

# Developing the use of MDS/RAI reports for UK care homes

Laura Stosz and  
Iain Carpenter

November 2008

## Using an assessment system to raise standard in long-term care homes.

The MDS/RAI (Minimum Data Set Resident Assessment Instrument) is a standardised assessment system developed by interRAI used internationally to raise standards of care in long-term care homes.

Implementation in the UK has been sparse and currently there are no well-established demonstration sites for use in long-term care (although Cheshire has adopted and successfully implemented the MDS-HC (Minimum Data Set Home Care) for community care).

Successful implementation of the MDS/RAI requires a methodical approach and commitment: it is a way of developing best practice that goes far beyond just gathering information about care needs. This project aimed to develop an implementation process model for MDS/RAI use in three UK care homes through an iterative and collaborative process.

The report includes:

- development of the MDS/RAI;
- lessons learned from the international community on MDS/RAI best practice;
- the development of MDS/RAI reports in the UK;
- barriers to implementation in the UK;
- recommendations for implementation in a care home;
- future goals and development.



# Contents

Executive summary	5
Introduction	6
<b>1 International examples of MDS/RAI best practice</b>	<b>11</b>
<b>2 Development and use of the MDS/RAI reports in the Joseph Rowntree Housing Trust</b>	<b>15</b>
<b>3 Challenges faced during the project and barriers to optimal use</b>	<b>20</b>
<b>4 Recommendations for implementation</b>	<b>24</b>
<b>5 Conclusions and implications</b>	<b>28</b>
List of abbreviations	30
Note	30
References	31
Appendix 1: Explanation of MDS/RAI tools for long-term care and home care	32
Appendix 2: Countries that were represented at the Canadian Institute for Health Information (CIHI) conference	35
Appendix 3: List of reports produced for Quarter 1 2008. (January, February, March)	36
Appendix 4: Sample reports	37
Appendix 5: Social Engagement Scale (SES) explained	40

Appendix 6: Changes in Health, End-stage Disease and Signs and Symptoms (CHESS)	41
Acknowledgements	43
About the authors	43

# Executive summary

The MDS/RAI (Minimum Data Set Resident Assessment Instrument) is a standardised assessment tool used internationally to raise standards in long-term care homes. This project aimed to improve the usefulness of the MDS/RAI for long-term care and create reports that were helpful to the staff and management of one UK care home provider, the Joseph Rowntree Housing Trust (JRHT). Evidence of best practice was collected from other countries that have extensively developed their use of the MDS/RAI. This evidence formed a model for developing the MDS/RAI in JRHT. The development process was achieved through an iterative and collaborative process of report creation. The end result was a usable collection of reports for care planning and care home management.

The project identified a number of factors that are key to MDS/RAI implementation success. These included:

- teamwork and communication between all levels of care home staff;
- time for evaluation and reflection on the reports to identify areas for service improvement;
- increasing the number of staff with expertise in the MDS/RAI;
- comparing data from the reports, which fosters competition and improves care provision;
- government policy and a user network to support use of the MDS/RAI.

While the care home managers said that the reports were useful to care planning, developing interventions and determining funding, more work needs to be done to ensure that this happens consistently throughout the care homes. Good organisational structure and leadership will help achieve this. Recommendations for implementation are:

- creating care home policy that sets the direction for MDS/RAI use;
- ensuring that software products and technology that are used meet front-line staff needs;
- regular production of reports;
- creating an MDS/RAI coordinator role in the care home to be responsible for implementation;
- regular care staff meetings that focus on using data in reports to modify care practices;
- ensuring that senior members of the care team are trained in the MDS/RAI and that skills are maintained with regular refresher courses;
- establishment of an MDS/RAI user group and network to increase development in the UK.

# Introduction

The MDS/RAI (Minimum Data Set Resident Assessment Instrument) is a standardised assessment system developed by interRAI used internationally to raise standards in long-term care homes. Implementation in the UK has been sparse and currently there are no well established demonstration sites for use in long-term care, although Cheshire has adopted and successfully implemented the MDS-HC (Minimum Data Set Home Care) for community care. Successful implementation of the MDS/RAI requires a methodical approach and commitment, as it is a way of developing best practice that goes far beyond just gathering information about care needs. This project aimed to develop an implementation process model for MDS/RAI use in three UK care homes through an iterative and collaborative process. The report includes:

- development of the MDS/RAI;
- lessons learned from the international community on MDS/RAI best practice;
- the development of MDS/RAI reports in the UK;
- barriers to implementation in the UK;
- recommendations for implementation in a care home;
- future goals and development.

## Policy context

Government policy documents on the integration of the long-term care system (HSO, 2003; HCHC, 2005; DH, 2006) accept the need to improve the assessment process across care settings. A good assessment record is an essential first step

in the assessment process (Worden *et al.*, 2006). Standardised assessment tools can improve record keeping and simplify moving through the care system (DH, 2006). They can ensure high quality care and equity in continuing care funding across localities. Despite the benefits of using a single assessment tool, government initiatives have fallen short of creating an assessment process using only one tool that minimises paperwork and would truly benefit the public in these ways. The Common Assessment Framework (CAF) is an attempt to build on difficulties encountered in the development of the Single Assessment Process (DH, 2001) and to create an assessment process that allows local authorities to maintain control over their assessment tool while unifying health and social service provision.

The first aim of the CAF is to improve outcomes through a person-centred assessment that is focused on delivering the client's desired outcomes (Evans, 2008). This will be achieved only by using valid and reliable assessment tools with usable information that can track changes in outcomes as a result of care received. However, practical implementation of the Single Assessment Process, on which the CAF is built, has resulted in the creation of assessment tools with untested reliability and validity. The CAF allows various domains of different assessment tools to be combined into one framework. The underlying assumption is that these tools measure health and social well-being in the same way, when in fact they may not. In addition, focusing on achieving desired outcomes before an assessment is carried out may overshadow real unmet needs. The CAF does not ensure that assessment tools measure the same things and questions arise over the validity of combining the various domains of different assessment tools into one document.

The second CAF aim is to improve the transfer of information across settings (Evans, 2008). This will require improvements in record keeping and

data reporting so that it can be understood by all levels of practitioners in the various health and social care fields. Records and reports should be able to: track resident status over time, make comparisons between residents as well as care homes and measure resource use. Reports with this information may assist care home managers in outcome-based commissioning. However, these reports will need a common language so that information is understood by all those involved and comparisons can be made. Also, as care homes are required to show evidence of meeting residents' needs (DH, 2003), assessment tools that use reliable scales that show changes over time will help them to provide this evidence.

The third policy initiative is to improve joint working (Evans, 2008). Joint working should make receiving funding from health and social services easier. However, allowing local authorities to develop their own assessment tools that may not be standardised will not solve the problem of the 'postcode lottery' for continuing care funding. National eligibility criteria for continuing care funding will need to be underpinned by a nationally recognised assessment tool (HSO, 2003; HCHC, 2005).

Government documents (HCHC, 2005; DH, 2006) point towards the need to establish a national assessment framework based on a valid and reliable assessment that provides useful reports and supports joint working. Several assessment tools exist that have the potential to fulfil the need for a national standardised assessment (MDS/RAI, FACE, EASYCARE). This report discusses the process of implementation for the MDS/RAI in three care homes in the UK.

## Minimum Data Set Resident Assessment Instrument (MDS/RAI)

The Minimum Data Set Resident Assessment Instrument (MDS/RAI) for Care Homes 2.0 (Morris *et al.*, 1990) is designed to be a comprehensive standardised assessment for routine needs assessment in long-term care. It was implemented nationally in the US following a series of scandals on the poor quality of care in care homes (Zimmerman, 2003). The MDS/RAI is a tool that includes the assessment (MDS), care planning

guidance and reports on changes in resident well-being and resource use. The MDS/RAI is available royalty-free through interRAI, which is a not-for-profit organisation. The domains in the MDS/RAI include (Challis *et al.*, 1996):

- function and continence;
- cognitive, mood and psychosocial;
- social environment;
- clinical and medical.

With the introduction of the MDS/RAI, staff are challenged to see residents for who they really are, using standardised assessment items, with systematic definitions and training materials. The MDS/RAI has as its primary purpose raising the quality of care by improving the process and recording of needs and strengths, and by providing evidence-based support for those who provide care for older people.

A previous study (Hawes *et al.*, 1997) showed that using the MDS/RAI resulted in lower use of physical restraints and indwelling catheters. It also led to improvements in care practices, such as an increased use of advanced directives, higher participation in activities and use of toileting programmes for bowel incontinence. Another study (Holtkamp *et al.*, 2001) showed that the MDS/RAI is better able to meet residents' perceived needs. However, while evidence on the benefits of the MDS/RAI exists, there is no practical guidance for implementation.

## Aims and objectives

Care home managers in the Joseph Rowntree Housing Trust (JRHT) identified the need to further develop their use of the reporting capabilities of the MDS/RAI. The care homes used the MDS/RAI for routine assessment, but had not explored the potential uses of the reports. Therefore the aim of the project was to improve the usefulness of the MDS/RAI for long-term care and embed it into care home practice for care staff and management. This was achieved through eight objectives.

1. Identify what barriers exist that prevent optimal use of the MDS/RAI.
2. Determine what factors lead to successful implementation of the MDS/RAI.
3. Discover what reports can be generated by the MDS.
4. Identify what reports are useful to care staff.
5. Identify what reports are useful to management.
6. Determine how often reports should be generated to meet the needs of care staff and management.
7. Ensure that care staff and management understand the data produced by the MDS and feel confident in using it.
8. Establish through trial how the MDS/RAI can be implemented and used so that it is self-sustaining.

As this was a development project it followed an action research design. Avison *et al.* (1999) defines action research as:

*... an iterative process involving researchers and practitioners acting together on a particular cycle of activities, including problem diagnosis, action intervention, and reflective learning.*

(Avison *et al.*, 1999, p. 94)

Action research follows the pattern of fact-finding, planning, acting, evaluating and modifying (Hart and Bond, 1995). Because it is used mainly for developmental purposes, data collection methods can use formal quantitative methods, like cause and effect, or informal methods such as asking participants directly for an opinion (Hart and Bond, 1995). In action research, the lines between researcher and practitioner become blurred, as the researcher is often involved in the practice and the practitioner involved in the research. As the purpose of this study was to improve practice, it was important to work closely with practitioners and involve them at all stages.

The planned methods used for data collection included:

- semi-structured interviews with MDS/RAI users in other countries;
- attending the Canadian Institute for Health Information (CIHI) conference in Canada entitled 'Making the health care connection: sharing and caring beyond borders';

## Methodology

The study took place in three JRHT care homes (two residential and one nursing care home). Table 1 contains information about each home.

Table 1: Description of each participant care home

Description	Care home A	Care home B	Care home C
Type of provision	Nursing	Residential	Residential
Resident beds	42	34	42
Nursing staff	10	1	0
Care staff	23	22	26
Specialist staff	Activities organiser, mental health specialist nurse	Activities organiser	None
interRAI assessment tools used	MDS/RAI care	MDS/RAI; MDS-HC	MDS/RAI; MDS-HC
Other		Involved in flexible skill mix trial	



- focus group with JRHT care home staff;
- observation of an assessment;
- meetings with policy-makers;
- questionnaire for care staff;
- regular meetings with care home managers.

At the start of the project, it was discovered that front-line care staff were not involved in using the MDS/RAI. The managers did not think it was appropriate to include care staff at that stage because they felt that they would be unable to help them use it. It was decided not to formally involve care staff in the development of MDS/RAI use, but rather to include them in more general care provision discussions when it seemed appropriate. Therefore the questionnaires were not used and the focus group was held with the managers rather than with care staff.

Several months into the project it became clear that the proposed meeting with policy-makers would be unproductive because implementation of the MDS/RAI was in an early stage of development. It was decided that meetings with policy-makers would be more useful after the project had finished when there would be results to show them. In lieu of meetings, policy documents were reviewed to aid the development process.

The project was run in two stages. The first stage was used for fact-finding on MDS/RAI best practice. The second stage was spent relaunching the MDS/RAI in the three JRHT care homes.

## Stage 1: fact-finding

The first stage gathered information from professionals in countries where the MDS/RAI has been successfully used. Information was also collected from staff in the JRHT care homes in order to identify any problems they had with using it. This information was gathered in the following ways:

- an initial meeting with JRHT care home managers to identify issues;
- interviews and observations with MDS/RAI users in Canada and the United States to identify what barriers they had faced and what factors have led to their success;
- attendance at the Canadian Institute for Health Information (CIHI) conference in Canada to meet with MDS/RAI users;
- focus groups with care home managers in JRHT to explore what issues are important to their work and how the MDS/RAI might help with these.

### Interviews

Semi-structured interviews were carried out with an MDS/RAI educator in Canada, and an MDS/RAI coordinator, MDS/RAI assessor and director of nurses at a care home in the US. The questions for these interviews were informed by the issues raised in the initial meeting with the JRHT care home managers. Interviewees were identified by MDS/RAI experts in each country. The interview schedules asked questions about:

- the type of care home and patient profile;
- how they use the MDS/RAI, particularly any barriers to success and plans for development;
- what reports they use and how they use them;
- any specific education or training requirements;
- what factors have contributed to MDS/RAI success in their care home.

### CIHI conference

The CIHI conference was attended by over 300 MDS/RAI professionals from 18 countries (Appendix 2). Attendees included interRAI fellows, MDS/RAI coordinators and educators, data analysts, care home managers, researchers, doctors and nurses. Lectures and workshops covered topics such as report creation and use, MDS/RAI implementation lessons and first-hand experiences. The conference offered

an opportunity to share ideas and knowledge. It provided an overview of MDS/RAI use and potential use, and opened up links with the international community.

Themes that arose in the interviews and conference proceedings were used to create the first focus group interview schedule with the care home managers in JRHT.

### **Focus groups**

Focus groups help people to explore and clarify their views (Morgan, 1997). Focus groups were carried out with five home managers and deputy managers from the three JRHT care homes currently using the MDS/RAI. One care home provided nursing care and the other two provided mainly residential care. One focus group was carried out at the start of the project and a second at the end. The interview schedule included questions about:

- how the care home managers use the MDS/RAI;
- information that would help them in caring for residents;
- information that would help them manage their home;
- their training or educational needs for the MDS/RAI;
- challenges and barriers that they have faced in using the MDS/RAI;
- what reports from the MDS/RAI would be useful to them.

### **Observation**

A care home manager was observed completing an MDS assessment. This helped the researcher to familiarise herself with how the MDS is used in practice.

Data from the conference, interviews and focus group was analysed thematically. This analysis then provided the structure for an action plan for the project to work to.

## **Stage 2: relaunch MDS/RAI**

In stage 2, the MDS/RAI was relaunched in the three JRHT care homes using learning from the interviews, conference, focus groups and observation. The relaunch was structured to:

- improve managers' skills in completing assessments;
- create reports on both resident and facility levels that could be further developed during the project;
- facilitate understanding of the reports and the MDS/RAI as a whole system;
- discover ways in which the information could be used to improve care service provision.

The researcher created reports every three months using assessments completed quarterly. On average, the researcher met with the managers once a month. The meetings were used to explain the reports, solve any problems and in general keep an MDS/RAI dialogue going. After each meeting, the reports were modified and the action plan was changed to include new discussion points for the next meeting.

At the end of the project, a focus group was held with the managers to discuss their views on progress made during the project and ideas for the next steps in MDS/RAI use in JRHT.

# 1 International examples of MDS/RAI best practice

This chapter presents previous experiences and lessons learned in countries that have extensively developed the use of the MDS/RAI. Since the MDS/RAI is not widely used in the UK, it was necessary to visit other countries to build a model of best practice. This model is based on expert advice gained through the interviews and at the CIHI conference. The themes from the interviews and the conference were very similar. Therefore it was concluded that, while some aspects of MDS/RAI implementation may vary by country, there are certain elements that are common to all MDS/RAI users and are needed for success.

Descriptions of MDS/RAI use were gathered from the interviews with an MDS/RAI educator in Canada and an MDS/RAI coordinator, an MDS assessor and the director of nurses at a care home in the US. In addition, anecdotes and lecture notes from the CIHI conference were collected. These accounts represented experiences of professionals from Finland, Chile, Canada, the US, Iceland and Australia. Sample reports were collected from the conference and care home.

The themes that arose from the interviews and conference can be divided into two categories: factors within the care home and the care home within the context of the long-term care system. The first category covers factors that keep the MDS/RAI working successfully at the care home level on a day-to-day basis. The second category covers mechanisms in the local or national context of long-term care that can support the use of the MDS/RAI in the homes.

## Factors within the care home

### Teamwork

Teamwork is necessary for completing assessments accurately and on time. Information for completing the assessment should come

from everyone who interacts with the resident, e.g. care staff, home manager, GP, dietitian, physical therapist, occupational therapist, activities coordinator and family members. Two basic models for completing assessments were identified – which one is used depends on the structure and needs of the individual care home. In the first model, each member of senior staff is a key worker for a number of residents and has overall responsibility for completing their assessment on time. Though they complete the whole assessment, they still collect information from other sources described above. In the second model, staff members complete the sections of the MDS that relate to their specialism, such as an occupational therapist completing sections on activities of daily living. The sections for each resident are collated by one member of staff, usually the MDS/RAI coordinator, who then signs off on the whole assessment.

The second model, in which the entire care team is involved in the assessment, creates a broader knowledge base from which to create a care plan. The MDS/RAI coordinator in a US home described who is in the care team and what they do with the reports:

*I actually give one to what we call IDT members, which stands for interdisciplinary team members, which is the director of nurses, activities, social services, dietitian, rehab and myself ... We're the ones that go to every meeting. We go to a weekly skin meeting, a weekly weight meeting ... everybody gets copies of these so we can all focus and look together.*

(FCS01)

Bottom-up team working is particularly important for successful implementation. Ensuring buy-

in from frontline staff who use the MDS/RAI on a daily basis will mean that it is used effectively and accurately. Front-line staff benefit from using the MDS/RAI when they receive feedback from managers on MDS/RAI outcomes for the residents. Care staff can become engaged with the data through the support of management. The MDS/RAI coordinator should lead the whole care team by clearly defining each staff member's role and communicating the goals of the MDS/RAI.

### **Communication**

Good communication underpins every dimension of MDS/RAI use. Frequent communication, both formally in team meetings and informally between all levels of staff, is crucial to sustaining the MDS/RAI and providing high levels of care.

Communication is especially important during the assessment process. A wide range of people should be involved in the assessment so that it reflects the many dimensions of health, though one member of staff should be in charge of collating that information. From the resident to care staff, manager to family members, each person can have a different view of the resident and it is important that each view is considered when completing assessments and care planning. Care team meetings are a useful forum for discussing care plans, managing the care of residents and planning future care provision. Front-line care staff play an essential role in identifying changes in the residents' health, as they have the most physical contact with the residents. MDS assessors need to train their care staff in what to look for in the residents so that they can tell the assessor if there have been any changes that may affect the MDS.

### **Evaluation**

The MDS/RAI provides feedback on resident status and can highlight deficiencies in care. This information, which comes in the form of reports, needs to be evaluated by the care team and management. Reviewing reports is an opportunity to explore any changes in an individual resident's health status or where interventions may improve the quality of life in the care home as a whole. The Director of Nurses described her thoughts when looking over reports:

*We never like to see any sentinel [serious] events, but they do occur in facilities. And looking back when you extrapolate this information, how could I have prevented this? Is there something that we could have done?*  
(FM01)

Spending time completing assessments without spending time evaluating the outcomes means only half of the MDS/RAI system is being used.

The MDS/RAI is a comprehensive tool for care planning and incorporates many levels of information that can be used for this process. The MDS/RAI will not create care plans, but rather guides the thought processes of the care planner. Care planning is more than just the translation of the assessment; it requires a thoughtful, analytic and investigative process using the assessment data, outcome scales, quality indicators, previous care plans and the expertise of all members of the care team. The MDS/RAI also allows staff to see the impact of the care they provide by reviewing reports quarterly.

Evaluating care practices reassures staff about the care they provide because it prevents them from overlooking aspects of health and care. Many MDS/RAI users describe an 'epiphany' moment when it has helped them recognise a problem in their resident they would have otherwise missed. One nurse in Canada described how the MDS/RAI helped him discover that a patient's behavioural problems were the result of one of the medications he was taking. The nurse said that this key moment changed his outlook of the MDS from a paper exercise to a crucial tool for providing care.

These experiences give staff a feeling of confidence in their work, as explained by the MDS coordinator:

*When I look back, you know, we missed a lot of things on patients, we missed a lot of psychosocial, behaviour, emotional ... things that just weren't really – that we don't miss now because it's part of our MDS.*  
(FCS01)

### **The MDS/RAI coordinator**

A range of professionals who specialise in the MDS/RAI have evolved in all countries where the MDS/RAI is in widespread use. These professionals include educators, trainers, data analysts and coordinators. The most important professional for day-to-day use at the care home level is the MDS/RAI coordinator. Specific tasks of the coordinator vary by care home, but in general the coordinator is responsible for overall implementation in the care home. The coordinator may perform some or all of the following tasks:

- completing assessments, either part or whole;
- training new staff;
- creating reports;
- care planning MDS items;
- creating schedules for completing MDS assessments;
- developing new uses for MDS/RAI data;
- tracking new developments in the MDS/RAI system.

The MDS/RAI requires a lot of time, but this is rewarded with enormous amounts of information. However, this time requirement and information load has meant that the coordination of MDS/RAI has become a job in its own right. In this way the MDS/RAI is a specialism, like dementia or rehabilitation; it requires unique knowledge and expertise, which at least one person in the care home should possess. The MDS/RAI coordinator does not have to be a registered nurse, but he or she should have experience in care provision.

### **Management of the care home**

MDS/RAI outputs on resource use can be used to manage staffing levels and to indicate whether any specialist skills are needed. Managers can also use these reports for quality assurance, especially in long-term care systems where the sharing of MDS/RAI data is easy. Managers can reflect on the data and, by comparing it against benchmarks, assess if their home is deficient in any areas. The Director

of Nurses described what she did with the reports:

*And then in turn I look reflectively at this material and analyse it, picking out the strengths and the weaknesses of my facility.*

(FM01)

Managers can look at the facility data and then resident-level data to see what can be done on an individual level to affect facility outcomes. Management is also responsible for making sure staff complete assessments on time and setting out responsibilities for staff.

### **The care home in the context of the long-term care system**

There are external factors that influence how the MDS/RAI is used within the care home. These factors exert pressure on or influence the care home to continuously improve care. Without these pressures, MDS/RAI use might stagnate within the care home.

### **Comparisons and competition**

Comparing MDS/RAI data drives care provision in the home and in the long-term care system. There are three types of comparisons.

1. Resident over time: comparing an individual resident's health status over time, whether it is improving or deteriorating and how it is being managed.
2. Care home over time: comparing how the quality indicators of the care home change from quarter to quarter, year to year.
3. Other care homes: comparing the quality indicators to other care homes in the local area or nationwide.

These comparisons, especially those made to other care homes, motivate staff to maintain high levels of care and strive for excellence. Care homes are in competition with each other and work hard to make sure that they are one of the best care homes in their area. The director of nurses describes how MDS/RAI motivated her:

*... nobody ever likes to admit this, but we're all in competition, aren't we? We're in competition, we don't like to say that but we are. So if we can do something better, get a better handle on something, if something is drawn to our attention ... what can we do better for the residents and this says, ok, you're doing all these things and ah ha! Take a look! So I find this is a great instrument as far as that's concerned.*

(FM01)

### **Government policy**

In countries that use the MDS/RAI widely, such as Canada, the US and Iceland, government policies and regulations help keep standards at a high level. This happens in three ways.

1. Competition is fostered by creating reports that compare facilities across a large area.
2. Fear is created in a facility that has a below average score and where failing an inspection would lead to a citation.<sup>1</sup>
3. MDS assessments must be done on a strict schedule, which ensures good-quality data that can be used for comparison reports.

Because there is a mandate that care homes in the US and parts of Canada must use the MDS/RAI, inspections by government regulators are based on MDS/RAI data. Regulators can access resident data before an inspection and are therefore better prepared for a visit. The MDS/RAI coordinator described how the Government ensures accurate assessments across settings:

*The main thing is the State will come and, like I said, we have state surveys and when they look at that MDS they want to be sure it reflects as truthful as possible of what they're gonna observe with that patient.*

(FCS01)

Besides regulation, facilities have support from a wider audience outside of the care home. This support comes from the Government and international agencies, health services researchers, universities and software developers. These groups have formed networks that support education, training and research in the MDS/RAI. This means there are more human and material resources available to care facilities, which improves their ability to provide care.

### **Summary of key findings of MDS/RAI use in other countries**

In other countries, the MDS/RAI is integrated into, and underpins, the long-term care system. It is part of the care home culture; it is not thought of as an extra part of the job, but rather as the job itself. Resources have been put into the system so that the MDS/RAI can operate at such a high level. This means investment in technology, software, training and, most importantly, additional staff who specialise in the MDS/RAI. The MDS/RAI, when used properly with teamwork and good communication, can impact not just on the care element of a care home but also on costing services, business planning, care home management and quality assurance; it is a comprehensive system on which an entire care home can be run. In many care homes, each one of these areas is a person's job. This is why the MDS requires appropriate resources and more commitment than other assessment tools, as well as a proper understanding of its capabilities.

## 2 Development and use of the MDS/RAI reports in the Joseph Rowntree Housing Trust

This chapter explains the report development process and the issues that arose. As shown in other countries, reports are the bloodline of the MDS/RAI. They are what link all levels of users together, from the care staff to the government-level policy-makers, facilitating quality improvement. Their development formed the core of this research. In line with the action research design, the template of reports was revised after each meeting with the care home managers until a satisfactory template was created. This process resulted in the production of three quarterly reports and a separate chart report on selected MDS/RAI data, which was incorporated into the final quarterly report.

### Process of report development

The first focus group meeting with the care home managers aimed at identifying the extent to which JRHT's use of the MDS/RAI matched the MDS/RAI model used in other countries. The focus group scoped out what the project needed to achieve, identified what achievements would be possible and provided a baseline for the project. The sample reports from Canada were brought to the meeting to gauge whether the managers felt they were a sufficient starting point for report creation. Reports are based on the MDS assessment domains, which are listed in the Introduction.

The focus group meeting revealed a range of issues. Some could be addressed during the project, while others (such as organisational issues that required changes in staff duties) were outside its scope. One limitation was the availability of the home managers and care staff. Their busy schedules meant that the planned frequent group meetings were not possible and therefore the project had to adapt to these practicalities. Also, while it had been assumed by the research

team that direct care delivery was separate to management, it became apparent that, in JRHT care homes, both managers and care staff deliver care. This is likely to be the case in many other UK care homes. Therefore *Objectives 3 and 4* were combined into one. It was hoped that front-line care staff could be included, but this was not feasible given time constraints with their workload and their lack of previous experience with MDS/RAI. It was decided that the managers should introduce their care staff to the MDS/RAI when they felt it appropriate. Bearing in mind these limitations, the researcher aimed to initiate changes that would help MDS/RAI use and noted the issues that would need further development. These barriers will be discussed in the next chapter.

The managers wanted reports that compared the care homes and helped them to plan care. They thought that the sample reports from Canada would be useful to them and agreed they would be a good starting point. The managers wanted the reports to be visual so they would be easy to read. Therefore the first round of reports was based on the template of reports from the CIHI conference. The first set focused mainly on quality indicators and outcome scales.

Subsequent reports built on the feedback from managers about what they did or did not understand or like and what information they would like to have or needed. The relevant literature on MDS/RAI use was searched, as well as current topics in health media, to explore what issues in care might be of interest to the managers. The researcher then tried to develop reports accordingly.

Meetings with the managers were held on average once a month. One of the deputy care home managers was appointed to liaise with the research team and help with the practicalities

of conducting research in the care homes. At the start of the project, group meetings were organised with all the managers to discuss the reports. However, after the first meeting, it became clear that this was not feasible given their busy schedules. It was then decided that the researcher and the project's liaising manager would visit each care home individually to discuss reports. This proved useful as it allowed for a more personal discussion of issues that were important to the individual home.

By the end of the project, quarterly reports were produced that contained information on: quality indicators, outcome scales, casemix index, Resource Utilisation Groups III (RUGs), benchmark scores from the US, falls, psychotropic medication, mood state, resident ages and comparisons between the three JRHT care homes (see Appendix 3 for full list and Appendix 4 for samples). Reports were only created quarterly when there was new assessment data. Ideally, the managers would like more immediate information so they can have a method of reimbursement that would be based on care needs and services provided.

## Feedback from care home managers on the reports

This section reports the feedback from the care home managers during the informal meetings and from the final focus group. Feedback is grouped according to the themes identified as important from the best-practice examples from Chapter 1.

Overall, the managers' confidence in using the MDS/RAI grew over the course of the project. They felt that they have a better understanding of the uses of the MDS/RAI compared to the previous year. However, some of the issues identified in the first focus group remained unresolved at the end, largely because they were out of the scope of the project.

### Teamwork

Teamwork in the JRHT care homes did not seem to be as focused or explicit as in the US example. However, the managers reported that sometimes care staff would help them go through the MDS assessment form every three months. One manager said she showed her care staff

the outcome scales of certain residents who had declined in order to help them write their care plans. The managers tried to engage the care staff when it seemed appropriate:

*We show some of them to the care staff, those that can grasp it, cos not everybody understands what MDS is. They've been quite interested, like you say, comparisons.*

(CHC2:2)

Managers still seemed to limit the involvement of their care staff, perhaps reflecting their own reservations about its use and their understanding.

### Communication

Managers reported that they do discuss some of the reports with other members of the care team in their home. However, as stated above, these discussions were held only with care staff who the managers believed would understand the information. The managers reported that the care staff still do not use the MDS/RAI, but that it is just 'the passing on of knowledge' (CHB1:2) to the care staff. However, even though the care staff do not use the written outputs of the MDS/RAI, using the knowledge and information that is derived from it is beneficial to residents and should be considered useful for the successful management of the care home. If the information causes care staff to modify their practice then in reality they are indirectly using the MDS/RAI.

The monthly meetings that were run during the project also provided an opportunity for managers to discuss issues with each other as well as with the liaising manager and the researcher. It appeared that these meetings generated the most fruitful discussions, providing the opportunity to clarify practice issues and answer questions.

### Evaluation

The reports gave managers the chance to reflect on their practice and modify it if needed. They highlighted issues that might be problematic and the managers were then able to consider if interventions were necessary. They said they were generally aware of most issues that were highlighted in the reports, but that the reports were helpful because they provided them with concrete evidence.



They also showed managers where certain interventions or initiatives had or had not worked. In one home, the manager found that the hiring of an activities coordinator was reflected in improved social engagement scores, fewer residents declining, and more residents maintaining their social engagement level in the following quarter (see Table 2; see Appendix 5 for explanation of the Social Engagement Scale).

One manager found that a high score in the outcome scale of Changes in Health, End-stage disease, Signs and Symptoms (CHESS) often predicted the death of a resident (see Appendix 6 for further explanation of CHESS). After sharing this observation, another manager could see the same trend in her residents. Knowing that high CHESS scores can precede death helps managers to change care plans to assist in slowing decline or ensure that appropriate end of life care is given.

The managers who were able to spend more time reviewing the reports had the most success in investigating trends in the MDS/RAI data and reported a better understanding of it at the end of the project.

### **The MDS/RAI job**

The managers found the combined role of the researcher and liaising manager to be very important to MDS/RAI use. The researcher created reports, explained them in meetings, answered

questions and addressed problems. The liaising manager offered insights into practical applications of the data, helped arrange meetings, and liaised with upper JRHT management. This combined work done by the researcher and the liaising manager amounted to the role of an MDS/RAI coordinator in other countries. Managers said that having this sort of human resource available to them was very helpful and provided a point of reference for MDS/RAI use.

The managers reported that the monthly meetings with the researcher and liaising manager were very helpful. During these meetings the researcher, with the help of the liaising manager, explained the reports, facilitated a discussion, addressed issues or problems that had arisen, and answered any questions. These meetings with someone knowledgeable about the MDS/RAI were important in building the knowledge base of the managers. The managers said that keeping this type of service in place would be helpful.

### **Management of the home**

Managers began to take steps towards using the information in the reports to provide interventions and ensure high quality care. The managers in one home identified a problem with depression. They looked at reasons why their residents had high levels of depression and if there were any interventions they could put in place to improve the mental health of residents:

Table 2: Social Engagement Scale change by quarter. Shaded areas indicate improvement from previous quarter

Among residents previously assessed		Quarter 4 (Oct.–Dec.) 2006	Quarter 1 (Jan.–Mar.) 2007	Quarter 2 (Apr.–June) 2007	Quarter 3 (July–Sept.) 2007
Maintained	No.	20	22	23	34
	%	87	85	85	97
Declined	No.	3	4	2	1
	%	13	15	7	3
Improved	No.	0	0	2	0
	%	0	0	7	0
Total with previous assessment		23	26	27	35
No previous assessment		3	2	5	4
Total		26	28	32	39

*In overall management it's been quite interesting because we've highlighted things such as depression being extremely high and looking at reasons why and how we can manage it, interventions we can provide because of what the reports have highlighted. So I think it's quite useful as an overall view of what's going on and how things are changing and what we can do to improve our service.*

(CHA1:2)

They believed the reports provided a useful overview of the health and social well-being of their residents, and found they could use the reports to improve their service.

Managers also used the reports to negotiate resources for their residents. One manager said that, as the dependency levels of her residents went up, she was able to justify increasing fees for her residents. However, she believed this system could go further and the MDS/RAI could be used to create a system of reimbursement based on care needs. She said that the funding structure of health and social services meant that homes were not able to get the funding they deserved for their residents. However, within the home, she was able to use reports to determine staffing levels.

The managers believed that the MDS/RAI could be used to scope the future care needs in their home, though this step was not achieved during the project. As the reports show change over time, the managers could see how the care needs of their residents were altering and whether plans for the future could be based on these changes. They believed that, because the MDS/RAI was so comprehensive, it could also form the base for providing future training to staff. The managers could see that, beyond providing care, the MDS/RAI could be used for business plans and training in the care home.

### **Comparison and competition**

Though, in the US and Canada, competition plays a major part in motivation, the same competitive drive did not seem to appear within the JRHT care homes. This may be because there were only three care homes involved and because, between them, they cared for residents with a wide range of nursing and/or other care needs. Therefore any

variation in quality indicators could be attributed to differences in the residents rather than differences in care provision. Competition may also have been hindered by the fact that not all JRHT's care homes were involved in the project – the fourth was excluded for a number of reasons. Had it been included, there may have been a more competitive drive between the care homes.

Even though there were differences in types of care provision, the managers did find it useful to compare the strengths and weaknesses of their homes, and were interested in how they compared to each other. However, by the end of the project, they mostly found these comparisons to be interesting rather than influential to their care practices. They believed that the comparisons would be more useful if they could be used for resource allocation across the JRHT care homes.

### **Government policy**

Government policy had little or no influence on how the managers used the MDS/RAI and the reports. This is mainly because the tool is not uniformly recognised by the various local social services departments or by regulators, and there is no network of support as there is in other countries. These factors led to feelings of isolation and apathy in using it.

Managers believed that the MDS/RAI could be used for determining funding levels for their residents, but only if it was recognised by social services and the NHS. One manager reported that she worried that her residents were vulnerable because social services would not fund their higher care needs in a residential home even though the home could provide for them if it had the extra funding required. She was concerned that lack of understanding of the MDS/RAI would mean one of her residents would have to move to another care home:

*I feel my residents are vulnerable. I think she's vulnerable, because if they say, well I know what they're probably gonna say. They're probably gonna say, 'We are not gonna pay any more, it doesn't matter ... she can go down to a nursing home, apply for nursing funding and live there.' But why should she? She should have a choice where she goes. We*

*can meet her needs, it's not cos it's a nurse that's needed for her needs, she's got high care needs. And her family can't afford to pay any more.*

(CHB1:2)

## **Summary of report development and use**

Overall, managers were satisfied with the reports that were produced. They were able to evaluate how their care provision impacted on the well-

being of their residents. There was some evidence that the reports and the project as a whole improved teamwork and communication within the care homes. The managers felt they could use some of the information in the reports but, to utilise all of it, JRHT care services would need to be more involved in using MDS/RAI data. They also thought the full potential of the MDS/RAI could not be realised unless there was cooperation with, and recognition from, social services, the NHS and other government agencies.

# 3 Challenges faced during the project and barriers to optimal use

The previous two chapters discussed work done in other countries on the MDS/RAI and the progress made in this project towards achieving the international standards. This chapter discusses areas of potential future development within JRHT, as well as lessons that could be learned for implementation in other care homes.

Over the course of the project, several areas were identified as needing further development. Some of these areas were outside the scope of the project and could not be dealt with, but will be discussed here. Suggestions for how these barriers can be tackled are also discussed.

## Communication

The work during the course of the project confirmed the importance of communication within the care home, but also highlighted the need for greater communication between the homes and with senior management. While communication within each care home between the managers and senior care staff seemed to improve, there is room for improved communication, especially between homes, and between the homes and JRHT care services.

### Communication within the home

Managers should aim to engage all care staff more in MDS/RAI information. There was some evidence of information being passed along, but this should happen routinely and there should be uniformity in what information is communicated.

### Communication between homes

The managers each reported variations in how they complete assessments and what they do with report information. In order to ensure data quality for reports, they should discuss with each other and plan a uniform way to complete assessments.

Though each manager will find different uses for the report information, discussing how each of them uses it will broaden each other's perspective. It was suggested by the managers that they should maintain the monthly meetings, especially for heads of homes. These meetings are important in keeping the MDS/RAI dialogue going.

### Communication between the home and JRHT care services

Of particular concern to the managers was the communication of information between the care homes and senior management within JRHT care services. Managers reported that information seemed to flow out of the home, but they received no feedback in return. They reported that the project had no effect on increasing the amount of information that they received and that communication between them had not improved over the year. They wanted feedback in three areas.

1. What is the direction of the MDS/RAI? Where is it heading and what are the expectations for using it?
2. How the MDS/RAI is used by other organisations. Those who see the MDS/RAI demonstrated in practice need to feed back that information to other members of staff.
3. How they should use it correctly and for which residents the MDS/RAI Long Term Care (Appendix 1) should be used.

## Leadership

It may be that lack of communication stems from problems with leadership of the MDS/RAI. The

managers highlighted two types of leadership that are needed: organisational direction of the MDS/RAI and day-to-day leadership.

### **Organisational direction**

The managers stated that, since the inception of the MDS/RAI about ten years ago, they had not received any guidance on the direction and purpose of the MDS/RAI in JRHT. They are not aware of an agenda for its use and report that the way they use it has not changed over the years. Most have not received any further training since the first session.

In two of the care homes that have clients with residential needs where both the MDS/RAI long-term care and home care tools were used, they did not use the home care data and were not sure why they were using it since it seemed to serve no purpose. The managers felt that the reports had the potential to prove the need for equipment, more staff and training, but this could not work if the information did not reach the JRHT decision-makers.

The lack of overall leadership has caused MDS/RAI use to stagnate because home managers were unsure of their authority to make decisions and enact them. They felt that the MDS/RAI provided them with the information they needed but, without higher-level backing, they were unsure of what to do with it.

### **Day-to-day leadership**

Once JRHT sets the direction for MDS/RAI use, there needs to be a lead person who can ensure that each home is heading in that direction on a day-to-day basis. In other countries this person is usually the MDS/RAI coordinator. JRHT managers said that the person who held this type of role in the past was difficult to access. They said that access was not a problem with the current liaising manager and that she provided a useful point of reference for help with the MDS/RAI. However, without formal direction from JRHT, it is difficult for the coordinator to do more than problem-solve and maintain the status quo.

JRHT should set the direction for care services and work closely with those who coordinate the MDS/RAI and the managers to ensure that its policy is implemented correctly.

### **Time**

The managers said that they do not have enough time to complete all the assessments when they are due because of all their other managerial duties. One manager reported that her deputy spends 50 per cent of her time on MDS. The lack of time was reflected in the fact that assessments were not always completed in time to be included in the quarterly reports. This has implications for the data quality and reliability of the reports.

MDS/RAI users in other countries noted the importance of reflecting on the data in order to modify care plans or identify possible interventions. Without adequate time to evaluate the data, completing the MDS assessments is little more than a paperwork exercise. The benefit of the MDS/RAI comes in the reflection that occurs after the reports have been produced. Without having adequate time, managers, and indeed their residents, are missing out on a crucial benefit.

### **Development**

Though the MDS/RAI has been used in the UK for over ten years, it has not been in widespread use and, although anglicised to a significant extent, it has not been tailored to the UK market in the light of local experience. The managers said that they felt the MDS assessment was still too americanised and they did not understand all of the terminology. They felt that the terminology should be developed to meet their needs. Work is ongoing by Cheshire social services to further anglicise the MDS/RAI home care tool.

Managers felt that it would be worthwhile to develop the MDS/RAI as a whole package. This would involve not only adapting the terminology, but also improving training and investing in technology that would speed up assessment completion and aid in care planning. The managers felt that enthusiasm and momentum for the MDS/RAI had been lost because it has not been developed. Managers fear that without development they will be overtaken as a leader in long-term care.

It is important that these key resources and mechanisms for support are kept in place once they have been established. Managers report that resources for the MDS/RAI have been lost in the past, such as the reports that used to be produced.

## Technical difficulties

Challenges with using the computer software for completing the assessments and creating reports were identified by the managers at the start of the project. These included not being able to print off certain reports, difficulties in changing assessments, the programme not being user-friendly and not knowing who to contact for help. The managers reported that JRHT's technical support team did not support the software and were unable to help. Some of the problems regarding printing reports and identifying a contact person from the software company were resolved during the course of the project. However, issues with the software itself could obviously not be solved.

The user-friendliness of the software seemed to be a major barrier to how the managers regarded the MDS/RAI in general. Because the software was not easy to use, this made the MDS/RAI appear more complicated. Also, because the software did not allow residents moving from residential to nursing care to progress from the home care tool to the long-term care tool, it added to the workload of the managers. They had to fill in all new paperwork even if the resident was only moving between types of care within the home and not physically moving. One way to resolve this problem would be to upgrade to the MDS/RAI Integrated Suite, which links all the MDS/RAI tools together, using a new software provider.

## Sharing knowledge and enthusiasm in JRHT and beyond

Another problem identified at the start of the project was a lack of knowledge and enthusiasm for the MDS/RAI. It may have been that knowledge impacted on enthusiasm, as it was observed that enthusiasm grew as knowledge improved during the project. As managers started making links between the reports and care, their interest in what the reports could produce increased. Those who have made this connection in understanding should be encouraged to help spread their knowledge and thus their enthusiasm. As was mentioned before, this system of feedback and sharing knowledge is important for maintaining a high level of use.

Interest in the MDS/RAI is spreading in the UK. In Cheshire, social services are expanding their user base for community care. There are also increasing numbers of users in Newham. A key factor in developing the MDS/RAI in other countries is the presence of an MDS/RAI network that includes care home providers as well as researchers, educators, trainers and data analysts. As the MDS/RAI is a comprehensive tool, it requires a comprehensive network to use it to its full potential. Managers were concerned that there were no other care homes in the UK where they could see the MDS/RAI working in practice and they expressed feelings of isolation in using it. The lack of an MDS/RAI network has probably slowed development of the MDS/RAI in JRHT care homes. As both JRHT and Cheshire social services are still in developmental stages, it would be beneficial to both parties and all potential users to link up and share their knowledge.

## Government policy

Contradictions and tensions in government policy relating to the provision of long-term care services for older people were a recurring theme throughout the project. The managers identified three areas in which this impacted on their work and made using the MDS/RAI difficult: funding, inspections and joined-up working.

### Funding

In some other countries, the MDS/RAI is used as a tool for allocating funding. The JRHT home managers recognised that this is a potential use of the tool and expressed interest in using it in this way. However, as discussed before, one of the homes has found it impossible to get funding for nursing care for one of their residents by using MDS/RAI data. This may be specific just to this home, as they are trialling a new flexible skill mix method of care. The NHS will not pay for the resident's nursing care because there is not a nurse available 24 hours a day, every day. Social services will not pay a higher price for her care simply because it is being provided in a residential home. Instead they insist that she should move to a nursing home in order to compensate them for the higher cost of care. Therefore, in order to

maintain the resident in the care home, the care home must buy in the nursing care and pass this cost on to the family – even though this same care would be paid for by social services in another setting. This not only is inconvenient and unfair to the resident and her family, but also raises questions about the legality of refusing to fund care based on the setting in which it is being delivered (HSO, 2003).

Managers felt that not only does the MDS/RAI provide accurate information for funding, but its use could be extended to ensure that funding changes quickly in line with changing needs. They recalled that, in the current circumstances, it could take two or three assessments before a resident's funding level caught up with their care needs. This means that a home could be providing this care 'free' for six to nine months. Managers believe that the MDS/RAI could be used to ensure that residents' care is funded as soon as they receive it, rather than months later.

### **Inspections**

The managers also noted that regulators from the Commission for Social Care Inspection (CSCI) were inconsistent in their understanding of the MDS/RAI. One manager reported that her regulator 'loved it' (CHC1:2) and was impressed with its detail; while another manager said her regulator 'couldn't get her head around it'

(CHB1:2). This variation in understanding of assessment tools calls into question the validity of care home comparisons that are made by regulating organisations.

### **Joined-up working**

Both of the above problems stem from an overall lack of coordination between services. Managers said that there were instances when primary care trusts (PCTs) did not want to send a patient to their care home because they did not understand the care home's system of fees for residents. The managers did not see the point of working in isolation, when much could be gained from working with PCTs and social services. A shared understanding between all players would ensure a smoother process of resident allocation, funding and inspection.

## **Summary of challenges and barriers**

Many of the barriers to implementation discussed here could be addressed internally through changes to JRHT's policy and procedures. However, others – such as building an MDS/RAI network and developing government policy – require cultural changes in the long-term care system. These issues are not prohibitive, but will require users to be persistent and patient in waiting for change to come.

# 4 Recommendations for implementation

This chapter discusses six recommendations for implementing the MDS/RAI into a care home setting, based on progress made during this project and the barriers identified in the previous chapter.

MDS/RAI use within a care home will change in response to government policy, as will developments in the wider MDS/RAI network. The MDS/RAI can produce data that can be used by all levels of staff and management in a care home. Therefore care homes should adopt an organisational structure in which information is circulated throughout the home, and practice and policy decisions are based on the evidence in reports (see Figure 1).

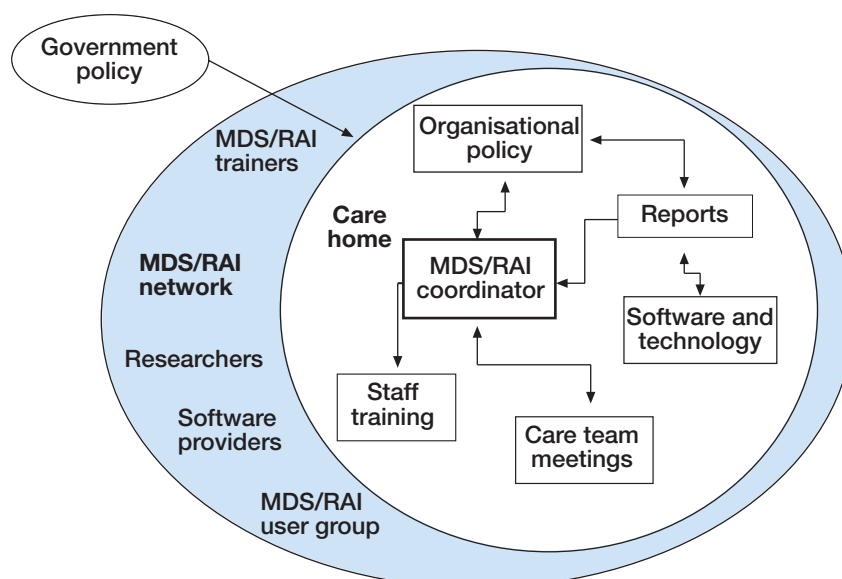
## Policy

MDS/RAI use should be responsive to government policy. Government policy will influence how the MDS/RAI is developed and implemented, and individual care home policy. However, in the UK, where a specific assessment tool is not mandated, organisations will probably need to determine their

own policy to combat staff members' resistance to working above minimum government standards. Organisational policy will need to be structured so that the MDS/RAI is used to a high standard. This includes setting guidelines for:

- a timescale for completing assessments;
- who will complete assessments;
- ensuring that staff are given adequate time to complete assessments;
- ensuring that MDS assessment items are included in care plans;
- what reports will be produced;
- producing facility reports regularly;
- providing time for staff to reflect on the reports;
- quality assurance using the reports;

Figure 1: Structure for implementing the MDS/RAI in the UK





- establishing links with other MDS/RAI users to build a network, both within the UK and internationally.

Home managers should be involved where possible to help shape policy. They can provide insight into the practicalities of using the MDS/RAI and can help inform what resources are needed to achieve best practice.

## Software and technology

The limitations of the software and technology used for completing assessments were identified as a major obstacle by the home managers. Criticisms of the MDS/RAI often reflect inadequacies in the software product that is used rather than the assessment tool itself. The MDS/RAI system, which is available free of charge, is embedded into software by licensed providers who then sell it as a product. Therefore it is important that the software and technology used meet the needs of frontline staff. Identifying the most appropriate software, and hardware if needed, should be done after frontline staff have a basic understanding of how to use the MDS/RAI and what reports are most useful. Since the MDS/RAI system is available free of charge, it is possible to become familiar with the tool by using the user's manual (Challis *et al*, 2000) prior to buying in software. This will ensure that whatever software product is used it will best meet the needs of frontline staff.

## Reports

Reports are important for care planning and care home business management. There are two types of reports that impact on the delivery of care: individual resident reports for care planning and reports for care home management. Development of the latter reports was the focus of this project, but both will be discussed.

First, an individual resident report is needed immediately after assessment completion. These reports help to create the care plan. They should include the following information.

- Resident Assessment Protocols (RAPs) triggered. This report should also include which items triggered the RAP.
- Outcome scales scores for:
  - Activities of Daily Living (Self-performance Hierarchy, Long Form or Short Form);
  - Changes in Health, End-stage disease, Signs and Symptoms;
  - Cognitive Performance Scale;
  - Depression Rating Scale;
  - Social Engagement Scale;
  - Pain Index.
- Resource Utilisation Group III level and group number.

Reports that are needed immediately for care planning should be generated by computer software.

The second type of reports should be produced on a quarterly basis. These reports are listed in full in Appendix 3. This list is not exhaustive, but should be seen as a starting point for further development. As home managers and care staff become familiar with the reports and engage with the data, they will begin to question it and want to look for further explanations. Therefore report development is a continuous process and there is no limit to what can be produced.

Reports can either be created by someone within the organisation or they can be outsourced to a data analyst or researcher. Some software programmes may have the ability to produce many of the reports, but will not be able to grow and develop with the needs of the care team. The person who creates the reports should have good knowledge of the MDS/RAI, be literate in appropriate analytical software and have good communication with the care team and a willingness to explore the data for other reporting options. Creating quarterly reports is time-consuming and, in the US and Canada, many

care homes have their reports created by outside organisations, such as CIHI. Because development of the MDS/RAI is at an early stage in the UK, it is essential that care providers work closely with data analysts so that the reports reflect the needs of the care team.

## MDS/RAI coordinator

The MDS/RAI coordinator is an essential member of the care team. The coordinator is responsible for implementing the MDS/RAI in the care home and adhering to MDS/RAI policy. This person is a champion of the MDS/RAI and ensures that it is used to the highest standard by all members of staff.

For completing assessments, the JRHT care homes might benefit from the second system of assessment completion described in Chapter 1. Three or four senior staff members or nurses would 'specialise' in several related sections of the MDS, such as mood and behaviour patterns, psychosocial well-being and activity pursuit patterns. Each staff member in the assessment team would complete their section and collectively they would create or modify care plans. In this way multiple perspectives are included on the assessment, but since the length of the assessment is reduced they would not feel overwhelmed by it. This system ensures that multiple people in the care home have extensive knowledge of the MDS/RAI to pass on to others even if the staff turnover rate is high. Also, keeping the number of staff who need full training in the MDS/RAI to a small number means that the number of people requiring training is manageable.

In the scenario described above for assessment completion, the MDS/RAI coordinator might have the following responsibilities:

- ensure assessments are completed on time and in full;
- train staff members to complete the assessments;
- sign off on assessments and care plans;
- ensure quality by personally carrying out random assessments;

- arrange meetings with care team members and management;
- liaise with data analysts for report creation;
- track new developments in the MDS/RAI system;
- interpret quarterly reports for care staff and managers;
- update funding reimbursement based on MDS/RAI items;
- help develop organisational policy with the director of care services;
- coordinate with other users of the MDS/RAI and participate in user groups;
- actively participate in the MDS/RAI network.

The coordinator might be required to be in the care home only on a part-time basis and therefore could be shared between the homes. However, they would need to know the residents in each care home fairly well. Also, some of the coordinator's time would need to be spent liaising and meeting with other users to establish an MDS/RAI network.

To carry out the above duties, the MDS/RAI coordinator would need experience of providing care at a high level, ability to translate reports into practice, good knowledge of the MDS/RAI and good organisational skills. The goal of the coordinator should be to coordinate knowledge and development occurring in the wider MDS/RAI community nationally and internationally, and translate that into practice in the JRHT care home.

## Care team meetings

Meetings should occur routinely between all levels of staff. The following is a list of meetings that would help improve communication within and between the care homes.

- The assessment team should meet weekly to discuss any changes in residents and care plans.

- The assessment team, home managers and MDS/RAI coordinator should meet monthly to discuss any assessments completed that month.
- The home managers from all care homes and the coordinator(s) should meet monthly or every other month to discuss progress in using the MDS/RAI, share knowledge and discuss any challenges.
- All the home managers, the director of care services and coordinator(s) should meet quarterly to discuss the reports. Yearly meetings should be used to discuss any changes that need to be made to organisational policy.

## Staff training

Staff training will probably be the responsibility of the MDS/RAI coordinator, though training from an MDS/RAI professional outside of JRHT may be required on occasion to refresh everyone's skills. All care staff should be aware of the MDS/RAI, though their knowledge of it may depend on their involvement in the assessment and care planning process. All staff who complete assessments or write care plans should be trained in the full assessment tool. Staff members who are responsible for completing sections of the assessment should still be trained in the full assessment, though particular emphasis should be paid to those specific sections.

The training manual (Challis *et al*, 2000) can be used to facilitate staff training and to plan yearly refresher courses. It can also be used as a resource for care planning.

## MDS/RAI network

An MDS/RAI network would help to support all the elements above. Currently the potential for networking in the UK is undeveloped. Use of the MDS/RAI around the country is patchy, but users could be linked together to provide mutual support and opportunities for development. New users of the MDS/RAI should aim to establish links with existing users. Creating an MDS/RAI network could have the following benefits. It could:

- aid development and help to further anglicise the assessment tool;
- ensure that work to develop the MDS/RAI is not duplicated;
- create excitement in users and reduce isolation and apathy;
- provide support for other users to influence local policy-makers and government.

A first step towards establishing a network is to create or engage in an MDS/RAI user group. The group should include other users of the MDS/RAI and researchers, and potentially health information analysts, health and social care commissioners and software providers.

## 5 Conclusions and implications

The success and usefulness of the MDS/RAI is evidenced by its widespread use around the world. The key factors to its success in countries where it has been implemented on a significant scale are: teamwork, communication, evaluation, management, human and material resources, and government policy. This project used the years of experience of the international community to help develop MDS/RAI use in JRHT care homes.

The MDS/RAI is more than just a tool for assessment – reports can be produced for care planning, quality assurance and resource allocation. The development of these reports was the focus of this project. The reports were created through a pragmatic process of user testing and revision. This meant that the reports that were created were fit for purpose. Care home managers found the reports to be useful for managing care for the residents and planning a business strategy for the care home.

However, this research revealed that reports alone are not enough to sustain use of the MDS/RAI. The barriers and challenges faced were the same as every other country has experienced in their development process. These barriers were overcome in other countries by a shift in cultural practice and organisational structure in long-term care. Teamwork, communication, leadership, management, development, evaluation and time are all aspects of good organisational structure. As evidenced by this project, these aspects must be in place for the MDS/RAI to be used to its full potential.

In the UK, the Common Assessment Framework is meant to tie services for older people together and create an organised structure for long-term care (DH, 2006). The CAF builds on the Single Assessment Process for community care, which seems to have stalled, perhaps because there is no uniformity across the system. The CAF attempts to standardise the meaning of different assessment tools to

create uniformity, but it does not address the difference between assessment instruments in the assessment items and response codes for specific assessment domains. The effect that this will have on the validity and meaningfulness of the assessments has yet to be seen. The CAF falls short of mandating the use of a single assessment tool. This project supports the need for a single assessment tool that allows people to move easily through the care system while tracking their care needs in a systematic and reliable way.

To ensure equity in continuing care funding, a common, standardised assessment tool should be used (HSO, 2003; HCHC, 2005). The MDS/RAI can be used to determine funding levels based on needs and, as the care home managers stated, they are already using it to determine fee levels. Despite the MDS/RAI being used as an evidence base for funding elsewhere in the world, social services and the NHS in the UK do not yet recognise it for allocating funding, though adoption of the CAF may help resolve this. This is not to say that social services' own funding criteria are unsatisfactory. However, the fact that their funding methods are based on a person's location, rather than on the care they receive, does raise questions; the MDS/RAI resource utilisation groups and casemix index show that a person with high care needs could cost more than a person with nursing needs (Carpenter *et al.*, 1995). Residents with high levels of care needs can still be maintained in residential homes, but, because their needs are not of a nursing nature, they cannot receive funding. Unfortunately, social services assume that high levels of care need automatically imply nursing care, when this is not always the case. There is a strong case for nursing bands to be based on the *cost* of care needed, not on the *type* of care needed, and for this to be addressed in the policy for PCTs and social services funding nursing and personal care.

The CAF also aims to improve the transfer of information across settings (Evans, 2008). However, as this project found, it will be essential that the link between care homes and health and social care services is established, and that their assessment tools and outputs are accepted. The MDS/RAI can track patients through the various stages of health and social care – from first admission, to hospital, to home care and then to the long-term care setting. This sort of uniform progression with reliable reporting and a common language is what is needed to make the CAF a reality. As the MDS/RAI has already been proven in other countries, adapting it to the UK would make it easier to compare care standards across international borders.

Finally, the CAF aims to improve patient outcomes. Though improving patient outcomes

was not a direct goal of this project, the reports did provide the care homes with information that could be used to improve the well-being of residents. Reports provide staff with a mechanism to evaluate the care provision of their homes and thus make changes to improve it. This is important in identifying when desired care outcomes have been achieved.

Although important steps have been made to improve the usefulness of the MDS/RAI in JRHT, more work is needed to make it self-sustaining. However, it is likely that full implementation will realise the full benefits, for both JRHT and other care providers, only if it is accompanied by a shift in government policy and in acceptance by the regulators, local authorities and health bodies of the use and potential of the MDS/RAI.

# List of abbreviations

ADL SPH	Activities of Daily Living Self-performance Hierarchy
CAF	Common Assessment Framework
CHESS	Changes in Health, End-stage disease, Signs and Symptoms
CIHI	Canadian Institute for Health Information
CPS	Cognitive Performance Scale
CSCI	Commission for Social Care Inspection
DRS	Depression Rating Scale
HC	Home Care
JRHT	Joseph Rowntree Housing Trust
LTCF	Long Term Care Facility
MDS-HC	Minimum Data Set Home Care
MDS/RAI	Minimum Data Set Resident Assessment Instrument
PCT	Primary care trust
RAP	Resident Assessment Protocol
RUG III	Resources Utilisation Group III
SAP	Single Assessment Process
SES	Social Engagement Scale

# Note

## Chapter 1

- 1 A citation in the US is a penalty resulting in either a written warning or monetary fine. In the UK, failing an inspection might lead to the care home being issued with a requirement or warning letter.

# References

- Avison, D., Lau, F., Myers, M. and Nielsen, P.A. (1999) 'Action research: to make academic research relevant, researchers should try out their theories with practitioners in real situations and real organizations', *Communications of the ACM*, Vol. 42, No. 1, pp. 94–7
- Carpenter, G.I., Main, A. and Turner, G.F. (1995) 'Casemix for the elderly inpatient: Resource Utilization Groups (RUGs) validation project', *Age and Ageing*, Vol. 24, No. 1, pp. 5–13
- Challis, D., Carpenter, I. and Traske, K. (1996) *Assessment in Continuing Care Homes: Towards a National Standard Instrument*. Canterbury: PSSRU
- Challis, D., Stewart, K., Sturdy, D. and Worden, A. (eds) (2000) *UK Long Term Care Resident Assessment Instrument User's Manual*. York: interRAI UK
- DH (Department of Health) (2001) *National Service Framework for Older People*. Cm. 6737. London: DH
- DH (2003) *Care Homes for Older People: National Minimum Standards and the Care Home Regulations, 3rd ed.* London: TSO
- DH (2006) *Our Health, Our Care, Our Say: A New Direction for Community Services*. London: TSO
- Evans, C. (2008) *Putting People First Personalisation Toolkit: Common Assessment Framework*, [www.icn.csip.org.uk/\\_library/Resources/Personalisation/Personalisation\\_advice/Common\\_Assessment\\_Framework\\_CAF.pdf](http://www.icn.csip.org.uk/_library/Resources/Personalisation/Personalisation_advice/Common_Assessment_Framework_CAF.pdf) (accessed 29 September 2008)
- Hart, E. and Bond, M. (1995) *Action Research for Health and Social Care: A Guide to Practice*. Buckingham: Open University
- Hawes, C., Mor, V., Phillips, C.D., Fries, B.E., Morris, J.N., Steele-Friedlob, E. *et al.* (1997) 'The OBRA-87 nursing home regulations and implementation of the Resident Assessment Instrument: effects on process quality', *Journal of the American Geriatrics Society*, Vol. 45, No. 8, pp. 977–85
- HCHC (House of Commons Health Committee) (2005) *NHS Continuing Care, 6th Report of Session 2004–2005, Volume 1*. HC.399-I. London: TSO
- Holtkamp, C.C.M., Kerksta, A., Ooms, M.E., van Campen, C. and Ribbe, M.W. (2001) 'Effects of the implementation of the Resident Assessment Instrument on gaps between perceived needs and nursing care supply for nursing home residents in the Netherlands', *International Journal of Nursing Studies*, Vol. 38, No. 6, pp. 619–28
- HSO (Health Service Ombudsman) (2003) *NHS Funding for Long-term Care, 2nd Report – Session 2002–2003*. HC.399. London: TSO
- Morgan, D. (1997) *Focus groups as Qualitative Research*. Thousand Oaks, CA: Sage Publications
- Morris, J.N., Hawes, C., Fries, B.E., Phillips, C.D., Mor, V., Katz, S. *et al.* (1990) 'Designing the National Resident Assessment Instrument', *The Gerontologist*, Vol. 30, No. 3, pp. 293–307
- Worden, A., Challis, D.J. and Pedersen, I. (2006) 'The assessment of older people's needs in care homes', *Ageing and Mental Health*, Vol. 10, No. 5, pp. 549–57
- Zimmerman, D.R. (2003) 'Improving nursing home quality of care through outcomes data: the MDS quality indicators', *International Journal of Geriatric Psychiatry*, Vol. 18, No. 3, pp. 250–7

# Appendix 1

## Explanation of MDS/RAI tools for long-term care and home care

The interRAI Minimum Data Set (MDS) assessment system consists of a number of directly comparable assessment instruments that were developed on a rigorous systematic basis by interRAI, an international research and development collaboration ([www.interrai.org](http://www.interrai.org)). They are designed to be used by health and social care professionals who have been trained in their use.

The MDS (Minimum Data Set) assessment instruments are so named because they use the *minimum* set of items necessary to determine whether there may be a problem or a potential to benefit from care services in the key domains for care of older people. All MDS assessment instruments have been tested for validity and reliability.

The following assessment instruments are in existence and available in a number of languages:

- Long Term Care Facility (MDS/RAI);\*
- Home Care (MDS-HC for community care);\*
- Community Health Assessment;
- Contact Assessment;
- Assisted Living;
- Acute Care;
- Post-acute Care;
- Mental Health;
- Community Mental Health;
- Emergency Screener for Psychiatry;

- Palliative Care;
  - Intellectual Disability.
- \* Instruments used by JRHT care services.

### Long Term Care Facility (LTCF)

#### Background

The first assessment instrument created by members of interRAI was the Long Term Care Facility Resident Assessment Instrument, which consists of a core screening and assessment instrument, known as the Minimum Data Set (MDS), and 18 Resident Assessment Protocols (RAPs). The instrument and its related training materials provide a standardised approach to assessing the health, functional and psychosocial needs and strengths of individuals living in care homes or receiving short-term post-acute care in skilled nursing facilities.

The interRAI LTCF, also known as the MDS Resident Assessment Instrument (MDS/RAI), was originally developed in 1988–90 under a US Health Care Financing Administration (HCFA, now Centers for Medicare and Medicaid Services – CMS) contract with a consortium of researchers from Research Triangle Institute, Hebrew Rehabilitation Center for Aged, Brown University and the University of Michigan. The development of the MDS/RAI was mandated by the 1987 Nursing Home Reform Law, which also required that it be implemented in all US nursing homes. The LTCF was originally implemented in approximately 17,000 US nursing homes in 1990–91. It was revised (Version 2.0) in 1994–95, and items were dropped, modified or added to enhance clinical utility and item reliability, and to streamline the care planning process. Version 2 was implemented across US nursing homes in 1996.

#### Target population

Frail older people and disabled adults in institutional long-term care settings.

#### Adoption and use

The LTCF consists of core screening and assessment items in the following areas:



sociodemographic information, prior customary routine, cognition, communication/hearing, vision, mood and behaviour, psychosocial well-being, physical functioning and structural problems, bladder and bowel continence, disease diagnoses, health conditions, oral/nutritional status, dental status, skin condition, activity pursuits, medications, special treatments and procedures, and discharge potential. The full instrument was designed to be used on admission to a facility, annually and on significant change in resident function. The assessment instrument takes 60–75 minutes to administer, although the assessment of people with complex needs may take longer. A briefer quarterly review containing a subset of key functional, psychosocial and health items was designed for use on a quarterly basis to assist in identifying and managing emerging problems.

Certain item responses are ‘triggers’ that indicate the need for additional assessment using the Resident Assessment Protocols (RAPs). The LTCF includes 18 RAPs that contain guidelines for in-depth assessment of potential problem areas that may warrant care planning. RAPs are available for the following conditions: delirium, cognitive loss, visual function, communication, activities of daily living (ADL) function/rehabilitation, urinary continence and indwelling catheter, psychosocial well-being, mood state (depression and anxiety), behavioural symptoms, activities, falls, nutritional status, feeding tubes, dehydration/fluid maintenance, dental care, pressure ulcers, psychotropic drug use, physical restraints and pain management.

The LTCF is currently used in 19 countries for one or more of the following purposes: care planning, facility management, needs assessment, policy development, quality improvement and benchmarking, reimbursement, research, or service eligibility. It is used in North America (US and Canada), Europe (Denmark, England, Finland, France, Germany, Iceland, Italy, the Netherlands, Norway, Spain, Sweden, Switzerland and Wales), Asia (Hong Kong, Korea and Japan) and Israel. The MDS/RAI was designed primarily for care planning purposes. MDS items achieve excellent inter-rater reliability when scored by clinical professionals (e.g. nurses, physicians) trained on instrument assessment processes and coding conventions.

## Home Care

### **Background**

The Home Care assessment instrument, or HC, was developed to provide a common language for assessing the health status and care needs of frail older and disabled individuals living in the community. The instrument was designed to be compatible with the Long Term Care Facility instrument that was implemented in US nursing homes in 1990–91. The HC was developed initially in 1993–96.

### **Target population**

The HC was developed for use with adults over the age of 18 in home and community-based settings. The instrument is generally used with frail older people or disabled people who may or may not be receiving formal health care or supportive services.

### **Adoption and use**

The HC was designed to highlight issues related to functioning and quality of life for community-residing individuals. It consists of the Minimum Data Set for Home Care for care in the community (MDS-HC) and Client Assessment Protocols (CAPs). The MDS-HC is designed to collect standardised information on a broad range of domains critical to caring for individuals in the community, including items related to cognition; communication/hearing; vision; mood and behaviour; social functioning; informal support services; physical functioning; continence; disease diagnoses; health conditions; preventive health measures; nutrition/hydration; dental status; skin condition; environment/home safety; service utilisation; medications; and socio-demographic/background information. The assessment instrument takes 60–75 minutes to administer, although the assessment of people with complex needs may take longer.

Additionally, certain MDS-HC item responses are defined as ‘triggers’ for additional assessment using a specific CAP. Although the instrument can be used on admission to a home care programme or at a hospital prior to discharge, its power is augmented by reassessment at a standard interval such as 90 days. Multiple trials

conducted in several countries have demonstrated good inter-rater reliability of MDS-HC items. The HC instrument is currently being used in North America (Canada, and multiple states and the Department of Veterans Affairs in the US), Europe (Italy, Switzerland, Germany, Finland, UK,

etc.), and Asia (Hong Kong, Japan, Australia). It has been accredited by the UK Department of Health for use in England and Wales in the Single Assessment Process ([www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH\\_4070322](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4070322))

# Appendix 2

## Countries that were represented at the Canadian Institute for Health Information (CIHI) conference

Table A2.1: Representation of countries at CIHI Conference in Canada

Country	Delegates
Australia	2
Belgium	2
Canada	286
Chile	1
China	3
Czech Republic	1
Finland	20
France	1
Germany	1
Iceland	11
India	1
Netherlands	3
New Zealand	1
Norway	1
Singapore	1
Taiwan	1
United Kingdom	2
United States of America	8

# Appendix 3

## List of reports produced for Quarter 1 2008. (January, February, March)

Summary of Key Findings	Cognitive Performance Scale (CPS) Distributions
Resident Assessment Dates	Depression Rating Scale (DRS) Distributions
Quality Indicators by Quarter	Social Engagement Scale (SES) Distributions
Raw Data	Casemix Index, RUG III Groups and RNCC Banding Distributions and Averages
Incidence of Fractures, Q1 1	Resident Ages
Incidence of Cognitive Impairment, Q1 7	CHESS Percentages by Care Home
Incidence of Decline in Late Loss ADL, Q1 17	CPS Percentages by Care Home
Incidence of Range of Motion Decline, Q1 18	SES Percentages by Care Home
Comparison of USA and JRHT Care Home Quality Indicator Scores	DRS Average by CPS Score
Comparison of Quality Indicators for 3 JRHT Care Homes	Average Number of Mood State Items Ticked by ADL SPH Score
Summary of Outcomes	Psychotropic Medication Use among Fallers
Comparison of Outcome Scales	Fallers among those on Psychotropic Medication
Activities of Daily Living Self-performance Hierarchy (ADL SPH) Distributions	Falls and Wandering
Changes in Health, End-stage disease and Signs and Symptoms (CHESS) Distributions	RUG III Distribution of Residents by Care Home
	Average Casemix Index by Quarter
	Number of Residents in each RUG III Group Level A
	Number of Residents in each RUG III Group Level B (stacked percentage)
	Cumulative Casemix Index A
	Cumulative Casemix Index B (stacked percentage)

# Appendix 4

## Sample reports

Figure 2: The number of residents by age group per care home

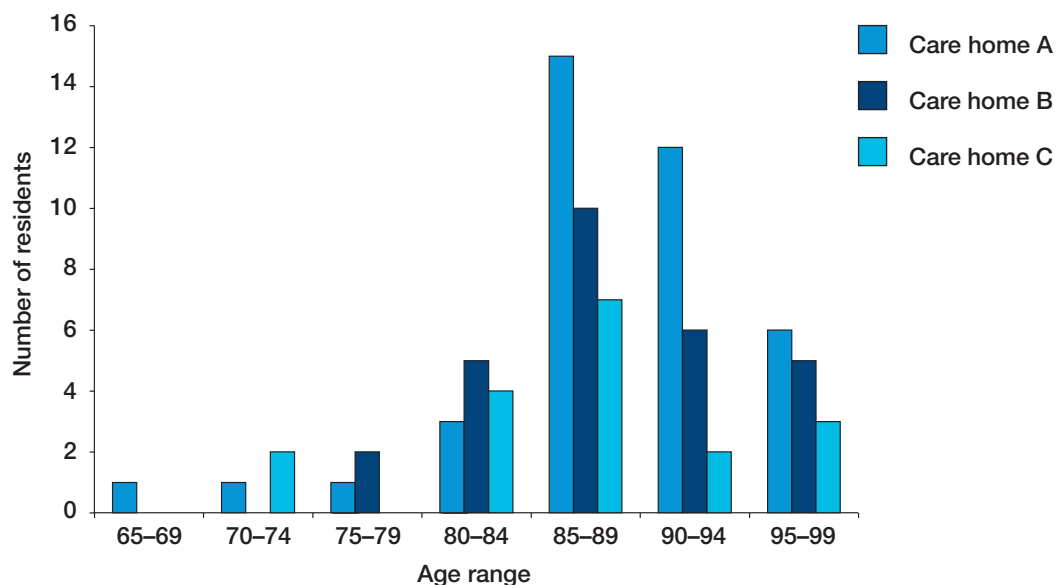


Figure 3: The number of residents in each RUG III by care home

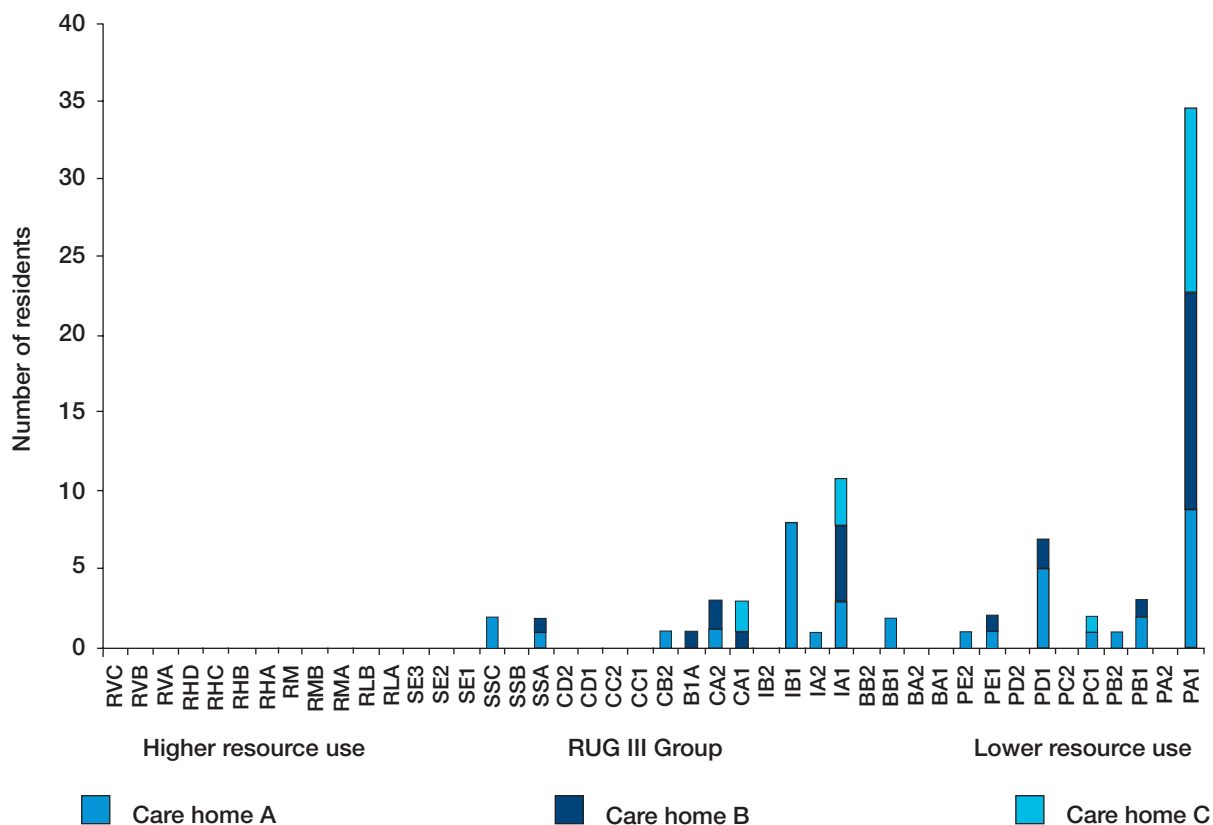


Figure 4: Cognitive Performance Scale scores by percentage of residents

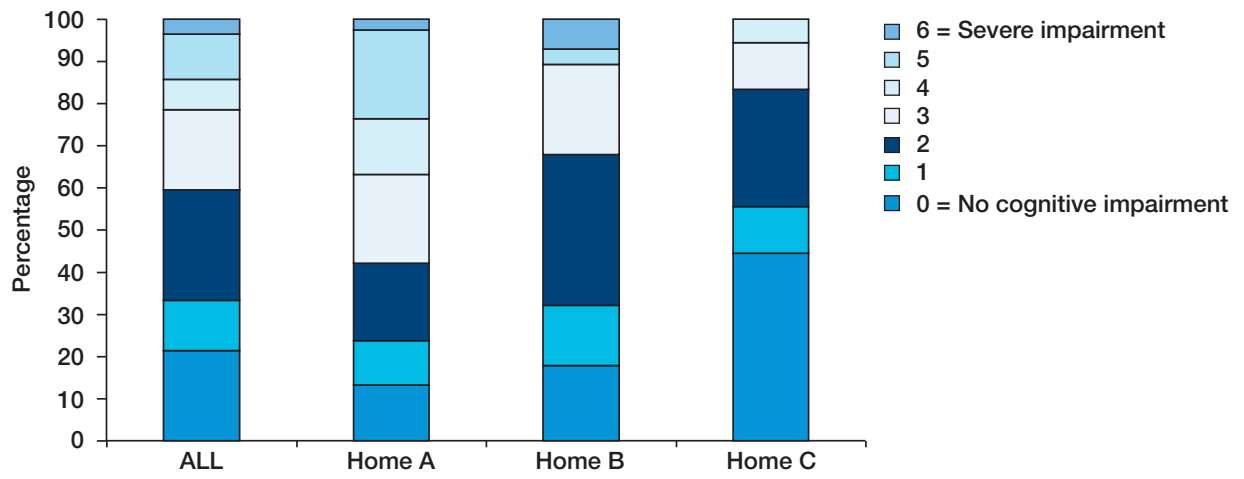


Table A4.1: Percentage of residents scoring on each quality indicator for the three care homes

Domain	Quality indicator	Quarter 4 2007			Quarter 1 2008		
		Home A	Home B	Home C	Home A	Home B	Home C
Accidents	1. Incidence of new fractures	0.0	3.3	0.0	0.0	0.0	0.0
	2. Falls	4.8	14.7	23.1	7.7	14.3	22.2
Behavioural and Emotional Patterns	3. Behavioural symptoms	14.3	5.9	3.8	12.8	7.1	0.0
	4. Symptoms of depression	61.9	32.4	7.7	64.1	35.7	5.6
	5. Symptoms of depression – no antidepressants	42.9	14.7	3.8	38.5	7.1	0.0
Clinical Management	6. Nine or more different medications	9.5	32.4	15.4	12.8	35.7	16.7
Cognitive Patterns	7. Incidence of cognitive impairment	12.5	22.2	0.0	0.0	23.1	0.0
Elimination and Incontinence	8. Bladder/bowel incontinence	21.1	12.5	16.0	36.8	18.5	11.8
	9. Incontinence – no toileting plan	14.3	90.0*	100.0*	31.3	28.6	100.0*
	10. Indwelling catheters	9.5	5.9	3.8	0.0	3.6	5.6
	11. Faecal impaction	0.0	0.0	0.0	0.0	0.0	0.0
Infection Control	12. Urinary tract infections	4.8	5.9	11.5	7.7	0.0	11.1
Nutrition and Eating	13. Weight loss	9.5	11.8	7.7	5.1	10.7	0.0
	14. Tube feeding	0.0	0.0	0.0	0.0	0.0	0.0
	15. Dehydration	0.0	0.0	3.8	0.0	0.0	0.0
Physical Functioning	16. Bedfast	9.5	0.0	0.0	5.1	0.0	0.0
	17. Incidence of decline in late loss ADLs	5.0	6.1	0.0	15.2	11.5	6.7
	18. Incidence of decline in range of motion (ROM)	4.8	0.0	0.0	5.9	3.8	0.0
Psychotropic Drug Use	19. Antipsychotic use absence of condition	9.5	8.8	7.7	10.8	7.1	5.6
	20. Anti-anxiety/hypnotic drug use	14.3	32.4	3.8	13.5	35.7	11.1
	21. Hypnotic drug use more than two days in last week	14.3	26.5	3.8	10.3	32.1	0.0
Quality of Life	22. Daily physical restraints	4.8	11.8	0.0	12.8	10.7	0.0
	23. Little or no activity	23.8	35.3	3.8	28.9	25.0	5.6
Skincare	24. Stage 1–4 pressure ulcers	4.8	0.0	0.0	10.3	0.0	0.0

Numbers given above are per cent. Percentages in blue are above the 'high' percentage benchmarks from the US.

\* High percentage indicates misinterpretation of assessment question and not inadequacy of care. The question was clarified with the researcher and subsequent assessments were accurate.

# Appendix 5

## Social Engagement Scale (SES) explained

The Social Engagement Scale (SES) is based on six MDS items:

- F1a at ease interacting with others;
- F1b at ease doing planned or structured activities;

- F1c at ease doing self-initiated activities;
- F1d establishes own goals;
- F1e pursues involvement in life in home;
- F1f accepts invitations into most group activities.

The scale is a summation of these items and ranges from 0 to 6, with a higher score meaning higher social engagement. Note that this is the *only* scale where a higher score is associated with better well-being.



# Appendix 6

## Changes in Health, End-stage disease and Signs and Symptoms (CHES)

The score from column A is combined with the score from column B. Column A can have values of 0 (no symptoms), 1 (one symptom present), or 2 (two or more symptoms present). Column B can have values from 0 to 3, each item receives one point if it is present. For example, if a resident has four symptoms present in column A and two from column B, they would have a CHES score of 4.

The CHES scale detects frailty and instability in health. It attempts to identify individuals at risk of serious decline. The scale ranges from 0 (no instability) to 5 (highest level of instability). It is calculated using the items from the MDS shown in Table A6.1.

Table A6.1: Items from the MDS used to calculate the CHES scale

Column A		Column B	
Question	Item	Question	Item
J1c	Dehydration	B6	Decline in cognition
J1g	Oedema	G9	Decline in ADL
J1l	Shortness of breath	J5c	End-stage disease
J1o	Vomiting		
K3a	Weight loss		
K4c	Leaving food uneaten		

---

The Joseph Rowntree Foundation has supported this project as part of its programme of research and innovative development projects, which it hopes will be of value to policy-makers, practitioners and service users. The facts presented and views expressed in this report are, however, those of the authors and not necessarily those of the Foundation.

Joseph Rowntree Foundation  
The Homestead  
40 Water End  
York YO30 6WP  
[www.jrf.org.uk](http://www.jrf.org.uk)

Further copies of this report, or any other JRF publication, can be obtained from the JRF website ([www.jrf.org.uk/bookshop/](http://www.jrf.org.uk/bookshop/)).

A CIP catalogue record for this report is available from the British Library.

© University of Kent 2008.

First published 2008 by the Joseph Rowntree Foundation.

All rights reserved. Reproduction of this report by photocopying or electronic means for non-commercial purposes is permitted. Otherwise, no part of this report may be reproduced, adapted, stored in a retrieval system or transmitted by any means, electronic, mechanical, photocopying, or otherwise without the prior written permission of the Joseph Rowntree Foundation.

ISBN: 978-185935-680-7 (pdf)

Designed by Draught Associates  
Typeset by  
York Publishing Services Ltd



**Available in  
other formats**

Working Towards



**Investors in Diversity**

[www.iiduk.com](http://www.iiduk.com)

## Acknowledgements

We would like to thank the Joseph Rowntree Housing Trust care home managers and staff for their time, effort and enthusiasm throughout the project. Creating guidance for the development process would not have been possible without the advice and wisdom of the CIHI conference attendees and the staff at the US care home who welcomed the researcher. We thank David Zimmerman, John Hirdes, Nancy Curtin-Telegdi and Harriet Finne-Soveri for their help and support during the project. We are grateful to the Senectus team and the Centre for Health Services Studies for their continuous academic support. Finally, we would like to thank the project advisory group members for their guidance and expertise: William Anderson, Sarah Bartholomew, Karen Davidson, Janice Duff, Val Ellis, John Kennedy and Philippa Hare.

## About the authors

Laura Stosz is a Research Associate in the Centre for Health Services Studies at the University of Kent.

Professor Iain Carpenter is an Emeritus Professor of Human Aging in the Centre for Health Service Studies at the University of Kent, and Associate Director of the Health Informatics Unit at the Royal College of Physicians, London.

