ABSTRACT

**Purpose** This paper reports an evaluation of the usability and acceptability of a computer-based decision support program (EMPOWER™) for cardiovascular risk from the perspectives of both general practitioners (GPs) and consumers.

**Methods** A qualitative research design utilised semi-structured telephone interviews to assess the program from participants’ perspectives. Qualitative approaches included the use of purposeful sampling, the collection of open-ended data, and the analysis of text and personal interpretation of findings. The theoretical foundations for the methods chosen are explained.

**Results** Consumers enjoyed being involved in the study and thought the program had benefits for encouraging confidence in seeking health care. Consumers reported feeling reassured about the processes followed during consultation. GPs found the application of the software program increased demands on their time but admired several features of the program, especially its educational advantages. Participants were of the opinion that the program would be of particular benefit to inexperienced GPs and newly diagnosed patients.

**Conclusion** Computer decision support programs are becoming more prevalent, but little is known about their usability and acceptability to both health professionals and consumers. The complexities of cardiovascular risk assessment and management can be adequately managed with such programs. As a contemporary report this study contributes to the growing knowledge required for developers of medical software and decision support systems to better understand the needs of end-users.

**Keywords**: cardiovascular, decision aid, electronic decision support software, evaluation, medical informatics
Introduction

Development of information technology (IT) for health care and its adoption into practice has accelerated in recent years with the development of decision aids for a variety of applications, including case note management, educational outcomes, clinical decision making and risk management. Computer applications in the form of electronic decision support systems have the potential to assist clinicians and patients make specific and conscious choices regarding health care and intervention options. By doing so, decision support systems are thought to facilitate improved safety and quality of health care and contribute to improved patient outcomes. The Australian Federal Government's National Electronic Decision Support Task Force has defined electronic decision support as ‘access to knowledge stored electronically to aid patients, carers and service providers in making decisions on health care’. For decision aids to lead to improvements in health care, the Task Force encourages evaluation of the impact of programs in order to determine their safety, quality and efficacy. To understand how this occurs and to delimit the knowledge gained, it is ideal that clinical tasks be examined within the context of clinical work processes. A systematic review that identified over 200 decision aids revealed that, although their availability was expanding, few were evaluated.2

The purpose of this paper is to describe an evaluation undertaken to assess the usability and acceptability of a cardiovascular computer decision support software (CDSS) tool developed within the Department of General Practice at the University of Adelaide, called EMPOWER™. This descriptive study sought to ascertain the level of acceptability of cardiovascular decision support programs to both patients and doctors.

Background

Articles focusing on decision support tools to assist healthcare providers when conducting a face-to-face consultation were included in the review of literature. Articles that examined the application of software to manage medical records, electronic prescribing or general health information systems, or to improve educational outcomes through the use of handheld computers, were outside the scope of this review.

Overall, studies examined reported high levels of satisfaction and positive attitudes with regard to decision aids by users.3–5 Ahearn and Kerr acknowledged that there is little information available about the attitudes of Australian general practitioners (GPs) to decision support software.6 In their qualitative study of 22 GPs, they identified that doctors need to remain sensitive to their patients’ needs and expectations. Software developers need to be cognisant of this when designing the software interface and allow doctors to maintain a high interactive level with patients. The focus for evaluation design to include both the system and the users is strongly encouraged.7 Frequently, concern is centred on how to contain evaluation costs rather than recognising that rigorous evaluation is needed if the software industry wishes to develop and retain the confidence of doctors, patients and organisations.

O’Connor et al reported that among the trials comparing decision aids to usual care, decision aids performed better in terms of improved knowledge, more realistic expectations, lower decisional conflict due to feeling informed, an increased proportion of people active in decision making, and a reduced proportion of people who remained undecided post-intervention.2 Interestingly, they found that decision aids had a variable effect on which of the healthcare options offered by the program were selected.

Describing a formative evaluation of diabetes management in primary care, Pagliari et al found that evaluation provided a number of important and unforeseen improvements to the software prototype and helped to refine the implementation plan.8 A beneficial outcome of stakeholder involvement in the process of evaluation led to high levels of ownership and widespread implementation.

Computerised decision support systems have, in some cases, demonstrated benefits for GPs and others. Patients and clinicians were reported as being enthusiastic about clinical decision support systems, finding confidence with the systems after short training periods.3 Decision aids were considered to be useful, with benefits for healthcare providers, patients and software designers.3,6,9 In their validation of a clinical model and program, Liaw et al found additional benefits included an emphasis on safety and effectiveness in the provision of medical care, a focus on user-centredness, privacy and the application of logic in decision making.10 A standards base to clinical processes and for acquiring required information was also considered to increase efficacy. Murff et al studied attitudes toward outpatient decision support systems and revealed that primary care providers also felt they could comply better with guidelines through clinical electronic reminders.8

Features of CDSS vary due to lack of an established framework for standards of quality and safety within which software developers are required to work.9 When reporting concerns and deficiencies, Carroll et al found that some patients had difficulty interpreting clinical data, while the clinician’s main concern was that the CDSS would increase consulting time.3
Ahearn and Kerr and Johnston et al were less satisfied with functional rather than clinical process features, and found too many prompting and alerts, which were annoying and interfered with the client–doctor relationship. In their study examining barriers to electronic decision software in general practice, Liaw and Schattner identified several issues, including lack of business case, shifting costs for data collection, uncertainty about the optimal level of decision support, lack of technical and semantic standards, and resistance to use by time-conscious GPs. Although evaluation was considered essential, the process of incorporating consumers' and clinicians' views into the design of CDSS was reported as an arduous process.3

Computer literacy of users was commented on in some reports. Johnston et al, for example, found that utilisation of the software was affected by users' knowledge of computers and evidence-based medicine.9 For successful dissemination of decision aids this matter would need to be addressed. Suggested strategies could include, but not be limited to, effective collaboration between government, computer industry and the medical profession.11

O'Neill et al recommend comprehensive methods for uncovering, evaluating and assimilating information for clinical decision support systems.12 They discuss innovative approaches for knowledge development such as integration of clinical experts and a practice network to incorporate practice knowledge. These strategies will assist scientists and practitioners interested in determining the best evidence to support clinical decision support systems. Persistence with chosen therapies and cost-effectiveness require further evaluation and optimal strategies for dissemination to be explored.

**Key features of the program**

Cardiovascular disease remains a major cause of disease burden in developing and developed regions,13 and disease and risk management has increasingly been discussed as a means of curtailing healthcare costs and improving patient outcomes.14 As an integrated information–communication technology program, EMPOWER aimed to enhance existing medical software programs to improve disease management for hypertension through management of patient information and provision of patient education materials.

The EMPOWER project embraced the following definition of disease management: 'a systematic population-based approach to identify persons at risk, intervene with specific programmes of care, and measure clinical and other outcomes'.15

Conceptually, the program has a 'patient-centred' focus, which is about sharing management between patient and doctor and includes the key principles of communication with patients; partnerships; and a focus beyond specific conditions, on health promotion and healthy lifestyles.16 Key features include goal setting, written management plans and regular follow-up. There is some evidence that such an approach improves management for hypertension.17 Studies that focus on the use of computer-based clinical decision support systems for hypertension (particularly standalone risk calculators to establish cardiovascular risk) have demonstrated that a combined approach to integrate both risk estimation and management recommendations may be required to be of benefit to patients and patient outcomes. Contrary to this, a recent randomised trial18 found that getting evidence into practice through guidelines has limited effects on changing prescribing habits. The study found that close integration of a software risk calculator with the electronic medical record had a very limited effect on the frequency of formal risk assessment prior to prescribing for hypertension.18

**Software elements of EMPOWER**

The development of EMPOWER was initially based on the National Prescribing Service's paper-based Cardiovascular Risk Calculator, informed by the New Zealand Cardiovascular Risk Calculator.19 In contextualising the use of such a cardiovascular risk calculator within general practice, it was recognised that such a tool would be more appropriate within the context of hypertension and cardiovascular risk assessment and management.

Development concentrated on reorientating the cardiovascular risk calculator with recently updated Australian clinical hypertension management guidelines.20 The EMPOWER program guides a general practice hypertension/cardiovascular risk consultation using computerised decision support aids based on data entered within a consultation, or from data derived from the clinical records of a patient. Such computerised decision support guides both a patient and a GP through representation of a clinical guideline, including:

- categorising and grading blood pressure readings against international classifications21
- establishing which risk factors apply to that patient and whether or not a patient requires a risk profile generated for their circumstance
- determining the risk profile of a patient (of having a future cardiovascular event in the next five years) through the use of a cardiovascular risk calculator
tailoring particular management interventions based on individual circumstance (lifestyle and/or lifestyle and pharmaceutical intervention)

establishing the appropriate review cycle for that patient.

Recognising that GPs are loath to input the same data twice, the technologies within EMPOWER™ require integration with clinical software and, importantly, patient data derived from the use of such clinical software within a consultation.

Purpose of the study

The study sought to assess the EMPOWER™ program’s acceptability and usability from the perspectives of GPs and consumers. The term usability was defined by Carroll et al to mean ‘the ease with which a system can be learned’. Drawing from a definition by the American National Standards Institute Incorporated, Carroll et al explain that it includes the degree to which users can use the product to achieve expected outcomes. Furthermore, Nielsen (1993, as cited in Carroll et al) suggests that IT applications should display five major usability attributes, namely:

- easy to learn
- efficient and productive to use
- easy to remember so that the infrequent user is not disadvantaged
- relatively error-free so that users make few errors and recover easily from errors they do make
- pleasant to use and so increased satisfaction in using it.

For a product to be considered acceptable we sought to ascertain:

- how well it integrated with other clinical software
- the time taken to install and use the software in consultation
- impact on workflow
- effect on the consultation
- value as part of the clinical process
- the extent to which a clinician desired to use it.

Although not expected to reveal the impact on patient health outcomes, this evaluation was designed to determine the program’s usability and acceptability during a health consultation from the perspectives of both GPs and consumers. Cardiologists were not included in the study as the focus was on primary, not secondary, care.

Method

Setting and participants

The study was undertaken in metropolitan general practices which used the Medical Director electronic medical record program for the management of patient clinical data. Five GPs were randomly recruited from a database of general practices in the Adelaide metropolitan area. Participants were required to use a computer for consultation. Three of the GPs were female and two male. Of the initial GPs approached, two declined but others in their practices volunteered. On recruitment, GPs were provided with a letter of information about the study and software program and expectations of them. Prior to consultation, each patient was provided with printed information outlining the aim of the study, ethics approval, risks, benefits and considerations.

Consumers were recruited through the participating GPs when they presented for consultation. If, for whatever reason, they deemed a patient was compromised by participating, their details were not provided. This provided a mix of first-time consultations and follow-up consultations. Consumers were asked to provide informed written consent with phone contact details for a post-consultation telephone interview. Consumers whose health might be compromised by involvement were not eligible to participate. Of nine consumer participants, four were female and five male. Most consumer participants reported they were not computer-literate and did not have a personal computer, although some had access to one via family members. Some were interested in obtaining educational information they could install on their computer, while others were not.

Processes

To minimise the risk of difficulties occurring between software and hardware components and in application, recruited GPs were trained in the use of the software in their clinical setting on their personal computer. This enabled the informatics research officer and researcher to address glitches at the beginning of the trial. GPs were also provided with on-call support from the informatics research officer.

Interview instruments

The survey for GPs was a semi-structured questionnaire consisting of 11 items divided into two domains: usability and acceptability (see Appendix 1). These domains included general experience (one question),
provider opinions concerning the CDSS in application (8 questions), and user satisfaction (two questions).

**Procedure**

The researcher and software installer made appointments with the practices to install the software on participants’ computers. Following installation, participants notified the researcher of completed consultations.

A 9-point semi-structured questionnaire (see Appendix 2) was applied by telephone to patients who had consented to be interviewed following a consultation with a GP using the EMPOWER™ software. The questions were divided into two main sections: acceptability and usability. Nine patients consented to be interviewed. Participants were provided with a copy of the questions to refer to during interview in order to facilitate the process. Interviews were digitally recorded and transcribed.

Telephone interviews offered researchers the opportunity to clarify tasks or questions for respondents and to obtain more meaningful data. General practitioners were interviewed within 24 hours of applying the program to five patients. Patients were similarly interviewed within 24 hours. In some cases this was on the same day as the consultation. Rapid follow-up reduced the risk of memory loss.

**Data analysis**

Electronically recorded data from telephone interviews were downloaded into computer software and supplemented from transcribed notes taken during the interviews. Data were thematically coded to the key evaluation questions which guided the development of themes. Short summaries of the key findings from the analysis were prepared for discussion and the formation of recommendations by the project team.

**Results**

Results are summarised and reported within categories that reflect the interview questions and the domains of usability and acceptability.

**General experience of using the EMPOWER™ program**

General practitioners’ experience of the program differed, with four providing operational criticisms and one providing a more general comment. Generally, the program was considered to be comprehensive and easy to use, although a time-consuming application in its entirety. It was considered visually satisfactory to users. A common opinion was:

Basic idea very good; need to get it to run smoothly. (GP1)

**Integration with other software and hardware**

General practitioners’ experience of whether the program ran smoothly varied widely. Networking configurations through servers were found to interfere with the smooth running of the software. When this element was removed, the problem resolved. A major frustration for those with small-sized computer screens was the inability to scroll down the page:

Not being able to scroll and move to the next page made using it difficult. Also had to change the computer settings so could see the whole page. When working with a low-risk patient couldn’t progress to the next stage without making her high-risk – wouldn’t let me finalise it at any rate. (GP1)

General practitioners were hampered by the lack of a search/find tool for selecting patients quickly from their database. In addition, the program showed all the active and inactive patients. Subsequent modifications to the program addressed these issues. Articulation with other computer software was reported to be satisfactory by all GPs, but integration into the Medical Director program for easy access was desired:

Would be better if there was an icon in Medical Director that could be selected rather than having to open a new program. (GP3)

**Impact on workflow and effect on the consultation**

Taking part in the study lengthened practitioners’ consulting time; this was due to the consenting process and also because of application of an unrefined tool. General practitioners unanimously agreed that using the decision support software increased the amount of time required for consultation:

Quite useless as far as the routine goes. It took me half an hour for each patient. On an ongoing basis could reduce it to 20–25 minutes. (GP2)

Would lengthen the time for the consultation because you are so used to assessing those features in your mind rather than doing it physically and put the results on paper rather than go through all the tests and their values and everything. (GP1)
Significant time increase due to the problems above. May not have time to use videos. (GP4)

Most of the consumer respondents were favourable about the extent to which the program could be incorporated into a consultation, and reported there was no interference with the patient–doctor relationship, but it provided an opportunity for discussion:

Didn’t interfere with patient–doctor relationship or interfere with questions. Could bring up questions for us to discuss as we went through it. (GP1)

Application of the software during the consultation did not disrupt the patient’s relationship with the doctor. Several participants reported having known their doctor for a long period of time and had a high degree of comfort with him/her.

That wouldn’t be the case. I have known him many years and whichever way he asks me the question while he is using the computer doesn’t upset me. And I’m used to computers too. Not that I use one. The family uses one. (P2)

Value as part of the clinical process

In addition, participants gave considerable support for the use of decision support software in consultation, being of the opinion that it facilitated the doctor’s work:

No. Makes doctor’s work easier. I trust computers. Gets all kind of information. Everything is together. (P5)

Helps him to form the questions, doesn’t have to rely on his own memory, it is all there on the screen for him. A doctor with experience could ask those questions as well. More help to a less experienced doctor. Didn’t interfere in the consultation. (P6)

Participants did not feel restricted in their ability to make health-related decisions, express opinions about their health, or ask questions during the consultations. In general, they found the use of the software increased their involvement in the consultation and facilitated discussion:

Liked the printed information and being able to discuss, like having a second opinion. (P1)

I was more involved and interested. (P8)

Being able to show patients their risk and how to minimise it was considered beneficial:

Clear and concise when risk factors come up on the screen. Getting the risk factor to show patients and help them understand they can make a difference by modifying behaviours. (GP4)

Value to the users

Participants were asked for their opinion on the tool’s applicability in a broader sense within the general practice setting, for example, by practice nurses or administration staff. All but one GP thought this a possibility:

If they could use it for us it could be great. Use it as a guide to collect information during health assessment tailored as an adjunct tool feasible. (GP1)

I think it’s the sort of thing a practice nurse would like to do. We have a practice nurse and she does a few things with the computer, such as spirometry. (GP3)

All GPs interviewed were experienced practitioners and some felt that the tool was of more value for the inexperienced practitioner, who could benefit from following a decision trail. Additionally, the program might be more useful for the newly diagnosed patient:

I really don’t know if I would use it though because I don’t use much like that at all. Even for depression, I don’t use questionnaires; I go on my own questions. If starting out as a new doctor, it would be a good way to start train of thought and documenting. Usability more for those starting out. (GP1)

Of the health education and promotion materials available in the program, videos on healthy eating, physical activity and salt intake were the resources most frequently viewed by doctors over 25 consultations. Overall, the patient education material was well received, with the most useful resource considered to be the dietary information on potassium, which is often not available:

Education material excellent: dietary potassium in particular, because we don’t see it anywhere else. (GP1)

The resources, they are good. Especially the potassium-in-food information as this is not usually available, and patients have been told to reduce potassium foods but not given information on what foods contain potassium. (GP3)

Patients’ responses to the program

Patients liked the health information provided in the program. They found the information to be practical, realistic and relevant. The visual nature of the information in the videos was reported to have more of an impact than if only provided on paper:

It helped explain more about food and proper eating. Exercise difficult at my age. Given 3–4 sheets of printed information. More awareness of bad conditions that are possible. (P1)
Sure. And the printouts: people, including me, would have gone through those things years ago and then forget, so this is a good reminder. (P6)

Patients appeared to enjoy the use of the program during their consultation and being part of the trial. Their overall impression was that computerised decision support programs were practical and useful for GPs:

I don’t know how much use it will be to you because I am nearly 81. It didn’t faze me in any way at all or upset me at all. I think it could be a useful tool for people continuing to have problems, or improve rapidly, or not enough, so you can check up on them. Anything the doctor wants to know is there. (P2)

Participants found the program logical and commented that the software combined well with the patient and doctor:

...a good idea – actually shows you via video. People don’t like reading. Rather see a video than read. Great idea as multicultural country and has benefits information too. (P9)

I would say the three together; your advice, doctor and patient go together. I think a good combination. What I feel as a patient: we would like to maintain the health standards as long as we can. (P1)

It was very good. All comprehensive. All together in one spot. Not just one doctor but another doctor could have a clear view and know what is happening. That I think is important. Don’t have to go from doctor to doctor. (P2)

Although critical of some aspects, patients found several features favourable and thought that computerised medical information could be an attraction to some patients who needed encouragement to seek medical assistance:

Many patients don’t want to go to the doctor, especially men, so if there is something new it might interest them; on the other hand they might be put off, especially if the relationship was new or rather official. If you haven’t seen the doctor often, once in a while, and he comes up with this, it might put you off and cause you to clam up. The fact it is new and being developed is in itself a good thing. (P6)

Discussion

In the main, GPs found the EMPOWER™ program to be usable and acceptable following modification. The most significant drawback was the extra time needed in consultation, and how much this could be reduced by regular usage is unknown at this stage. Nevertheless, it is known that clinicians often failed to use CDSS because of slowness or because it was not linked to the electronic patient record. Educational materials were praised and the inclusion of dietary information on potassium notably so. How easily practitioners could find what they needed in the software was difficult to measure due to limited use and operational difficulties. However, the difficulties provided useful feedback for modifying the software prior to further testing.

Patients found that the program impacted positively on the consultation process, allowing them to enter into discussion about their health care with the GP. They believed it to be a useful adjunct to the healthcare process and one that allowed them to join with the practitioner in assessing and managing their cardiovascular risk. Operational problems encountered by the GPs did not appear to impact on the patient participants, who mainly reported an increased reassurance about the consultation process through the use of decision support software. Both patients and GPs felt that the software was particularly useful for those newly recognised as at risk, and also for the less experienced practitioner.

The problem of increased time for consultation was the largest issue for GPs, and developers are challenged to address this effectively. In recognising the natural constraints imposed within a consultation, the software developers considered an alternative approach. This was to address management of hypertension and cardiovascular disease as discrete components. Management is one part of the spectrum, with diagnosis and review extending on either side. By enabling the software to address each of the aspects individually, a GP would not be obligated to run the tool serially, that is, diagnosis, interpretation and management in one consultation. Each component could be run as discrete modules within single or multiple consultations. An additional software development motif looked at how to process clinical information for rapid assessment of where a patient was placed in a management cycle. For example, was a patient newly presenting, recently diagnosed, requiring a management plan or amenable to review? A graphical presentation system was developed to visually present each of the modules, data pertinent to an individual patient and their placement on a management cycle. In addressing the constraints of a consultation, the tool could act in a modular manner, mindful of consultation times, and offer rapid assessment of a patient on reopening the tool within a new consultation.

The use of education materials within the consultation was deemed to be a further limiting factor, due to the time required to involve a patient in their own clinical management. We acknowledge that the additional education materials were not the focus of the study but an adjunct to management, and as such the option of others such as practice nurses implementing the education tools is worth investigating.
While not able to be generalised because of the small sample, the study findings provide insight into patients’ acceptance of decision support software and pave the way for larger studies, particularly in other areas of chronic disease.

Conclusions

This study provides an original first-hand account of an evaluation of a CDSS program for cardiovascular risk assessment and management from the perspectives of two stakeholders.

The feedback received from patients indicates that the EMPOWER™ decision support software was generally acceptable, practical and serviceable. General practitioners were critical of the time issues involved in using the program and getting it to run smoothly with minimal disruption to a consultation. Patients indicated that they did not object to the use of CDSS during consultation. It was seen to provide a positive means through which to interact with the GP and to have significant educational benefits. In fact, patients expressed an interest in obtaining electronic health education tools for their own use.

Participants recommended that this software might have particular benefit for newly diagnosed patients or inexperienced doctors. An additional benefit might be that it provides encouragement to some patients who find it difficult to seek medical advice; it could also lower decisional patient–doctor conflict due to the patient feeling informed and involved.

Installation of the program did not create problems integrating with other desktop software. Operational difficulties encountered during this testing phase were practical in nature and were addressed by refinement of the program. The largest impact was the increased time taken on workflow and consultations, which is also the biggest concern identified in the literature. This could be addressed by dividing the tool for systematic planned consultations.

In the new demands of the contemporary primary health care context, there needs to be closer analysis of the processes that are implicated in formative evaluation situations and about which the literature is largely silent. The rise in the development of electronic decision aids demonstrates an increasing interest in IT and information processing. It also offers increased opportunities for health promotion strategies within the primary health care context. This suggests a trend that could be important from resource utilisation, time and efficacy perspectives. This study is a useful step in contributing to the understanding of the benefits of electronic decision support software in the multi-disciplinary pathways of cardiovascular disease. In addition, developers of medical software and decision support systems might better understand the needs of end-users.

In closing, the authors note that the literature expresses differing views on appability and usability, often dependent on the setting. It is important to keep abreast of changing views in this developing area of IT.

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**CONFLICTS OF INTEREST**

None.

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Appendix 1

General practitioner interview questions

1. Tell us about your general experience of using the CDSS.

Acceptability

2. Please comment on the CDSS in terms of its impact on your workflow.
3. What would you view as being the most valuable aspect of the tool?
4. What would you view as being the least valuable aspect of the tool?
5. Comment on the impact (both positive and negative) that the CDSS might have on the consultation.
6. Comment on the extent to which you think the CDSS program can be incorporated into the consultation.
7. Give your opinion about the length of time taken and ease with which the CDSS was installed onto your desktop computer.
8. Comment on how well the CDSS integrates with your other computing software.
9. Comment on any extra time taken to use the CDSS in the consultation.

Usability

10. Comment on the extent to which you could find what you needed in the CDSS.
11. Comment on the extent to which you could get the CDSS program to run smoothly.
Appendix 2

Patient interview questions

1. Please tell me about your general experience with the decision support software. (Prompt: Was it used during a consultation with your doctor? Have you not experienced it at all? Or: Have you experienced it more than once?)

Acceptability

2. Please rate the following statements:
   (a) Loss of the ‘personal touch’
      - not at all
      - some degree
      - significant degree
   (b) Improvement in your ability to express opinions during the consultation
      - not at all
      - some degree
      - significant degree
   (c) Improvement in your ability to make decisions during the consultation
      - not at all
      - some degree
      - significant degree
   (d) Improvement in your ability to ask questions during the consultation
      - not at all
      - some degree
      - significant degree

3. To what degree has exposure to the CDSS increased your thought or knowledge about hypertension and treatment options?
   - not at all
   - some degree
   - significant degree

4. Was there any aspect of the consultation using the CDSS that you didn’t like?

5. Was there anything in particular you did like about the use of the CDSS during the consultation?

6. Please tell me if you have seen any of the following parts of the program. Please answer yes or no.
   - pamphlets in the waiting room
   - computer-generated pamphlets
   - information on smoking
   - information on alcohol
   - information on healthy eating
   - information on weight reduction
   - information on salt intake
   - information on physical activity
   - information on managing stress
   - information on family and social supports
   - medication advice
   - excerpts from videos
   - none of the above
   - other (please describe)
7 If any, what parts of the consultation were enhanced by use of the software? (Prompt: For example, your involvement.)

**Usability**

8 If you have seen or read any of the printed material provided by the software, please comment on:
   (a) The extent to which you have been able to find what you needed.
       - [ ] not at all
       - [ ] some degree
       - [ ] significant degree

   (b) The appropriateness of the material. (Prompt: For example, its value to you, ease to read, use of understandable language.)

9 Do you have any final comments or recommendations?