Paediatric International Nursing Study: using person-centred key performance indicators to benchmark children’s services

Tanya McCance, Val Wilson and Kelly Kornman

Aims and objectives. The aim of the Paediatric International Nursing Study was to explore the utility of key performance indicators in developing person-centred practice across a range of services provided to sick children. The objective addressed in this paper was evaluating the use of these indicators to benchmark services internationally.

Background. This study builds on primary research, which produced indicators that were considered novel both in terms of their positive orientation and use in generating data that privileges the patient voice. This study extends this research through wider testing on an international platform within paediatrics.

Design. The overall methodological approach was a realistic evaluation used to evaluate the implementation of the key performance indicators, which combined an integrated development and evaluation methodology.

Methods. The study involved children’s wards/hospitals in Australia (six sites across three states) and Europe (seven sites across four countries). Qualitative and quantitative methods were used during the implementation process, however, this paper reports the quantitative data only, which used survey, observations and documentary review.

Results. The findings demonstrate the quality of care being delivered to children and their families across different international sites. The benchmarking does, however, highlight some differences between paediatric and general hospitals, and between the different key performance indicators across all the sites.

Conclusions. The findings support the use of the key performance indicators as a novel method to benchmark services internationally. Whilst the data collected across 20 paediatric sites suggest services are more similar than different, benchmarking illuminates variations that encourage a critical dialogue about what works and why.

Relevance to clinical practice. The transferability of the key performance indicators and measurement framework across different settings has significant implications for practice. The findings offer an approach to benchmarking and celebrating the successes within practice, while learning from partners across the globe in further developing person-centred cultures.

What does this paper contribute to the wider global clinical community?
- This paper demonstrates the potential to use person-centred KPIs to benchmark nursing services internationally.
- The outcomes reported contribute to the limited evidence base relating to the impact of nursing on the quality of the patient and family experience.

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Introduction

Nurses are a critical part of the healthcare workforce worldwide and provide a significant proportion of care to children who are sick in hospital. Nurses adopt a family-centred care model working with the child’s family to ensure that they are part of the decision-making process regarding their child and to support them in caring for their sick child in hospital and after discharge (Wilson et al. 2005a). The principles of Family Centred Care outlined by Wilson (2011) include creating meaningful working relationships with people, a supportive learning environment, actively engaging staff in change processes and ensuring the effectiveness of the care context. These principles sit within a broader philosophy of person-centred care, which takes into account the patient, the family and staff (McCormack & McCance 2010). Being able to measure and monitor the quality of care and the effects of that care is essential.

There is a strong global commitment to ensuring that the care provided to patients and families by nurses is of a high standard. Measuring this, however, can be challenging and within nursing the emphasis has been on aspects of care where metrics can be more easily quantified (American Nurses Association 1995, NHS Quality Improvement Scotland 2005, Wilson et al. 2005a, Griffiths et al. 2008). Some metrics are universally recognised within nursing and widely used across the globe to evidence the quality of care, for example, pressure ulcer incidence, failure to rescue, rates of health care-associated infections (of varying types) and incidence of falls; (Griffiths et al. 2008, Maben et al. 2012). While such metrics are helpful there is recognition of the need to involve staff in localised improvement initiatives (Zoschak 2010, Haines & Warren 2011) and to develop evidence-based metrics which can measure both nurse delivered outcomes and patient experience (Griffiths et al. 2008, McCance et al. 2012).

There is a move towards developing other indicators that focus on the impact of care delivery, and these are often more difficult to measure, such as dignity, respect, privacy and communication (DoH 2006, Levenson 2007, Department of Health, Social Service & Public Safety 2008, Goodrich & Cornwell 2008, McCance et al. 2012).

This also reflects an international policy agenda that is focused on improving patient experience through the promotion of person-centred practice (Wilson 2005b, Engedal 2010, New South Wales Essentials of Care Program 2012). The Paediatric International Nursing Study (PINS) is a large study that tested a unique set of nurse indicators to evidence experience of care for children and their families, within a specific context (children’s service within acute hospital settings) and on an international stage (Australia, UK, Ireland and Denmark). This paper reports on initial findings from the PINS.

Background

The key performance indicators (KPIs) that are the focus of this paper originated from primary research undertaken by McCance et al. (2012, 2015), the aim of which was to develop indicators that were appropriate and relevant for nursing and midwifery practice. The resultant KPIs were developed using a process of consensus based on a two-stage nominal group technique and resulted in ‘a different but complimentary set of indicators for nursing and midwifery, which confirm the importance of some fundamentals aspects of practice, as identified by nurses and midwives’ (p. 1152). The nature and orientation of these KPIs (which are presented in Table 1) are considered novel in the context of the existing evidence as they are: (1) different from the usual nursing or midwifery indicators generally; (2) reflected key elements of person-centredness; and (3) have the potential to contribute to improving the patient experience.

A measurement framework was developed to measure the eight KPIs. This included the use of a questionnaire, patient stories, observations of practice and review of patient records in combination with questioning staff. The utility of the KPIs and the measurement framework were tested across nine different practice settings in the UK and the Republic of Ireland covering both nursing and midwifery practice. Testing revealed that the evidence generated from the implementation of the key performance indicators was effective for: measuring what matters; evidencing the patient experience; engaging staff; providing a focus for improving practice and articulating and demonstrating the positive contribution of nursing
The study aims and objectives

The overall aim of the PINS was to explore the utility of the eight KPIs and related measurement framework in supporting the development of person-centred practice across a range of services provided to sick children. More specifically the study objectives were to:

- Implement the KPIs and use the outcomes to benchmark children’s hospital services internationally
- Explore relationships between the KPIs and other metrics relevant to children’s hospital services, for example, drug error rates
- Establish how the KPIs can be used to support staff in using evidence to inform their practice and in undertaking localised practice change and innovation
- Review the effectiveness of data collection mechanisms (e.g. resources, access and ethical implications) data analysis (e.g. participatory models that involve staff and or patients/families) and the cogency of varying types of data (e.g. numerical incident data, patient narrative and staff satisfaction surveys)
- Establish views of key stakeholders on the appropriateness and relevancy of the evidence generated from the KPIs as a measure of quality of service provision
- Develop explanatory hypotheses related to the implementation of the KPIs for further testing through research.

This paper primarily focuses on the first research objective and will also provide data relating to the third objective.

Methods

Realistic evaluation was the overall methodological approach used to evaluate the implementation of the key performance indicators (Pawson & Tilley 1997), which combined an integrated development and evaluation methodology. This study was conducted in six stages reflecting the research objectives, which are presented in Table 2. The focus of this paper is on the data collected resulting from the implementation of the KPIs and measurement framework at baseline. A variety of qualitative and quantitative methods were used, however, this paper will report the quantitative data only and how this has been used to benchmark services.

Sample and setting

The study was conducted in collaboration with children’s hospitals and children’s units in general hospitals across a
Stage 2: Implementation of the KPIs and measurement framework (Cycle 1 – baseline)

Stage 3: Supporting practice change

Stage 4: Implementation of the measurement framework (Cycle 2)

Stage 5: Evaluation of the implementation process

Stage 6: Hypothesis generation

Table 2 Overview of the research stages

<table>
<thead>
<tr>
<th>Stage 2</th>
<th>Stage 3</th>
<th>Stage 4</th>
<th>Stage 5</th>
<th>Stage 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation of the KPIs and measurement framework (Cycle 1 – baseline)</td>
<td>Each site worked with the KPI data from cycle 1 to identify changes they wish to make in practice</td>
<td>Activities undertaken during cycle 1 were repeated to generate a second set of data followed by one more PDSA cycle</td>
<td>The KPIs and the measurement framework will be evaluated using multiple methods</td>
<td>The findings will be used to generate the hypothesis as a basis for further testing in subsequent studies</td>
</tr>
</tbody>
</table>

PDSA, Plan, Do, Study, Act; KPIs, key performance indicators.

number of countries in Europe and Australia. A total of 12 organisations were involved across 19 wards/units, 13 of which were wards in a paediatric hospital and the remaining six were paediatric wards in a general hospital. The type of clinical settings participating in the study were mixed covering mainly medical and surgical specialities.

The study participants comprised nursing staff, patients and families in each of the study sites. The study was co-ordinated by two chief investigators, one based in Europe and the other based in Australia, with the support of a research assistant. Each site was supported by a local facilitator/researcher who worked with staff in the units to assist in data collection and analysis and in undertaking the improvement cycles using a Plan, Do, Study, Act model commonly used in the health care setting (Taylor et al. 2013).

Data collection methods

Data collection incorporated a variety of approaches that generated both qualitative and quantitative data as described below.

- A parent survey: the parent survey was administered via a questionnaire comprising nine questions relating to each of the KPIs. KPI 8 (Nurses’ knowledge of what is important to the patients and their families) had a two part question, the first part relating to what was important to the parent and the second relating to the parent’s view about the child, hence nine questions in total. Likert type responses (four options) were used to establish the extent to which the parent felt the KPI had been achieved (always to never). The questionnaire was distributed to all parents with discharge documentation (over a seven-week period), with return options being either by post using a stamp addressed envelope or in a sealed returns box situated within the ward environment. No follow-up reminders were used as the survey distribution was a continuous activity. The questionnaire was translated into Danish, Farsi, traditional Chinese, simplified Chinese, Arabic, Polish, Romanian, Somali, Turkish and Vietnamese and back translated to ensure accuracy. The languages were selected based on the most commonly spoken languages in each site and was aimed at maximising the opportunity for participation within the target population.

- Patient and family stories: over two weeks, three patient stories and three family stories were collected in each site. On the day interviews were scheduled to take place, all patients and families eligible to participate were identified by ward staff and then participants were randomly selected by the interviewer. Eligibility was primarily on the basis of informed consent from parents and assent from children and ability to communicate effectively in English. Interviews were conducted by project staff, and varied in duration from 15 minutes to one hour. The interview was led by the patient/family and focussed on their experience in hospital. Bear Cards (Deal & Wood 2014) were used to assist children in telling their story, which were range of cards with illustrations of bears depicting a range of different emotions. The patients were asked to pick a card(s) that would help them describe their time in hospital. Interviews with families were unstructured and began by asking a key question such as: ‘What is it like for your child to be cared for on this ward?’ Interviews were taped and transcribed verbatim in preparation for analysis.

- Review of records and questioning staff: 10 chart reviews were undertaken in conjunction with asking staff about patient goals and what was considered important for the patient and their families (KPI 1 and KPI 8). Ten patient charts were randomly selected and the key staff member looking after each patient was subsequently questioned. It is important to clarify that the intention was not to undertake an open review of...
what was written in the patient record, but rather
establish the degree of consistency between what was
written in the patient record and what staff reported
when questioned, in relation to these two specific KPIs.
Project staff identified in each of the participating sites
going undertook this activity.
• Observations of practice: three observations of nursing
presence in a specified bay or area over a 30-minute
time period were conducted. The specified bay was
selected by the project personnel undertaking the activity and was driven largely by those families who consented to be observed during the observation period.

Each of the data collection methods was related to one
or more of the eight KPI’s. Each KPI had at least two
sources of data to inform it, for example KPI 5 was informed by survey data, observations and interview data.
The data collection comprised a 10-week cycle and the timeline for data collection, analysis and feedback is presented in Table 3.

Data collection at baseline was staggered across the sites
due to organisational and staff constraints and ethical clearance. The first site commenced data collection in June 2013 and the last site commenced data collection in March 2014.

In view of the widespread nature of the sites and the staggered start dates, several measures were put in place to ensure a consistent approach to the study. Each site was provided with a comprehensive PINS resource manual, which included data collection templates and detailed instructions for the conduct of the study in line with ethical approval. The quantitative baseline data collected using the survey, observations and chart review are only presented in this paper in response to the research objective relating to benchmarking children’s hospital services internationally.

Data analysis

Cycle one baseline data analysis was undertaken by one researcher to ensure a uniform approach across all sites. Data analysis procedures can be broadly divided into two approaches. Quantitative data was analysed in Microsoft Excel using simple descriptive statistics to calculate percentages and create a pie graph for each survey question (related to each of the eight KPIs). Observation of time spent was calculated as % of time (out of a 30-minute period) when nurses were visible in the bay. The chart review was calculated on the basis of % consistency between what nurses reported and what was recorded in the patient record.

To benchmark the data across the sites a mean score was determined for every site for each question in the survey, observations and chart review. An overall mean score for all sites was then calculated for each aspect of quantitative data. A separate mean was calculated for wards in paediatric hospitals and wards in general hospitals, respectively, for comparison between the two.

Ethical considerations

Ethics approval was obtained from the local Human Research Ethics Committee at each site and also from the two higher education institutes taking the lead for the study. Due to the global nature of the study, there was a degree of complexity regarding ethics processes and subsequent approvals resulting in staggered start dates for some sites.

Results

The demographic characteristics including total beds, focus of care, patient age range and staff to patient ratio are shown in Table 4. Sites have been de-identified to wards within specialty paediatric hospitals (Paediatric) and paediatric wards within general hospitals (General). The included units

A total of 1360 questionnaires, 71 observations and 178 chart reviews were collected from all sites during cycle one baseline data collection. The results presented in Table 5 provide the mean score for each of the KPIs across the individual sites. In addition, the table provides the mean score for paediatric hospitals (P), general hospitals (G) and the overall mean across all sites (O). Furthermore, Fig. 1 presents a comparison of overall means between the paediatric and general hospitals, illustrating a high degree of similarity.

Time spent with patient

The indicator focusing on time spent reflects two quantitative data sources – survey and observations of practice. Figure 2 shows site means for time spent with the

Table 3 Data collection, analysis and feedback timeline

<table>
<thead>
<tr>
<th>Week</th>
<th>1-4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data</td>
<td>Survey Stories</td>
<td>Survey Stories</td>
<td>Survey Transcribe Analysis</td>
<td>Observations Analysis</td>
<td>Document review and staff interviews</td>
<td>Feedback</td>
<td></td>
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<tr>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
Table 4 Demographic characteristics of PINS wards

<table>
<thead>
<tr>
<th>Site</th>
<th>No. of beds</th>
<th>Focus of care</th>
<th>Patient age range* (years)</th>
<th>Staff:Patient ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paediatric 1 (P1)</td>
<td>20</td>
<td>Asthma; Overnight oximetry; Bronchiolitis; Pneumonia; Seizures</td>
<td>0–15</td>
<td>1:4</td>
</tr>
<tr>
<td>Paediatric 2 (P2)</td>
<td>21</td>
<td>General surgery; Urology; ENT; Ophthalmology</td>
<td>0–18</td>
<td>1:4</td>
</tr>
<tr>
<td>Paediatric 3 (P3)</td>
<td>20</td>
<td>Orthopaedic; Plastics; Maxillary facial</td>
<td>0–22</td>
<td>1:4</td>
</tr>
<tr>
<td>Paediatric 4 (P4)</td>
<td>22</td>
<td>Neurology/Neurosurgery; Cardiology/cardiothoracic; Renal; Rehab</td>
<td>0–22</td>
<td>1:4</td>
</tr>
<tr>
<td>Paediatric 5 (P5)</td>
<td>20</td>
<td>Medical; Surgical; Respiratory; Neurological; Renal</td>
<td>0–2</td>
<td>1:4</td>
</tr>
<tr>
<td>Paediatric 6 (P6)</td>
<td>22</td>
<td>Endocrinology; Gastroenterology; Respiratory/CF; General medical; Immunology; Dermatology</td>
<td>0–16</td>
<td>Variable</td>
</tr>
<tr>
<td>Paediatric 7 (P7)</td>
<td>26</td>
<td>Multispecialty; General surgery; Orthopaedic; General medical; Respiratory medicine</td>
<td>12–20</td>
<td>1:4</td>
</tr>
<tr>
<td>Paediatric 8 (P8)</td>
<td>18</td>
<td>Cardiology; Cardiac surgery; Transplantation; Airway abnormalties; Metabolic</td>
<td>0–18</td>
<td>1:3</td>
</tr>
<tr>
<td>Paediatric 9 (P9)</td>
<td>12</td>
<td>General surgical paediatric; Plastics; ENT; Burns; Orthopaedic</td>
<td>0–18</td>
<td>1:4</td>
</tr>
<tr>
<td>Paediatric 10 (P10)</td>
<td>24</td>
<td>Paediatric orthopaedic planned; Trauma orthopaedic</td>
<td>0–18</td>
<td>1:4</td>
</tr>
<tr>
<td>Paediatric 11 (P11)</td>
<td>20</td>
<td>Digestive; Injury and poisoning; Congenital malformations and chromosomal abnormalities; Musculoskeletal diseases; Symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified</td>
<td>0–16</td>
<td>1:2</td>
</tr>
<tr>
<td>Paediatric 12 (P12)</td>
<td>9</td>
<td>Infectious diseases; Meningitis; Chicken pox; Gastroenteritis; Measles</td>
<td>0–18</td>
<td>1:3</td>
</tr>
<tr>
<td>Paediatric 13 (P13)</td>
<td>18</td>
<td>Orthopaedic surgery; Spinal surgery; General surgery; Urology</td>
<td>0–18</td>
<td>1:4</td>
</tr>
<tr>
<td>General 1 (G1)</td>
<td>24</td>
<td>Tonsillectomy/adenoidectomy; Oesophagitis and Gastroenteritis; Bronchitis and Asthma; Injury to forearm, wrist, hand/foot Otitis media and URI</td>
<td>0–15</td>
<td>1:4</td>
</tr>
<tr>
<td>General 2 (G2)</td>
<td>12</td>
<td>Bronchitis and asthma; Whooping cough and bronchiolitis; Tonsillectomy and Adenoidectomy; Gastroenteritis; Respiratory; infections/inflammations</td>
<td>0–16</td>
<td>1:6</td>
</tr>
<tr>
<td>General 3 (G3)</td>
<td>24</td>
<td>Asthma; Bronchiolitis; Gastroenteritis; Orthopaedics/hands; ENT</td>
<td>0–18</td>
<td>1:4</td>
</tr>
<tr>
<td>General 4 (G4)</td>
<td>25</td>
<td>ENT; Orthopaedics; Maxillofacial; Plastics; Paediatric medical</td>
<td>0–18</td>
<td>1:6</td>
</tr>
<tr>
<td>General 5 (G5)</td>
<td>32</td>
<td>Medical; Surgical; Oncology; Trauma and orthopaedics</td>
<td>0–16</td>
<td>1:6</td>
</tr>
<tr>
<td>General 6 (G6)</td>
<td>24</td>
<td>Medical; Surgical; Oncology; Trauma and orthopaedics</td>
<td>0–16</td>
<td>1:5</td>
</tr>
</tbody>
</table>

PINS, Paediatric International Nursing Study.

*The age range of patients admitted in these clinical units. While most were 0–16 years, some were outside this range due to the nature of the socialists services provided in that unit.

Patient (survey question 5) ranging from 83.50–97.75 (overall mean 90.25), with general hospitals performing better (92.25) than paediatric hospitals (89.50). Mean scores for observations ranged from 60.00–100.00 (overall mean 78.75), with the opposite being the case, that is, paediatric hospitals performed better (81.50) than general hospitals (73.00). This is a good example to illustrate the potential of triangulating the different data sources.

Case examples

The following case examples provide an overview of all quantitative results for a particular site in one figure. The different data sources are connected with symbols; triangle for the chart review and survey questions 1 and 8 (KPI 1 and 8) and a circle for observations and survey question 5 (KPI 5). Figure 3 provides a case example for one site within a paediatric hospital illustrating overall that this site performed well with mean scores ranging from 87.25–96.50. Of note, the data collected for KPI 5 (survey question 5 and observations) correspond to each other and were lower than other aspects. Data related to the chart review (KPI 1 and 8) also corresponded to each other.

Figure 4 provides a case example for one site in a general hospital presenting mean scores ranging from 77.75–95.00. There was a correlation between the chart review data and associated survey questions (1 and 8). A difference between the observations and survey question 5 is evident, however, this is not marked.

Discussion

The research objective being addressed within this paper focuses on the implementation of the person-centred KPIs...
Table 5 Results across all sites for each measure

<table>
<thead>
<tr>
<th>Sites</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
<th>Q6</th>
<th>Q7</th>
<th>Q8a</th>
<th>Q8b</th>
<th>Obs</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>95.50</td>
<td>95.50</td>
<td>97.50</td>
<td>96.00</td>
<td>88.75</td>
<td>96.25</td>
<td>97.25</td>
<td>93.75</td>
<td>96.25</td>
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<tr>
<td>P2</td>
<td>94.50</td>
<td>93.25</td>
<td>97.00</td>
<td>93.50</td>
<td>90.50</td>
<td>96.00</td>
<td>95.75</td>
<td>94.00</td>
<td>95.00</td>
<td>82.00</td>
<td>50.00</td>
</tr>
<tr>
<td>P3</td>
<td>94.50</td>
<td>94.50</td>
<td>96.25</td>
<td>95.00</td>
<td>91.75</td>
<td>93.00</td>
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<td>P4</td>
<td>100.00</td>
<td>95.25</td>
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<tr>
<td>P11</td>
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Q 1–8 relate to mean score for KPIs 1–8; Obs – Observations of practice (KPI 5); CR – Chart Review (KPI 1 and 8); P Mean – overall mean percentage score for paediatric hospital sites; G mean – overall mean percentage score for general hospital sites; O – overall mean percentage score for all sites.

Figure 1 Comparison between paediatric and general hospitals.

and measurement framework and how the outcomes could be used to benchmark children’s hospital services internationally. The transferability of the KPIs and measurement framework on a multisite international platform, however, is an important outcome. Despite the challenges involved in running a large scale international study of this nature (McCance & Wilson 2015), there was a sustained level of engagement across all sites with no attrition over time. This supports the findings from the initial testing of the KPIs, which highlighted how the KPIs generated a high level of engagement from staff, originating from a genuine connect-

edness with the KPIs, which were considered fundamental to nursing practice (McCance et al. 2015).

The area that has, however, moved this work forward significantly are the findings demonstrating the use of the KPIs to benchmark services within health care. More advanced analysis of the quantifiable data has enabled comparison within and across the range of participating sites. While the data would suggest that services are more similar than they are different, there are variations that encourage a critical dialogue about what works and why, which can inform improvement work. For example, paediatric wards within general hospitals performed better than paediatric wards within specialty paediatric hospitals across seven of the 11 sources of evidence (i.e. survey questions, observations and chart review), as illustrated in Table 5. More detailed analysis in relation to individual KPIs as illustrated by Fig. 2 can offer additional insights into difference between KPIs across sites. In the context of this study the motivation underpinning the desire to benchmark is not simply to present data or generate league tables, but to use this data to ask important questions about practice to understand why such difference may arise, and what can be improved as a consequence. Furthermore, the KPIs and measurement framework can be used to demonstrate trends.
over time with repeated measures, which is built into the overall research design of this study and will be the focus of subsequent papers.

Benchmarking as a measure of quality has been prominent within paediatric services across both Australia and Europe for some time. For example, Children’s Healthcare Australasia benchmark against a range of clinical indicators, such as waiting times, elective surgery rates, length of stay and incident reports to name a few. Similarly, in a UK context there is evidence of benchmarking for example the national audit of intermediate care (NAIC 2013). On a worldwide stage the Vermont Oxford Network (VON) collects data from around 1000 neonatal centres and facilitates interdisciplinary benchmarking activities. The contrast in the benchmarking data presented in this study using the person-centred KPIs is the generation of evidence that provides a focus for improvement, which is directly related to nursing practice and within the influence of practitioners. In this context, the value of benchmarking becomes a very powerful motivation for improving practice, further strengthened by the sense of being part of something bigger that spans the international landscape.

This study also contributes to the limited evidence base regarding the impact of nursing on the quality of the patient and family experience. Furthermore, it reinforces the original intent which underpins the use of these KPIs, that being an opportunity to evidence the unique impact of nursing care on the patient experience (McCance et al. 2012). This is further reinforced by the benchmarking scores which are relatively high across the board with means above 87.75 for all survey questions, indicating that each KPI is being achieved most of the time. The observational and audit data demonstrate a wider variability with means ranging from 60–100 (O and 50–100 (A). This data in itself has utility at different levels, for example, for organisations who want to evidence high performance of nursing, for commissioners of services and at a policy and strategic level. The sophistication of using this data to correlate with other important variables such as skill mix, work load and staff morale sets the direction for the future.
Limitations

A limitation of this paper is the sensitivity of the measures. The presentation of the quantitative data in isolation does not provide a complete picture of the results. This highlights the importance of the triangulation of the data (survey and observation/chart review results) considered in combination with the patient and family stories. Further papers will provide a detailed analysis of the content of the collected patient and family stories to expand on the results presented in this paper.

Conclusion

The evidence presented in this paper supports the use of the person-centred KPIs as a novel method to benchmark services internationally. While the data collected from across the 19 paediatric sites suggest services are more similar than different, benchmarking activity does illuminate variations that encourage a critical dialogue about what works and why. Furthermore, testing the use of the person-centred KPIs within paediatrics, but on an international platform, has reinforced the positive nature of the KPIs as a means of engaging staff. This level of engagement reflects the ability of these KPIs to generate evidence that demonstrates the positive contribution of nursing, but is also primarily about promoting and enabling the development of person-centred practice. The PINS is ongoing and it is anticipated that further papers detailing various aspects of the research will be developed by both site investigators and individual sites.

Relevance to clinical practice

The outcomes presented in this paper have relevance for practitioners on an international platform. This study confirms the utility of person-centred KPIs derived from original research and their transferability across different practice settings across the globe. Furthermore, it offers data that reflect the patient and family experience, which can be benchmarked internationally to inform a critical dialogue about what works in practice and why, thus further developing positive person-centred cultures.

Contributions

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References


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