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Occupancy data: unravelling the mystery

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KEY WORDS

Bed occupancy; nursing workload; nursing resources

ABSTRACT

Objective
The main purpose of this study was to clarify the method used to calculate bed occupancy rates.

Design
Qualitative, using semi-structured face-to-face interviews, telephone interviews and email correspondence with internal and external stakeholders, as well as analysis of key documents.

Setting
A tertiary hospital in Queensland, Australia.

Participants
Nursing and administrative staff from 34 clinical areas, nurse managers and finance officers.

Main outcome measure
Identification of the method used to calculate bed occupancy.

Results
A number of issues potentially impact on the accuracy of occupancy data including timeliness of data entry, knowledge about what should be entered and skill deficits. There was also considerable confusion and misinformation about how occupancy data is calculated, used and reported.

Conclusion
Occupancy data integrity may be compromised by timeliness and accuracy of data entry and by methods used for calculation. Until these problems are resolved, occupancy remains a woolly measure on which to estimate nursing resources.

INTRODUCTION

Nursing resources generally account for the majority of the operational budget in most acute care facilities. This is because appropriate nursing staff levels are integral to providing not only safe patient care but also suitable and sustainable workloads for nurses. Since ground breaking research, published nearly a decade ago (Aiken et al 2002), researchers have continued to demonstrate strong links between nursing staffing levels and skills mix and patient morbidity and mortality (Kane et al 2007; Lankshear et al 2005; Lang et al 2004; Hickam et al 2003). In addition, nurse staffing levels have been directly related to higher retention, less turnover and greater job satisfaction (Rathert and May 2007; Kim et al 2005).

A variety of methodologies worldwide have been described in the literature to justify and rationalise nursing resources. For example, in an attempt to develop a staffing methodology to specifically meet the needs of facilities in Western Australia, Twigg and Duffield (2009) reviewed several nursing workload measurement systems from the past three decades, including professional judgment, commercially available acuity packages, staff-patient ratios, patient dependency systems and nursing hours per patient day. In earlier work, Hurst et al (2003) described other methodologies, ranging from simple to complex, which are used to calculate appropriate staffing levels including nurses per occupied bed, acuity-quality method, time-tasked activity method and regression analysis method.

What is obvious in the descriptions of these models is that the type of data required and the variables taken into account when calculating staffing levels varies between methodologies and any one system may not be totally suitable for any one organisation or clinical unit. This supports recommendations for the use of a combination of two or more methods to ensure appropriate nursing resources (Hurst 2003) and assertions that senior nurse managers do not have adequate workload measurement tools to justify what they believe is a suitable workload (Twigg and Duffield 2009). Despite the availability of several methodologies to estimate appropriate staffing levels, a dilemma for nursing management remains. The limited availability of validated, responsive measurement tools that adequately address nursing workloads and also provide the transparency required to justify the nursing budget remains (Callaway and Major 1988; Twigg and Duffield 2009).

BACKGROUND

In Queensland, Australia, the Business Planning Framework (BPF), endorsed by Queensland Health in 2001, is the tool utilised by Nurse Managers to calculate nursing resources. The BPF calculates nursing hours per patient day for each inpatient ward or unit and utilises occupied bed days as a demand indicator. In other words, occupancy is a rate, based on occupied bed days (Queensland Health 2008). Consequently, calculating appropriate nursing resources depends on the accuracy of the occupancy data, which is entered into the BPF system.

The current study started in 2009 in response to what was perceived by senior nurses as inaccuracies in occupied bed days and occupancy data. There were discrepancies between what was being reported in the hospital's Patient Information System; in the data published at national health meetings, where health executive representatives compare data for national benchmarking purposes; and what was observed or perceived 'at the coalface' on a day to day basis. With continuing pressure to justify the nursing budget, the aim of the study was to identify which data is used to calculate occupancy and factors that may impede accuracy.

METHODS

Design

A pragmatic study design, using qualitative data collection methods was used. Data was collected through semi-structured, face-to-face interviews, telephone interviews and email correspondence with internal and external stakeholders, as well as analysis of key documents.

Procedure

The study was undertaken between March 2009 and May 2010. The project team consisted of four senior nurse leaders, each from one of four major clinical areas of the organisation; surgery, cancer care, maternity and newborn services and medicine. An interview schedule (Figure 1) was used to guide data collection. A snowball sampling strategy was used to identify and interview appropriate staff throughout the study period. Key internal and external stakeholders were contacted initially by telephone or email and further information obtained, if required, through follow-up contact. Interviews were not tape recorded, careful field notes were taken during contact with all participants.

Figure1: Interview schedule used to guide data collection

Who enters the patient's admission, discharge and internal transfer data into the hospital's Patient Information System?
What is your understanding of the area or person responsible for ensuring this data is entered?
Are there any official guidelines or rules regarding the area or person responsible for this data entry?
In regard to internal transfers, which procedures or investigations is the patient's data entered into the hospital's Patient Information System?
In regard to internal transfer to operating theatre, is the patient's data entered into the hospital's Patient Information System?
Please describe what actually happens in regard to data entry into the hospital's Patient Information System during business hours.
Please describe what actually happens in regard to data entry into the hospital's Patient Information System after hours.
Please describe what actually happens in regard to data entry into the hospital's Patient Information System on weekends.
Is there a process in place to capture data to be entered retrospectively into the hospital's Patient Information System – for example: a book with the details of the patient's admission, discharge or transfer?
In your opinion is the hospital's Patient Information System data entered in a timely manner?

Occupancy data accuracy

Informal interviews were conducted with ward receptionists and all levels of nursing staff from 34 clinical areas. Each staff member was contacted by telephone, advised of the study and provided with an overview of the information to be discussed at interview. A request for a one hour interview, at a date and time suitable to each individual, was scheduled in the clinical area where the staff member worked. Staff were asked about data entry into the hospital's Patient Information System related to patient admissions, discharges and transfers. This was to clarify which data was entered, accuracy and timeliness of data entry, how data entry was managed out of hours and whether those entering data understood the implications of correct data entry. Data was also obtained from senior ward reception staff regarding the training provided to ward receptionists about how patient data should be entered. In addition, staff from the computer training unit were asked about the education provided to nurses in relation to the Patient Information System.

Occupancy data calculation

Because occupancy is related to bed numbers, interviews were scheduled with those who are responsible for calculating bed numbers. Queensland's Health Information Services reports organisational health information data, physical bed numbers are also reported monthly to the State Government. So, from a state wide perspective, two senior State Government data collections staff and a senior head of department from the State Government statistical unit were asked how bed numbers were estimated. In addition, to clarify how the related issue of occupancy is calculated, initial discussions were held with divisional Business Managers and subsequently with a senior Financial Manager to determine where they sourced their information about occupied bed days and occupancy data for their monthly financial reports.

ANALYSIS

Analysis and data collection were intertwined. In the team meetings, field notes were compared and findings discussed. This enabled specific issues to be revisited in one or more services, to ensure a degree of consistency in data was achieved. Content validity was supported through the emergence of substantively similar findings between the project officers. Using their observations, the authors were able to describe the general understandings of key informants and identify key areas of concern related to accuracy of data entry, which emerged time after time, in each service.

RESULTS

A total of 79 interviews were conducted including 10 senior administrators, 33 administrative officers and 36 nursing staff. Data were categorised and is reported using two key areas, occupancy data accuracy and occupancy data calculation.

Occupancy data accuracy

Occupancy-related data entry is guided by a local Patient Information System Handbook, which is provided to new employees during their orientation program. The handbook offers instructions about how to enter data into the system but does not provide business rules about when data should be entered or by whom. It suggests that internal transfers on the system be limited to those patients going to the operating theatre, to the cardiac investigation unit, the gastroenterology unit, and to those being transferred to other wards. This is to ensure that entries into the hospital's Patient Information System are consistent and of high quality, to support the Casemix funding model. Registered nurses are provided with limited training related to data entry for admissions, discharges and internal transfers.

Despite the presence of a 'handbook', respondents described a number of issues that potentially impact on the accuracy of occupancy data. These were consistent in all clinical areas surveyed. Administrative officers enter most patient data related to admissions, discharges and transfers; however, they are faced with multiple factors that impact on data accuracy. After hours, registered nurses are responsible for either entering patient movement data or recording movements accurately on paper, so that administrative staff may adjust the data base retrospectively. Several issues were identified that have implications for both administrative staff and registered nurses in maintaining data integrity; these are shown in figure 2.

Figure 2: Receptionist and nursing factors affecting accuracy of data entry

Issues for ward receptionists

- Less than 24 hour coverage by ward receptionists, most commonly 0700–2000 weekdays, 0800–1200 Saturdays, no cover Sundays.
- Information about patient movements is not always communicated to the ward receptionists and therefore not able to be recorded.
- Generally information to enable retrospective adjustments to data entry is not available.
- Timeliness and completeness of data entry is influenced by the number and urgency of other requests to the ward receptionists.
- Data entry is given a lower priority than performing activities that more directly relate to the provision of patient care.
- Lack of clear, documented instructions regarding the business rules for patient movements.
- Data entry is sometimes made more complex by incomplete or inaccurate patient data.

Issues for nursing staff

- Skills and knowledge for accurate data entry are limited as the system is used infrequently.
- Expired or forgotten passwords are a frequent occurrence and difficult to reset.
- Skills and knowledge in relation to retrospective data entry or correction are mostly non-existent.
- Patient care activities take precedence over maintenance of the patient data entry.
- Workload often prevents data entry.

Occupancy data calculation

Discussions with those responsible for providing a monthly report to the State Government about the number of inpatient hospital beds and bed alternatives advised this information is collated from the Patient Flow Unit's Bed Manager Information System. Hospital bed numbers data from the hospital's primary Patient Information System is not utilised for this report.

On the other hand, business managers advised the data source for occupied bed days, and therefore the occupancy rate, is generated from the hospital's Patient Information System. This was confirmed by the Senior Finance Manager who stated three data sets (patient admissions, discharges and transfers) are used to calculate fractional bed days, or the actual hours a bed is occupied. Data is downloaded three times each week so any retrospective data is captured and forms part of occupied bed day calculations. A formula is used by financial services, which is entered manually into the financial information system that generates the occupancy data. A key component of the formula is the total number of beds for each clinical area. To change the formula every month is not practical so the bed number is not changed routinely. This means, even though it is every day practice within the organisation for each clinical area to 'close' beds in the hospital's Patient Information System when they are not required, this bed closure information is not included in the data that calculates the fractional bed days.

DISCUSSION

There is widespread use of occupancy data and occupancy rates in calculations for estimating appropriate nursing workloads and justifying nursing resources. The ideal occupancy rate generally accepted by health administrators is 85%. This figure is based on a queuing model, developed by Erlang in 1909, which suggests systems are most efficient at 85% capacity (Bain et al 2010). It is argued, when the occupancy rate exceeds 85%, the risk of patients being turned away from emergency departments is likely to increase (Keagan 2010; DeLia 2006; Bagust et al 1999). This leads to a phenomenon known as hospital access block described as a situation brought about when beds are unavailable (Bain et al 2010; Green 2002). Although the 85% occupancy rate is accepted as ideal and perceived to reduce the risk of hospital access block, the argument

is contentious in professional literature (Bain et al 2010; Garling 2008; Green 2002; Pettinger 1997). Nonetheless, 85% occupancy rate is referred to in position statements documents and reports related to healthcare funding models (CHA 2009; AMA 2006) and patient safety and quality care (Kane et al 2007) at state and national levels. The occupancy rate is also the basis of staffing workload measurement tools, such as the BPF. Although use of occupancy data in calculations of nursing staff levels is widespread, the consideration and communication of clear and replicable processes for identifying the required data to make the calculations is crucial.

Another factor relating to occupancy rates that requires consideration when estimating staffing levels is the size of the hospital. Smaller hospitals have less economies of scale and may require a lower occupancy rate than the accepted 85% (Green 2002; Jones 2001; Green and Nguyen 2001). When considering occupancy rates, the final report for the Special Commission of Inquiry for Acute Care Services in NSW public hospitals concluded that further research into levels of risk and safety associated with varying levels of bed occupancy was required before ideal occupancy levels could be determined (Garling 2008). The Garling report also suggested an occupancy rate of 92% to 95% for individual hospitals should not be exceeded until further research provides scientific proof of the appropriate bed occupancy level (Garling 2008). It is further suggested that other demand indicators instead of occupancy be used for capacity planning by health administrators (Green 2002; Green and Nguyen 2001). Despite the literature attempting to describe the most appropriate occupancy rate for hospitals, any occupancy rate depends on the method used to calculate it. However, as this investigation has shown, there is considerable confusion and misinformation regarding occupancy data including how it is calculated, who undertakes the calculations and how the occupancy data is used and reported.

When accurate data is used to calculate occupancy rates, it is invaluable for decision making regarding bed availability and hence nursing resources (Green 2002; Cohen and Martorella 2000). One vital component in the calculation of occupancy rates is the number of available beds that are included (DeLia 2006; Green 2002; Jones 2001). This study has identified, despite senior management ensuring beds are 'closed' in the Patient Information System for individual wards on a shift by shift basis, that this data is not utilised in occupancy calculations. Occupancy data is calculated using only the total number of beds in a clinical area regardless of the beds being funded or staffed. Bed numbers are rarely changed in the Patient Information System, with the exception of a permanent increase or decrease in beds. Despite this, the importance of accurately recording bed closures in the Patient Information System is emphasised to all staff because of a belief that this data impacts on occupancy rates and funding but this is not the case.

Although complex modelling techniques are utilised for long term planning of hospital beds, to manage hospital resources on a day to day basis it is necessary to have accurate data which is collected on a frequent basis (DeLia 2006; Mackay 2001). In the study hospital, this has resulted in some areas developing their own system. Local occupancy data is recorded three times each day to calculate accurate nursing resource requirements. If this was a hospital wide practice, it could provide the raw data for more accurate occupancy data for use in BPF calculations and nursing services workforce reports.

The study has also highlighted a number of issues affecting accuracy of the occupied bed days data. Although there are some business rules around data entry into the Patient Information System by ward receptionists and nursing staff, the actual information entered was dependent on individuals entering the data. For ward receptionists, the primary issues related to timeliness and accuracy of information about patient admissions, discharges and transfers. This was affected by the fact that there is no 24 hour cover for data entry and communication about patient movements after hours was poorly documented. Even though data

can be retrospectively entered into the Patient Information System this did not always occur. Although other studies reporting similar findings were not found, retrospective data entry may also be a factor for accurate occupancy calculations elsewhere. Administrative staff expressed relief that there was a review of the data entry requirements and processes for the Patient Information System. They commented that the overall, 'rules' surrounding the transfer of patients temporarily leaving the unit remained unclear, despite efforts to ensure high quality data input. Decisions around entering information in the Patient Information System for transfers to procedures and investigations are often made by the administrative staff, based on historical or personal practices, time demands, and whether or not patient movement are communicated to them. Some clinical areas utilise a transfer and discharge book after hours, and the Patient Information System is updated by administrative staff retrospectively. This may be up to 48 hours after the patient was discharged or transferred and leads to a significant increase in workload for these clerical staff.

For nurses, the issues were different. They were infrequent users of the system so re-setting passwords was time consuming and remembering processes required for accurate data entry was difficult. Overriding these issues though, was their focus on care delivery, which always took precedence over data entry. Willmer (2007) found similar problems for nurses, which included not having the required information technology skills and others who did not have time for data entry (Willmer 2007).

CONCLUSION

Currently the calculation of nursing resources is directly related to the integrity of occupancy data, which in turn is directly related to the data entered into the hospital's Patient Information System. There is confusion about how occupancy is calculated, the definition of 'a transfer' and what the State and Federal reporting requirements are in relation to occupancy. Until these issues are addressed, calculating appropriate nursing resources will remain difficult, despite the availability of several methodologies to estimate appropriate staffing levels. Although, a myriad of contextual, patient and staff variables impact on any process used to determine appropriate nursing resources, correctly estimating appropriate nurse staffing levels depends on the accuracy and consistency of data used in workload measurement calculations.

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Measuring 'magnetism' in Australian nursing environments

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KEY WORDS

nursing attraction and retention, magnet hospitals, Nursing Work Index–Revised: Australian (NWI-R:A).

ABSTRACT

Objective
The aim of this research project was to use the NWI-R:A tool to measure the organisational features that impact on 'magnetism' in Australian health facilities.

Design
The cross sectional survey questionnaire incorporated the Nursing Work Index-Revised: Australian (NWI-R:A) developed by Joyce and Crookes (2007).

Subjects
Participants were registered nursing staff (n=262) including ward nurses and managers within a group of four Australian hospitals.

Main outcome measures
To measure the organisational features that impact on 'magnetism' in Australian health facilities using the NWI-R:A tool specifically developed for the Australian context.

Results
The results have identified a number of consistent patterns in nursing staff views in relation to the magnet features present in their current practice environment. The findings have affirmed results reported by Joyce and Crookes (2007) that respondents in the Australian surveys consider positively, the quality of care and the level of support from management in their workplace. The calibre of leadership and support was also considered favourably as were the relationships between health professionals. Conversely the respondents indicated their workplace provided insufficient nurse participation in decision making and inadequate staffing and resources for practice.

Conclusions
The establishment of a tool for the reliable measurement of magnetism in Australian facilities allows for the transferability of the magnet concept to Australia. A better understanding of nursing staff perceptions on the presence of magnet features in their workplace can be used to inform the development of magnetism in Australian health facilities. This research develops the concept of `magnetism' to health organisations in Australia extending on existing research. By using the magnet framework to underpin the planning and development of organisational governance administrators and managers will be well positioned to improve staff retention.

INTRODUCTION

At present, despite an increase in actual health workforce numbers, several trends are impacting on the availability and participation of health care workers in the workforce: ageing of the workforce; lower average working hours; and issues of job satisfaction resulting in a considerable number of health professionals not practising in their profession (Productivity Commission 2005; Preston 2002). The health workforce demand is also impacted on by the increasing life expectancy of the Australian population and the increasing incidence of chronic illnesses (Duckett 2005).

Impacts of these issues are already evident and projections for the future are pessimistic. The use of the magnet hospital concept as a strategy to address these deteriorating trends is an option that warrants further exploration. The magnet hospital concept could be used as a conceptual basis for developing health care environments that are responsive to the increased workforce trends of poor attraction and retention of staff.

There is considerable evidence spanning two decades to show the success of magnet hospitals, in attracting and retaining nursing staff (Kramer 1990; Kramer and Hafner 1989; Kramer and Schmalenberg 1988a; 1988b; McClure et al 1983). These hospitals have also been shown to have consistently produced better outcomes for staff and patients as demonstrated in higher job satisfaction and quality patient care, than non-magnet hospitals (Aiken et al 2001; 1997; 1994).

The lessons learnt from the global research into the magnet hospital concept are significant to Australia, as a framework for addressing the immediate issues related to the recruitment and retention of professional nursing staff. A magnet hospital is defined as a facility that is 'good place to practice nursing; low turnover and vacancy rates; in a competitive locality' (McClure et al 1983) The features identified as forming the foundation of a magnetism are: participatory management; effective leadership; autonomy of practice; existence of quality care; collegial relationships; career promotion and education opportunities (Upenieks 2003; Jones-Schenk 2001; Aiken and Haven 1999; Kramer and Hafner 1989).

In Australia, like other western countries, there has been an identified shortage of practicing nurses. The increased burden on health care services can be attributed to a number of variables that include workforce issues. It is also impacted on by the increasing life expectancy of the Australian population and declining disability free expectancy rates that have resulted from the increasing incidence of chronic illnesses (Duckett 2005). To date a dearth of research has been undertaken in Australia that measures nursing practice environments and the few studies undertaken have used the US tool. It was considered by the researcher that a broader application of magnet principles in Australia would be achieved through the development of an Australian tool that could inform health care services about how to improve the magnetism of their organisation.

MEASURING MAGNETISM IN AUSTRALIAN FACILITIES

Aim

The aim of this research project was to utilise a previously validated 'magnet' tool specifically developed for use in NSW, Australia (Joyce and Crookes 2007) to measure magnetism within a group of Australian hospitals. This research will provide a better understanding of nursing staff perceptions on the presence of magnet features in their workplace that can be used to inform the development of magnetism in Australian health facilities.

Methods

The first stage of the research involved the development and piloting of an Australian tool to measure magnetism (NWI-R:A) and was reported previously by Joyce and Crookes (2007). In the second stage the 'Australianised' tool, the NWI–R:A was used to measure the magnet features in a sample of hospitals in the Illawarra region of Australia. The tool was contained within an anonymous questionnaire of registered nursing staff at four facilities, along with questions on biographical information, job satisfaction and their future intentions about working in that facility.

The statistical analysis of the Australian tool replicated the work by Lake (2002) using five subscales each related to the key features of magnet hospitals. Ethics approval was achieved from the Human Research Ethics Committee of the University of Wollongong, HE03/382.

Participants

The research project surveyed registered nursing staff including ward nurses and managers in the four hospitals. The questionnaires were circulated to nursing staff by internal correspondence systems. As this population group works in a shift work structure it was expected that there would be limited opportunities for direct contact between the researcher and the population. Responses were mailed back to the researchers via a (provided) stamped, pre-addressed envelope to maintain privacy and confidentiality for the respondents.

Measure

The magnetism of the participating Australian facilities was measured using the NWI-R:A a tool consisting of 49 items. Respondents were asked to indicate the level of magnetism on a 4 point Likert scale from 1 (strongly agree) to 4 (strongly disagree). The items were reverse coded so that the overall NWI-R:A score and the scores for each of the tool subscales shows greater levels of perceived magnetism when the score is higher. This method reflects the data management of previous researcher's allowing for easier comparison of results between the versions of the tool.

The five subscales, used in the analysis of the NWI-R:A were:

1. Nursing Foundations for Quality of Care (QC);
2. Nurse Manager Ability, Leadership and Support of Nurses (MLS);
3. Nurse Participation in Hospital Affairs (NP);
4. Staffing and Resource Adequacy (SR); and
5. Collegial Nurse-Physician Relations (NPR).

The statistical analysis of the Australian tool replicated the work of Lake (2002) using the same subscales in the analysis. This study was also informed by the pilot project undertaken by Joyce and Crookes (2007) that established the NWI-R:A produced reliability scores that were consistent with those achieved for the 5 subscales in previous studies using the US tool. The Cronbach's alpha model of internal consistency based on the average inter-item correlation was used to establish the internal consistency of the Australian tool in the pilot project and this study.

Results

The response rates at each site and the overall response rate are indicated in table 1.

Table 1: Survey response rates

	Site 1	Site 2	Site 3	Site 4	Total
N	143	70	7	549	749
n	60	25	7	170	262
Response rate	41.9%	34.2%	100%	30.7%	34.97%

Table 1 shows that the overall response rate of the total sample combining all four sites was 262 respondents equating to 34.97% of the population. This response rate includes a percentage range from 30.7% at site 4 to 100% at site 3. It was expected by the researcher that the number of respondents would be influenced by the work practices of the registered nurse population. As this population group works in a shift work structure it was expected that the limited opportunities for direct contact with the population would influence the response rate. It is also the case that management in this Area Health Service had recently undertaken a staff satisfaction survey, which may have affected the response rate.

Demographic data

The average age of the respondents across all four sites was 40 years, the majority were female and less than 10% were male. Generally they were married, born in Australia and spoke English as their native language. In the survey study over 50% of the samples were full-time employees, 42% were employed part-time and only 3% were casual staff. Over 50% of survey respondents indicated they were in a supervisory role. The population for this research project displayed demographic characteristics that are close to the profile of the Australian registered nurse population as reported by the Australian Institute of Health and Welfare (2006) suggesting that is reflective of the target population.

NWI-R:A internal consistency

This data set for the survey showed an overall average internal consistency score of 0.76 indicating the NWI-R:A has statistically acceptable levels of internal consistency (Dunn 1989).

NWI-R:A frequency scores

The results for the NWI-R:A presented in table 2 show the total mean score for the tool and the mean score for each of the five subscales at the four sites. NB: higher the score, the more magnetic the workplace. The frequency score is also presented as a percentage score. This indicates the percentage number of participants that responded positively to the existence of magnet features in their workplace. This presentation of the data was included because it was considered by the researcher to be a useful addition for the reader of the patterns of participants' responses about the presence of magnet features at the facilities.

Overall scores show that three of the four sites (2, 3 and 4) had a total mean score in the positive range (< 2.5) while site 1 was the only site to have recorded a total NWI-R:A score in the negative range. The results for the five subscales show a particular pattern of response across the four sites. All sites viewed three of the NWI-R:A subscales positively. While three sites (1, 2 and 4) viewed two subscales negatively. Specifically sites (1, 2, 3 and 4) reported positive mean scores for the magnet features relating to nursing foundations for quality care, manager ability, leadership and support and collegial nurse-physician relations. While three sties (1, 2 and 4) scored two of the magnet subscales, nurse participation in hospital affairs and staffing and resource adequacy.

The percentages of positive scores for the tool and the five subscales at the four sites shows the number of respondents who viewed the magnet features in their workplace environment positively. Table 2 shows that respondents in the survey were clearly positive in their responses that related to the three NWI-R:A subscales of: nursing foundations for quality of care (60-83%); nursing manager ability, leader and support of nurses (70-92%); and collegial nurse-physician relations (60-88%). However the range of response for the subscales nurse participation in hospital affairs (45-71%) and staffing and resource adequacy (32-57%) subscales were rated less positively by the respondents.

Table 2: NWI-R:A total and subscale scores

NWI-R:A & subscales	Site 1 (n=60)	Site 2 (n=25)	Site 3 (n=7)	Site 4 (n=170)
NWI-R:A total				
Mean	2.48	2.60	2.77	2.65
SD	.42	.38	.42	.48
% positive	50%	64%	70%	65.9%
1. Nursing foundations for quality of care (QC)				
Mean	2.61	2.69	2.83	2.89
SD	.48	.47	.47	.50
% positive	60%	72%	85.7%	82.9%
2. Nurse manager ability, leadership and support of nurses (MLS)				
Mean	2.63	2.89	2.72	2.71
SD	.58	.50	.66	.75
% positive	70%	92%	71.4%	68.2%
3. Nursing participation in hospital affairs (NP)				
Mean	2.28	2.46	2.67	2.43
SD	.54	.58	.31	.56
% positive	45%	52%	71.4%	47.6%
4. Staffing and resource adequacy (SR)				
Mean	2.12	2.11	2.61	2.35
SD	.68	.63	.74	.74
% positive	33.3%	32%	57.1%	51.2%
5. Collegial relations between nurses and physicians (NPR)				
Mean	2.70	3.03	3.05	2.79
SD	.63	.45	.42	.58
% positive	60%	88%	85.7%	70.6%

Nursing foundations for quality of care (QC)

The mean scores for the Nursing Foundations for Quality of Care (QC) subscale were rated in the positive range at each site. On average, more than 60% of the respondents scored this subscale favourably with the percentage of positive scores ranging between 60% and 86%. At three sites (2, 3 and 4) over 70% of respondents gave a positive response to this subscale. This suggests that the majority of respondents considered that the relationships established with patients in their areas are productive and contribute to what they consider to be a high standard of care.

Nurse manager ability, leadership and support of nurses (MLS)

Data on the Nurse manage ability, leadership and support for nurses (MLS) subscale showed three sites (1, 3 and 4) had close to 70% of the respondents scoring a positive response. Site 2 had an even higher number with 92% of respondents scoring this subscale positively. The mean scores of this subscale at the four sites thus recorded average scores that were in the positive range. The favourable results from the NWI-R:A in this magnet area, provides evidence that the respondents tendered to consider their nursing leaders to be competent and possess a relevant professional profile within nursing. The responses also suggest the respondents considered their managers to be highly visible and were readily available to them to provide adequate support and direction.

Nurse participation in hospital affairs (NP)

The mean scores in the subscale nurse participation in hospital affairs (NP) show that all the sites except site 3 recorded mean scores close to the midpoint in the range. From the results on the percentage of respondents scoring the NP subscale positively it can be seen that three of the sites (1, 2 and 4) had similar scores at

around 50%. In contrast site 3 recorded a 20% higher positive response (at 71.4%) indicating the nursing staff there viewed their level of representation in hospital committees and involvement with decision making about hospital affairs was somewhat higher than at the other 3 sites.

Staffing and resource adequacy (SR)

The subscale for staffing and resource adequacy considers the availability of resources in the organisation. This subscale recorded the lowest mean scores and amongst the lowest percentage of positive scores for the five subscales across all four sites. While sites 3 and 4 had over 20% more respondents indicating positive scores than for sites 1 and 2, this subscale still rated the lowest for site 3 and second lowest for site 4 indicating staff resources to do the job were generally viewed negatively by the survey respondents across all four sites.

Collegial nurse-physician relations (NPR)

The subscale collegial nurse-physician relation (NPR) was viewed positively at all sites with the scores ranging from 60% (site 1) to 86% (site 2). Professional relationships between medical and nursing staff at all four sites would therefore appear to be productive and to be viewed positively by respondents across all four sites.

DISCUSSION

The researchers consider the number of respondents at each of the sites to be a reasonable number taking into account the limitations in accessing the population. In the context of staff participation it is pertinent to reiterate this survey was distributed soon after a workplace survey initiated by the nursing management of the facilities. This may have had an impact on the response rate as staff may have been reluctant to complete two surveys within close proximity of each other. Furthermore, as with any such study sample the researchers are careful about generalising the findings. The primary aim of this project was to measure magnet features in Australian facilities using a newly developed tool. Perhaps the most important point to make is that participants rate their work environment, not workplaces generally. Over time then, the main issue will be the proportion of respondents from a given workplace and aggregated data will be almost meaningless, at least from the perspective of being able to act in a specific workplace, based on generic data collected.

Magnetism in Australian facilities

The data demonstrates the nursing staff of the surveyed facilities were clearly positive in their responses related to the three NWI-R:A subscales of: nursing foundations for quality of care; nurse manager ability, leadership and support for nurses; and collegial nurse-physician relations. While the 'nurse participation in hospital affairs' and 'staffing and resource adequacy' subscales were rated less positively by the respondents. Staffing and resource adequacy stands out as the most negatively viewed feature by the study participants indicating this is an area that requires attention by these facilities.

The findings from this project that the quality of care provided by participants was considered to be of a high standard despite the absence of decision making opportunities for them, along with concern about limited staff and resources. These findings reflect the results of equivalent international and domestic research studies. In a large UK study of over 10,000 nurses Rafferty et al (2001), reported that despite recognised shortcomings in their workplace environments, nurses generally viewed the quality of care provided to be of a high standard. In a recent Australian research study by Duffield et al (2007) a significant number of Australian nurses also indicated they provided a high quality of care to patients within the resource poor environments.

The majority of research findings that focussed on the impact of leadership styles report that more supportive managers are more likely to have staff express higher levels of job satisfaction and remain in their positions (Sourdif 2004; Janney et al. 2001; Chan and Morrison 2000; Boyle et al 1999). Only one study by Tourangeau

and Cranley 2006 found differing results to this. In a large descriptive survey of over 13,000 Canadian nurses using the NWI-R they found the key determinants of nurses' intention to remain employed in current hospitals of employment are age, gender and job satisfaction.

In a recent comparative study by Stordeur and D'Hoore (2007) of over 1000 nurses from 12 Belgian hospitals the researchers found that support and quality of nursing leadership reported by staff were similar in both the identified attractive and conventional hospitals. The interesting aspect of this study however was the relationships that existed with nursing management were found to be more positive in the identified attractive hospitals.

Research conducted by Laschinger et al (2003) from a nursing population in Ontario tested the impact of workplace empowerment on job satisfaction finding that where nursing leaders develop a workplace environment that is empowering it can positively influence job satisfaction. Hoffart and Woods (1996) described the work environment most conducive to retaining nurses is an environment empowers nurses through opportunities for their control over the work environment. Estabrooks et al (2002) later confirmed that a positive nursing work environment enabling nurses' autonomy and involvement in professional practice decision making is important.

A significant issue in the retention of staff across a number of countries including Australia is they believe they have insufficient resources available to them in the practice environment and this impacts on patient health care outcomes. The findings from this study and the research by Duffield et al (2007) have further substantiated the view that Australian nurses working in the state of New South Wales believe they have insufficient resources available to them in the work environment and as a result are less satisfied with their workplace.

Comparison of Australian magnetism with international findings

A consideration of the overall scores from this project for the NWI-R:A show the mean scores for the Australian facilities measured in this survey were generally positive with the mean score ranging between 2.48-2.77. Comparing these mean scores to the international data from studies using the US tool and its derivatives needs to be considered within the identified limitations that occur with the variation in analysis of the tools.

Early work by Aiken et al (2000) that reported magnet hospitals with a mean score of 2.99 and non-magnet hospitals with scores of 2.83 represents a calculation for magnet features that uses only three subscales: autonomy, control over practice and nurse-physician relationships. The work undertaken by Lake (2002) in a review of two data sets of research into magnet hospitals reported the mean score for the magnet hospitals (n=1610) as 2.95 while for non-magnet hospital it was 2.5. While these results were calculated from the US tool they provide for a more meaningful comparison to the findings of this project because the same five subscales are used in the analysis of the data. The designated magnet hospitals in the Lake (2002) study report mean scores that are higher than the four hospitals in the Australian study while the non-magnet hospitals report similar scores to the lowest score for this project.

Another relevant study to consider is the work by Choi et al (2004) in a national survey of over 2,000 critical care nurses reported the magnet hospitals with a mean score of 3.19 and 2.91 for non-magnet hospitals. As identified with the body of work undertaken by Aiken et al (2000) this study also used a tool derived from the US tool but with a variation in the structure of the subscales. The results indicate higher mean scores for both the magnet and non-magnet hospitals. While this is an interesting result it needs to be noted that the project was undertaken in a specialised care area in the Canadian health system, something the authors identified as possibly influencing the difference in the findings from those of the US research.

The more recently published work by Lake and Friese (2006) and Friese et al (2008) provides the most relevant data for comparison with the findings from this project. This body of work has identified categories for hospitals using the aggregate mean scores from the PES-NWI. These categories are unfavourable nurse practice environments (scores > 2.5 for 0-1 subscale), mixed (scores > 2.5 for 2-3 subscales) and favourable (scores > 2.5 for 4-5 subscales). Friese et al (2008) in a review of 164 hospitals in the US reported 12 hospitals as unfavourable, 118 mixed and 34 favourable. The average mean score reported for each of the five subscales by Friese et al (2008) were NP - 2.33, QC - 2.84, MLS - 2.38, SR - 2.20, NPR - 2.75. While this project identified means for the five subscales as being NP - 2.46, QC - 2.75, MLS - 2.38, SR – 2.29, NPR – 2.89. The two subscales of QC and NPR are positive in both study findings while the subscales for SR and NP are both in the negative score range. The major difference is with the results for the MLS subscale in the US study the mean score is in the negative range while in this study it is in the positive range.

RECOMMENDATIONS AND IMPLICATIONS

The development of an Australian tool the NWI-R:A allows for the measurement of magnet features in Australian facilities. The results of this study indicate the respondent's views of the presence of magnet organisational features in their workplace. Further use of the Australian tool in measuring magnet organisational features across a broad range of Australian facilities will provide information about the magnetism of hospitals in Australia. Recently Lake (2007) has undertaken a systematic review of instruments used in the measurement of nursing practice environments. This work assessed relevant tools on three criteria: the theoretical relevance of the tool; the usability and the number of citations for the tool. As a result of this rigorous review the structure and analysis of the tool used in this project has been supported as the most appropriate contemporary measure for the nurse practice environment.

It has been established in this project that the nursing staff perceived the foundations for quality of care they provided to be of a high standard despite the absence of decision making opportunities and adequate staff resources. The implication of this finding being that a key determinant of nurse's perceived satisfaction is that they have a work environment that they believe supports them in delivering quality care. Alternately it could be suggested that the participating nurses in this study and others report a high quality of care because their professional conscious prevents them from considering otherwise. This leads to a recommendation for health services to monitor and acknowledge quality care to inform the staff of the care being provided at the facility. It also warrants a recommendation for health services to provide the specific resources identified as necessary by nursing staff for the provision of quality care. This requires further exploration of what resources are required for the provision of quality care.

It was expected that the results of this study would reflect the majority of research findings that have supported the view that nurses in magnet hospital rate the leadership styles of their managers as supportive. (Sourdif 2004; Janney et al. 2001; Chan and Morrison 2000; Boyle et al 1999). The implication of the findings from this project supported by the majority of literature is that the development of leadership and leaders in health care services is an important aspect for improving the magnetism of facilities.

It has been consistently found in the literature and affirmed by this study that nurse–physician relationships are perceived favourably by nurses (O'Brien-Pallas et al 1997; Laschinger et al 2001; Duffield et al 2007). The implications being that while the quality of nurse–physician relationships is currently good organisations wanting to improve magnetism should facilitate the maintenance of these relationships. A recommendation arsing from this data is for the ongoing development of multidisciplinary health relationships as a strategy for improving the practice environment.

The negative perceptions of Australian nurses about their involvement in the decision making process identified in this project and supported by the Duffield et al 2007 study shows that nurses continue to express the need for more control over their work environment. These findings highlight the necessity for organisations to empower nursing staff within the workplace. A strategy recommended for improving the magnetism of the organisation.

A number of studies including this project have identified the negative effects inadequate staffing resources have on nursing staff perceptions of the professional practice environment (Joyce and Crookes 2007; Clarke et al 2002; Sibbald 1999; Nolan et al. 1998a). Day et al (2007) in an Australian study presented similar findings to the results of this project regarding a perceived inadequacy of resources by nursing staff for achieving organisational goals. The implications arising from the strong evidence that nurses believe they are inadequately resourced are that health services must identify the areas that are seen to be lacking in the current professional practice environment. Further research is recommended by a number of researchers in an attempt to more clearly identify the resources required to improve the work environment.

The work, undertaken in the development and measurement of the NWI–R:A tool, one that is relevant to the Australian context, allows for research into magnet organisations to be progressed. The measurement of magnetism in a variety of health facilities has produced information about the presence of magnet features in the Australian context. The future includes ongoing measurement with the development of strategies, so as to allow the provision of constructive advice to organisations on how to improve magnetism within their organisations. Given the impact of magnetism on the practice environment, the significance of this work for Australian nursing seems obvious.

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Interaction between primary health care professionals and people who are overweight or obese: A critical review

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KEY WORDS

Obesity, men, primary health care professionals, interaction

ABSTRACT

Objective
To identify through a review of the literature how primary health care professionals interact with people who are overweight or obese.

Setting
Primary health care practices.

Primary Argument
Interactions between primary health care professionals and overweight or obese patients are influenced by complex factors that impact on effective management of overweight and obesity.

Conclusions
The practice skills and knowledge of primary health care professionals, lack of resources, and inconsistent overweight and obesity management guidelines impact on the interaction with patients. The emotive and personal nature of overweight and obesity, and the attitudes and beliefs of primary health care professionals also impact on the interaction. Education of primary health care professionals must address attitudes and beliefs about overweight and obesity. Education in the diagnosis of overweight and obesity and the acquisition of effective weight loss counselling skills is essential to improving interactions and the overall management of overweight and obesity.

INTRODUCTION

The epidemic nature of overweight and obesity has been extensively reported and acknowledged. The rising prevalence of overweight and obesity and the consequent increased incidence of associated chronic disease (World Health Organization (WHO) 2006) are creating significant demands on health care resources. Primary Health Care Professionals (PHCP) play a key role in recognition, diagnosis and management of overweight and obesity. However, the success of primary health care strategies to address the epidemic of overweight and obesity is limited.

Some of this limited success can be attributed to the interaction between PHCP and people who are overweight or obese (Scott et al 2004). The nature and quality of the interaction between patients and PHCP is a key determinant of the successful management of overweight and obesity (Kelly-Irving et al 2009). Consequently, a critical review was undertaken to examine the interaction between PHCP and overweight or obese patients, and the subsequent effect on management strategies.

Literature search strategy

Key terms were identified and defined prior to commencing the literature search. Overweight is defined as a Body Mass Index (BMI) between 25 kg/m^2 and 30 kg/m^2, whereas obesity is defined as a BMI greater 30 kg/m^2 (WHO 2005, 2006). Likewise, 'primary health care professionals' are defined as first contact health care professionals (specifically doctors and nurses) who work individually or collaboratively to deliver primary care (Australian Primary Health Care Research Institute 2009). 'Interaction' is defined as a communication where there is a two-way sending and receiving of verbal and non-verbal information.

Medline, PubMed, Scopus, CINAHL, PsychINFO and Social Work abstracts were searched using the terms outlined in table 1. Where applicable MesH terms were used in preference to these key terms (refer table 1). The literature search was limited to research papers and systematic reviews published in English between January 1990 and August 2011. A review of 181 citations yielded from the combined search identified five papers that specifically examined the interaction between PHCP and overweight or obese patients. An additional eleven papers examined communication and counselling skills of PHCP, however did not specifically address the interaction and were therefore excluded from the critical review. A hand search of the reference lists of these papers did not reveal additional studies or papers.

Table 1: Search terms and associated MeSH terms

Search terms	MeSH terms	Number of citations
Obesity, obese, overweight, morbidly obese, morbid obesity	No additional terms applicable	1,436,657
Primary health care professional, nurse, doctor, medical practitioner.	Physician	3,071,270
Patient, person, client	Patient	26,892,877
Interaction, communication, patient education	Physician-patient relations	11,840,352
Overweight + obesity + physician + patient + physician-patient interaction	No additional terms applicable	181

Findings of literature review

Five studies examined the interactions between primary health care professionals and overweight or obese patients. A summary of the findings of these studies is presented in table 2.

Table 2: summary of reviewed studies

Author(s)	Aim(s)	Participants	Key methods	Key findings
Michie 2007	Understand the practices of primary health care professionals when communicating with overweight and obese patients	• 40 General Practitioners (GP) • 47 Practice Nurses (PN)	Postal Questionnaire of GP and PN in two inner London Primary Care Trusts	• 52% of GP and 28% PN were concerned about raising the issue of overweight • The predominant concerns were fear of distressing, angering or alienating the patient, or damaging the therapeutic relationship with the patient • 9% of GP and PN discussed weight loss solutions and health promotion with overweight patients • GP and PN were more likely to raise the issue of weight with overweight patients if there was a diagnosed medical problem • PN were more likely to discuss weight and health than GP • GP and PN identified the need for more training, skills, knowledge and resources to address and manage the issue of overweight
Bertakis and Azari 2005	Investigate the influence of patient obesity on primary care physician practice style	• 509 patients (205 were obese) • 105 Primary Health Care physicians	• Videotapes of doctor-patient interactions analysed using Davis Observation Code (DOC) • BMI calculated • Patient interviewed pre-visit and questionnaires conducted for self-reported health status, sociodemographic information, depression evaluation, and general satisfaction with previous health care • Post-visit patient satisfaction interview	• Mean BMI 29.78 kg/m^2, 205 obese patients • Obese patients more likely to be female (p = 0.0101) • Physicians failed to diagnose 63% of obesity • Physicians two times more likely to diagnose obesity in female patients than in male patients • No significant difference in consultation time between obese and non-obese patients • Physicians spent more time on technical tasks and less time on communication with obese patients • Obese patients received physical activity education more often than nutrition education • Obese patient post-visit satisfaction significantly lower than non-obese patients
Scott et al 2004	Compare strategies used by physicians when communicating with patients who are obese with the aim of identifying strategies that are more effective (Sub-study)	Doctors and patients in 18 family practices	• Descriptive field notes of outpatient visits collected • Field notes analysed independently by two family physicians, a medical anthropologist, a nurse, a conversation analyst and two epidemiologists • Observation of 633 doctor-patient interactions some of the patients were obese • Chart review recording height, weight, visit type and preventative care activities	68% of adults and 35% of children overweight or obese Excess weight discussed in 17% of encounters with overweight or obese patients (11% with adults) Participation by the physician and the patient was necessary to make weight loss part of the agenda for the encounter Weight loss counselling went well if: the patient raised the issue the agenda to discuss weight loss had been set at a previous visit Weight loss counselling only initiated by the Physician when weight diagnosed as a problem Need for weight loss counselling frequently not diagnosed by the Physician Weight loss counselling done most frequently in health care maintenance visits with patients with BMI > 35 kg/m^2

Table 2: summary of reviewed studies, *continued...*

Author(s)	Aim(s)	Participants	Key methods	Key findings
Huang et al 2004	• Determine physicians' barriers to weight loss counselling • Determine patients' recall of physicians' weight loss recommendations • Determine the influence of physicians' counselling on patients' understanding, motivation, and behaviour regarding weight loss	• 24 Faculty and internal medicine residents • 210 patients, BMI ≥ 25 kg/m^2	• Four focus groups of Faculty and internal medicine residents • Chart review • Exit interviews with patients regarding the relationship between weight and health, the effect of a 10% weight loss, the physician's weight loss recommendations, the patient's motivation for weight loss, previous and current weight loss activities	Physicians • Diagnosis of obesity in 14.4% of obese patients • Pessimism about the patient's desire and ability to lose weight • Pessimism about effectiveness of weight loss counselling • Insufficient time due to high patient volume • Lack of comprehensive obesity management resources • Underuse of dieticians or lack of experience working with dieticians • Lack of skills in providing brief weight loss counselling • Insufficient knowledge of best clinical practices Obese Patients • Mean BMI 39 kg/m^2 • 61% believed their weight affected their health • 89% reported need to lose weight (88% wanted to) • 79% recalled physician counselling to lose weight • 28% recalled being given specific recommendations - 17% recalled dietary modification counselling - 5% recalled physical activity counselling - 5% recalled dietary and physical activity counselling • BMI ≥ 35 kg/m^2 and type 2 diabetes more likely to be given specific weight loss advice • More motivated to lose weight if they received weight loss counselling • 63% referred to dietician • Patients with type 2 diabetes, dyslipidaemia or both were more likely to be referred to a dietician • Patients who received weight loss counselling were more likely to have a better understanding of obesity-associated health problems and the benefits of weight loss
Himmel et al 1994	Explore whether family physicians recognise the problem of overweight in patients and if the problem was addressed in communication between patient and physician	• Physician in a sole physician family practice in Germany • Patients attending the practice over a three month period	• BMI determined for all patients • Questionnaire sent to all patients with BMI ≥ 25 kg/m^2 • Semi-structured interview with physician about need for treatment, attitudes, knowledge and treatment methods for overweight and obesity	• 49% patients recalled physician discussing their excess weight with them • Information/communication regarding overweight between physician and patient ranked as 'good' in 29% of cases and 'average' in 53% • Physician rated 36% of overweight patients as overweight • Physician rated 74% of obese patients as obese • Physician considered is weight loss advice futile because of the personal characteristics of the patients • Physician regarded type 2 diabetes, hypertension and/or 8 to 10 kg overweight as indicative of need to treat overweight patients

DISCUSSION

Several factors impact on the interaction of people who are overweight or obese with PHCP. These include the diagnosis of overweight and obesity, and the initiation and nature of weight loss counselling. Likewise, the attitudes and beliefs, and education of PHCP about overweight and obesity also impact on the interaction.

Three papers identified that PHCP underdiagnose overweight and obesity in their patients (Bertakis and Azari 2005; Scott et al 2004; Huang et al 2004; Himmel et al 1994). Huang et al (2004) found that obesity was diagnosed in 14.4% of obese patients, whilst Himmel et al (1994) identified that one-third of overweight patients were not diagnosed. In contrast, Bertakis and Azari (2005), and Himmel et al (1994) found improved rates of obesity diagnosis; 37% and 74% of obese patients respectively. Interestingly, female patients who were obese were two times more likely to be diagnosed as such compared to male patients (Bertakis and Azari 2005).

This underdiagnosis of overweight and obesity is consistent with the findings of other authors (Brown et al 2006; Epstein and Ogden, 2005). Bramlage et al (2004) reported 70% to 80% of overweight patients and 30% to 40% of patients with grade 3 obesity were undiagnosed by PHCP. Consequently, overweight and obesity may not be adequately addressed by PHCP in a significant number of patients.

The relatively low rate of overweight and obesity diagnosis corresponds with low rates of weight loss counselling. Michie (2007), Scott et al (2004) and Huang et al (2004) found that weight loss counselling did not occur in more than 70% of encounters with overweight and obese patients. However, weight loss counselling was more likely to occur if the patient presented with obesity related comorbidity (Tham and Young 2008; Michie 2007; Huang et al 2004; Himmel et al 1994) or had a BMI greater than 35 kg/m^2 (Scott et al 2004). Yet the benefits of weight loss counselling are clear (Pollak et al 2007; Loureiro and Nayga 2006; Rodondi et al 2006; Galuska et al 1999). Overweight and obese patients receiving weight loss counselling were more motivated and more likely to lose weight, and demonstrated a better understanding of obesity comorbidity and the benefits of weight loss (Huang et al 2004).

The underdiagnosis of overweight and obesity and the underuse of weight loss counselling may relate to perceived difficulties about communication and the lack of confidence in patient compliance and physician counselling skills (Greiner et al 2008; Alexander et al 2007; Ruelaz et al 2007). Michie (2007) found that physicians were concerned that a diagnosis of overweight or obesity may distress or anger their patients, which may in turn affect the therapeutic relationship.

PHCP are often uncertain about raising the issue of overweight or obesity, and rather focus on technical tasks such as blood pressure measurement (Bertakis and Azari, 2005). Linking the diagnosis of overweight and obesity with an associated comorbidity can be an effective means of raising the issue (Alexander et al 2007). However, comorbidities associated with overweight and obesity typically develop over a number of years. Early recognition and management of overweight and obesity results in a decreased risk of comorbidity, improved course of disease of existing comorbidities and reduced health care costs (Bramlage et al 2009).

Therefore, PHCP need to be proactive in addressing the issue of overweight and obesity in their patients. Whilst, weight loss counselling is most effective if the patient raises the issue (Scott et al 2004), overweight and obese patients may be reluctant to do so (Alexander et al 2007). Consequently, developing a collaborative therapeutic relationship that leads overweight and obese patients to an understanding of the potential comorbidities and the need to take action is essential. This involves determining the patients' readiness to accept this information, their willingness to make change, seeking their permission to discuss the issue of overweight and obesity, and encouraging the patient to set the agenda (Scott et al 2004).

Addressing the attitudes and beliefs of PHCP is equally important to the development of effective interactions. Michie (2007), Huang et al (2004) and Himmel et al (1994) found that physicians were pessimistic about the capacity and motivation of their overweight and obese patients to lose weight, and consequently the effectiveness of their weight loss counselling. Given the prevalence of overweight and obesity and the limited long-term success of overweight and obesity management strategies, such attitudes and beliefs are not without basis. Nevertheless, these attitudes and beliefs negatively impact on the interaction and are obvious barriers to effective management of overweight and obesity.

Similarly, the education of PHCP with respect to overweight and obesity diagnosis and management, may also impact on the interaction. Michie (2007) and Huang et al (2004) identified the need for additional resources and education to address and manage overweight and obesity, especially with respect to weight loss counselling and implementation of best practice standards. The lack of quality overweight and obesity clinical guidelines and doubt in their effectiveness of weight loss counselling, were identified by physicians as significant barriers to effective management of overweight and obesity (Huang et al 2004).

There are a number of limitations to the five studies. The duration and quality of the doctor-patient relationship has not been specifically explored in any of these studies. Moreover, only Bertakis and Azari (2005) and Scott et al (2004) directly observed the interaction. The remaining three studies made inferences about the interaction based on questionnaires, focus groups and chart reviews. It seems obvious that if the research focus is on understanding the interaction between two parties (e.g. PHCP and patients) then it is best to either view the interaction directly or at least gain the perspective of both parties.

The impact of the quality of communication techniques of PHCP was also not adequately examined. Bertakis and Azari (2005) and Himmel et al (1994) found relatively high rates of patient recall of weight loss counselling. However there is no evidence about the quality and effectiveness of the communication techniques. Equally, none of the studies sought to determine if participants had received any form of weight loss counselling before the observed clinical encounter. Similarly, the qualitative experience of the patient has not been researched, and should be considered in future studies. Knowledge of previous incidences of weight loss counselling and the patients' past response may well assist in determining appropriate approaches to counselling in current and future interactions.

CONCLUSION

Several factors inhibit effective management of overweight and obesity by PHCP, and impact on their interaction with patients. Key factors include PHCP practice skills and knowledge, lack of resources, and inconsistent overweight and obesity management guidelines. The emotive and personal nature of overweight and obesity, and the attitudes and beliefs of PHCP also impact on the interaction.

PHCP are the gatekeepers for the recognition, diagnosis and subsequent management of overweight and obesity (Sharma et al 2004). Consequently, education of PHCP needs to address their attitudes and beliefs about overweight and obesity. Equally, education in the diagnosis of overweight and obesity and the acquisition of effective weight loss counselling skills is also important in improving PHCP-patient interactions.

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OVoiD delirium and improved outcomes in acute care. Introducing a model of care

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KEY WORDS

Acute Hospital, Delirium, Improved Patient Outcomes, Management Strategies, Multifaceted, Prevention

ABSTRACT

Objective
In this article three aspects of prevention/management will be available at a glance to nursing staff – the key personnel who manage this difficult area in aged care.

Setting
The acute hospital environment.

Primary argument
Delirium is a syndrome characterised by a sudden onset, over hours or days, impaired attention that fluctuates, together with altered consciousness and impaired cognition (ASGM 2005). Delirium is well reported to be already present for older people (10% - 24%) (Inouye 1998) on admission to hospital and develops in many more (up to 61%) (Gustafson; Berggren; Brannstrom et al 1998). Research has reported a multifaceted approach to reduce and manage the incidence of delirium in acute care, but do acute care staff have access to a brief overview of the information they can refer to, to prevent a crisis? Upon review, many of the non-pharmacological strategies to manage delirium are similar to those which prevent delirium.

Conclusion
Delirium is under recognised and often poorly managed. This paper suggests preventing and managing delirium is achievable through a consistent, systematic, multifaceted team approach.

INTRODUCTION

Delirium is a syndrome characterised by a sudden onset, over hours or days, impaired attention that fluctuates, together with altered consciousness and impaired cognition. Delirium may be the only sign of serious medical illness in an older person and is a medical emergency (ASGM 2005). Delirium has previously been known as "acute confusional state, acute brain syndrome and toxic psychosis" (Weber et al 2004, pp 115). Delirium, in the acute patient, presents a challenge to the bedside care providers as the patients are often not able to be orientated to their environment, can become non-compliant and at times confrontational.

Delirium is well reported to be already present for older people (10% - 24%) (Inouye 1998), on admission to hospital and develops in many more (up to 61%) (Gustafson; Berggren; Brannstrom et al 1998). Delirium is often misdiagnosed and usually results from an underlying acute health condition. Delirium risk factors include age, co-morbidities, dementia or previous delirium, polypharmacy, dehydration and/or visual/ hearing impairment. Precipitating events are directly proportional to cognitive reserves, as a risk factor for delirium. If brain function is already lowered by history of memory problems, chemical imbalances, poor nutrition and/ or damage to nerve tissue the risk of delirium is increased.

Recent review of staff knowledge indicated that nursing staff were not aware that delirium is preventable (82% no=115) (Hoolahan 2009) and therefore did not implement preventive strategies. Staff believing delirium may be preventable, were not aware of preventative strategies. Research has reported a multifaceted approach to reduce and manage the incidence of delirium in acute care, but prompt access to this information is difficult.

DISCUSSION

Preventative strategies have been reported to reduce the incidence of delirium resulting in improved patient outcomes (Cole 1999; Cole et al 1996; Inouye et al 1999; Milisen et al 2005). Many of the non-pharmacological strategies to prevent delirium are similar to those implemented to manage delirium (Melbourne Department of Human Services 2006), yet it is reported that prevention of delirium is more effective than early detection and/or treatment (Weber et al 2004). A "multicomponent approach... and provision of individual patient recommendations targeting multiple components of care" (Melbourne. Department of Human Services 2006, pp45). In this article, aspects of prevention and management will be available at a glance (see figure 1).

1. **Obtain relevant information**

   The first approach to assessment of any older person, with or without cognitive impairment is obtaining information gathered from both carers and medical review. This assessment and review directly impacts on the strategies implemented. Maintaining known routines is vital to assist with orientation and 'normalising' the hospital experience as much as possible. Action and management plans should be patient specific whilst incorporating direct carer involvement, enabling patient and carers to be partners in the care.

   Adequate oral intake to maintain nutritional and hydration status, maintaining mobility, regulating sleep/ wake cycles, enhancing independence in activities of daily living (ADLs), recognising and managing pain are all assisted by knowing individual routines and incorporating these into the daily management plan and person centred care practices.

   Recognising delirium risk factors on a hospital admission such as, pre-existing cognitive impairment, severe illness, > 65years of age, visual impairment, depression and +/- sodium levels can assist in delirium prevention. These risks are escalated by the use of an indwelling catheter, use of physical restraint and

the addition of > three medications whist in hospital (Melbourne Department of Human Services 2006). Obtaining relevant information helps staff to recognise risk factors and ensure they are addressed as soon as possible post admission. Assessing for delirium using a reliable, validated tool, such as the Confusion Assessment Method (CAM), (Inouye et al 1990) improves early detection and appropriate assessment and management.

2. **Implement a variety of strategies**

   There is never one management strategy that will be effective for every patient, therefore implement strategies focused around re-orientation, risk reduction and promoting the resumption of 'known' routines will reduce the impact and duration of delirium.

   Re-orientation can take the form of time and place orientation but can also include orientation by the presence of familiar people, familiar items - such as photos, a rug or books from home - and familiar routines – such as a daily walk, the opportunity to listen to music as they prepare for bed or time to attend to their daily bodily requirements.

   Risk reduction, involves identifying risk factors such as unfamiliar environment, decreased mobility, falls, infection, aggression, skin integrity, nutrition levels, dehydration, constipation, pain levels and sleep deprivation all need to be considered as potential risk factors if not addressed in the patient care plan and preventive actions implemented.

3. **Dialogue**

   It is important never to negate the importance of talking to the patient, the carer and the staff. By talking to the patient and the carer, 'normal' can be established, 'changes' can be determined and a plan established. Staff can also offer valuable information and insights into their patients and this information is often lost, if not related or well reported.

   A routine component of every shift should include time spent to:

   Value the person –

   Orientate the patient to where they are and why they are there. This may need to be repeated frequently, in a calm manner.

   Validate what the patient has to say – never argue or contradict their thoughts. Validating an experience as 'real', without confirming it exists in the real world (Ski and O'Connell 2006). For example, 'you said you need to visit your mother, tell me about your mother'.

   Distract their conversation and actions into a manageable area. 'Did your mother like you to help her? Why don't we go and fold the towels to help out'.

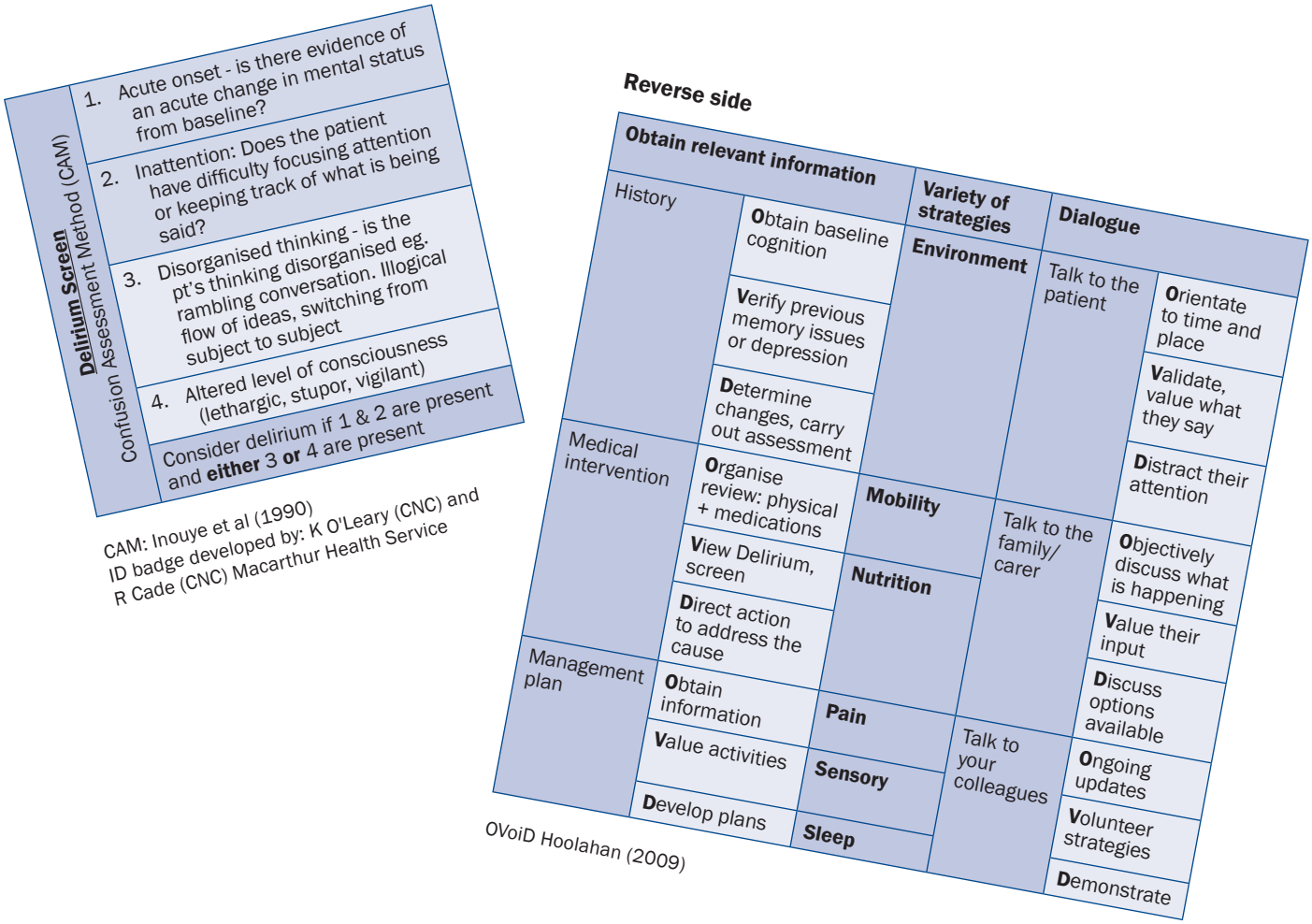
   Value the carer/family for the input they can offer and the person with whom all medical information and decisions should be discussed. The carer/family can provide insight into what is going on for the patient, and potentially the cause of delirium. By including the carer/family in discussions, previous patterns can be established, such as, functional ability, likes and dislikes and habits.

   Share information with colleagues, strategies implemented and success stories. Through this, acute care staff will be empowered to continue to trial range of innovative strategies.

Figure 1:

Obtain relevant information		Variety of strategies	Dialogue	
History	**O**btain baseline cognition	**Environment** • locate close to desk, avoid room/ward changes • locate staff in room with desk and light • night lights • remove clutter • family visiting plan, reduce number at one time, increase length of patient support, visitor diary (ie when/who will return) • large clock, orientating signs, newspaper	**Talk to the patient**	**Orientate** to time and place, day/date current affairs/familiar people
	Verify occurrence of previous memory issues or depression			**Validate** what the patient says, value what they say
	Determine changes, discuss with patient/carer, what has been happening. Assess bowels/urine/hydration/skin			**Distract** their attention to a positive outcome, using information obtained from family/carer
Medical intervention	**O**rganise review • physical • alcohol/medication	**Mobility (minimise bed rest)** Reduce falls, lower bed, appropriate shoes, consider non-slip socks at night, walking aid accessible, hip protectors - as appropriate • early mobilisation - physiotherapy • walk 1/24 short distances and chair based strengthening exercises • remove equipment that restrict mobility	**Talk to the family/carer**	**O**bjectively discuss what is happening and what family /carer can expect (ie delirium brochure)
	View results of diagnostic tests carried out, including a delirium screen			**V**alue their input in planning, decision making and assistance • flexibility in visiting hours
	Direct action to address the risk • repeat cognitive assessment if change occurs • no IDC or early removal • address oxygen levels • consider SC fluids • no restraints	**Nutrition, ensure hydration** • limit choices, know and offer preferences • open food packages • set up utensils • finger food • minimise caffeine • position to assist digestion • swallowing difficulties - refer to speech pathologist		**D**iscuss options available and how they can help
Management plan	**O**btain • personal profile information, interests, likes/dislikes • familiar items from home • information on patterns (hygiene/sleep/wake)	**Pain** Ensure pain is managed early Avoid benzodiazepines	**Talk to your colleagues**	**O**ngoing updates on the information you have gained (document, document, document)
		Sensory Use sensory aids (hearing aids, glasses, dentures - keep them clean) • reduce noise/over stimulation		**V**olunteer strategies you have tried
	Value activities that the patient likes to do	**Sleep** Avoid hypnotics Assist normal sleep/wake cycles: • massage • toilet program • limit caffeine (non after 4pm) • pain management • noise reduction • stagger activities		**D**emonstrate what has worked (do what I do)
	Develop a plan • continence/bowel management • pain management • mobilisation			

Figure 2: ID card – prompt



CONCLUSION

Increasing awareness and knowledge of prevention and management strategies for patients at risk of delirium or diagnosed with delirium will reduce the degree of strain on the nursing staff and improve outcomes for the acute care patient. A multifaceted approach to reduce and manage the incidence of delirium in acute care incorporates an environmental and psychosocial approach to the clinical care. Prompt access to this information will facilitate improved patient outcomes and reduced length of stay.

In Sydney South West Area Health Service, these strategies are being implemented and evaluated. Patient outcomes; such as, the review of nursing burden, carer satisfaction, falls, use of night time sedatives, length of stay and readmission rates are being measured to provide evidence about the patient's hospitalisation.

RECOMMENDATIONS

Implement strategies to OVoiD delirium to provide systematic pro-active care, focused on prevention, for older patients in the acute care environment.

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Enhancing facilitation skills through a practice development Masterclass: the other side of the rainbow

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KEY WORDS

Facilitation, practice development, co-operative inquiry, (individual, team and organisational) transformation

ABSTRACT

Objective
Professional impact and practice based outcomes of an inaugural Practice Development Facilitation Masterclass, for facilitators of Practice Development activity in Victoria, Australia, is presented. The Masterclass educational program format is designed to incorporate experiential learning strategies with individual transformation as an explicit goal. The program structure is underpinned by critical social science and delivered through a co-operative inquiry approach. Evidence of personal and professional transformation, identified as a consequence of participation in the Masterclass is reviewed, as we aim to share the 'other side of the rainbow', as a symbol of participant's transformation during the Practice Development Facilitation Masterclass experience.

Primary argument
Skilled facilitation is a key requirement in modern health care, as practitioners are expected to innovate within a changing and complex workplace environment.

Conclusion
Using a Practice Development facilitation Masterclass program format as outlined, provides a structured experiential educational program that could enhance and enable many professional teams to understand and facilitate effective health care practice. Engaging in a co-operative inquiry process provides a supportive yet challenging learning culture for sustaining individual and team's professional development.

INTRODUCTION

Global health care is continually being challenged to implement change strategies that can embed new technologies, deliver outstanding, high quality, safe and effective care delivery from a workforce that remains fit for purpose. Such high level demand can lead to a direct confrontation for health care practitioners, who are continuously faced with a myriad of competing demands on their knowledge, skill and practice expertise. Bevan (2010) asks what skills are required in order to sustain the healthcare workforce's energy for such a rapid pace of change, enabling them to deal with work place complexity, whilst at the same time promoting and maintaining effective service delivery alongside economic sustainability? According to Pierce, et al (2000) it is the more progressive organisations that look to a participatory approach for long term solutions for sustainable organisational advancement. The aim of this paper is to consider how transformational intent, delivered through a Practice Development facilitation Masterclass programme', was able to provide a platform for improved facilitation of effective workforce development. Insight into participants' expressed personal and professional advancement are revealed through an evaluation of the Masterclass experience. Transformation is seen to be achieved through an increased ability for facilitators to work with confidence to sustain and lead practice based health care innovations.

Transforming individuals and groups has been a fascination within many fields of study (e.g. psychology, sociology, and politics), each producing theories to further understand and apply their field of learning to particular practice improvements. Yet information, whether theoretical frameworks or implementation models and change management tools, all require expert navigation to enable busy clinicians to effectively apply learning into practice improvements rather than continue to follow established practices encountered within daily workplace (Kitson et al 1998). Providing effective education for skilled facilitators, (i.e. those expert navigators who can enable practitioners to implement health care modernisation) is in itself a commitment that some would argue, represents an unnecessary additional level of training expense. Yet, we propose it is these skilled facilitators that are potentially the key to achieving organisational goals and sustainable widespread cultural reform.

FACILITATION OF PRACTICE IMPROVEMENT

Practice Development (PD), as a term relating to health care practice improvements, is utilised within the published literature and in practice settings in a variety of ways. PD's aim is to facilitate the achievement of person-centred and effective care delivery, achieved through collaborative and inclusive processes that enable all participants to develop their full potential. PD takes into consideration attributes and enabling factors of the workplace environment, alongside consideration of the very practical issues around how daily clinical service delivery can be enhanced, in order to provide safe, effective health care. In reality some PD projects are often time-limited, involve and depend upon a number of committed clinical staff who led the work within a small localised section of an organisation. However, more recent PD project outcomes have shown how to maximise the impact of working with PD approaches at strategic organisational level, developing transformational workplace cultures in and across whole organisations (Manley 2004; Manley et al 2009; Manley et al 2011; Crisp and Wilson 2011). In order to achieve a level of sustainability requires highly skilled and effective facilitators (Gerrish 2004; RCN 2006). The development of a Practice Development Facilitation Masterclass was therefore devised in order to support and prepare PD project facilitators, and their colleagues, with the skills required to deliver on the transformational improvement strategic agenda.

A working definition of transformational PD

The following definition of PD has been developed by the International Practice Development Collaborative, specifically to capture contemporary understanding of PD, gathered through identifying theoretical influences, collective practical experiences of working with PD and strengthening methodological advancement. For example, contemporary understanding of PD includes consideration and explicit reference to the transformative processes that characterises PD's emancipatory intent (cf. Titchen and Manley 2006) including the notion of critical creativity (McCormack and Titchen 2006). A working definition for PD was used to provide context for the PD Facilitation Master class (PDFM).

"Practice development is a continuous process of developing person-centred cultures. It is enabled by facilitators who authentically engage with individuals and teams to blend personal qualities and creative imagination with practice skills and practice wisdom. The learning that occurs brings about transformations of individual and team practices. This is sustained by embedding both processes and outcomes in corporate strategy." (Manley et al 2008:9)

This paper has been developed from experiences and evaluation data emergent from an inaugural PDFM held in Victoria and South Australia (Hardy & Bolster, 2008). Prior participants of PD Masterclasses of this kind (held in England, Northern Ireland and New South Wales, Australia), all confirm the learning experience of the PDFM program as transformational. This paper aims to discover how this transformation takes place, through consideration of the PDFM objectives and the impact of associated theoretical influences used to inform transformational PD methods.

PDFM: program objectives

The PDFM curricula was originally devised by Professor Brendan McCormack and aims to further enhance and support facilitation skills of health care practitioners, particularly those working within identified PD roles. PD roles first started to appear within health care organisations in England during the late 1980's. These roles then spread through Europe, reaching New South Wales, Australia in the 1990's and continues to have precedence in international organisations that identify a need to transform organisational culture and influence practitioners' ongoing clinical skill development in order to improve patient experience and health care outcomes (cf. Essence of Care Programme, NSW).

The PDFM outlined here was the first in Victoria, prepared and delivered in response to increasing demand for skilled PD facilitators able to lead and support individual practitioners and their clinical teams through organisational wide strategic modernisation programs, being implemented through the use of PD processes and methods. The implementation of the PDFM was therefore in response to several health care organisations' interest in the development of effective workplace cultures; for example, in areas of clinical practice development, targeted workforce education programs, evidence based practice and increased practitioner led research participation.

The ultimate aim of any PDFM is to expand participants' knowledge and skills within a cooperative, critical creative and reflexive educational space that can further enable and maximise individual and group learning. Using a cooperative inquiry approach (outlined in more detail below), the program was tailored to meet the identified learning needs of all participants to promote the development of advanced facilitation skills, enhanced theoretical understanding and professional practice knowledge. PDFM course objectives were finalised with participants in a preliminary example of modelling how to work within a cooperative inquiry approach. Course objectives are displayed in box 1 below.

Box 1: PDFM 2008 objectives

1. Engage in activities that extend the scope of facilitation practice;
2. Critically engage with facilitation theory and approaches, and distinguish significant differences between models of facilitation and their translation into activities such as clinical supervision, action learning, work based learning, and PD; and
3. Engage in evaluation of individual effectiveness as a facilitator.

PDFM methodology: embedded learning through cooperative inquiry

Cooperative inquiry is a model of action research conceptualised in the work of Heron (1996). Located within critical social sciences, cooperative inquiry shares core values with PD, which embraces holistic, critical, creative, developmental, emancipatory and adult learning approaches that promote and enable a transformation of thought, language patterns and practices that occur at an individual level, moving out into wider social influences (Friere 1972; Fay 1982; McCormack and Titchen 2006). Cooperative inquiry values individual intellect and practical capacity to participate in the co-generation of knowledge and skill enhancement, through insights gained by working alongside others, drawing on multiple sources of knowledge, including (within the PDFM context) embodied knowledge of health care practitioners (Reason and Bradbury 2001; Greenwood and Levin 2007). Consistent with emancipation, cooperative inquiry uses methods that openly engage individuals in critical reflection on their learning through practical experience, use of interactive and creative modes of learning, all used in equal measure with emphasis on 'whole person' learning (Dewing 2008).

Using a cooperative inquiry approach to program delivery offered the PDFM a framework for identifying and working closely with participants' shared values and beliefs about how clinical practice is delivered. Participants were invited to engage emotionally, cognitively and practically in determining the direction, structure, evaluation and decision-making processes of the PDFM program content. Heron and Reason (2001) state cooperative inquiry is about working with people, to help them make sense of their world, using creative ways of looking at things differently; learning how to act to change things a person wants to change and to explore how to do things better. The PDFM was established to maximise potential for participants to achieve personal and professional developmental objectives in harmony with achieving demands arising from strategic organisational goals for improved workplace practices and cultures of effectiveness.

PDFM: evaluation approach

In an attempt to capture and further articulate the process of transformation, participants were engaged in a process of collaborative evaluation using PRAXIS evaluation (Wilson et al 2008). PRAXIS evaluation is an approach that aims to ensure evaluation is undertaken in a manner that reflects and incorporates the principles of transformational PD (i.e. participation, collaboration and inclusion). The six core components of PRAXIS are; **p**urpose, **r**eflexivity, **a**pproaches, conte**x**t, **i**ntent and **s**takeholders. These six elements work together in a 'praxis spiral', interlinking evidence with experience, and knowledge development with practical impact; utilising all strands of evidence for evaluation data as they arise and, as a result of, critical reflexion. Reflecting and reframing each element of the PDFM became an integral element for mapping and critically exploring the extent of individual's learning, without which this deep level of scrutiny was at risk of being hidden, overlooked and not articulated. Participants were able to adapt to the challenge of engaging in regularly offering critically constructive feedback to each other; challenging each step of the program and each other's participation within it, through discussing and seeking how individuals and the group as a collective contributions were aiding or inhibiting knowledge development, utilisation and transfer (Hardy et al 2011).

Using PRAXIS evaluation in this way further helped the group to recognise;

a) an inherent ability to evaluate; not only evaluating each other's level of participation but also how to further scrutinise the impact and outcomes of individual and collective activity.

b) consideration of the relational aspects of learning; through critical observation and constructive feedback on all aspects of the program, processes and its impact on group dynamics (cf. Bion 1961). In addition, participants were able to consider how they might wish to use the PRAXIS evaluation framework as a tool to guide, develop and strengthen collaborative PD activities taking place outside of the PDFM sessions, back in their own places of work.

PDFM (2008) participants

Twelve participants attended the PDFM (2008), representing a range of health and education organisational establishments across Melbourne, Victoria, Australia. Participants all worked with the concepts and tools of PD, either in clinical settings or in educational roles. A small number of participants were working in strategic organisational PD roles as well as actively engaging in PD activities external to their organisation. Differing levels of participant knowledge, skill and experience in relation to facilitation and PD theory, was openly discussed and explored as participants began to learn more about each other.

Participants were required to meet for a full day, once a month over six months. All obtained organisational support prior to attending which provided opportunity to ensure PDFM activities were then linked back into strategic organisational goals plus an acknowledged requirement to report back learning and experience, through for example sharing practices taking place in each other's organisations.

PROGRAM OVERVIEW

In order to provide and expose participants to a rich variety of experiential learning opportunities, sessions were not formally 'taught', but led by different participants; each taking it in turn to prepare and test their personal facilitation skill development through leading sessions. The content and teaching approaches for each session were influenced by individual lead facilitator's teaching styles and consideration of what would suit participants' learning requirements. For example, when new information was being shared more formal presentation styles were used, whilst other more creative means of exploring participants' propositional knowledge base were widely employed. Visualisation (cf. Eppler 2006), creative artwork (cf. Bartol 1986) and dramatisation (cf. Yaffe 1989) were used within sessions to embrace the groups learning needs, and to further challenge all aspects of an individual's person (Heron 2002). This willingness to embrace unstructured activity meant lead facilitators needed to timetable in adequate space for each participant to engage in critical reflection and then to verbalise their considered critical analysis of activities through constructive feedback; experiences and insights (cf. Johns and Freshwater 2005) were articulated at certain key points in sessions, with participants also encouraged to maintain reflective journals outside of sessions.

Attention was paid to identifying and recognising how to integrate key theoretical influences into practical and experiential work being undertaken, to further verify or challenge each aspect of the session for evidence of impact and transformational outcome. As a result, each facilitator individualised their session approach, each choosing different teaching methods and learning tools. This in turn allowed for personalised constructive feedback offered directly from session participants to those individuals leading the session. Each session was therefore constructed as consistent with a cooperative inquiry approach. Active inclusion of participants in their learning was emphasised, through engaging in receiving direct feedback on their contribution, whether they were the lead facilitator or as a session participant.

Experiential elements included heated debate and lively discussion, alongside quieter times spent in personal critical reflection. The use of role play and creative methods, to promote an environment of exploration and enlightenment, were used throughout the six sessions. None of these processes were entered into by participants easily, or without element of hesitation. Many participants expressed feeling more comfortable with traditional notions of classroom based learning (i.e. pedagogy as a form of instruction giving). The first PDFM session was undertaken by the PDFM lead, with the intention of providing a role modelling process for the potential scope of a session format. At the request of participants, the second session was again conducted by the PDFM lead for the purpose of specifically clarifying participant's expectations and ground rules for enabling an open forum of critical pedagogy, that enabled participants to become accepting of each other's values (i.e. to challenge within a framework of high support and an explicit intention for individual development and increased self-awareness) (cf. Daloz 1999; McLaren and Leonard 2001). Table 1 below summarises the PDFM six session's content theme, focus and goals.

Table 1: The PDFM sessions: theme and focus

Session	Theme	Focus
1	Establishing collaborative principles, program relationships, cooperative inquiry	Co-operative inquiry, terms of engagement, data for evaluation, underpinning values, RCN facilitation standards
2	Facilitation methodologies – a person-centred approach	Exploration of different facilitation models. Exploration of key roles, skills and styles. Evaluation.
3	Working collaboratively	Agreeing ethical processes. Stakeholder analysis and involvement. Values clarification. Developing a shared vision. Developing a shared ownership. Celebrating success. Evaluation.
4	Developing cultures of effectiveness	Workplace cultural analysis. Facilitating cultural development. Evaluation.
5	Learning strategies in PD	Giving space for ideas. High challenge/high support. Feedback. Critical reflexivity. Evaluation.
6	Evaluation	Evaluation approaches. Tools for evaluation. Final program evaluation.

EVALUATION DATA

At the start of the program (i.e. session 1), in order to clarify expectation and approaches to data gathering, in addition to an opportunity for participants to become more familiar with using PRAXIS Evaluation, three evaluation questions were devised.

How has the PDF Masterclass been able to provide:

i) an opportunity to learn more about: own facilitation style, develop and practice new skills, gain insights based on different styles and opportunities for learning, and a sound theoretical basis?

ii) a safe and trusting environment where new ways of working can be explored and avenues for personal growth/capacity as a PD facilitator?

iii) opportunity for sharing and using different methods and approaches, materials and resources to enhance learning and improve confidence to work with PD through to attaining the vision?

In the final (sixth) session, these questions were reviewed again using PRAXIS evaluation. Participants identified a missing element within the original evaluation questions regarding the broader influence of the PDFM for themselves, their organisations and for other PD activity taking place across Victoria. The following three questions were added to guide and inform the closing phase of the evaluation:

1. How has the Masterclass prepared participants to create opportunities for sustainable and strategic directions for PD in Victoria?
2. How has participation in the Masterclass enabled participants to share learning, utilise facilitation and apply new skills in and beyond daily practice?
3. How are the Masterclass participants working together?

The last session utilised a process of guided visualisation, described and outlined as a journey of discovery. This process aimed to help participants re-engage with evaluation data collected throughout the program and collated at the close of each session. Each participant responded individually to the six co-constructed evaluation questions. The group then agreed to further collate these individual responses to form overarching themes, generated using a thematic analysis approach (cf. Wilson and Hutchinson 1991).

In total, fourteen themes were identified, further clustered into three concept domains of *attributes, enabling factors* and *outcomes.* The domains (identified in box 2 below) are represented in bold type and themes are underlined. In addition some of the participants' individual responses are reproduced (as exemplars to theme identification) and identified in italics. As a point of clarification, from the representative material provided in box 2, 'enabling factor' appears as a theme in the domain of the same title. This was explained as enabling factors being both a an important process as well as being considered a core facilitation skill.

Box 2: Evaluation data PDFM (2008)

Attributes
Personal and group attributes.
Person-centeredness (as a lived way of thinking). Trust. Respect. Holistic.
Enabling Factors
Feedback. *Critique – high levels of critique and support.*
High challenge/high support. *Willingness to take risks and receive support.*
Open to feedback and personal challenge.
Collaboration/connectedness. *Sharing tools, approaches, using Masterclass as a testing ground. Collaboration with one another outside of the Masterclass. Establishing networks.*
Reflection. *Reflective practice – within and outside Master class.*
Participation. *Active participation. Engagement. Being part of planning and facilitating a session.*
Commitment. *Committing to the 6 months.*
Adaptability. *The Masterclasses have been fluid and adapted to time constraints, likewise PD in practice needs to be fluid and adapt and become part of it all.*
Creativity. *Variety of approaches. Washing machines. Roller coasters.*
Creativity in how sessions delivered.
Enabling factors. Ways of working – established early. Lived. Engagement with expertise.
Outcomes
Confidence. *I came with a donkey and left with a unicorn. By believing in myself.*
Application of learning/opportunities created. *Created opportunities in a safe environment. Applying and linking theory.*
Development of theory and skill related to PD. *Knowledge development and transfer. Developing the skills to enable the support and development of others.*
Consequences. *Has allowed me to take risks in a supported environment – transferred to workplace.*

EXPLORING OUTCOMES: DISCOVERING TRANSFORMATION

The first evaluation question identified by participants was; how had the Masterclass prepared participants to work with PD? In response to this, participants were able to identify a level of self-improvement in their skill development and theoretical knowledge, both in relation to facilitation of PD and through application of this learning in complex clinical practice settings. The enabling factors (as described above in the evaluation data), identified the processes and structures within the facilitation program that were noted as directly contributing to positive outcomes for participants. These included experiencing the process of developing and sustaining a learning environment of high challenge, balanced with high support; giving and receiving of critical developmental feedback; use and engagement with creativity in a way that promoted critical reflexion and, new insight at individual and group level transformational learning.

Improved confidence

A large number of participants (75%) commented on how engaging in the PDFM had contributed to improvement in their personal confidence in relation to undertaking and leading on PD work. Participants spoke of knowledge enhancement to building and understanding the theoretical basis of PD that further assisted their ability to synthesise new knowledge that, in turn, could then be more readily articulated and shared with others. Importantly a number of participants also commented on how their knowledge and skill development was becoming 'embodied' as a recognised change observed in their daily practice. Change was evidenced through undertaking new critically informed ways of working, not just an espoused improved understanding that did not impact directly on actions, but in practical, action and behavioural changes. The application of new learning ranged from participants' engaging in activity outside of the PDFM that they and colleagues could recognise as 'enhanced'. For example, seen through an internally felt gestalt and externally observed increased level of confidence when working with groups. Examples of these practice changes were facilitating action learning in the workplace; developing and implementing locally delivered facilitation development programs and in leading and facilitating team based seminars. Perhaps most surprising to participants was recognition within their organisation of the need for PD to be included at a strategic planning level, rather than used as a means to trouble shoot in problematic areas, which had been participants' previous experience of their PD role from senior managers. One outcome that signified participants increased self-confidence was that six (50%) participants took up lead facilitator roles in the International Practice Development five day School, (held biannually in Melbourne), which brought together a variety of practitioners and educators from across New South Wales, Adelaide and Tasmania, all interested in developing an understanding of Practice Development.

Collaborative networking

Another theme of PDFM transformative impact was identified as relating to 'connection and collaboration', best seen in the established connection formed between participants of the PDFM (and in response to initial evaluation questions 2 and 3). This level of connection also extended into their home organisations, as role and contribution potential began to reveal itself. For example, participants emphasised the supportive value gained from forming established and legitimate networks within and amongst each other, all working in similar roles. This supportive network was further emphasised through the ability to share problematic workplace experiences and use different developmental tools to work through solutions. A shared sense of purpose was also evidence through participants experiencing the impact and effect of being exposing to non-conventional and varied approaches to learning that they could then use in practice knowing exactly how being introduced to new situations and approaches might make others react and respond. This supportive network was further enhanced through participants knowing they could have the opportunity to call upon each other in various ways outside the PDFM to undertake collaborative work in the future.

Broadening the influence of PD work, identified in the second set of evaluation questions, was fulfilled through the PDFM participants being asked to present their experiences at a national conference. Participants chose to undertake an oral presentation using an image that emerged frequently during the PDFM. This image

first came to the surface during the creation of a 'facilitation collage' in session 4. The poem captured in box 3 below was developed by participants to build upon the repetitive use of a waterfall, as visual imagery, representing and helping to explain the turbulent process of facilitation and a transformational journey of discovery.

Box 3: A waterfall: experience of the Victoria based PD Masterclass 2008

A WATERFALL

"Still waters representing where we all were at the start.

Leaping off... into the unknown – taking risks, jumping in.

The journey down... hitting rocks, energy, and rush of adrenaline still there.

Trying out tools and approaches... falling still.

More tools for the journey, seeing the effect on self and others... sharing, nourishing, challenging.

Tears, reality, clinical chaos, PD calm creativity...

Evaluation rainbow, pulling all the particles together.

Basking at the calm waters at the base.

Where next along the river?

Embracing creativity

The process of engaging with creativity within the PDFM was identified as a shared theme in the evaluation data. This was further explored in evaluation descriptors of a 'washing machine' and 'roller coaster'. Both provide for strong imagery that gives expression to and captures the group's experiences of emotional highs and lows, thoughts spinning, energetic turbulence and the exhilaration of new insights. Imagery is further used to explore the relationship of the three identified domains to each other and represented in the conceptual image of a waterfall and refracted rainbow.

The imagery of a waterfall and rainbow represent for the participants the dynamic and colourful nature of both a collective and individual process of experiential learning that had taken place during the PDFM. The process of transformation, as experienced by participants, was accepted and celebrated. Evidence of a recognised alteration in knowledge and skills was able to be clearly related back to the evaluation data; captured in themes of attributes, enabling factors, and outcomes. The attributes of a skilled facilitator was described as 'someone who can enable others to take a 'leap into the water' towards workplace and personal transformation'. This was recognised as a significant starting point to commencing a 'turbulent journey of discovery'. The group identified how individuals need to be adequately prepared and enabled to 'navigate the raging waters of workplace transformation', and not be afraid to 'bump against rocks', or undertake some 'frantic splashing about', as this activity in itself could further promote expected and unexpected outcomes of transformation. More specifically, outcome was seen and expressed in the formation of a rainbow; a representation of both process and outcome of transformation.

DISCUSSION

Shaw et al (2008) discuss how facilitation is in itself multifaceted and remains largely unexplored in terms of how specialised PD facilitation needs to be over and above any other means of enabling best practice performance. The PDFM approach appears to provide a robust engaging and enlightening process that pulls together both individual and collective contributions, via expressed, experienced and articulated evaluation evidence, of how effective a participatory/cooperative inquiry, critical creative process can be in enabling transformation to occur for individuals and groups.

What enabled transformation?

The process of utilising experiential adult learning principles, participation and exploration within a safe but challenging learning environment, produced both high level anxiety (*roller coaster*) counterbalanced with exhilaration arising from achieved new insights (both theoretical and practical) and resultant improved confidence; evidenced through externally confirmed changes in individuals critically informed practice (i.e. praxis). One PDFM participant stated; '*I came with a donkey but left with a unicorn'.* This phrase provides an example of the creative, descriptive imagery participants were beginning to use to expose and explore the subtlety of internal learning taking place for an individual, seen further in how the group changed how they talked and behaved with each other over time, as in itself a process of transformation. Perhaps participants did not see or recognise fully how they themselves had altered but they achieved a greater level of appreciation and understanding of how the different learning tools and approaches, made available to them during the PDFM, had enabled them to more clearly recognise and articulate how meaningful learning had been at first quite a clumsy activity (i.e donkey), but moved to become more sophisticated and elegant (i.e. unicorn).

According to Barnhart (1988) the word facilitation comes from middle French, '*facile*' and the Latin '*facilis*' which means 'to make easy to do: of a person courteous'. However, from the emergent data of the PDFM, facilitation of PD is not something that comes easily to 'persons courteous'; rather the development of facilitation skills requires considerable effort, commitment and a willingness to take risks. Risks associated in establishing personal attributes and amassing the enabling factors needed to produce desired transformational outcomes are largely debated as attempting to achieve a state of utopia that can never be fully attained. Davies et al, (2000) warns that any organisation aiming to transform its practices requires transparent goals that provide a clear pathway to achievement. The risk is that the destination is never fully attained due to an ongoing state of flux health care organisations find themselves having to manage. A final word of warning is to consider that engaging in a process of transformation does require a level of disruption and disturbance to normative cultures, which can increase individual and collective sense of turbulence and entering unsettled waters.

As Hogan (2002) identified, facilitators work to help staff come together and make sense of their complex, turbulent worlds. Skilled facilitators are able to draw from and effectively use a variety of applied processes, choosing which is more pertinent to localised need and requirements. This ability was replicated in the PDFM delivery mode, where participants agreed to engage in the planning of sessions, then lead these sessions drawing on a variety of tools and approaches, identified by taking into consideration how best to tailor activities to suit participants' learning needs. Through the gathering of evaluation data and constructive feedback on process and impact of these choices was considered in a hermeneutic cyclical process of critical review and refinement. Participants were not only exposed to their own learning needs, but engaged and reviewed how to best adapt and apply different learning styles and modes of delivery to address other participants needs. Shaw et al (2006) conclude that 'enabling' is in itself, a form of expert facilitation, and can only be fully acquired and synthesised through a continuous commitment to achieving transformation of others.

What enabled transformation then to occur in the PDFM, was perhaps the opportunity participants had to experience processes that enabled an exposing, critiquing and testing of individual and collective understanding. Embracing a model of skill development (such as the PDFM) provided an unprecedented opportunity to test ideas, make new discoveries and further refine these in a supportive collective approach; all leading towards a transformational intent for improved understanding and validation of knowledge, action and resultant outcomes. We recognise however, this is a small and select sample of PD facilitators, undertaking a specialist educational program, and that transferability of findings requires additional investigation on a broader more inclusive sample.

CONCLUSION

The PDFM aimed to provide an environment that could enable participants to achieve personal and professional outcomes in harmony with strategic organisational goals of improved workplace practices and cultures of effectiveness. Cooperative inquiry offered the PDFM a transformational framework, through working with explicit shared values and beliefs amongst those who participated. Each participant, through a process of PRAXIS evaluation, recognised an increased level in their personal knowledge base from starting the program to its closure. Individuals gathered evidence of their personal skill development and began to recognise altered practices. This was also reported by external colleagues who saw changes in participants facilitation skills, attitude and confidence levels back in the workplace. All of this evidence, gathered from within and outside the PDFM group itself, had helped expose an inherent process of transformation.

Participants expressed the emotional highs and lows of working experientially, yet recognised the impact the experience of exploration, critical reflexion and constructive feedback had on their personal and professional identity.

Further work is needed to capture long term change, as a result of Practice Development facilitation. Greater exploration of what constitutes particular skills and enabling factors required to enable PD facilitation expertise is also required; particularly as quality improvement programs and modernisation of health care facilities continues apace on a global scale. This paper has identified a mere drop in the ocean of what potential can be found in the collation of evidence a transformational Practice Development approach is having on health care practice. We believe PD offers an effective mechanism for navigating the turbulent waters of workplace culture. If expertly navigated the health care workforce can be supported to continue to transform to meet the changing and challenging needs of global health.

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