by the national Ministry of Labour and Social Affairs and highly regulated by this ministry. This ministry allocates staff and budgets to the approximately 200 local social services departments. In order to make these allocations, three information tools are being used, the basic data questionnaire and two decision support systems (Berman, 1989, 1993).

The **basic data questionnaire** is a registration of every client who has contact with the social services departments. Since the early seventies every client has been registered. At present, information is available on approximately nine percent of the total population of Israel. These data include information on the head of the family, the other members of the family as well data on the family itself. The information includes indicators of the family's problems and the level of functioning, in addition to identifying and demographic data. These data are gathered through the use of paper-based forms used by the local social services departments, although it is presently shifting towards an on-line system. The data are centralised and processed by the national office of the Ministry of Labour and Social Affairs. These basic data are not anonymous, as the national identification number of all persons is registered. This number is used on all administrative documents and by all public organisations. The information of the basic data questionnaire is expanded by a database of macrodata on all local municipalities, including 35 variables on different areas such as population, standards of living, social services, social deviance, community participation and employment data (Berman, 1993).

The first **decision support system** is used for the allocation of staff to local social services departments. This allocation is done centrally by the Ministry of Labour and Social Affairs since 1984. As there are less resources than needs, the allocation process is under considerable political pressure from different stakeholders. To prevent too much political and lobbying influence, a decision support system using objective parameters and procedures was developed. Two main parameters are being used: population size and community distress. This parameter in itself comprises seven different variables including the percentage of families with more than three children, the percentage of the population aged 65 and more, a ratio of dependence, the percentage of children up to 18 years in residential care, a ratio of criminality, the local tax percentage and the number of cars. For rural communities, the distance to the nearest city is also taken into account.

While developing this decision support system, three proposals with different data base and different implications on the resource allocation were formulated. The first proposal used the percentage of the population known to the local social service department as main parameter. This serves as an indicator for the need of social services in the municipalities. The second proposal used the average number of hours service provision to clients as its parameter. This indicates the severity of the need. Not every case has the same implications on budget and staff allocations. Therefore, a committee assigned a weight, an ideal-type number of hours service provision to categories of problem situations. By multiplying these weights with the number of clients faced with these problem situations, a parameter of the severity of need of social services could be calculated. The third proposal use the community distress parameters as its data base. Each of these proposals not only has a different data base, but also involves different policies towards the delivery of personal social services (Berman, 1991):

<u>Policy</u>	<u>Data base</u>	<u>Parameter</u>
Short-term interventions	% of the population known to the social service departments	Population that receives services
Intensive interventions, multi-problem families	Average number of hours of service provision per client	Severity of the problem situations
'Out-reach', target, public community based services	Community distress	Potential of social services departments

For the development of this decision support system, one could not choose objectively between the described proposals. Each of these different proposals with their distinguished data base has

proposals with their distinguished data base has substantially different implications on the allocations of the budget and advantages in certain areas over others. The correlation of the budget allocation under each of the proposals is relatively small, with the implication that selecting one of the parameters would make a substantial difference to local authorities, compared to using other parameters. These correlations were 0.07 between average number of hours service provision and percentage of population known to the social services departments, -0.25 between community distress and average number of hours of service provision and -0.59 between community distress and percentage of population known to the social services departments.

Berman (1992) gives an intriguing report on which regions defended which proposal, not so much as for its intellectual or social policy benefits as for their own benefits. The conclusion is that a decision support system never can nor should make comprehensive decisions, but room should be left for policy influence: "the DSS is not 'representing' an objective situation, and therefore is open to pressures of adjustment in a political/administrative process to mirror a 'reality,'" and "one needs to define a service delivery policy before the manpower allocation process is implemented".

The Ministry of Labour and Social Affairs not only allocated the staff to the local social services departments, but also some seventy-five percent of their annual budgets. The traditional allocation of these budgets was influenced by factors external to social policy, such as bigger local authorities being able to maintain a higher profile and therefore receiving a disproportional share of the budgets. For this reason, the allocation of the budget is now based on objective parameters. For each social service, three indicators are being used: population that possibly can make use of that service, population that actually used the service the previous year and a general poverty and social problem indicator. Each of these indicators gets a certain weight in the allocation process: 'through statistical analysis (a combination of multiple regression analysis and factor analysis), the

weights of the respective indicators and specific variables can be determined' (Berman, 1991, p. 26). A number of significant elements make this process of budget allocation not 100% bullet proof. Firstly, only ninety percent of the total budget is being allocated by use of these objective indicators. The other ten percent can be used discretionary by the director-general of the Ministry. This implies that not only objective data, but also political pressure can have its effect. Moreover, there is a certain flexibility for these influences in the determination of the weights of the different variables and indicators. Officially, these weights are determined by use of statistical techniques, but in reality other influences still have an effect as well.

This information systems for the Israeli social services departments is internationally a good example of how to decrease the sometimes idiosyncratic influence of politicians on allocation processes and increase the influence of objective rules and policy considerations. While the system has this substantial benefit on the national level, its strengths on the local level may be limited. At the moment, the system is not integrated in the daily work of agency directors or service providers, thereby reducing the usefulness of the data on the operational level. The local agencies have the function for data gathering and data entry. This is caused by the 'closed' questionnaire (no data of local interest can be included in the questionnaire or the software) and the limited output options of the software. This is specifically relevant as the questionnaire includes only data on clients characteristics and problem situations and does not include information on treatments or outcomes. The Ministry of Labour and Social Affairs does generate and distribute 'profiles' of the social service departments agencies which enables the social service departments to interpret one's own data. The local social service departments are encouraged to develop information systems for their own use.

CONCLUSION

The four information systems described above are definitely not the ones within the Israeli social welfare system. Numerous systems are being developed or used throughout the country in the different social agencies. One system specifically noteworthy is the mental health information system of the army. It consists of a recording structure for interventions and treatments given by the mental health services in the army. Information is gathered through a machine-readable coding form and used on the individual level by clinicians (mostly psychologists and psychiatrists) and on the aggregated level by supervisors and planners. However, because of its setting within the military forces, limited information is available and no visit was possible.

The aim of this report was to describe some of the main developments in the use of client information systems in the Israeli personal social services. Reviewing the available literature and extending this by using information from interviews and visits, we have described four case studies: hospital social work, foster care, rehabilitation centres and the planning application of the Ministry of Labour and Social Affairs. These systems are not the only ones in use in Israel, but they are the most important ones and provide good examples as to the main features and approaches of other systems. These four systems also contain numerous lessons for similar developments in parallel personal social services or other countries. Apart from the very apparent lesson and possible innovation in transferring the information systems to similar services in other countries (such as is perfectly possible for hospital social work and others), two main elements of the approaches deserve special mention here.

First, the heavy focus on the clinical integration of information systems is surprising and noteworthy. Most client information systems are initiated and supported by managers or policy makers, rather than practitioners. However, they thereby raise questions regarding the validity and reliability of the data being gathered and processed. The shift or enlargement of the focus of client information systems to incorporate the

information needs of practitioners is nowhere so prominent as in the Israeli cases and provides a starting point to overcome the difficulties of validity and reliability. This approach stresses the fact that no quality aggregated information can be attained without having the same quality on the disaggregated level. Or, as Rami Benbenishty puts it, in order to harvest the fruits (aggregated data = population level), you have to tend the roots (disaggregated data = client level).

The second important lesson to be learned from the Israeli cases is the relation between data and policy. Data can provide tools to objectify budget allocation processes, but only on the condition that policy processes have already identified the framework for service provision. However obvious this is after learning about the case of the Ministry of Labour and Social Affairs, one can almost daily see examples where the quest for accountability in social services induces the use of objective parameters, unfortunately without any framework whatsoever.

endnote 1

The research for this text was made possible by a grant from the Belgium Friends of the Hebrew University, spring 1994. The author wishes to thank the staff of the Paul Baerwald School of Social Work of the Hebrew University in Jerusalem for their great hospitality, especially Gail Auslander, Senior Lecturer.

endnote 2

Information was gathered through the existing publications and a series of interviews with the authors and developers/users of client information systems. These included, among others, Gail Auslander, Dorit Barak, Rami Benbenishty, Yitzhak Berman, Abraham Doron and Menachem Monnickendam.

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