SHAREing Maternity Care:
Clinical Handover between Visiting Medical Officers and Midwives

Public Report on Pilot Study

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ACSQHC acknowledges that the information contained in this one-year study presents initial developments and supports longer-term research and evaluation. The information presented here does not necessarily reflect the views of ACSQHC, nor can its accuracy be guaranteed.
Table of Contents

Abstract 4
Executive Summary 5
Background to the Project 7
Project Scope and Objectives 9
‘SHARE’d’ Tools and Resources 9
Evaluation Method and Comparative Data Analysis 11
Results and Discussion 12
Recommendations 13
Project Reflections 14
Future Directions 14
References 15
Abstract

The SHARED (Situation, History, Assessment, Risk, Expectation and Documentation) framework was piloted within the Mater Mothers’ Private Hospital and Mater Private Hospital Redland. It sought to address the communication issues associated with the critical time around the following clinical points of care:

- Referral from the midwife to the Visiting Medical Officer (VMO) when a change in the woman’s condition is diagnosed.
- Referral from the VMO to the recovery nurse/midwife post-Caesarean section.

The project included pre- and post-implementation measures using clinician surveys, chart audits, clinical incident data and patient satisfaction data. This project found that a standardised approach using SHARED to define the minimum dataset can improve the accuracy and appropriateness of information exchanged, however a longer time frame for implementation and evaluation is necessary for these changes to be consistently captured.
Executive Summary

AIMS:

Mater Misericordiae Health Services Brisbane Limited sought to develop a program to address communication issues associated with critical times around specific clinical points of care within a private hospital setting.

This project sought to:

- Develop a framework for the specific handover of care related to maternity services at the Mater Mothers’ Private Hospital (MMPH) and Mater Private Hospital Redland (MPHR). The tool was based on the Mater’s existing SHARE framework.
- Develop support tools to facilitate use of the SHARED framework across the MMPH and MPHR, and possibly to other hospitals.

DEVELOPMENTS:

As part of the process to develop, test and implement a framework for clinical handover, literature pertaining to clinical handover in maternity services was examined by the Clinical Handover Project Team. Specifically the SBAR, I PASS the BATON, CHAPS and SHARE frameworks were reviewed to guide the process of developing, implementing and evaluating the SHARED clinical handover tool. Successful communication strategies and handover techniques identified included, (i) a structured time allocated approach, (ii) the use of tools that encompassed the important data elements, (iii) tools that supported a common language and (iv) the addition of written documentation to sustain the handover process.

The modified handover trigger mnemonic SHARED is presented as a method for enhancing the quality and accuracy of information passed between healthcare professionals. Each letter of the mnemonic represents an essential component of clinical handover as well as highlighting that clinical handover is about the transfer of responsibility and accountability, not simply the transfer of information. SHARED provides an orderly and focused approach to set expectations around clinical handover communication and offers a means for creating a clear mental picture of a patient’s current condition or circumstances.

To support the trial of SHARED at the two Mater hospitals, this project also created a toolkit which includes an education training package, care path inserts, poster, swing tag, end-of-bed template and sticker.

EVALUATION:

Early evaluation on SHARED as a framework for clinical handover has been promising. Staff satisfaction surveys identified that the majority of respondents are aware of the SHARED framework and its support tools. Staff found SHARED helpful however there was some dissatisfaction with the A chart audit demonstrated an improvement in ‘adequate overall’ documentation from 13% to 24% following implementation of the SHARED framework with statistically significant improvements.
occurring in three of the ten criteria measured - legibility of documentation, time entered and signature used.

Patient satisfaction data demonstrated that in relation to patients' perception of communication adequacy and process, the mean score point around the question 'how staff worked together to care for you' improved significantly following the implementation of SHARED at MMPH. Clinical incident data was also reviewed however overall, there was no statistically significant improvement or reduction in incident data at either site after SHARED had been implemented.

The validity of the measurement data however must be raised as a limitation to the project as a consequence of the 12 month timeline and variable response rates. Post-implementation measures undertaken within 3 months of the introduction of significant change to some of the processes around clinical handover may not accurately reflect the real impact of SHARED within the clinical arena and further evaluation is necessary.
Background to the Project

**CLINICAL HANOVER**

The effective transfer of information between healthcare practitioners (handover) is a fundamental element of patient care and is increasingly recognised as an "important consideration in maintaining patient safety, work flow and quality care." Communication failure is identified as one of the top five contributing factors to sentinel events in Australia and worldwide. Ineffective communication between healthcare professionals can lead to a patient receiving the wrong treatment: delays in diagnosis, life threatening adverse events, patient complaints, increased health care expenditure and increased length of hospital stay.

**OBSTETRIC WORK IN PRIVATE HOSPITALS**

The private sector is a significant provider of birthing services nationally. More than 66% of all specialists in obstetrics work in private practice. The relationship between Visiting Medical Officers (VMOs) and private hospitals is an unusual one in that the VMOs are essentially independent contractors who are treated as customers, due to their ability to influence the volume and profitability of patient-related activity. As a consequence, the nature of obstetric practice is one in which obstetricians often work in multiple locations and as such are not always located on or near the hospital campus when women present to the hospital or when a critical situation occurs.

The midwife and the VMO have a unique relationship in the private maternity setting. It involves a lot of trust and confidence that accurate information is being communicated when care and responsibility is handed over. This is mainly due to the VMO being based outside the hospital setting and having other commitments and responsibilities in their private practice. Midwives assess women on admission, prior to transfer to another area, during labour or when there is a change in her condition. They then hand over some or all responsibility of this care to the VMO. The handover of information is vital to allow the VMO or midwife to make an informed decision of how to plan the woman's care.

**ORGANISATION PROFILE**

The Mater Mothers’ Private Hospital (MMPH) and Mater Private Hospital Redland (MPHR) represent facilities where unique relationships between VMOs and midwives are commonplace. The MMPH is a tertiary referral maternity hospital birthing approximately 4200 babies a year. The MPHR is a small 60 bed hospital located 45 minutes from the centre of Brisbane that births approximately 400 babies per year.

The MMPH was considered representative of most private hospitals in terms of its bias towards provision of caesarean section as the most frequent mode of delivery. This indicates that when dealing with obstetric delivery, it is vital to deal with both medical and surgical contexts for that environment as well.

Due to its small size, MPHR represented an opportunity to test the use of SHARED within a less acute and less busy obstetric environment where continuity of care was more commonplace. In addition, given that within MPHR the same theatre team supports both general and obstetric surgery, this offered an opportunity to test the framework in a non-obstetric elective surgery area of care. It was anticipated that one...
benefit in having the tool tested in the more general environment of elective surgery at MPHR was that the lessons learned would inform an easier translation of the framework into broader use elsewhere.

These hospitals offered an excellent context in which to develop and test a framework for clinical handover and communication to enhance the safety and quality of maternity care. Within MMPH and MPHR women may be admitted directly from home or a VMO's private room. In these instances, the midwife is reliant on information provided by the VMO as the woman's recent history and current condition will not always be available in the hospital health record. Throughout labour, birthing and the postnatal periods, the VMO may be reliant upon information gathered and communicated by midwives who are involved in providing care. This exchange of information may occur face-to-face but more commonly occurs via telephone. There are occasions when critical communication must occur, often at potentially highly stressful times. It is therefore vital that the clinical communication and exchange of information that occurs is accurate, up-to-date and relevant to enable informed decisions to be made around a woman's care.

DEVELOPMENT OF ‘SHARED’ AS A HANDOVER FRAMEWORK

The starting point for this project was previous work undertaken by Mater Health Services, Clinical Safety and Quality Unit (CSQU) in 2006 around a set of identified key characteristics for clinical handover. These characteristics were represented by the mnemonic SHARE (Situation, History, Assessment, Risks and Events).

Following a literature review, it became evident that the concept of ‘what comes next’ was not fully captured by SHARE in its original capacity. To address this, and to create a mnemonic meaningful in any clinical handover situation, E-Events was altered to E-Expectations/Escalation. It was considered that this better represented the need for clinicians to communicate and consider ‘what comes next’ during the handover process. As the importance of documentation surrounding handover was also not fully represented by SHARE, D-Documentation was also included to ensure this vital component of the clinical handover process is not overlooked.

The modified handover trigger mnemonic SHARED is therefore presented as a method for enhancing the quality and accuracy of information passed between healthcare professionals. Each letter of the mnemonic represents an essential component of clinical handover as well as highlighting that clinical handover is about the transfer of responsibility and accountability, not simply the transfer of information. SHARED provides an orderly and focused approach to set expectations around clinical handover communication and offers a means for creating a clear mental picture of a patient’s current condition or circumstances.
**Project Scope and Objectives**

**AIMS**
This project sought to address the communication issues associated around the following clinical points of care:
- Referral from the midwife to the VMO when a change in the woman’s condition is diagnosed e.g. haemorrhage, change in maternal condition vital signs, established labour, concerns regarding maternal/fetal condition in labour or imminent birth of a baby, and
- Referral from the VMO to the recovery nurse/midwife post-caesarean section.

The project scope initially sought to also include ‘Referral and admission of a woman from the VMO’s private practice’, however it became evident early in the project timeline that addressing the main issues associated with this was not realistic within the project timeframe. It would need extensive collaboration with VMOs regarding this issue, examples sourced from other hospitals and possibly the introduction of a hand-held patient record.

**PROJECT PROCESS**
- The project commenced with a literature review to assess assumptions and work previously undertaken in relation to clinical handover in maternity services.
- The handover trigger mnemonic (SHARE) proposed as a method for enhancing the quality and accuracy of information passed between midwife and VMO was refined into SHARED.
- A number of tools for assessing the current status of handover and the information provided were defined.
- A standard model of intervention with pre and post intervention data collection and analysis occurred. The target audience for data collection was midwives, VMOs and their respective maternity patients.
- The handover framework and support tools were trialled in the MMPH and MPHR and evaluated.

The key deliverable of this project is a researched, trialled and documented handover trigger mnemonic, which is accompanied by program documentation, a training program and support tools for implementing the program. Any tool developed needed to be able to be successfully used in environments other than MMPH and MPHR so that it supported broad industry implementation.

**‘SHARED’ Tools and Resources**

A number of support tools to complement SHARED were developed following an extensive consultation process with all key stakeholders including midwifery and nursing clinicians. These tools are:
- **SHARED Poster:** developed in conjunction with Mater Marketing Department with the intention that the poster would be hung within clinical work areas as a prompt for staff around the content and use of SHARED in clinical handover situations. The SHARED poster was presented in an A3 size colour poster.

- **SHARED Swing Tag:** provided an easy-to-carry, easy-to-use double-sided prompt of SHARED. On one side the components of SHARED were detailed, on the other a series of prompt questions (identical to the poster) were provided.

- **SHARED End-of-bed Template:** provided a framework to assist midwives and nurses to be fully prepared prior to communicating a critical situation or change in patient condition to a VMO in a phone handover situation.

- **‘I SHARED’ Sticker:** developed to assist the documentation of clinical handover within patient charts. It was intended for use during a clinical handover situation from the midwife or nurse to the VMO. The ‘I SHARED’ sticker was designed to be placed in the patient chart to accompany the midwife/nurses’ documentation of the clinical handover communication that took place. This included the changes that occurred to the patient’s plan of care as a consequence of the clinical handover provided.

- **Carepath Inserts for handover from recovery to ward staff:** The inserts were developed to complement the existing caesarean section and surgical care paths already in use throughout the MMPH and MPHR. The carepath inserts were intended to support the midwife/nurse accepting the transfer of the patient from recovery to capture all the relevant and appropriate information required to ensure safe, effective post-operative care. A neonatal carepath insert was also developed to complement the neonatal care path.

- **SHARED Education Resources:** A ‘Learning Guide’ and an ‘Information Pack’ were designed, developed and printed to complement the education sessions.

### Evaluation Method and Comparative Data Analysis

The project evaluation method involved three specific phases:

1. Pre-implementation data collection
2. Training and implementation of SHARED
3. Post-implementation data collection

Collaboration with the Mater Research Support Centre and Service Improvement Facilitator occurred throughout the life of the project. This collaboration assisted in the development of the assessment tools and subsequent analysis of surveys and other data. The pre and post intervention data included:

- Staff satisfaction surveys created specifically for the project. Three kinds of staff were surveyed: VMOs, midwifery clinicians and medical/surgical nurses;
- Patient satisfaction data from formal quarterly surveys carried out at both hospitals;
- Clinical incident data analysis relating to communication issues. More specifically, these were incidents types of ‘failure to communicate,’ ‘delay/lack of response to patient condition,’ ‘failure to follow order,’
‘documentation missing,’ ‘documentation inappropriate,’ ‘delayed treatment,’ ‘delayed critical result’ and if communication or teamwork failure were noted as contributing factors;

- Chart audits including assessment of documentation regarding: VMO contacted, assessment of patient documented, conversation referenced in medical record, documentation legible, date, time and designation entered, surname printed and signature recorded.

The training and implementation of SHARED involved a number of Information Sessions which were conducted across MMPH and MPH over two months. Brief small group and one-on-one education sessions with staff within pilot testing areas were held. These small group sessions were undertaken to address anticipated difficulties in the release of staff to attend a longer and larger education program. In conjunction, 450 Information Packs were also distributed to midwives, nurses, managers and VMOs at both sites.

All staff in the target areas including VMOs received an Information Pack. To address the instances where some staff were not captured in the brief small group or one-on-one education sessions, additional self-directed learning exercises were included in the Learning Guide and Information Packs. These packs were also provided to Executives of the other Mater hospitals (Adult public and private and Children’s public and private).

The project team again met with the Mater Research Support Centre to assist in the refinement of the assessment tools to measure post-implementation satisfaction of midwives, nurses and VMOs.

**Results and Discussion**

**STAFF SATISFACTION SURVEY**

**Pre-implementation:** A total of 386 pre-implementation surveys were distributed to obstetricians, anaesthetists, physicians, surgeons, midwifery and nursing staff where SHARED was pilot-tested (122 at MPH and 264 at MMPH). The overall pre-implementation survey response rate was approximately 30% with 117 respondents.

**Post-implementation:** 376 surveys were distributed to staff and VMOs where SHARED was pilot tested. The response rate was approximately 25% - a total of 98 respondents across the two hospitals.

Some of the positive feedback included:

- “SHARED is good for handover – comprehensive”
- “Useful for new graduates”
- “A big step towards developing excellent tools”
- “Well trained/enthusiastic staff equals good communication and handover”

Whilst the majority of respondents are aware of the SHARED framework and its support tools, and some respondents have found SHARED helpful, the post-implementation staff satisfaction survey identified some dissatisfaction around the introduction of this framework and its associated processes for clinical handover.
Respondent’s comments indicate there is a general sense of dissatisfaction related to the introduction of any increase in paperwork or time away from direct patient care. A number of respondent comments also suggest there is a general sense that adequate processes were in place prior to the introduction of SHARED and its support tools. These comments are consistent with the outcomes of the pre-implementation staff satisfaction survey results.

The initial survey identified that in general, staff were satisfied with the current state of phone handover. However, with the recovery room handover processes, a number of issues were raised. These included:

- Quality of handover can be dependent on VMO/midwife involved;
- Difficulty communicating with person directly involved in patients care;
- Appropriate information not always provided;
- A systematic approach or tools to improve consistency would be helpful;
- Quality of handover is inconsistent and dependent on person providing handover; and
- At times inadequate information provided.

**PATIENT SATISFACTION DATA**

**Pre-implementation:** The Press Ganey Patient Satisfaction report for the periods March to May 2008 was reviewed and discussed. This measure is not only about whether communication in relation to patient care has been improved but whether the patients perceived it to be improved.

**Post-implementation:** The ‘Priority Index’ combines information about the hospitals’ performance and the relative importance of each question to the respondent’s overall satisfaction. Higher priority is given to the issues that are relatively important to the respondents and that the mean score was low on.

Overall there was no statistically significant improvement or reduction in patient satisfaction at MPHR relating to the following questions:

1. ‘Communication between doctors and nurses regarding your care’;
2. ‘How staff worked together to care for you’.

At MMPH, satisfaction around question 2 (‘How staff worked together to care for you’) improved by 6.9 mean score points and saw this question move from 10th to 19th most important (correlation coefficient slightly decreased from 0.76 to 0.71) on the priority index.

**CLINICAL INCIDENT DATA**

**Pre-implementation:** Incidents relating to communication or handover were captured through the Mater Health Services Incident reporting system (Risk Monitor Pro) for the period March - May 2008.

**Post-implementation:** Incident data was reviewed and relevant incidents collated and analysed by specific incident type and contributing factors for the period August-October 2008.
During the project timeline, a decrease in the total number of reported clinical incidents around communication occurred at the MMPH with a reduction in the incidents that had a specific incident type of: ‘failure to communicate’, ‘delay/lack of response to patient condition’, ‘failure to follow order’, ‘documentation missing’, ‘documentation inappropriate’, ‘delayed treatment’, ‘delayed critical result’, and/or communication failure or teamwork failure as contributing factors. Conversely, the total number of clinical incidents at the MPHR increased over the same time period. Of these incidents, a slight increase in specific incident types relating to communication and/or documentation (as listed above) was noted.

Overall, there was no statistically significant improvement or reduction in incident data at either site after the implementation of SHARED. The literature has noted that there are a number of caveats around the use of incident data as a measure. This is primarily in relation to reporting culture, and increased reporting when focus and awareness on particular issues is highlighted.

**CHART AUDIT**

**Pre-implementation:** The sample size and selection of the 173 medical records for the time period February – May 2008 for audit was undertaken with the guidance of the Mater Research Support Centre. A flowchart defining adequate vs. inadequate documentation to guide the pre implementation chart audit was also developed.

**Post-implementation:** 173 medical records for the time period September to November 2008 were selected for auditing. These records were also audited to ascertain how frequently the SHARED sticker and carepath insert were used.

Analysis of the data from the chart audit shows an increase in ‘adequate overall’ documentation from 13% to 24% following implementation of the SHARED framework. In particular, legibility of documentation, time entered and signature used significantly increased. The SHARED sticker and carepath insert were used in approximately 13% of cases.

**Project Reflections**

The project outcomes and staff ownership of the proposed SHARED framework may have been enhanced by undertaking an observational study at the projects’ commencement had project time constraints allowed. The use of observational study may have provided significant information around the processes and culture of clinical handover to assist with this initiative which was heavily reliant on cultural change. The contribution of an experienced educator may have also assisted in the support tool development, the education and buy in of staff within the pilot testing areas.

This project has been constrained by its 12 month project timeline. This project sought not only to change processes already deep-seated in practice but it also sought to change the culture around clinical handover including responsibility and accountability for patient care. Time is necessary for change to occur. The comments provided by the staff satisfaction survey are testament to this.

The validity of the measurement data must also be raised as a limitation to the project as a consequence of the 12 month timeline. It must be considered that post-
implementation measures undertaken within 3 months of the introduction of significant change to some of the processes around clinical handover may not accurately reflect the real impact of SHARED within the clinical arena. In terms of measuring change this is a very short timeframe. An evaluation of handover using the measures undertaken in this project at a time approximately 6 months or more from the introduction of SHARED may provide more valid results.

Additionally, the time constraints of the project have been amplified by the limited number of project staff. Limited project staff has impacted on the implementation of the SHARED framework and the education of staff within the pilot sites. A number of other constraints have also impacted on the education of staff prior to the implementation of SHARED. These constraints include (i) the short timeframe of the project, (ii) the acute nature of maternity work and (iii) the budget constraints for backfilling of clinical staff to attend education sessions.

**Recommendations**

1. Further implementation of the SHARED Framework across Mater Health Services Ltd. to be guided and supported by senior management.
2. Project Manager to facilitate and support service improvement relating to clinical handover and documentation in conjunction with existing relevant support services (Health Information Services, Mater Education Centre, office of Strategic Planning, Clinical Safety and Quality Unit) and clinician focus groups.
3. Appropriate and robust measures of clinical communication be developed and where possible incorporated into existing auditing and review processes.

**Future Directions**

SHARED and clinical communication continues to be a large focus for Mater Health Services. In addition to the sites used for the project, SHARED is being used or implemented across all PACUs (women’s, adults and children’s) for post-operative handover to the inpatient units. The main emphasis and body of work continues to be Mater Mothers’ Hospital focussing on all critical communication situations for midwifery, nursing and medical staff as detailed below:

- The SHARED framework has been incorporated into a newly designed 24hr observation chart in the Special Care Nursery. The framework provides the prompts for end of shift handover. It is anticipated that this will be incorporated with the introduction of a complete Electronic Health Record in 2010.
- The obstetric registrars have been provided with; SHARED Information Packs; following a 15 minute information session as part of their weekly education sessions.
- Both public and private birth suites have modified the minimum dataset to develop templates and prompts specific to the clinical need and have used this to foster a multidisciplinary approach to clinical handover.
- SHARED for the inpatient antenatal/postnatal units and Women’s Health Unit is continuing to be implemented and used in both public and private units with a new focus on end of shift handover.
References


