

The PACT Project: improving communication at handover

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Clinical handover is a fundamental element of safe patient care. Communication between members of the health care team directly affects patient outcomes and the quality of care. Failure of effective communication has been identified as contributing to medication errors, delays in treatment, perinatal mortality and morbidity, patient falls and wrong-site surgeries. The United States Joint Commission on Accreditation of Healthcare Organizations (JCAHO) reported in 2004 that communication errors were the key contributory factor in over 70% of all sentinel events. In emphasising the seriousness of this problem, the JCAHO noted that 75% of patients affected by these events died.^{1,2}

Effective communication in the health care environment requires knowledge, skill and empathy. It encompasses knowing when to speak, what to say and how to say it, as well as having the confidence and ability to check that the message has been correctly received. Despite being used every day in clinical situations, communication skills need to be learned, practised and refined by all clinicians so that they can communicate in clear, concise and appropriate ways in fast-paced environments that are often noisy and stressful.

Clinical handover encompasses a range of formal and informal communication, including nurses' shift-to-shift handover ("hand-off" in the US); routine information exchange between health care professionals; out-of-hours telephone calls; and transfer of patient information between wards, units or different hospitals.³ All of these are marked by a lack of consistent practices, limited use of protocols and an absence of best-practice guidelines, leading to increased risk and interruptions to the continuum of care.³ The issue is complicated further by the differences in preferred communication style between doctors and nurses, with doctors preferring a brief "bullet point" summary and nurses favouring a more discursive narrative.²

There are additional communication challenges facing rural and regional hospitals in Australia, specifically those in the private sector. These hospitals may have no resident

ABSTRACT

Objective: To describe and evaluate the PACT (Patient assessment, Assertive communication, Continuum of care, Teamwork with trust) Project, aimed at improving communication between hospital staff at handover.

Design, setting and participants: The PACT Project was conducted between April and December 2008 at a medium-sized private hospital in Victoria. Action research was used to implement and monitor the project, with seven nurses acting as a critical reference group. Two communication tools were developed to standardise and facilitate shift-to-shift and nurse-to-doctor communication. Both tools used SBAR (situation, background, assessment, recommendation) principles. All nurses attended workshops on assertive communication strategies and focused clinical assessment of the deteriorating patient. Questionnaires were distributed to nurses and doctors at baseline, and post-implementation questionnaires and qualitative data were collected from nurses immediately after the project.

Main outcome measures: Nurses' opinions of improvement in structure and content of handover; nurses' confidence in their communication skills.

Results: At baseline, 85% of nurses believed communication needed improvement. After implementation, 68% of nurses believed handover had improved and 80% felt more confident when communicating with doctors.

Conclusion: Early evidence supports the use of standardised communication tools for handover, together with specific training in assertive communication and patient assessment. Long-term evaluation of patient outcomes is needed.

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medical staff and rely instead on visiting medical officers (VMOs), usually specialists. As a consequence, communication between nurses and VMOs often occurs by telephone, particularly out of hours and in emergencies. Mobile telephone networks in rural areas can be unreliable and limited in coverage. It is also difficult to recruit and retain skilled, experienced nurses to regional areas. Consequently, a high proportion of the staff are relatively inexperienced and may lack the confidence and, at times, competence to carry out complex patient assessments and report their findings to senior nurses and VMOs.

Effective interpersonal communication is fundamental to safe patient care. It lies at the core of the continuum of care from clinician to clinician, from shift to shift, between departments and between hospitals. This belief provided the impetus for the PACT Project (see below), which was designed to improve patient assessment, assertive communication, continuum of care and teamwork with trust through the development, implementation and evaluation of struc-

tured assessment and communication tools for nurses. In this article we outline the tools developed for the project, and its implementation and first evaluation.

METHODS

Setting

Our project was implemented in a private, for-profit hospital that offers an extensive range of surgical, medical, mental health, diagnostic and support services in one of Australia's most rapidly growing regional centres. It services a catchment area of over 450 000 people.

Philosophy

The key objective was to improve communication and, consequently, patient safety by designing, implementing and evaluating standardised tools for clinical handover within the organisation. This initiative was called the "PACT Project", where PACT represents the essential elements of effective clinical handover:

- P Patient assessment.** Nurses must be able to carry out a comprehensive patient assessment, particularly for patients whose condition is deteriorating.
- A Assertive communication.** Nurses must know how to communicate assessment outcomes in a clear, concise manner and gain an appropriate response.
- C Continuum of care.** This ensures that patient safety is maintained from carer to carer and from shift to shift by the timely, accurate and complete transfer of responsibility for patient care.
- T Teamwork with trust.** All health care providers, regardless of their position and experience, have the right to express their concerns or opinions about a patient in a trusting and respectful team environment.

Implementation

An action research process was used to implement and monitor the PACT Project. Action research is a form of research that empowers participants to change their practice and gives ownership of this change to participants. It is designed to create change in practice through a series of iterative cycles of problem identification, change implementation, reflection and evaluation.⁴ Expressions of interest were sought from nursing staff to form a critical group for the action research. Seven nurses from medical and surgical wards responded and were identified as "PACT Champions". They led the development, implementation and evaluation of the project, met monthly with the project team and acted as conduits between the project team and ward staff. Staff were kept informed throughout the project by monthly PACT newsletters, posters and PACT noticeboards in wards and in the staff dining room.

Project tools

Two communication tools were developed, refined and implemented as part of the PACT Project:

- (i) *Handover prompt card.* This provides a template for standardising shift-to-shift and person-to-person handover. It guides the speaker to give information in a standardised sequence, thereby establishing a routine that also enables receivers to note whether any information is omitted. Measuring 6 × 9 cm, coloured hot pink and laminated, the prompt card is designed to clip onto each nurse's identity badge. A similar card, of A4 size, has been attached to the handover desk at the nurses' station on all wards.
- (ii) *Reporting template.* This is a standard script or template to be followed by nurses

who need to contact VMOs to report deterioration in a patient's condition. It uses a hybrid of the bullet-point preferred communication style of doctors and the descriptive narrative style of nurses.² The format helps nurses to structure their communication in a logical sequence, facilitating rapid comprehension by VMOs. Prompts on the form ensure that a comprehensive assessment has been done and that all pertinent details are at hand before calling the VMO. There is space on the form to record the doctor's orders and directions for follow-up. Once used, the form is filed in the patient's medical record. The forms are provided in pads kept at nurses' stations, and there is a flowchart on the cover to remind nurses of the key points in the sequence of assessment and reporting.

Both the handover prompt card and the reporting template use the SBAR system (see below), a communication format originally devised for military use and subsequently shown to be effective in a range of health care settings.^{2,5-7} The SBAR acronym provides an easy-to-remember structure for giving required information in a logical sequence:

- S Situation.** What is the patient's diagnosis or reason for admission?
- B Background.** What is the clinical background or context?
- A Assessment.** What is the current situation and what do I think is the problem?
- R Recommendation.** What action do I recommend or what do I want you to do?

These tools were refined using action research with input from the PACT Champions and incorporating changes through a number of drafts.

Project workshops

Two workshops were developed by the project team and PACT Champions to ensure that staff had the skills needed to use the communication tools effectively. Each mandatory workshop lasted 1 hour and staff were paid to attend.

(i) *Assertive communication workshop.* This interactive workshop drew on theory and experiences of staff. Examples of good and poor communication techniques were shown, and staff used role-plays to learn assertiveness principles to ensure that their message was heard and acted upon.

(ii) *Patient assessment workshop.* This workshop outlined a focused assessment method for examining deteriorating patients. The acronym CAB SAVI was used to highlight key assessment criteria:

- C Conscious state**
- A Airway**
- B Breathing** (rate, depth and ease of respiration)
- S Sphygmo! Systolic!** (pulse, blood pressure, fluid balance, etc)
- A All round** (sum up the patient and the environment to get the full picture)
- V Vital signs** (do the data confirm what you see?)
- I Intuition and insistence** (get help if required).

This final step reinforced the need for assertive communication and use of the SBAR reporting tool.

Evaluation

In April 2008, baseline data were collected from nurses and VMOs to investigate their opinions of handover methods and to identify problems with current procedures. The nurses' questionnaire comprised 38 Likert-scale statements, three open-ended questions and three demographic questions. The VMOs' survey was much shorter, with two closed-response and three open-ended questions. Nurses' questionnaires were distributed with payslips and VMOs received their questionnaires at the monthly Medical Advisory Committee meeting. Post-implementation data were collected from nurses in December 2008. Questionnaires with seven Likert-scale statements and space for additional comments were placed at nurses' stations. The PACT Champions also took part in a discussion moderated by the external project team members (EC and EP). The discussion was recorded digitally and transcribed, and key themes were identified. All evaluation data were anonymous and confidential.

Ethics approval

Ethics approval was given by the region's Joint Hospitals' Ethics Committee and La Trobe University's Human Research Ethics Committee.

RESULTS

Baseline data

Responses were received from 49 nurses (response rate, 54%) and 16 VMOs (response rate, 73%). The responses from both groups confirmed the key assumption underpinning the project, namely that there was scope for improvement in the way clinical handovers occurred.

Key results from the nurses' survey included the following:

- 32% stated that they always get the information they need at handover;

- 94% identified that different nurses give handover in different ways;
- 82% agreed that we needed a standardised way of giving handover;
- 85% felt that there was room for improvement in the way nurses communicate;
- 86% felt that there was room for improvement in the way that nurses and VMOs communicate; and
- 60% said they would like to deliver handover more effectively.

An additional two nurses' questionnaires were returned blank except for comments about the project being a waste of money.

Key issues identified by VMOs included the following:

- Their need for detailed and specific clinical information;
- The need for nurses to specifically identify the issue/problem;
- The importance of nurses having all information at hand before contacting the doctor;
- Their need to know whether all protocols and standing orders had been carried out.

Post-implementation data

Completed questionnaires were received from 25 nurses (an estimated response rate of 28%). Overall, the results suggested that the PACT Project was initially successful at improving handover:

- 68% of nurses stated that they always get the information they need at handover;
- 68% of nurses believed shift-to-shift handover had improved; and
- 72% agreed that handover was more structured now than at the start of the project.

Nurses also believed that their own communication skills had improved:

- 80% felt more confident when communicating with doctors;
- 72% agreed that they now communicate more effectively; and
- 62% agreed that the SBAR tool helped them to know what they should say when communicating with doctors.

The PACT Champions identified that there had been initial resistance to the project among some experienced nurses, but this had dissipated as the benefits of the project became apparent, especially for junior staff. The following quotes are a sample of their comments:

It was "What a load of crap!" at first, then 2 weeks later, "Gee, we get good handover now".

Really good for grads and students.

Good idea, good reminder of important issues to hand over.

Helps me do a good handover when I'm tired at the end of the shift.

Another theme was that the assessment workshops and SBAR tool led to earlier intervention and clear documentation of contact with VMOs and their responses. Champions also noted that a similar tool would be valuable for preoperative admissions and interhospital transfers, as it would help ensure that all relevant information was given.

The main problem identified by the Champions was the difficulty of ensuring that all staff attended the workshops and continued to use the tools, especially given the large proportion of part-time and casual staff.

DISCUSSION

Our baseline findings confirmed that staff were dissatisfied with the communication of clinical information and that this led to stress and frustration when the required information was not available, or when it was communicated inappropriately or at the wrong time. The PACT Project has shown that the use of simple structured tools can improve communication. This, in turn, should reduce the risk of adverse patient outcomes. The workshops on assessment and assertive communication were an essential component of the project in building nurses' confidence and reinforcing the need for a standardised approach.

Initial resistance to the project on the part of some nurses was not surprising. Nursing workloads and staff turnover remain high, and in these circumstances new projects are often not greeted with enthusiasm. The Champions were integral to the success of the project, as they maintained their passion for it throughout the year and worked hard to ensure that all staff knew about, participated in and benefited from the project.

Sustainability is a key challenge for any innovation. Steps taken to maintain the project include the use of eye-catching hot pink on all PACT materials as a visual reminder to staff, incorporating the program into orientation for new staff, and requiring staff to attend an annual refresher in-service session. In the longer term, benchmarking adverse patient outcomes and staff satisfaction surveys against other hospitals may show the ongoing success of the program and act as reinforcement for it.

This project has been developed and tested in one regional, for-profit hospital and the outcomes cannot be generalised beyond this site. The positive responses to the project suggest that it has the potential for successful implementation elsewhere, but further evaluation is needed. The relatively low response rate to the nurses' baseline questionnaire suggests that staff had not been motivated sufficiently to participate and did not value the

PACT Project at the time. There is no way of knowing whether the non-responders had similar views to those who did reply. The response rate to the post-implementation questionnaire was even lower and this was mainly due to two external events. Firstly, the hospital was redeveloping the operating suite, resulting in minimal elective surgery, with many nurses on leave. Secondly, clerical changes meant it was no longer possible to attach questionnaires to payslips, so they were left at nurses' stations — a less reliable means of distribution.

A longer period of evaluation is needed, including consideration of patient outcomes. We are undertaking an audit of completed SBAR forms and a sentinel events audit of risk-management reports before and after the implementation of the program to look for evidence of a reduced number of incidents related to communication failures, comparing year-to-year data. Until these are complete, the final outcomes of the PACT Project will not be known.

COMPETING INTERESTS

None identified.

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