

New Technology in the Human Services

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Human Services Computing in the Early 1990s

Disseminating Information: a Method for Practitioners

A Computer Program to Teach Coping

Community Care Information and Public Rights

Psych Systems Problem Management Program, Version 1.0

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**New Technology in the Human
Services,
CTI Centre for Human Services,
Department of Social Work
Studies,
University of Southampton,
Southampton, SO17 1BJ**

Tel: 0703 592779

Fax: 0703 592779

E-mail: CTIHums@Soton.ac.uk

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other projects in the field of
computing and Human
Services. Recent collaboration
has included the ENTER project
and partnership with
Bournemouth University on
development of TLTP materials.

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UP FRONT

This issue marks the end of an era for CTI centres in the UK and the launch of a new period of consolidation and growth. This note of optimism flows from the review of CTI centres by the Higher Education Funding Councils and by their recommendation that the funding arrangements should be established on a more stable and longer term basis. Until now, funding has been a source of anxiety and uncertainty, thereby restricting CTI centres from planning their work and development in a systematic manner.

This positive initiative on the part of HEFC, is paralleled by other developments in the field of Information Technology. The past five years have witnessed an increased interest in and use of computing in social services and related fields. This awareness could have snowballed had there been a similar growth in the development and availability of software applications which are relevant to teachers in the human services. While software developments in some subject areas have supported the development of the CTI initiatives, the scenario in human services has been rather patchy.

This is now hopefully being remedied by the funding of projects under the umbrella of the Teaching and Learning Programme (TLTP), albeit for much shorter time than desired. The CTI centre for Human Services is in partnership with Bournemouth University to develop TLTP materials for teachers which will be piloted in the coming year. The combination of these developments indicate that the next phase for CTI could be an exciting one in which interest in the field could grow at an exponential rate. Certainly, if the developments in use of

information technology within the agencies are any indication, a parallel growth can be expected.

This issue begins with an overview of the early 1990s in the field of IT in the human services. David Phillips reviews the publication of three major collections - a summary of the developments in Europe covered by ENITH (the European Network for Information Technology) and two collections of conference papers from the second and third international HUSITA (Human Service Information Technology Applications). The second paper describes an interesting project in the disseminating of information using the Hypertext Database. The project was commissioned by the Australian Government's Department of Health, Housing and Community Services and was conducted by the Department of Social Work and Social Policy within the University of Queensland. There are two reviews, one, by Fred Yates on his Computer Assisted Relapse Program (CARM) which was developed as a therapeutic tool to guide problem drinkers through a problem-solving procedure and provide access to a knowledge-base of coping strategies. The study described in the paper was situated in Plummer Court, Northern Regional Drug and Alcohol Service. The second review is from Derek Gordon of Northumberland Social Services, who reviews the Problem Management Program from Psych Systems 2000. Finally, Bryan Glastonbury raises philosophical and ethical issues in his paper on Community Care Information and Public Rights.

Suki Sitaram

Recession and Consolidation: Human Services Computing in the Early 1990s

David Phillips

1993 was a bumper year in the field of IT in the human services. It saw the publication of three major collections. The first is an overview of the situation in Europe coming from ENITH - the European Network for Information Technology in the Human Services. This provides a summary of the state of the art in 14 countries. The other two are collections of conference papers from the second and the third international HUSITA - Human Service Information Technology Applications - conferences which took place in 1991 and 1993. The HUSITA2 proceedings - *Technology in People Services* - fill a weighty 500 page volume which contains over 40 papers. The HUSITA3 organisers achieved the rare feat of publishing a collection of 24 key papers on the eve of the conference in June 1993. There is yet more to come because a whole volume of the international journal *Computers in Human Services* will be devoted to other papers from HUSITA3. But there is already enough to be going on with because these 80 or so papers between them cover around a half a million words and they epitomise the state of play in this constantly changing field.

Human Services and Information Technology: a European Perspective (ENITH)

(Edited by David Colombi, Jackie Rafferty and Jan Steyaert. 208pp. Paperback, published by ENITH, ISBN 0-854-32476-3, and available from the Centre for Human Services Technology, University of Southampton for £12 including postage.)

Although all three books are collections this volume has a tightly knit structure and thematic integrity which gives it more of a holistic feel than the necessarily fragmented nature of collections of conference papers. At a practical and information-disseminating level it is also the most satisfying of the three books. It does not reach the heights met in places in the other two but this is more than compensated by its consistent quality and overall clarity of purpose. The book is structured like a sandwich: two synoptic chapters form the bread, while the filling comprises 14 chapters on IT in human services in different western European countries. For a garnish there are two useful appendices - an introduction to networking and a brief overview of key publications in the field.

The book is worth buying just for the first and last chapter and the overview of literature. These taken together provide the best contemporary introduction to the subject. The introductory

chapter - "Human Services and IT" - is a *tour de force* in conceptual clarity. The first task in any cross national comparison is to define one's terms, and giving a continent-wide classification of human services is no mean feat. The editors then provide a general overview of the impact which IT has made on the human services, followed by a helpful introduction to the state of play in each of the following areas: information for citizens and service providers; employment and financial support; client / management information systems; client assessment and service provision; education, training and research; and other initiatives and future developments. Each chapter follows the same structure so that, for example a reader interested only in information systems could start off with that section in Chapter one to get a general overview and then go to the same section in each subsequent chapter to get a country by country view, right through to the final chapter where emerging trends are identified and discussed.

A similar reading strategy is the best bet for the non-specialist reader too. An excellent overview can be achieved by reading the whole of the first chapter, the first two general sections of each of the "country" chapters, and the whole of the last chapter. I can think of no better introduction than this to the study of IT in the human services.

However, and there is a real irony here, it is not easy to read the book straight through from cover to cover (I ended up following each section country by country rather than sequentially each country section by section). So, if it is read one way this is an excellent introduction for the lay reader; if read another way it enables the specialist to find out what is going on in their area, but it is not advisable to read straight through from cover to cover.

The HUSITA Papers

HUSITA is the dominant global force for dissemination and innovation in the field and its conferences offer a unique opportunity for innovators, practitioners, academic commentators and user groups to come together. The publication of papers from HUSITA1 in 1988 and 1989 was the first major international landmark in the field. The publication of material from HUSITA2 and HUSITA3, along with the ENITH volume, forms the second. While the basic purpose of the ENITH text was to survey the scene and summarise the state of the art, the HUSITA papers provide the leading edge of developments.

Human Welfare and Technology (HUSITA3)

(Edited by Bryan Glastonbury. 280pp. Paperback, published by Van Gorcum Publishers, POB 43, 9400 AA Assen, Netherlands, ISBN 90-232-2831-6, and priced at 59 Dutch guilders. Or available in North America from Books International Inc., POB 605, Herndon, VA 22070, USA at \$35 US).

It may seem perverse to deal with the HUSITA3 publication before HUSITA2. There is a good reason for this, though. The HUSITA3 volume is much slimmer and (from a reviewer's perspective) more manageable than its predecessor. It is also noteworthy that even though two years separate the conferences I got no impression of dramatic advances having taken place in the intervening period. As we will hear later, the recession may have something to do with this.

The underlying theme which dominated the

HUSITA3 conference was IT and the Quality of Life and Services. In the prologue to the book Glastonbury encapsulated the theme of the conference as "to explain and push forward the part IT can play in strengthening the lives of the global community ... in a way which is simultaneously helpful and without threat, life enhancing and not life controlling" (p. 1). His judgement of the prevailing mood in the early 1990s is of one much less buoyant than in the heady days of the mid 1980s - "we have been faced with a range of unexpected difficulties, some general, some specific, all inhibiting the anticipated development" (p. 1). He cites global politics, recession, ethical dilemmas, awareness of complexity and - perhaps most crucial of all to practitioners - IT failures as contributory causes. It is still the management information system and specialist programs like welfare benefits which are holding sway; the prototypes of the 1980s have yet to come to fruition.

Human Welfare and Technology is in three parts. The first - "Setting the Scene" - commences with two papers charting the historical development of IT in the human services, then moves on to the challenging and pervasive theme of the "two cultures" of computing and of social work, with particular reference to tensions emerging in the implementation of information systems and decision support systems. Part Two - "the Quality of Life" - falls into two distinct sections. The first contains three papers on broad issues of mutual aid, community computing and citizen empowerment, while in the second section issues of IT and disability are explored. It is in this area that IT has produced the most unequivocally positive - and often dramatic - results in enhancing quality of life and this area produced the largest number of HUSITA3 papers.

The final section, entitled "the Quality of Services", covers a wide range of areas, starting with discussions of problems associated with information systems and finishing with three papers on the importance of training in implementing IT.

Overall, this volume has a refreshing maturity. It

is a sober, unpretentious collection of papers giving a careful, measured overview of the situation in the early 1990s plus prospects for the next few years. My personal view is that the editorial contribution is possibly over pessimistic and I felt that the dark clouds of the recession dominated a little too much.

On the minus side there was considerable variability in the quality of contributions. I would have liked more editorial input and a larger number of sections. In particular the book would have benefited from the reader being given more guidance through the material in the third section, which ended up resembling a large collection of odds and ends. However, given that the volume was produced to an almost impossible schedule and that these were pre-conference papers, such criticism seems churlish.

For me there were 6 high spots, three papers from Part 2 and three from Part 3. The first was a welcome new article from Norman Smith and Floyd Bolitho who have previously written influentially on the nature of information. This time they have gone on a stage to the dissemination of information and its role in empowerment. They discuss dissemination at both the conceptual and practical level, and it was the practical level which caught my imagination. I was pleased to read about a software shell developed at the University of Minnesota called *Gopher* which will make electronic mail (email) much easier to use. As a regular - and regularly frustrated - user of email I just can't wait for the system to become more user-friendly. At present one needs to be a near-psychic to get through to someone if you do not know their exact email address (including gateways if they are outside the UK). With *Gopher* it ought to become easy.

Still in the area of communications, Skiba and Mirque describe the development of Denver Free-Net. Its mission is to promote the concept of community computing to citizens throughout Colorado and it concentrates on disseminating information on health. It officially opened in January 1993 and had gained over two thousand

users in a month. It developed out of *NurseLink* which was a bulletin board designed to disseminate research findings to nurses.

The communications theme continues in "New Technologies and the Americans with Disabilities Act" by Ben Tunkelang. The 1990 Americans with Disabilities Act (ADA) is an epoch-making piece of legislation which puts all British disability legislation in the shade in that it guarantees the civil rights of Americans with disabilities. It provides equal opportunities in employment, all government services, all transportation available to the public, public accommodation, and the telephone service. The article discusses the services available on the *Internet* electronic mail system and their potential for helping people with disabilities. It then goes on to look at the possibilities inherent in the National Research and Education Network and fibre-optic "super highways".

In Part 3 Hein de Graaf provides a long and discursive paper on the problems of making social databanks work. Much of the paper is highly conceptual; other parts are full of practical advice. His conceptual discussion concerns "intermediaries" between data banks and their users. He makes the provocative claim that direct use of social databases by people in need has not been very successful: "Experience in the Netherlands and elsewhere with electronic information systems containing social data, which are intended for direct use by the public, has shown that schemes of this kind do not work" (p. 148). His solution is the introduction of "smart databases" and fully interactive systems. This article is packed with interesting things and repays careful study, although it is not easy to get to grips with at first reading.

The paper I enjoyed most in this collection is an elegant and erudite essay by Philip Boyd on the difficulties, challenges and logical conundrums in developing an effective social security advice system. It is sheer pleasure to read the work of an expert fascinated by his/her own subject, who has the gift of communicating complex ideas with clarity. It is interesting to note that Boyd's

recipe for future developments is to evolve a methodology "within which any branch of determinative law from any legal system can be analyzed, specified and tested by an expert in that domain. That expert need not necessarily have any knowledge of conventional programming" (p. 181). This is the ultimate goal of good system development - to make the IT element invisible and hand over power to the worker in the field, be it social security law, social work administration or direct social work practice.

Finally, a paper by Pam McCulloch epitomises the value of international conferences for those grappling with problems in national isolation. It is a revelation for workers in the UK struggling with the problems and dilemmas of coming to terms with computerising case management in the new community care system to read of the trials and tribulations - and ultimate success - of implementing a computerised case management system in Australia.

Technology in People Services (HUSITA2)

(Edited by Marcos Leiderman, Charles Guzzetta, Leny Struminger and Menachem Monnickendam. 519pp. Hardback published by the Haworth Press, 10 Alice Street, Binghampton, New York 13904-1580, USA, ISBN 1-56024-456-9. Also published as Volume 9 of *Computers in Human Services*, 1993.)

This is a very substantial scholarly tome, packed with refereed academic papers, which makes it a somewhat daunting read, particularly for the non-academic reader. It is certainly worth persevering with it, though, for a selective sifting through its contents will yield substantial rewards. Like *Human Welfare and Technology* the editorial comments are pervaded with the gloom of recession.

Editorially it suffers from the opposite problem to the HUSITA3 book. *Technology in People Services* is substantially over-edited. It has eleven different sections, five of which cover particular client groups. Each section (containing between two and five papers) has an introduction from one of the volume's four editors. Infuriatingly,

for all the summarising of individual papers which the editors undertake, they sometimes do not take the next step and provide a synoptic overview. Some of the sections are worthy and competent but lacking in sparkle and originality, viz health and mental health; substance abuse; families and children; community applications; and Government support for computerisation. Others contain exciting and innovative material.

One of the most rewarding of recent developments is the increase in IT applications devoted to personal social services associated with ageing, disability and rehabilitation. There are several useful papers on this area, but unfortunately this is one of the sections where the editor is too coy to give a useful overview. The paper by Miller provides a useful - if highly technical - discussion of a decision support system for maintaining clients in the community. This paper is especially valuable as it reports extensive findings from a system which has been in operation for several years, and has been very well documented in previous conference proceedings and academic journals. Thus it has an authority rare in this field - and it is extremely welcome to find an example of a large scale decision support system which is effective. Other papers in this section provide rather more cautionary tales from projects in earlier stages of development. The papers by Stoelting et al. and Tighe provide sobering information about the problems encountered in the eventually moderately successful implementation of information systems for practitioner training and client records. Looman and Deimling report on the patchy outcome of implementing a seven agency database of respite service users over a two year period. Finally, Bowes et al. tell the sad story of practitioner responses to the early stages of implementation of an automated case management system over a ten week period where "the desired benefits in efficiency, effectiveness and quality of work life were not achieved" (p. 93). The overall message from this section is that - so long as the IT package is on the right lines and is flexibly and sympathetically implemented - in the end its benefits will be felt.

Another stimulating section was entitled "Instruction / Education" but it also included issues of professional development. Guzzetta, in the Editor's introduction, went over the top somewhat by telling us that "the following articles describe a quantum leap in data use, through computer applications". What they do deal with is a series of important new developments. Holloway, in a refreshingly clear conceptual article discusses a client-advocacy based management information system for use within an outcome-oriented, problem-solving model of client-focused practice. Gray comes from the opposite end of the spectrum. She describes an up-and-running Hypercard program for the Apple Macintosh aimed at enabling students and practitioners to learn case management skills though applying the problem-solving process to a simulated case situation. Finally in this section, Cwikel and Monnickendam discuss the results of a small scale study where social work students were exposed to three different sorts of IT implementation: computerised casework packages, decision support systems, and therapeutic games. Perhaps unsurprisingly, they found that therapeutic games were a clear favourite. For the record, Guzzetta found this a "jarring" finding.

The section on expert systems was a particular favourite of mine. For once we were not treated either to screeds of unintelligible jargon or to the extremes of hype or vituperation. Instead we are presented with measured and helpful chapters. Carlson produces one of the best conceptual introductions to expert systems that I have seen. He takes the uninitiated reader carefully through all the necessary stages and uses a vivid "real life" example of expert thinking as his starting place. Ravetz gives a useful introduction to the problems of systemising knowledge in "ill structured domains" which are extremely common in social work.

I am not normally excited by discussions of administration and management applications of IT but in this section were some of the most gripping papers in the whole volume. The most

impressive was Matheson's contribution - which I discuss in detail below - but even by the very high standards he sets, some of the other contributions bear examination. Grasso and Epstein confront us with an empirical paradigm: they address the issue of whether computerisation is effective or not by constructing a comparative research design to test this very proposition.

Monnickendam and Eaglstein report on a study which aimed to attempt to determine factors affecting computer acceptance and use amongst social workers. Although their study was small and their findings must be treated with some caution, they came up with a couple of interesting conclusions. First, for their sample at least, "Computer phobia is a non-issue. This was unexpected" (p. 422). Secondly, they provided a list of factors related to satisfaction with implementation - in order of magnitude i) ease and satisfaction during routine implementation; ii) intrinsic belief in the ability of the agency to implement the computerisation process; iii) worker involvement; and iv) feeling that the process was well planned. So it is important to get your implementation act together right from the beginning. Their final, and very positive, conclusion was that "Social Workers do not believe the computer to infringe on the worker-client relationship and do not fear for the dehumanisation and depersonalisation of clients" (p. 422).

The final paper in the administration / management section, by Oyserman and Benbenishty, is perhaps misplaced. Its title seems relevant: "The Impact of Clinical Information Systems on Human Services Organisations". But its content relates directly to issues of direct practice and the impact which a clinical rather than a management information system can have on the quality of social workers' professional practice. Here is a really exciting development - an implementation of IT which is of direct use and benefit to practitioners. The authors describe the impact of a clinical information system on social workers and the agency as a whole. They then give a case study of a system designed for

the Israel foster service.

The final section of the book - ethics and societal issues - covers an area of special interest to me and I contributed one of the papers in this section. So my views may well be biased. The section starts with a paper by Berar on: "Computer Ethics: Moral Philosophy or Professional Propaganda" which squarely confronts the distinction between ethical and ideological discourse. He points out that issues of ethical philosophy, social impact and moral values get lumped together in most studies of computer ethics. He makes a plea for these to be treated as three separate areas of investigation. Kolleck revives the debate between the "two cultures" - the formal, technologically oriented thinking which dominates the world of IT versus the reflective, dialectical and hermeneutic approach which is more attuned to the social work knowledge base. My own contribution to this section explores social justice implications of new technology in the human services. Monnickendam in his editorial introduction to the sections comments thus: "Phillips sees empowerment as the ultimate goal of human service workers. Since the road to empowerment must encompass new technology, all social workers have the duty to embrace new technology and to utilise it for ends compatible with their vision of their professional obligations and their reason d'être" (p. 440).

The book ends with a delightfully witty but acerbic critique of the role of systems analysts. Chaiklin disparages our addiction to false prophets and tells us "the current Messiah in waiting is the systems analyst". He is not wholly negative: the argument in the paper is that systems analysis is useful but it must be used with extreme care.

High Points

There are a couple of dazzling contributions to *Technology in People Services*. The first was a keynote speech given at the opening dinner of the conference. The speaker was Arno Penzias, a Nobel laureate in physics and Vice President

Research at AT&T Bell Laboratories.

He gave a glittering and provocative exposition of the technical state of the art in IT, particularly in the field of communications, and gave a highly specific set of predictions for the near future. He started off with the notion of a seamless interface: "You will log into a terminal, and wherever that terminal is, you can expect the system to behave as if you were sitting down at your customary terminal ... Your computing world becomes a global village because your local point of access is everywhere" (p. 22). He then went on to predict: voice-based interfaces; document integration (this is particularly crucial for social services record systems); multimedia telepresence - the ultimate in computer and video conferencing; and finally to the mind-bending, and to my mind rather far fetched, concept of artificial memory enhancement with people wearing miniaturised video cameras and receivers. The speech was witty and urbane and fortunately much of its style and presence comes across via the printed word. It is a loss that some of his pithy (not to say wicked) asides never made it into print but nonetheless this is an outstanding paper; entertaining, scholarly and thought-provoking.

For me, the most impressive contribution of all comes from Matheson, whose paper - "Innovative Use of Computers for Planning in Human Service Organisations" - achieved excellence on four counts. First, it was clear and tersely argued; second, it reported an elegant and highly purposeful empirical research project which gave us new information about the real world; third, its findings were of major practical significance; and fourth, it contributed to our theoretical understanding of the world.

Matheson starts off with Gouldner's two paradigms of organisational behaviour: the "rational" as exemplified by Weber versus the "natural systems" approach of Talcott Parsons. He then went on to test which of these paradigms was most appropriate in relation to the use of computers for strategic planning in social services agencies. His initial findings were not

unexpected: "large, people-processing organisations, computerised for many years, with systems experts on site, and the capacity to produce special reports, were most likely to be found in the advanced user group" (p. 388). Conversely, small agencies with few resources tended to make only limited use of computers for strategic planning. So far so good: the rational paradigm seems to be winning.

But then, with a stroke of methodological brilliance, Matheson decided to explore further and to look at the exceptions to the rule. So he also investigated the anomalies: "small advanced users" and "large limited users". This cross-case design yielded some very interesting results.

Briefly, "rational" factors - goal clarity, access to resources, and the desire for enhanced efficiency - were largely incidental. It was the natural system factors - organisational uncertainty, competition for access to resources, and internal receptiveness to change - which were most important. Absolutely crucial to organisational receptiveness to change is the presence of innovative individuals who will champion the implementation of systems. Surprisingly, in Matheson's study, these innovative people were not who you would expect them to be: "Ironically, none of these people were computer programmers or technicians, and few of them had formal training in the use of technology" (p. 391).

So, if you want successful computer implementation for strategic planning, ensure you have an innovative computer champion in your organisation. Tantalisingly, Matheson tells us that the special qualities of these people remain undefined and should be the subject of further research!

In Conclusion

The overall impression from these three volumes is that information technology in the human services has now achieved a level of maturity. It has put behind it the grandiose claims and unreal expectations of the early 1980s, and has settled down to a steady pace of development and consolidation. The recession is often mentioned as a reason for this, but it is not the only cause of IT developments slowing down. Exponential growth cannot go on for ever.

On to more mundane matters: which book to buy? Of the three, the ENITH volume is the best value for money and deserves a place on the bookshelf of everyone with an interest in the field. The two HUSITA volumes are both well-worth dipping into, and ought to be in the libraries of all human service agencies.

The author is from the Department of Sociological Studies in the University of Sheffield.

Passada Software

An A to Z of Love and Sex

From Dr, David Colombi
School House
Angmering
West Sussex, BN16 4JS.

Disseminating Information: a Method for Human Service Practitioners

Smith, N. J, Harris, P. and Burgess, D.

Introduction

Information is a key resource in the development and delivery of human services and, as in other disciplines, there is an increasing volume of it. Because of this its role in the decision making process presents problems (Thorngate and Hutton, 1990). How does the practitioner select, access and utilise specific information in the service delivery process when faced with an overabundance of material? Studies by Wilson, Strentfield and Mullings (1979) revealed that social workers selected that which was readily at hand, and tended not actively to seek out the broader body of information. However, this process can miss pertinent and current material, and displays the lack of an active search framework.

Given information's key role in service delivery, the challenge would seem to be to develop practitioners' selection, access, and utilisation skills as well as presenting relevant and up-to-date information in an appropriate framework so that high quality services are delivered.

The framework within which information is disseminated is important. For example, difficult to access material may be overlooked. Secondly, the framework can dictate the currency of information. For example, interrogation of databases which are frequently updated will provide current information in a manner that print formats usually cannot do. Thirdly, having to peruse extraneous information can be discouraging. Information technology already impacts on service delivery in the field of disability, and its influence will continue to grow in the future. How can it be employed to help practitioners access and use information? This paper describes a research project concerned with responding to the challenge by the application of this technology, specifically hypertext, for the dissemination of a body of information for use by practitioners involved in the delivery of services. It is based on the assumption that a specific kind of framework can provide easily accessible, up-to-date and relevant information that minimises the need to look at extraneous material. It can also assist practitioners in developing access and utilisation skills. To test this, a database was developed using hypertext principles. The database was then evaluated by practitioners in the field of disability

The Project

The Australian Government's Department of Health, Housing and Community Services commissioned the Department of Social Work and Social Policy within the University of Queensland to produce a handbook on the management of menstruation for use by parents and practitioners involved in the care of women with an intellectual disability.

For the user, finding what is required to meet a specific information need in a traditional book format often means that often unwanted material must be scanned in order to find what is required since the total information body is presented in a sequential manner. This can be a tedious and time-consuming exercise. Therefore, it was decided to take the information in the handbook and present it in a nontraditional, non-printed, nonlinear framework using information technology. The method chosen is termed 'hypertext'.

An assumption was made that, in organising and presenting information using hypertext, the user with information needs would want to make their own associations between units of information. Also that such associations would influence

information seeking and processing activities undertaken in meeting them. This means that different users, e.g. parents or practitioners, with separate needs, or the same user with different needs on separate occasions, could make different associations, and engage in different information seeking activities. The hypertext format with its flexibility responds readily to such multiple and different information needs, whereas the traditional framework of information presentation in a linear printed format does not do so as effectively. Furthermore, it can be difficult to keep the information in printed formats up-to-date. Hypertext databases however are easy to keep current.

What is a Hypertext Database?

Hypertext, according to Lucarella (1990), is simply "... a system to manage a collection of information that can be accessed non-sequentially ..." while Shneiderman and Kearsley (1989) describe it as a database with active cross-references which permit the user to move to other parts as required, noting that it is this facility that dictates the need for a computer in its implementation.

In the hypertext database, the collection (or body) of information is broken down into smaller discrete units (concepts) which form the database's key component (the frame or node). Although frames usually require just one visual display unit (VDU) screen to display, some need more, and this is facilitated by being able to scroll down a page at a time. Embedded within frames of information are highlighted references which, under control of the computer keyboard, access further information. These references take two forms, "popup notes" and "links" to other frames. Popup notes, which are displayed over the frame, provide further information on a word or phrase in the frame. The links allow the user to display other frames which address related concepts.

The user moves through the database displaying those frames and popup notes which are relevant to his or her need, bypassing those that are

unrelated. In this way as little, or as much, information as is required can be accessed. Hypertext therefore caters for the needs of those who have limited knowledge of the subject and may be seeking a substantial amount of information, as well as for the requirements of users who are knowledgeable about the subject matter and who seek just a little information. Hypertext can also be part of a multimedia approach (integrated text, graphics, sound, video etc.) in the organisation and presentation of information.

Advantages of the Hypertext Database

The hypertext database has several advantages not afforded by printed materials. Nielsen (1990) discuss some of the benefits. A hypertext database is easy and quick to update. The user-orientated approach is of particular value. The user, seeking information to meet a specific need, can employ key word search strategies to access relevant frames within the database. The reader types a term appropriate to the need and presses the "Enter" key. This produces a list of all frames containing the search term. Each frame can then be displayed. This minimises exposure to extraneous information. In contrast, the reader using printed materials employs a less precise method (i.e. perusing a table of contents, chapter subheadings and index) in seeking information, and may need to filter what is read.

When using the hypertext database, the user can, without becoming sidetracked, make an electronic note of frames and popup notes containing information relevant to the current, or another, need, recording short comments as a reminder of why the frame or popup note was useful. This process, which requires just a few keystrokes, creates a "notepad". Using a key, the notepad can be displayed at any time during the current reading of the database and frames and popup notes selected for display. The notepad can also be saved to a file which is given a meaningful name by the user. This file can be retrieved and used during later readings of the database, and references can be added to or deleted from the file. It can also be erased when

no longer required. More than one such file can be made, e.g. different files for separate information needs. This capacity of the hypertext database is superior to the placing of bookmarks in printed materials.

The user can return to frames already visited, thus allowing review of material previously displayed. This can be done one frame at a time (backtrack) and requires the press of a key. Another key will produce a list of all frames visited during the current session, and the user can select which one to display, the selection taking just one keystroke. This capacity is known as select back.

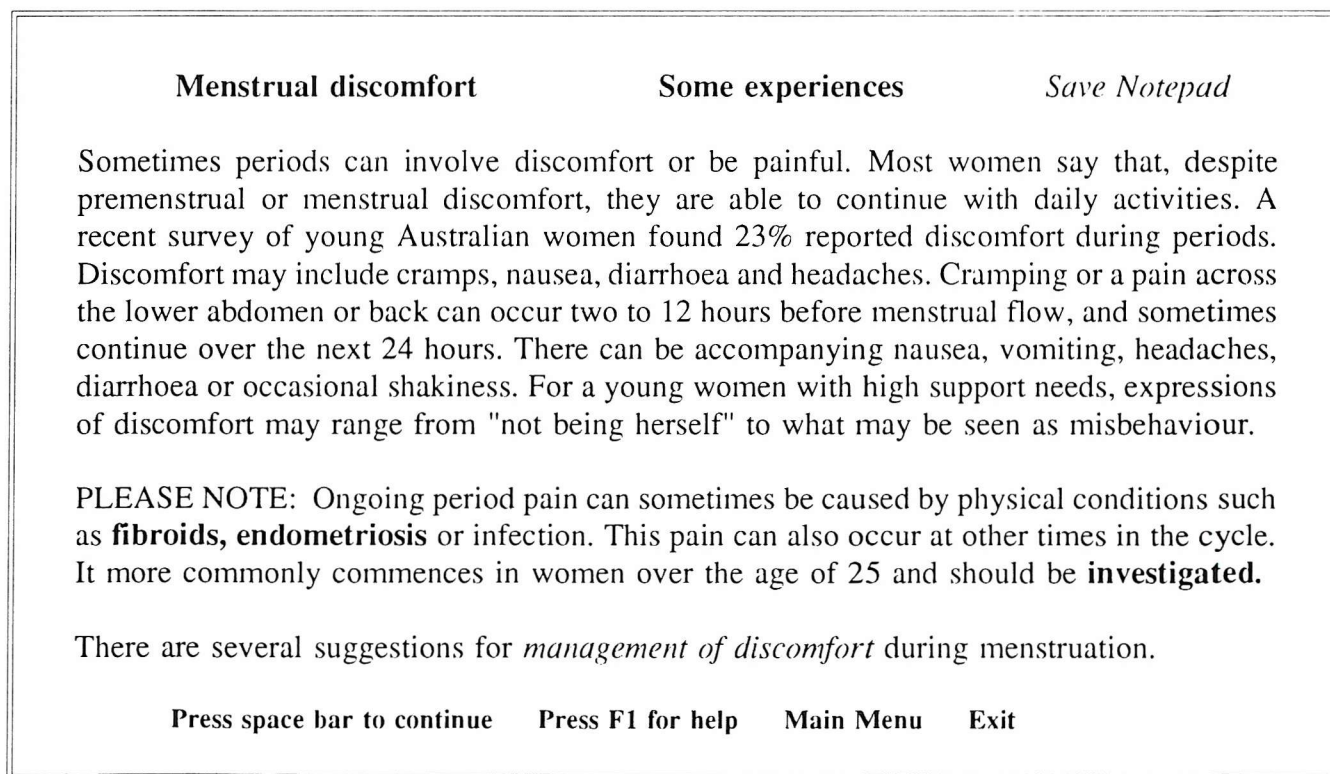
Hypertext permits the user to develop other files which can be "called in" to the database during any consultation. Such files are read using a page down approach. They can be searched using a similar manner to the one employed on the hypertext database, resulting in relevant sections of the file appearing highlighted. Return to the hypertext database is achieved by the use of a key.

The Hypertext Database Developed

HyperShell 1 software was used to develop the hypertext database for this study. In consultation with the research team that produced the handbook, the information in it was broken down into smaller discrete units which were embodied in frames. To a large degree, the conceptual framework adopted in the handbook was maintained. As an example, in the handbook one section addresses practicalities of menstrual management for women with an intellectual disability and for those providing personal assistance. This section covers several concepts including establishing aims and goals for the women and those helping them, suggestions for preparing the women for menstruation, strategies for teaching them menstrual care, and details of menstrual and incontinence products. Frames addressing each of these concepts were incorporated into the hypertext database.

Diagram 1 shows the frame named "Menstrual discomfort" which has the title "Some experiences".

Diagram 1



Embedded within frames are highlighted references which can be used to gain access to other information. The highlighted references in this frame are popup notes ("Fibroids", "Endometriosis", and "Investigated") and a link to another frame ("Management of discomfort"). Access to these references is under control of the computer keyboard.

Diagram 2 shows the frame with the popup note "Fibroids" displayed over it.

Diagram 2

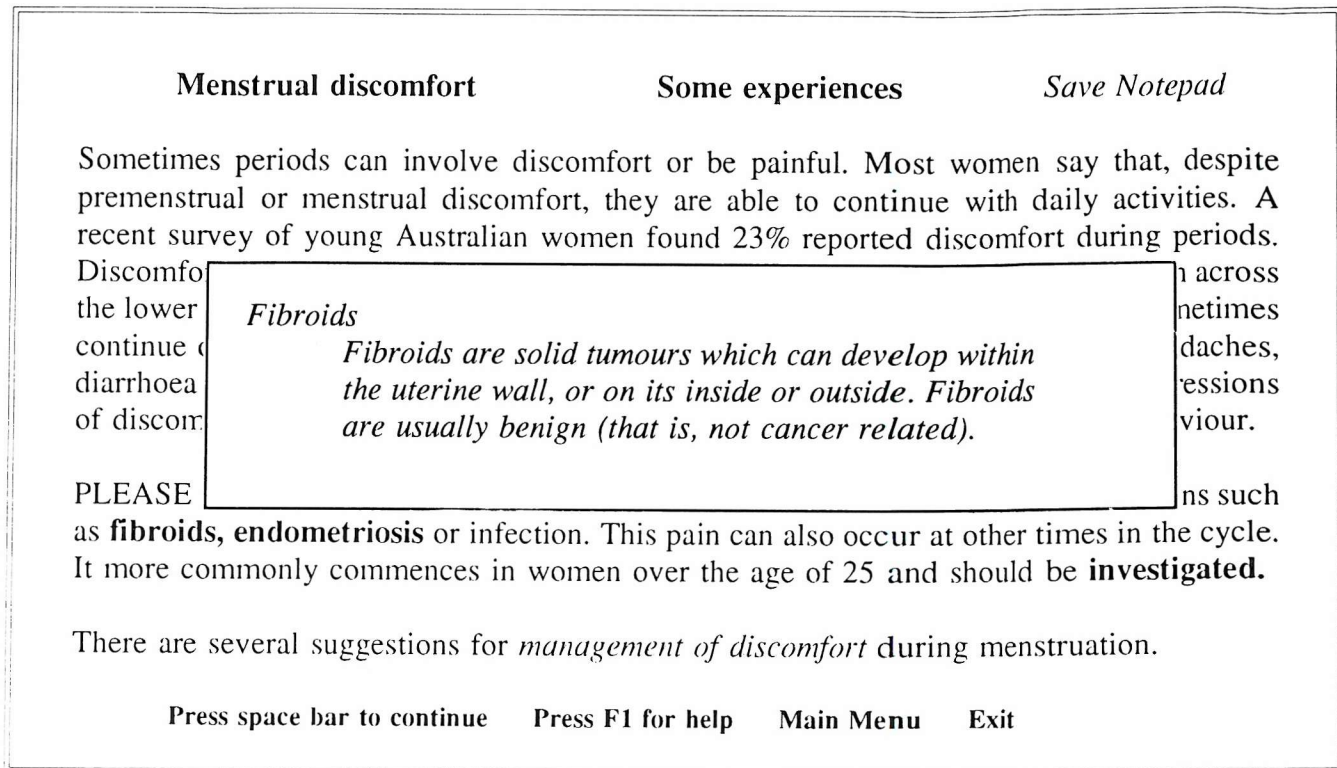


Diagram 3 (next page) shows the frame "Management of discomfort".

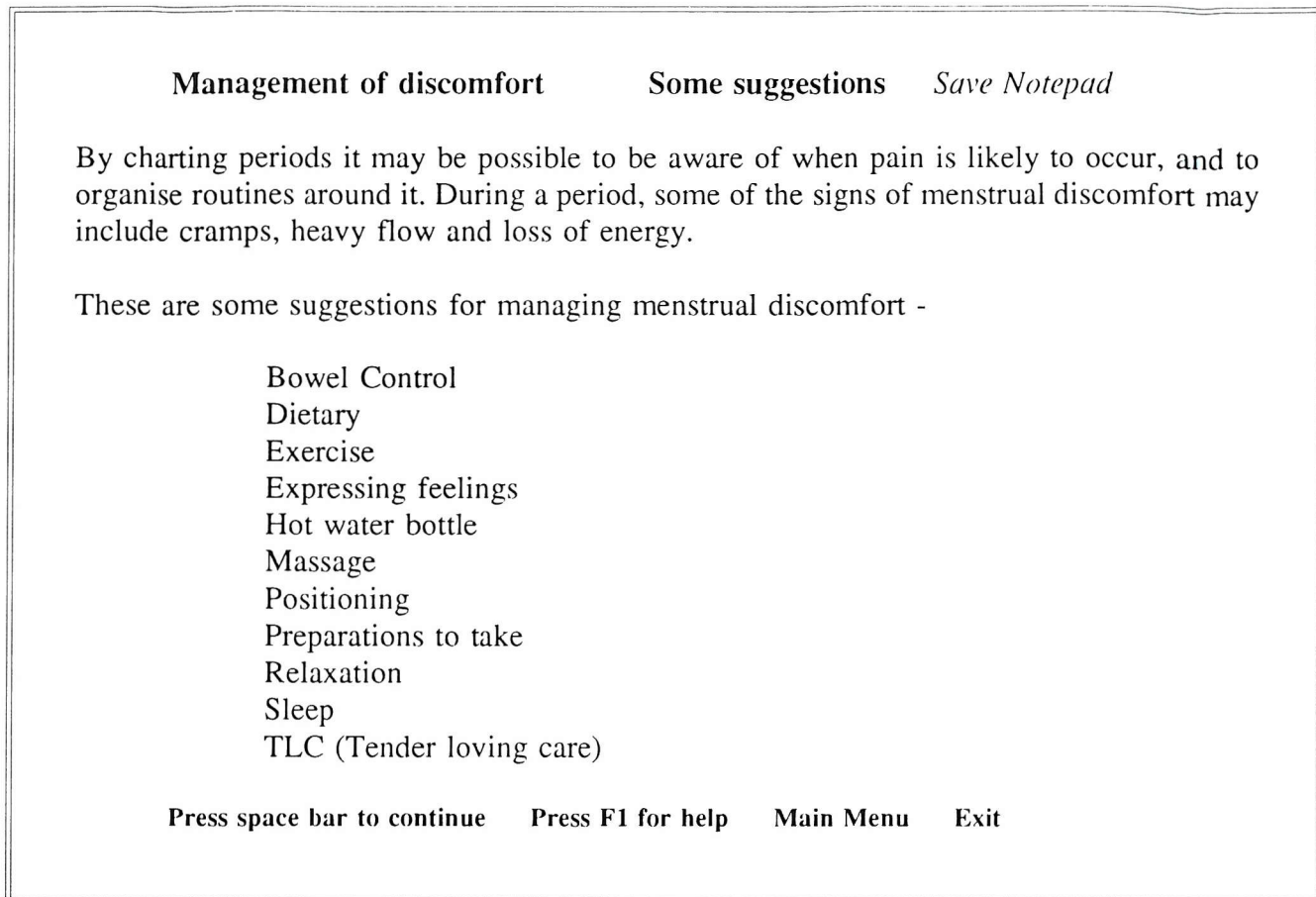
At the bottom of all frames is a highlighted term "Main Menu". This term is an access point for a frame which displays the major sections of the database and allows direct access to them. This frame serves as a "starting point" and source of orientation for the reader.

A comprehensive Help Menu is available. The database is user friendly, requiring only minimal keyboard skills to utilise. It is a stand alone program requiring no technical support and can be used on any IBM compatible personal computer.

Evaluation

When the hypertext database was completed, parents of women who have an intellectual disability and practitioners working with these women were invited to attend a demonstration of the database. Thirteen people, including nurses, teachers and occupational therapists representing several government and non-statutory agencies, participated in the study. No parents attended. A verbal description of the database was given while it was demonstrated using an overhead projector. Following this, the practitioners engaged in hands-on use of the database. They then completed a questionnaire.

Diagram 3



Evaluation of this database application was positive. Twelve practitioners working with women who have an intellectual disability considered it would be useful in their work.

Practitioners were asked what they liked about the database. A total of 29 favourable comments was made, all participants offering at least one observation. While the actual informational content of the database was favourably received, positive remarks focused primarily on the framework within which the information was presented, and the capacities that such an application offers the user, e.g. the highlighted references and the search facility.

Dislikes were sought and nine practitioners offered a total of 13 comments, four observations being a desire for additional content. Most negative responses, however, were associated

with using computers, e.g. need to be familiar with a keyboard or the time factor involved in learning how to access information. It could be that lack of experience in using computers was a factor here since only one of the 13 practitioners had a moderate degree of experience, and seven had none or word processing experience only. Some training in using computers may provide a remedy. Despite these negative responses, no participant assessed the application overall as being difficult to use, all but one finding it easy or very easy to use.

There are five methods of choosing the next frame to display. All practitioners utilised the highlighted references in accessing information. Most also chose frames from a contents list as well as from the Main Menu, demonstrating good use of these options. However, the other methods (backtrack and select back) were

infrequently employed.

All five practitioners who experienced some disorientation employed the method considered most appropriate, i.e. display of the Main Menu, in dealing with this experience. The use of other options too was reported and this would suggest that participants developed a good grasp of means of becoming re-orientated during one session of using the database. Interestingly, no practitioner suggested that improvements needed to be made to help users deal with disorientation, and such an experience did not lead participants to assess the hypertext application as difficult to use.

It was wondered whether prior experience in using computers would assist practitioners in using the database, and results suggest that such experience did make it easier. However lack of experience did not mean that participants found it difficult to use.

As most practitioners had prior exposure to the handbook, it could be suggested that such exposure made it easier for them to use the database given their knowledge of the handbook content. This hypothesis however is not supported by the results.

It is interesting to note that just over half of the practitioners offered suggestions for improvement. The assumption could be made that the remainder saw no need for improvements. It is unknown of course whether this would continue to be so if practitioners had further exposure to the database. Of the eight suggestions offered, only one reflected a concern with how to use the database, confirming the positive evaluation that practitioners made about its ease of use.

Conclusion

Availability of readily accessible, relevant and up-to-date information for use by practitioners in the delivery of human services is imperative. The hypertext application developed has been demonstrated to provide information that is

easily accessible to workers involved in the care of women with an intellectual disability. It has the capacity to minimise the need for the user to peruse extraneous information. It is easily kept current.

Evaluation of the database by practitioners working with this population confirms that the hypertext framework is a useful one for the dissemination of information. Workers considered it would be a useful resource. This is confirmed by expressions of interest in purchasing this database that several of these practitioners have made. Hypertext applications are suitable for a wide range of materials that workers and others involved in the delivery of rehabilitation services could use, both for help in direct practice and as an educational aid.

Note *HyperShell* is a trade mark of Text Technology

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The authors are respectively Professor and Dean of the Faculty of Social Work, Research Assistant, and Senior Tutor, Department of Social Work and Social Policy University of Queensland, Australia.

The Therapeutic Application of a Computer Problem-solving Program to Teach Coping Strategies to Problem Drinkers.

Fred Yates

Abstract

A computer-assisted relapse management program (CARM) was developed as a therapeutic tool to guide problem drinkers through a problem-solving procedure and provide access to a knowledge-base of coping strategies. The program was evaluated with 20 randomly selected hospital in-patients. Half the group used the computer program and the other half were taken through the same problem-solving steps by a therapist without the computer. A comparison of the computer and non-computer group opinion collected immediately after the session, and an analysis of the action plans generated, indicated that problem-solving with the computer and therapist support was preferred and more likely to stimulate original ideas than a therapist-only problem-solving session. Differences in drinking outcome in a short term follow-up were mainly attributable to family stability and support but there was found to be a better retention of action plans by the computer group.

Introduction

The practical management of drinking problems as an essential part of a treatment programme owes much to the work of Marlatt and his colleagues. They developed a set of coping methods known as relapse management specifically for people with a dependency problem (Marlatt and Gordon 1980, 1985; Shiffman, 1985). The object of relapse prevention is to teach clients how to recognise the cues likely to lead to a slip, and learn an alternative behaviour to replace the addictive response. The circumstances preceding a relapse are identified (eg. going out with workmates, celebrations, negative moods) and a repertoire of coping responses put together to deal with them. For example one way to weaken the "craving" feeling experienced by many drinkers before a relapse is to replace it with a healthy dependence such as on jogging or some other regular form of exercise.

The content of a relapse prevention course for problem drinkers is then specific, structured and follows a set of simple problem-solving rules:

1. Identify the cause of the drinking;
2. Set a goal which copes more effectively with the cause;

3. Find alternative, non-drinking actions to reach the goal.

The requirements of a problem-solving scheme for problem drinkers is an information processing task well within the performance capabilities of the standard desktop personal computer. At least one computerised coping skills program is commercially available in the United States (Holman, Quinn and Salerno, 1988) though few appear to have been written for specific client groups and none, to my knowledge, around a relapse prevention model. The development of a program to do this formed the first half of/a project funded by the Alcohol Education and Research Council. The evaluation of the program with a small sample of hospital in-patients from a Regional Drug and Alcohol Service made up the second part.

The initial program development work

The development work was done over the first 6 months of the study and included preliminary pilot work and trials with patients. I also carried out a preliminary questionnaire survey on relapse to gather information on the perceived causes of relapse and evidence of natural coping strategies already being used by the drinker. To this end the questionnaire served as a very simple paper

version of the program I was planning to write and provided me with some valuable empirical material to prepare the script of the program. The program was written using *FoxPro2*, a much extended version of the *Xbase* language derived from *dBase*. The application was called *Computer Assisted Relapse Management*, conveniently abbreviating to CARM and set up on an Amstrad 386 computer with a printer.

Description of the program

Over a minimum sequence of 24 screens, depending on the number of problems identified, the user is guided through 4 key problem-solving tasks:

1. Identify the problem;
2. Define it clearly;
3. Formulate a realistic goal to solve the problem;
4. Think out some practical steps which lead from the problem to the solution.

The user is asked to enter basic task information from the keyboard at each stage and interact more directly with the program by using the computer mouse to move "problem boxes" around the screen. The final stage generates an action plan made from up to 5 coping strategy steps appropriate to the problem. The coping strategy knowledge-base was not included in the first version of the program and users thought up the steps with the therapist in support. At the end of the program the computer prints out the action plan for each problem, as in the following sample given at the end of the paper.

Method

The site of the study was Plummer Court, Northern Regional Drug and Alcohol Service. The service has a 12 bed in-patient unit which accepts referrals needing detoxification and/or further support. The usual length of stay is about 2 weeks. The evaluation group was made up of Plummer Court in-patients.

I gave a series of initial training sessions to run

through the program with staff and provided ongoing support for the 6 months evaluation period when staff would have use of the program for their own clinical work. All clinical staff were free to make use of the program with their clients, whether in-patient or day attenders.

After the computer had established itself as a therapeutic facility on the Unit, I selected and tested 20 volunteers from the in-patient group over a period of 3 months. All subjects were chosen at random, their inclusion dependent only on a willingness to co-operate in the study. This group (15 males and 5 females with an average age of 45 years) constituted the research subjects for the evaluation of the CARM program. The 20 patients did either a single computer-managed relapse prevention session or a single relapse prevention session without the computer. There was no attempt to assess patients for the type of session. They were allocated alternately to one of the two groups. The final number in each group was 11 for the computer group and 9 for the non-computer group. Only one of the volunteers withdrew after beginning a session; all the others completed their allocated session which lasted on average 1-1½ hours.

Post-session questionnaires were administered to obtain immediate feedback on the experience depending on the type of session (Post-Computer Session Questionnaire or Post-Problem-Solving Questionnaire). Both questionnaires included the same general questions on the problem-solving task with some additional questions for the computer users specifically about the computer interaction.

The computer session was a single run of the full CARM program with myself in support. The non-computer session followed the same problem-solving procedure but was controlled by the therapist, again myself, using paper and pencil instead of the keyboard to sketch out action plans. My role in both types of sessions was to help the client in his/her problem-solving task: the identification of problems, setting goals and working out action plans. For the computer group I introduced the general rationale of

problem-solving applied to drinking and then told subjects to follow the screen instructions and enter requested input from the keyboard. I assumed a passive role in these sessions, deliberately not intervening in the computer interaction unless subjects asked for help. With the non-computer group I endeavoured to act as a human equivalent of the program to convey the steps and instructions presented by the computer. The non-computer group was effectively a comparison group to obtain an indication of how the computer interaction affected the problem-solving task.

Follow-up of the evaluation group

All 20 volunteers in the inpatient evaluation group were followed up between one and three months after discharge from the Unit. The follow-up questionnaire covered 3 main areas which also served as a procedural guide for the interview:

1. The general drinking pattern since leaving the Unit;
2. Whether the action plans had been referred to or recalled after discharge;
3. To what extent the action plans had been followed.

If subjects were unable to recall any of their action plans I produced my copy and invited comments on what progress had been made in carrying them forward and any circumstances which had prevented their execution. I made additional notes to fill out the outcome details collected on the questionnaire.

Results

Observations taken from the sessions and the post-session questionnaire results: a significant percentage of the computer group had worked with a typewriter or computer keyboard often enough to have acquired some competency at the keyboard. These skills had usually been gained in previous office occupations or sales work.

None of the users found the keyboard work so

forbidding that they had to abandon the program. In no cases did the therapist in support need to type in text entries for the user. Most of the group, especially naive users, enjoyed the novelty of typing in their responses. The text input required for any single entry in the program was never more than 30 characters and looking for the right letters on the keyboard for these short entries did not seem to frustrate users. The only difficulty experienced was in the use of the direction keys to move the cursor through text and control the flow of the program. The therapist, by using the mouse, could optionally take over the program direction allowing the user to concentrate on text entry.

More than two thirds of those who used the computer preferred to run the program with a therapist in support. Little technical assistance was called for to operate the program. The main reason offered by those users wishing to work alone was the extra privacy it could give them. "I felt uncomfortable with someone looking over my shoulder. This made me rush a bit and got in the way of my thinking", was one comment from an experienced computer user patient who undertook several runs on her own after the initial joint session.

The remaining questions on the post-session questionnaire referred generally to the problem-solving task and were completed by computer and non-computer subjects. Three quarters of the computer subjects felt able to say that the session had stimulated them to think in a new way about their problem. A smaller proportion, about a half of the non-computer group answered "Yes" to this question.

Follow-up findings for the evaluation group:

all of the 20 volunteers in the evaluation group had constructed one or more action plans in their problem-solving sessions and the main purpose of the follow-up was to find out to what extent these plans had been used after discharge, and measure any short-term outcome differences between the computer and non-computer groups. I was able to make contact with all but one of the group (who had died shortly after discharge)

and the findings are based on the remaining 19.

The best predictor of a good drinking outcome for the 19 volunteers in the follow-up group was an existing family responsibility as a parent with a supporting partner. Given the strong effect of living conditions in determining drinking outcome it would not be expected that the treatment difference of problem-solving with or without the computer would be perceptible in such a small sample.

Four of the questions directly measured what progress the volunteers had made in coping with the problems they had constructed action plans for, and any short term effect attributable to using or not using the computer might reasonably be expected to emerge from these data. The computer group were more likely to take away their plans on discharge and claim to be able to recall them though no more likely to refer to them than the non-computer group. When asked to recall their specific plans 5 out of the 10 volunteers in the computer group remembered 2 or more compared to 3 out of 9 in the non-computer group. Over half (6 out of 10) of the computer group felt better able to cope compared to one third (3 out of 9) of the non-computer group.

Discussion

The advantages of a problem-solving session which is controlled by computer; a problem-solving approach aims to reach practical answers to client problems. The therapist must officiate, keeping the client to a set procedure as well as being a sympathetic and patient listener as the problems unfold and these two roles can sometimes come into conflict. One of the main advantages of using a computer was that it took on the job of imposing a discipline on both therapist and problem drinker.

The reports fed back to me from other therapists, consistent with my own experience, were that the computer program tightened up a general problem-solving exercise because the machine did not allow any steps to be missed out. Within

this framework the therapist could use the sessions in different ways: to take a passive role and allow the client full stretch of his or her creativity in a "brainstorming" session, to be ready with practical solutions for the client who was bankrupt of ideas, to gently bring some clients face-to-face with their problems for the first time in a clear light and make them aware that there are no magic solutions, and to confront others with their own lack of commitment to apply non-drinking solutions to their problems.

All these approaches were possible and therapists learned to treat the computer sessions not always as a time to get straight down to the hard practicalities of a realistic action plan but as therapeutic opportunities to uncover the client's resistances to comprehending life's troubles as solvable problems. The problem drinker could be brought to an uncomfortable realisation that a negative attitude, low motivation or a faulty lifestyle was the primary difficulty, not the problem itself.

The post-computer session questionnaire results and the computer print-outs provided clear evidence that a computer program can be used effectively to generate action plans which address the perceived causes of relapse. The comparison of the computer and non-computer group opinion on the value of the exercise suggested that problem-solving with a computer is preferred and more likely to stimulate original thought than a therapist-only problem-solving session. For the computer users, particularly during the step-creation part of the problem-solving, some judicious therapist restraint was in order to permit the free flow of the client's own ideas. At these times the therapist needed to make room for a private interaction between the computer and the user. Nevertheless it should be noted that the therapist was most often called on to give advice at the action plan stage in the same way as a coping strategy database would be "consulted". The inclusion of the database in the latest version of the program to some extent replaces this information and advice function of the therapist.

My personal impression in supervising both computer and non-computer sessions was that the interaction with the computer was a genuinely therapeutic one because the machine possessed a special authority similar to that of the respect a student might have for a good teacher. By contrast the efficacy of the therapist/client relationship leans more on a parent/child association especially for clients with emotional problems or low self esteem. A teacher/student relationship may be more appropriate in a problem-solving task because there is information and advice to be understood and acted on and, whether deserved or not, the computer is credited with a superior machine intelligence which adds value to the action plans printed out.

The need for community support for the implementation of action plans: problem-solving exercises are purely intellectual affairs unless they are seen as the start point for a long term programme of care which continues into the community where they must be translated into action. In the discussions I had with follow-up contacts about the implementation of the action plans it became very clear that the committed interest of the therapist who supervised the problem-solving sessions must continue into follow-up if the plans were to be taken seriously.

Without some assurance of support the action plan is likely to be treated in the same way as homework which is never going to be marked - ignored or forgotten. The plans are just the blueprint for action and can be the beginning of some hard lessons which must be learned first (for example those cases in follow-up who had not yet started to apply them or tried to mix drinking and positive action). The original therapist is the best placed to support the client over the inevitable setbacks, to point out lessons to be learned, and to congratulate the successes.

Further research work and program development

The original version of the program written and evaluated in this study has been improved to

make the problem-solving task easier and includes a small database of coping strategies which can be edited and extended by the agency/user. This release version is being regularly used by clinical staff at the test site and proving its adaptability. It can be administered almost as a prescription to promote clear thinking alongside other types of therapeutic intervention with clients at different stages in the recovery process.

The next stage in its development will be in the hands of other alcohol agencies, voluntary counselling services, community residential and day services using it in their own settings. Each agency can build up its private library of coping strategies suited to its client management methods and local conditions, and there will be a need for a central service to update all the individual agency knowledge-bases with proven strategies which can be shared. This provision would do the job of circulating good therapeutic ideas around other agencies and, most importantly, give the client/user immediate access to them at the time when action plans are being prepared in problem-solving sessions.

Effectively this updating service would realise the practical aim of the study on a larger inter-agency scale - to establish a knowledge-base of agency expertise on how to deal with drink problems. This study has produced a software container to hold the experience of those learning how to solve their own or someone else's drink problem and shown that clients can profit from it directly. The collection and dissemination of this material to the end user, the client, depends crucially on a solid user-base of agencies prepared to make their contribution to the coping strategy database.

Acknowledgements

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computer program.

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Sample Action Plan Printout

RELAPSE FACTOR 1: VERY ANXIOUS

PRACTICAL DEFINITION : GET PANIC ATTACKS WHEN ALONE

- Step 1 : GO TO RELAXATION CLASSES
- Step 2 : COPING WITH PANIC
- Step 3 : SIT IT OUT TILL IT GOES
- Step 4 : CALL ON A NEIGHBOUR OR FRIEND
- Step 5 : KEEP A MOOD CHART

GOAL : LEARN HOW TO COPE WITH PANIC ATTACKS

COPING WITH PANIC

Panic feelings can come on suddenly or be a reaction to certain situations (eg. confined, crowded places). They are frightening experiences which stop sensible thinking when they happen. To control them you need to do some preparation in advance.

<ACTION>

Follow these rules next time you feel panicky:

1. Most important, don't try and get away from the situation. Wait and give the fear time to pass without fighting it.
2. Reassure yourself that the attacks are not harmful, just a peak state of anxiety which can only fade.
3. Don't be discouraged by some setbacks. Recovery will be a gradual process so see each attack as an opportunity to learn how to cope.
4. When the panic subsides congratulate yourself for having stayed with it and proved that nothing disastrous follows.

See Also: TURN ANXIETY INTO AN OBJECT, LEARN TO RELAX

KEEP A MOOD CHART TO FIND THE CAUSE OF THE CHANGES

Your depression can be a general mood of unhappiness which you have learned to live with and found relief in alcohol. To do something positive about it you need to find out what is making you depressed.

<ACTION>

Write down when your mood changes and what is happening to change it. For instance, if you feel OK up to 10.00 AM morning and then you feel worse, write down what you think happened to depress you (eg lack of company or worry about debt) and when. Do the same when your mood swings the other way and you begin to feel better. Keep this chart over several days and then sit down and look for a pattern. Mood charts can be useful with many feelings (eg anger, anxiety, frustration) to identify the specific pleasures and miseries related to them so that you can begin to control them.

The author, Fred Yates Ph.D, can be contacted at Plummer Court, Carliol Place, Newcastle upon Tyne, NE1 6UR. Tel. 091 230 1300.

Community Care Information and Public Rights

Bryan Glastonbury

Context

In recent years there has been much debate on public rights, with "the public" variously seen as the consumer, citizen, subject of secret data files, or person in need of community care services. A component of each debate has been the notion of ensuring that all of us are better informed, with potentially enforceable rights of access to information. If that information is about us and is inaccurate, or that information makes promises (such as trains running to time) which are not kept, then there is a further right to redress. Within the framework of community care the UK is close to a right to have needs assessed. Thus the notion of examining public rights within the specific context of community care policies is consistent with a wider range of concerns about informing and empowering consumers, most openly displayed in the range of citizens' charters.

While traditional political debate may have focused on the relative attractions of welfare provision within the community or within residential institutions, recent debate has taken for granted the preference for community solutions, and shifted attention on to the method of service delivery and the role of citizens and communities. Service delivery within the implementation of recent criminal justice as well as community care legislation is expected to be more publicly accountable, in terms of

expenditure, quantity and quality of service. Individuals, families and communities are expected to take still greater responsibility for social needs, both in identifying those needs and participating in the means of meeting them. In order to achieve this individuals and groups require knowledge which will both inform them and enable them to work in collaboration with welfare agencies. The differential participation of certain groups within existing frameworks for service provision highlights the need for the

development of a theory of rights consistent with concepts of justice and equality. This focus on public rights in the social area, or social rights, is an unavoidable adjunct to discussion of information and empowerment.

Social Rights

In the introduction to her edited volume, *The Welfare of Citizens: Developing New Social Rights*, Coote summarises four propositions developed by Lord Raymond Plant about rights to welfare. These provide a theoretical starting point for the discussion:

1. There is no fundamental theoretical difference between social and economic rights on the one hand, and civil and political rights on the other. At a practical level all depend for their effective implementation on current social, political and economic circumstances, and specifically on the ability to make enough resources available.
2. If social rights are to be meaningful they must be enforceable by individuals. While being directly pertinent to legislative provision for individualised packages of community care, such a statement might be challenged through arguments about limited budgets and lack of service provision. The challenge will also come from the individual user's participation in the assessment of needs, and the subsequent agency calculation as to which needs can and cannot be met.
3. The notion of enforceable social rights differs from models of empowerment through market choice or democratic accountability, but may be a viable alternative or complementary approach. Within the community care context it will be relevant to monitor the extent to which public right of access to information will affect the power of welfare organisations.

4. Plant himself argues both that rights will not be a panacea, and that there is no overarching methodology for their implementation: rather "rights should be looked at very carefully on a case by case basis to see how far they can be taken" (Coote, 1992, p28). The information needs of users of services within the community can be viewed as one such "case".

Developments in recent years have moved towards the recognition of procedural rights in the welfare field to information and assessment. Client access to personal files began the process, but more significant is the acceptance within social work theory as well as social policy that welfare arises from a partnership and negotiation between consumer and service provider. Fundamental to further progress is the provision of information and help which enables individuals to test their own needs, and check on their own possible eligibility for services. Fragmented efforts have been made, some with great success. Perhaps the most important examples are the establishment of the right of people with disabilities to a professional assessment (Disabled Persons Act, 1986) and success within the independent sector of several computer programs to calculate cash benefits entitlements (*Maximiser* and *Lisson Grove*).

A continuing gap concerns the provision of an information system which enables members of the public to analyze and gain an understanding of their own circumstances and needs, and to identify where local help might be forthcoming from statutory, voluntary or other sources. In short, such a system would do more than offer information. It would serve as a means for self-assessment, and its outputs could be linked directly to the provision of services. The sequence starts with the identification of need, leading to an acknowledgement of which needs can be met within the notion of social rights and an analysis of how such needs might be differentially identified, or met, according to the gender, class, ethnic background, age or level of physical or mental ability of the user (Forbes,

1993; Orme and Glastonbury, 1993; Plant, 1992). A universally accessible computer information system might provide the means to ensure non-discriminatory service provision but this requires yet another set of considerations.

The Ethical Use of Technology

An information system would inevitably take the form of a computer application, but there are significant challenges in developing a computer system for use by and on behalf of members of the public. Specifically in the context of welfare, Glastonbury (1985) has documented the traditional preference of members of the caring professions to keep new technologies at arms length, and reluctance to assess the potential benefits, to themselves and their clients, of computer-based information. As a result, computer applications in welfare services have concentrated primarily on meeting the needs of office automation, accountancy and agency management. At a more general level Glastonbury and LaMendola (1992) have argued both that there are particular problems in making technology accessible to communities characterised by poverty, and that the very rapid pace of information technology advance has outstripped its social integration, leaving in its wake significant concerns around discrimination and inequality. While ethical considerations which affect the information industry have been given close attention, most noticeably data security and software piracy, those which impinge on society as a whole still need theoretical analysis as well as practical action. Several authors (eg. Masuda, 1981) have drawn attention to the view that the social sciences have a particular role to play in the development of an ethical context for an information age.

Alongside addressing the notion of a social right to information in the context of community care, it will be necessary to address the conditions under which technology is and can be used to enable that right. Poverty, disability, gender and ethnicity all feature on this agenda, as does the question of what are reasonable expectations from members of the public, once information

has been made accessible, about the ways it can be utilised.

Accessible Information Systems

Making an information system accessible to members of the public is partly a matter of purchasing and locating the equipment and software, but more fundamentally for the purposes of this project the design of the information system itself. Avison (1992, pp11-12) notes some commonly occurring problems with conventionally designed systems -

- failure to meet needs
- inflexibility
- user dissatisfaction
- problems with documentation
- incomplete systems
- application backlog
- maintenance workload

After surveying a number of approaches to information system design he goes on (page 71) to suggest that "the reasons for failure in these projects tend not to lie in the technical side, though the technology is complex, nor in the economic side, though the cost of these systems is very high. The reasons for failure are more likely to be due to *people problems*, which may show themselves by the lack of co-operation when the information system is being developed and a resistance to the changes that occur when the application is implemented." His formula for the development of an effective information system is to involve the potential users of the system from the start, to ensure that the final product meets their needs, is seen by them as accessible and user friendly, and enjoys a sense of user ownership. This requires a flexible approach to information system development, rather different from the conventional approach, and one which addresses the issues both of direct public access and access via an intermediary (de Graaf, 1993).

Public Access Community Care Information Systems

There has been a flurry of localised information systems proposed, some originating from social services departments, some from health authorities, and a few seeking to span both areas (such as the new Wessex RHA and Hampshire SSD project). Significantly they are almost all initiated from agencies, rather than arising from a more detached and objective analysis of potential needs. The most substantial work undertaken to date in relation to listing and classifying social needs is American, the Infoline Taxonomy (Information and Referral Federation of Los Angeles County, Inc., and the Alliance of Information and Referral Systems, 2nd Edition, 1991). In the longer term the UK ought perhaps to move in the same direction, towards a categorisation of needs which is both comprehensive and designed to fit in with the structure and functioning of society. Continuing forward as at present will risk developing information systems which only allow for those needs that health and social services agencies feel able to recognize.

There are further sensitive areas in relation to members of the public. One is that an individual's assessment of his/her needs may be at variance not only those of a welfare agency, but also with those of professional social work, a matter recognised in social work theory in the difference between "presenting problems" (ie. as from the client) and "underlying problems" (ie. following professional assessment and analysis). Another is that cultural and linguistic factors may influence the way needs are described, defined and presented, to the extent that systems based on a rather generalised analysis of society could serve to exclude those who do not conform to the general pattern.

Information Systems in Operation

The concept of publicly accessible information is simple: the reality of its delivery is complex. To an extent this paper has already touched on the question of what constitutes "information", and

the risk that an element of selectivity can be introduced by approaching the matter from an agency rather than a public or community viewpoint. There are other issues. At what point does information become advertising? How are matters of accuracy, relevance and topicality covered, or the ongoing task of maintenance? Staff of agencies may have become somewhat cynical about information systems, in the knowledge drawn from experience that they must be treated with circumspection because of the gaps and inaccuracies they contain, or the extent to which they have become out of date. In contrast members of the public are less experienced users, so have few substantive grounds for such suspicions, or no easy way of checking systems against such criteria. The public, however naively, is likely to expect "information" to be "accurate, comprehensive and up to date information", and it is arguable that this places a particular responsibility on the providers of publicly accessible systems to meet such expectations.

Whatever the quality of information on offer, there are challenges around the working of public access. The UK has wide experience of universally available services, and with experience has come the awareness that universality is rarely, if ever, achieved. We know, for example, that universally available welfare benefits are not all claimed, and that the universal National Health Service is, in reality, used to much better effect by some sections of the community than others. It is possible to predict the weak points in public access to a computer system. There are known age differences, with elderly people and all those who passed through the educational system before computer teaching came onto the curriculum at risk of being less able users than younger people. There are known gender differences because of the way computers in schools are directed towards so-called "boys" subjects, and the calculated male appeal of much home computing. There are ethnic differences, especially where English is not the first language of the potential user group, or their culture does not fit in with prevailing norms.

Public access is likely to fall well short of universal access, and an operational challenge is to minimise the proportion of the population for which access is not a realistic possibility. The provision and location of computer terminals and nature of the software will be of utmost importance. The extent of unavoidable self-dependence in using the system will also be vital. In his paper referenced earlier (1993) Hein de Graaf argues strongly that public access computer systems wholly dependent on self-usage will not work except at a very simplistic level. His view is that there needs to be an intermediary between the member of the public and the system, or at least the right of a member of the public to call on the services of an intermediary. The case for this approach is partly a recognition that many people will not be able to use a system without help, and partly, in de Graaf's view more fundamentally, because there are particular skills needed not so much in getting something out of the information system, but in making best use of it. In short, he argues that the output from a system handled by an intermediary will be of higher quality and utility.

This approach is strongly supported in the USA by the Association of Information and Referral Specialists, who feel that as the bridge between information and members of the public they are undertaking a skilled task. They see themselves as more than experts in using a computer information system. They want to be able to relate to the person seeking to use the system, to help that person formulate the most appropriate interrogations, and draw from the system the most useful items of knowledge and ways forward.

Information for What?

Much of the thrust behind various citizens' charters is the asserted right of people to know, in juxtaposition to what is often seen as the traditional UK preference for secrecy. The question such a justification begs is what comes next, what is the purpose of knowing, and what can be done with the knowledge? It is hardly likely that a member of the public will be

satisfied simply to know that her of his children go to a school which is bottom of the league for exam success; or that an elderly person will be content with reading the GP's file when it says that s/he is not getting the best available treatment because it is too expensive. Giving information enables links to be made, arguments drawn up, and demands initiated for action.

Within community care there are two sets of data, either or both of which can form the core of an information system. One set relates to people's personal circumstances, especially those which might be seen as weaknesses in their ability to live independent lives. The other consists of community care services, whether provided by public, private or voluntary means. It is not difficult to envisage how a user of such information begins to ask fundamental questions. If the computer system helps a person to identify and clarify certain needs, then under what terms are services available to meet such needs? What are the costs, or the criteria for eligibility? If services are available, what are the conditions under which an individual can gain access to them? What can be discovered about the quality of services, or value for money of different agencies offering comparable services? In what ways can the giving of information develop into a advisory approach, or help with reaching a decision?

It is perfectly feasible for the information system to be closely confined to giving factual information, but such a system is likely to cause irritation and frustration to the user, and the questions arising from the information will not just go away. In a real sense the decision for those setting up an information system is where to draw the line in meeting these follow-up questions. Where there are clear rules for service eligibility then they can be built into the system, as they have been with *Maximiser* and *Lisson Grove*. Service charges can also be incorporated. Where interpretation of the information is involved, and possibly also some debate about it, then the case for access via an intermediary is strengthened.

Some questions become much more contentious however, especially when there is the added factor of computer rather than direct human judgement being involved. People may use the system not just because they want information but also because they want to get a clearer assessment of their circumstances, and perhaps an onward reference to possible forms of help. An example is Denver's Senior Information Source. This is a system for elderly people who access it for the most part via an intermediary, generally over the 'phone. The user tells the system what his or her needs may be: the computer helps to categorise and "place" them into a framework provided by the Infoline Taxonomy; and then the computer suggests the services which might be appropriate and offers contact names, numbers and addresses. The group of agencies administering the system have a follow-up arrangement to see if the users have been able to make use of the information and advice, and have been successful in meeting their needs.

The Denver approach is well used and appreciated by the elderly community, but it presents a challenge to professional workers because it gets close to offering an alternative to a conventional professional assessment of needs, and goes still further to influence the decisions which the user takes. Furthermore it is a much cheaper route to assessment than the traditional assessment interview.

Conclusion

What then are public rights in relation to community care information? Are they limited to being able to find out about selected data items, vetted by public authority, and lacking any necessary coherence or comprehensiveness? Or should the computer, with or without an intermediary, be left to exercise its full functions, helping people to assess their needs, establish eligibility for services, reach decisions, locate the services they want, and gain redress for service agency failures? Put another way, is the public access information system going to develop primarily as an extension to the PR and

advertising activities of government and agencies? Is computerised information to be used less for its intrinsic capabilities than because it can do certain tasks more cheaply than professional service staff? Or is the computer information system in community care to become the aid, guide and advocate for those in need?

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The author is a Research Professor at the University of Southampton and an Editor of New Technology in the Human Services.

Psych Systems Problem Management Program, Version 1.0

Reviewed by Derek Gordon

Like many other managers I seem to spend increasing amounts of working time trying to solve problems. Some of these are directly related to my own tasks, but I am often approached by colleagues as well as my staff teams for help in finding solutions to their problems. In attempting to pass on advice it occurred to me that a strategy profile would be helpful. It was in this context that I sought help from the Problem Management Program from Psych Systems 2000.

When I first saw the program on the screen, it took me a little by surprise as it was unlike other applications that I have used. Software such as databases or spreadsheets require data to be entered to the computer which then processes it in a form predetermined by the program. This application reverses the process as it supplies data in the form of knowledge to help you analyse any problematic situation. Once I had adjusted to this concept, I began to look at the program differently.

The main strategy of problem management is set out in the form of a menu checklist. By following the main points, it advances through a series of stages from:

- 1) Understanding a problem,
- 2) Finding a solution, to
- 3) Organising action.

Information corresponding to each of these sections branches out, again using the menu checklist approach. Organising information in this way is very constructive as it is possible to focus attention quickly on any part of a problem area. The program couldn't be easier to use, it's just a matter of following the simple instructions on the screen. This largely consists of selecting a menu option using the up and down arrow keys and pressing the 'Enter' key. The program runs on IBM compatibles and has a fast response time.

What I found interesting about the program was that the basic psychological principles of problem management are universal in the sense they can be applied to any problem situation.

Until I saw this, I had not been consciously aware of the actual process used to solve problems or appreciated how complex the task is to do. The program has considerable variety and depth, particularly in the area of problem recognition which includes Dramaturgical and Systems models. It questions whether problems are founded in the belief system or in emotions and attempts to distinguish between symptoms and causes. The second branch "Finding a Solution" also has much to offer in clarifying direction, generating ideas, setting objectives and constructing a plan. The third branch considers what needs organising before the start of action and what needs monitoring during the operation.

The Problem Management program helps to process a variety of difficulties from:

- 1) everyday mishaps
- 2) situations that involve a mass of information
- 3) confusing or complex problems
- 4) personal difficulties that are upsetting

Because the program is a knowledge base, the way in which it is applied will depend on individual circumstances. Once you see the framework it immediately makes sense and begins to shape the way you think about problems. Everyday difficulties can be processed quickly as the main program structure is easily remembered and can be applied without constantly referring to the disc. The program could be used as a personal thinking tool when complex or stressful conditions are disrupting normal thinking processes. On these occasions, getting help to organise information into a step

by step approach that clarifies thinking, helps to identify targets to be achieved until a conclusion has been reached, must be beneficial. It could also be used alongside some counselling techniques or to coach people in problem solving as part of life skills development. This aspect could be developed even further by showing that the process could be used as a planning tool to initiate change in people's lives in a self-determining way rather than as a method of responding to problems.

Because of the amount of detail in the program, one of the biggest concerns is the danger of over-analysis. There is a definite need to use this program sparingly. It is recommended not to go deeper than necessary and to flick over screens to select what is important rather than trying to answer all the questions on the screen. On occasions similar ground seems to be covered in different sections but this added guidance does save screen-shifting and having to refer back. Also some information statements appear out of place or slightly out of context. Despite these minor criticisms, the merit of the program in providing a guided step by step approach is unimpaired.

I was impressed by the very user friendly design of the programme. Often the technical operation of some software packages constitutes a barrier to its use. Simply typing "A:" 'enter' and "prob" 'enter' starts the program. None of the staff who used the system had any difficulty - including

those who professed a degree of computer-phobia! They were all able to choose and follow paths within the program and very quickly were engrossed in the information available.

In conclusion, I think that this program has great worth because of its wide-ranging application. The framework provides a rational and consistent structure toward the resolution of problems which must make this a welcome resource to many people. At the very least, it can save thinking time which is usually at a premium in social work. The value of the program will be determined by the variety of tasks to which it is applied.

Certainly, I feel confident to be able to recommend this program as I can envisage expansion of its use, particularly in the areas of assessment, report construction, counselling, case planning or even group teaching.

The reviewer is Head of Education at Netherton Park School in Northumberland. The establishment caters for 45 young people, providing education and residential care with some secure unit facilities.

The Problem Management Program is priced at £45 and is available from:

Psych Systems 2000,
301 Green Lane South,
Coventry, CV3 6EH.
Phone (0203) 692922.

HUSITA 4

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The fourth international conference of information technology applications in health and welfare will take place in Finland, at Rovaniemi, on the edge of the Arctic Circle, from 11th - 14th June, 1996. It will be organised by the National Research and Development Centre for Welfare and Health in co-operation with the University of Lapland.

To get on the mailing list contact the Husita 4 Bureau on fax: +358 0 3967 2001, email: husita4@stakes.fi, or phone: +358 0 3967 2110 (Victor Savtschenko).