Project Title:

Information System Pilot for Home Care in Winnipeg

Screening, Assessment and Care Planning Automated Tool (SACPAT) and

InterRAI Minimum Data Set (MDS-HC)

Project #   MB 121

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Executive Summary

The objectives of the Information System Pilot for Home Care in Winnipeg – Screening Assessment and Care Planning Automated Tool (SACPAT) and InterRAI Minimum Data Set (MDS-HC) project were to:

1. test SACPAT for reliability and validity using data from the two existing sites;
2. leave SACPAT in one existing site and roll-out MDS-HC, a tool with demonstrated reliability and validity, to the remaining 15 Winnipeg sites;
3. perform a comparative assessment of the two tools in order to identify a solution that best meets the needs of the Manitoba Home Care Program.

SACPAT is a computerized tool developed by Manitoba Health to act as a provincial standard. It was intended that SACPAT would be utilized by all Regional Health Authorities (RHAs) responsible for delivering home care services in Manitoba, to assess client eligibility and functional need.

When it was first developed, SACPAT was "state of the art" technology with regard to automated home care screening and assessment. However, it had not been tested for reliability or validity. Without these tests, it is not possible to use the data, which emanates from SACPAT for either research or analysis purposes.

InterRAI is a non-profit, international consortium of approximately 40 researchers and clinicians who conduct multinational collaborative research to develop, implement and evaluate the RAI (Resident Assessment Instruments) instruments and their related applications. InterRAI has developed assessment tools for long term care, mental health, acute care, chronic care and home care.

The InterRAI MDS-HC tool has been extensively tested for reliability and validity and has shown to have high levels of each.

No software had been developed for MDS-HC at the time the Health Transition Fund proposal was submitted. Manitoba Health was concurrently pilot-testing the InterRAI Minimum Data Set for Long Term Care, using Momentum Healthware software. By the time the pilot was initiated Momentum Healthware was developing the first-ever MDS-HC software which enabled us to compare two automated assessment instruments. Staff from the Winnipeg Regional Health Authority (WRHA) Home Care beta-tested the software package.

A Desktop Management Services contract was awarded to EDS Systemhouse to provide hardware and software procurement, deployment and on-going support of the desktop and infrastructure for over 300 workstations to 15 Home Care offices.

Point persons were trained in a train-the-trainer process for both the MDS-HC tool and the software.

The Manitoba Centre for Health Policy and Evaluation (MCHPE), as part of an allied Health Transition Fund project, Enhancing Capacity to Study and Evaluate Home Care (MB 122), evaluated SACPAT and MDS-HC for validity and reliability and recommended MDS-HC as the best tool for Home Care in Manitoba.

In December 2000, deployment and training began on a phased basis with all sites being deployed by March 31, 2001. A transition strategy is underway to transfer on-going operational responsibility for MDS-HC as the approved assessment tool for Home Care in Winnipeg.

The benefits to be realized with the implementation of a standardized, electronic assessment tool for the Home Care Program include:

Resource Allocation – contributes to equitable resource allocation based on reliable data provided.

Performance Measurement – promotes the activity of performance measurement through performance and outcomes measures. Manitoba Health will be able to compare Home Care performance between offices, regions, provinces and countries based on standardized quality indicators.

Assessment Reviews – reduced assessment times – provides a full and comprehensive assessment. Staff are able to depend on one assessment rather than an assessment requiring additional questionnaires.

Objective Assessment – requires the assessor to answer all sections. The previous Home Care tool allows a coordinator to omit sections and is therefore more subjective.

Decision Support – provides valid and reliable data in a standardized and accessible format to allow management to make the appropriate decisions at the right time. This will allow management to readjust program requirements or identify program shortfalls.

Standardization – provides common descriptors of clients, their needs and resources to meet those needs.

Benchmarking – allows comparison across sites using the same set of client based indicators. Provides information that can be used for accreditation and quality improvement.

Strategic Planning – contributes to the goal of improving accessibility and responsiveness of health care service to Manitobans. Enables evidence-based decision-making and planning across the health care continuum.

Manitoba Health has gone forward with plans to establish MDS-HC as the approved assessment tool throughout Manitoba.

1.   Short Description

The Home Care Information System Pilot Project performed a comparative assessment of InterRAI's Minimum Data Set – Home Care (MDS-HC) and the Screening Assessment and Care Planning Automated Tool (SACPAT) to determine which assessment instrument best meets Manitoba Home Care requirements. The pilot project required the creation of the appropriate system infrastructure and hardware platform from which to operationalize an automated assessment instrument for over 300 users in 15 Home Care offices.

An automated home care tool addresses numerous service provision and program management issues by providing the framework and mechanism for a standardized approach to Home Care assessment and care planning across multiple sites. An automated Home Care tool will:

- capture and classify a wide range of client-based demographic data;

- capture within the assessment component a full range of indicators/information on the functional status/ability of clients;

- enable care plan development based on the unmet needs and client assessment protocols identified in the assessment component;

- provide a classification component which will work in conjunction with that used in long term care;

- allow for the tracking and monitoring of resource utilization at the individual, regional and provincial levels;

- enable province-wide access to all client files by authorized personnel;

- have the capability to interface with a Health Information Network; and

- serve as the initial component of an electronic health record

2. Project Activities

Partners: Health Transition Fund, Health Canada

Manitoba Health, Continuing Care Programs

Manitoba Health, Information Systems

Manitoba Government Services – Desk Top Services

Manitoba Government Services – Electrical Engineering

Winnipeg Regional Health Authority

InterRAI

Momentum Healthware

EDS Systemhouse

Activities:

In order to coordinate and facilitate the design and activities of the project, a working group with representation from all the participants/partners met biweekly. A Steering Committee provided high level decision making support for the project, meeting on an as-needed basis. As much as possible, issues were brought to the work group for resolution by all concerned parties. The project activities were:

- support development of software package for MDS-HC by Momentum Healthware

- run beta-test of software with four home care coordinators for 2 weeks

- make recommendations for changes to make software as user friendly as possible

- train all Home Care coordinators in MDS-HC using train-the-trainer

- inventory all Home Care sites identifying hardware and wiring needs

- train Home Care Coordinators at test site in MDS-HC Momentum software

- begin data collection at test site

- site implementation work starts for wiring, telecommunication connections, etc.

- Desk Top Services proponent chosen through Request for Proposal process (EDS Systemhouse)

- Manitoba Centre for Health Policy and Evaluation compares two tools and recommends MDS-HC

- Providence Centre provides analysis of preliminary data from test site

- EDS acquires hardware and software for site implementation

- back-fill positions are hired for point persons who will train and support staff

- EDS begins hardware deployment and implementation on a phased basis

- point persons develop training schedule and begin in concert with hardware deployment

- continue to make recommendations for software improvements

- develop a transition strategy to transfer on-going operational responsibility for MDS-HC to the Winnipeg Regional Health Authority

Deviations/Problem

HTF approval was given in May of 1999 and Provincial approval in September of 1999. The first issue to arise was lack of software to

support MDS-HC. Manitoba Health was pilot testing the InterRAI assessment tool for long term care (MDS-LTC) using Momentum Healthware software. Momentum had intended to begin development of software for MDS-HC as part of its business plan for the MDS suite of instruments. Momentum agreed to accelerate development of MDS-HC to meet the need of the project. The acceleration reduced the usual development period and a beta product was ready for testing in December 1999. Revisions were made based on the experience of the beta-test and the software was ready for distribution to a Home Care test site in February 2000. With reduced development and testing time lines, the MDS-HC software was introduced with less than optimum trialling. More realistic time lines would have resulted in a more mature, user-friendly product to trial at the test site. As it was, all parties saw this as a pilot for both MDS-HC and the software and worked to improve the software through the trial period.

Delays occurred at every step of the pilot, despite all parties being committed to the pilot objectives. Changes in the environment that were beyond any one partner's control led to these delays. A provincial election resulted in a change of government. What had formerly been two Winnipeg Health Authorities merged into one. Problems were encountered with an existing government contract for desk top services that precluded using that contract to provide services for the pilot. Personnel representing each partner, changed up to four times for a variety of reasons.

The delays resulted in next-to-impossible schedules for procurement, deployment, training and evaluation. Home Care staff were being introduced to a new assessment instrument, learning how to use a computer and using a new software package in an environment that was

already highly stressed. A project that had started out with high enthusiasm, lost momentum and commitment with each new delay. However, in January of 2001, the first offices were trained, deployed and using MDS-HC in an automated environment for all new Home Care assessments.

## 3.	Project Results/Outcomes/Impact

The pilot evaluation (see Appendix 1, MCHPE MB 122) provided the necessary analysis to demonstrate that SACPAT, while a very responsive assessment and care planning tool for case coordination, would require considerable additional research and development to provide the level of reporting, comparison, decision support and comprehensiveness available through MDS-HC. Preliminary tests for SACPAT's validity and reliability indicated that major revisions would be required. On the basis of the evaluation, Manitoba Health has chosen MDS-HC as the common assessment tool for Home Care in Manitoba.

Due to delays outlined in section 4, only one Home Care office, the test site, had the opportunity to use the assessment and collect data over time. This office is in the inner city, has a high proportion of single males, low socio-economic status and deficient housing stock. The Canadian Collaborating Centre InterRAI, Providence Centre provided an analysis (see Appendix 2) of the assessment done over a six month period and compared the results with data from Continuing Care Access Centres in Ontario. It must be noted that the Manitoba Home Care Program includes home support services as part of its program at no cost to clients, which is not the case in Ontario.

As would be expected given the location of the test site, Manitoba's clients were more likely to be male, never married and have lower education levels. They triggered Client Assessment Protocols at a higher rate for communication disorder, visual function, alcohol dependence, depression, elder abuse, social function, nutrition, brittle supports and their environment. The fact that the assessment triggered those areas for additional care planning, reinforced the ability of the assessment to reflect accurately the needs of the clients.

HTF Framework

It must be noted again, that delays in the project have resulted in only one Home Care office having used MDS-HC over time, therefore the ability to respond fully to the Evaluation Framework questions is limited.

Quality of Service

This question is best answered by a quote from a case coordinator at the test site, referring to satisfaction with the tool, relationship with client and the appropriateness of an automated assessment instrument:

> "Personally, I had many misgivings. The challenge of taking a laptop into my client's home and using the computer to do the assessment has been enormous. Initially I was terribly concerned that I would focus on the screen to the exclusion of my client. In the past I had used my initial visit to do the assessment, build a Care Plan and form a relationship of trust with my client. Interviews had always been open ended and free flowing. Using the computer felt awkward and I was very uncomfortable. Suddenly I was forced to follow a different format, one in which questions were prescribed and driven more by the computer than by the client. I felt that I was losing so much of what I had viewed as my

professionalism. Then, having made an assessment visit with another case coordinator, I said, "that was horrible. The poor client must have been feeling that I was more concerned with the computer than her problems." The response was that I was the only one feeling that way. The computer had not prevented my maintaining eye contact or actively listening. After thinking about this for a while I realized they were right. When I closed the computer I could say "now let's talk". I was still doing what I had always done but with a slight modification.

I have been asked, "Is professionalism enhanced due to technology". In response I must ask what is meant by professionalism? I think I am able to assist clients in accessing the Program. That hasn't changed. Overall, however, the professionalism within the Program is enhanced. In having a standardized assessment, our clients have access to the Program in the same way, regardless of where they live or who their Coordinator is. This can only be a benefit to those who must rely on us.

Our software summarizes areas of concern and should force me to look at what is essential to maintain safety. When working with the client to build a Care Plan, which meets their needs, I am focussing on the risks they face and what can be done to alleviate those risks. Because the assessment tool flags areas of concern, I have a more unbiased basis on which to make decisions. It helps me keep in mind that we are in risk prevention not just service provision. My assessments are focussed and Care Planning is objectively tied to the assessment. My rational for what I am doing is clearly defined."" [1]

1 Leslie Orlikow, Case Coordinator, Winnipeg Regional Health Authority, December 2000

Access to Health Services

To date, the only demonstrated change in access to services is a reduction in the time required for assessment. The test site coordinators estimate they have reduced assessment time by up to one hour because the assessment itself is short and, with automation, is completed during the interview. We anticipate reduction in assessment time will translate to increased resource availability and reduced waiting time for initial assessment.

Integration with Other Services

MDS-HC is seen as the initial component entry point of an electronic health record for the Continuing Care continuum. The family of MDS assessments instrument including Post-Acute Care, Home Care, Long Term Care and Mental Health, would provide a seamless assessment system, using comparable instruments, that would reduce duplication, allow common data collection and interpretation, and provide natural linkages between elements of the continuum.

Health Impacts/Effects

No change in health has been documented as a consequence of the pilot.

Cost Effectiveness

No change in cost effectiveness can be attributed to the project at this time, due to the limited use to date, but the noted reduction in assessment time

may contribute to a reduction in the cost of assessment per client or may allow more timely assessment and reassessments.

Transferability

In spite of the delays noted in section 4, and the enormity of the task over-all, there are many successes/lessons that can be replicated elsewhere.

Project planning started with buy-in from all the partners. An automated assessment system for Home Care had been envisioned since the inception of the program in 1974.

Even if we were unsuccessful with finding the right assessment instrument or support software, we would have an automated environment from which we could continue to test. That light at the end of the tunnel kept the partners focused during the interminable delays and problems. With the ever changing array of personnel from Ministers all the way through the system to administrative clerks, that message needed to be repeated many times.

We would certainly never start a pilot with un-tested software, let alone first-in-the-world software. Having said that, the development process has been a very valuable educational process. We now have a group of case coordinators who have the skill to analyze any new software products with a very critical eye. We have software that has been built with hands-on involvement from the people who will be using it and who have ensured that it is user-friendly even for those who have never turned on a computer.

The infrastructure nightmares are likely the same in other jurisdictions. Most offices had no wiring capable of responding to the demands of automation. Wide area networks were non-existent. Some sites hosted two or more

completely separate programs and therefore might have completely separate companies responsible for wiring etc. Desks could not accommodate PCs and key-boards. With detailed site maps, inventories and wiring diagrams, the Information systems, Telecommunications systems and electrical staff found ways to make the system work. Without that initial buy-in, it would have been easy to say it can't be done.

The equipment presented challenges. Coordinators go into clients' homes and therefore needed lap-tops. In some homes, there is no phone or accessible electrical outlets so the lap-tops had to be able to function in a disconnected environment. Screen size is an issue with the amount of detail presented in the instrument. Fortunately, the delays gave us this opportunity to purchase the most recent release of lap-tops that have the capacity to show the instrument on a full screen.

Training has presented huge issues. Using a train-the-trainer process requires incredible dedication from the trainers. They must learn a new instrument and new software. They must sell their colleagues on the value of change. Their positions must be back-filled so they can dedicate their time to the project. They must find a way to schedule 320+ people for training without disrupting the day-to-day business. We added extra stress by changing the deployment start date at least six times and then forcing all of it to be done in the final quarter of the last project year. The result has been excellent. It was crucial to have peers as trainers. They know how business is done in their jurisdiction. They know the language to use in explaining the assessment. They have the credibility to help people through the change process. They know the peculiarities that will impinge on training schedules. We had the extra benefit of being able to share advanced training opportunities with our coordinators and the training coordinators in Nova Scotia and Saskatchewan because all these provinces are testing MDS-HC and Momentum software.

It has been of great benefit to the project that other jurisdictions in Canada are using MDS-HC, MDS-LTC and Momentum software. In addition to the joint-training opportunities mentioned above, there has been discussion, collaboration and information sharing on an on-going basis. The four western provinces and Yukon, put forward a proposal to formalize the relationships around MDS under the Canadian Health Infostructure Program. Manitoba has had the opportunity to participate in determining the Quality Indicators that interRAI will use for MDS-HC.

4.   Dissemination Plan

The Final Report will be shared with all Regional Health Authorities in Manitoba and other federal, provincial and territorial jurisdictions in Canada. A report on the project and its key findings will be sent to the Canadian Home Care Association for publication in its newsletter "At Home – Chez Nous". A report on the project will be posted on the Manitoba Health website.

Presentation on the Pilot Project have been made at:

Nova Scotia Health Organization MDS RUGS Conference	Halifax	December 1999
Case Mix Conference	Madison, Wisconsin	May 2000
Centre on Aging Symposium	Winnipeg	May 2000
Canadian Association on Gerontology	Edmonton	October 2000
Manitoba Provincial Health Organizations Conference	Winnipeg	October 2000
Advisory Committee on Health Services – Working Group on Continuing Care	Edmonton	May 2000
Canadian Home Care Association Conference	Calgary	December 2000
Health Transition Fund Workshop	Winnipeg	May 2001

Health Transition Fund Project Fact Sheet

Title:

Information System Pilot for Home Care in Winnipeg – Screening Assessment and Care Planning automated Tool (SACPAT) Tool and InterRAI Minimum Data Set (MDS-HC) #MB 121

Sponsor Organization:

Manitoba Health with the Winnipeg Regional Health Authority

Rationale/Goal:

The objectives of the project were: to test SACPAT for reliability and validity; to roll-out MDS-HC to Home Care sites (15) not presently using SACPAT; to perform a comparative assessment of the two tools in order to identify the solution that best meets the needs of Home Care in Manitoba.

Key Findings:

While SACPAT provides comprehensive assessment and care planning, its open-ended questions and additional detail limits the validity and comparability of the data. MDS-HC is both valid and reliable and the data can provide all levels of analysis and reporting. MDS-HC has been chosen as the assessment instrument for Home Care in Manitoba.

Implications:

> The findings from this project are important because Manitoba will now have one common automated assessment tool for Home Care that will provide reliable and valid data for resource allocation, performance measurement, decision support, quality control, bench-marking and strategic planning. MDS-HC is the first component in creating an electronic health record for the Continuing Care continuum.

Methodology to Data Collection:

> The evaluation of the two assessment tools was undertaken by the Manitoba Centre for Health Policy and Evaluation as part of a separate Health Transition Fund project (MB122).

Resources Developed:

> Momentum Software for MDS-HC

Health Transition Fund Contribution to the Project

> Initially $4,194,000
> reduced to $4,112,935 to extend time of project

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