The identification of the role and competencies of the graduate nurse in recognising and responding to the deteriorating patient in an acute ward environment: A mixed methods study

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Chapter 6

Phase 2 Quantitative Findings

Introduction

The previous chapter provided a discussion of the data collection and data analysis processes used for phase two of the study. Within chapter six, a discussion of the findings from phase two data collection will be provided. Initially the Q-Role findings will be presented. This will include the demographics of the participants followed by the core theme findings. Next, the findings of the Q-Comp will be presented. This will be subdivided into the parts 1, 2 and 3. Within each part, the demographics of the participants will be outlined followed by a presentation of the key findings.

Questionnaire role (Q-Role) findings

Phase two of the study commenced with part 1 Q-Role questionnaire. It was designed to capture the GRNs understanding of clinical deterioration, their current clinical role, knowledge, confidence and preparation to assess and manage the deteriorating ward patient. The Q-Role was formatted to initially collect nominal demographic data from the participants. The demographic data provided scope for further data analysis to understand if these variables were independent or influenced the participants’ role.
Q-Role: Demographic data.

participant numbers.

The total population of GRNs meeting the inclusion criteria for the study was 1100. Of that number a total of 90.09% (n=991) were eligible to participate. These people were emailed an invitation with via the Department of Health WA, with 5% (n=50) of GRNs opting out of the study. From the remaining number, 15.09% (n=142) participated in the online Q-Role with 76.7% (n=109) being fully completed. Unfortunately, 23.3% (n=33) were excluded from the study, as there was missing data. A total of 109 valid Q-Role were analysed. The demographic variables included: age; gender; area of speciality; private or public hospital employment; and their undergraduate nursing education. The findings will now be presented in detail.

age group

The participants were asked to identify their age group from nine categories listed. The age categories ranged from 18-20 years of age through to 56 years and over. The sample included participants from all age ranges with the greatest number of participants in the 21-25 years age range (n=55). The age ranges of 51-55 years (n=2) and 56 years and over (n=2) had the smallest representation.

gender

As was expected, the vast majority of participants in the part 1 Q-Role were female equating to 92.7% (n=101). A small number of males 7.3% (n=8) made up the remainder of the participants.

private or public hospital employment

The next demographic variable that was identified was the funding model used by the employing hospital organization. In general terms, the State and Federal Australian Government provide the majority of funds for public hospitals whereas private health insurance and out-of-pocket payments by patients mainly fund the private hospital sector (AIHW, 2010). Of the total, 87.2% (n=95) of participants were employed within the public hospital system, and 12.8% (n=14) within the private hospital system.
The participants were asked to identify their current area of specialty from a list of 10 options. The specialties were diverse, ranging in acuity and exposure to the acutely ill patient. The most frequent area of specialty in which the participants were working was identified as the medical ward accounting for 36.7% (n=40) of participants. This specialty was followed by the surgical ward, accounting for 24.8% (n=27), and Rehabilitation unit (Rehab) with 11% (n=12) of participants. The other seven specialty areas accounted for just 27.5% (n=30) of the total number of participants. The specialty with the lowest number of participants was Critical Care with just 1.8% (n=2) of respondents working within this area (see figure below).

Figure 8. Q-Role participants’ area of specialty.

The participants were asked to identify the university where they had completed their undergraduate nursing studies. They were given a choice of six categories, five containing local Perth universities, and an option of “other university”. There was a fairly even representation of participants from all undergraduate nursing programs. The largest number of participants were educated at UNDA with 31.2% (n=34). This was followed Edith Cowan University 24.8% (n=27). A number of participants 20.2%
(n=22) indicated “Other University” as their choice. This included interstate and overseas education providers.

**demographic cross-tabulations**

To better understand the characteristics of the participants in the Q-Role, a number of cross tabulation frequency distributions were calculated. These utilised the five demographic variables in combination to enhance the description of the distribution of the participants across the different themes. Initially the age and gender cross tabulation frequency distribution was calculated. This provided a summary of the number of male and female participants in each age group bracket across the participants (see table 4 below).

Table 4

*Q-Role: Age Group v Gender Cross-tabulation*

<table>
<thead>
<tr>
<th>2. GENDER</th>
<th>Female</th>
<th>Male</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Age Group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-20</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>21-25</td>
<td>51</td>
<td>4</td>
<td>55</td>
</tr>
<tr>
<td>26-30</td>
<td>17</td>
<td>2</td>
<td>19</td>
</tr>
<tr>
<td>31-35</td>
<td>8</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>36-40</td>
<td>12</td>
<td>1</td>
<td>13</td>
</tr>
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<td>41-45</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>46-50</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>51-55</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>56 &amp; over</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>101</td>
<td>8</td>
<td>109</td>
</tr>
</tbody>
</table>

As expected, the highest numbers of participants for both males and females was within the 21-25 years age bracket (n=55). Interestingly there was only 1 male participant in the age groups above that of 26-30 years bracket compared to 31 females. There were no male participants in the age brackets above 40 years and over.

The area of specialty and gender cross tabulation frequency distribution was also calculated. This calculation provided a description of the roles undertaken by both
males and females who participated in the Q-Role. The main area of specialty for both genders remained the medical ward area. The percentage of male participants working in the medical ward area was 50% (n=4) compared to a lower number of female participants at 35.6% (n=36) (see Table 5).

Table 5

*Q-Role Area of Speciality v Gender Cross-tabulation*

<table>
<thead>
<tr>
<th>Speciality Area</th>
<th>GENDER</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>Aged Care</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Critical Care</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Emergency</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Department</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Ward</td>
<td>36</td>
<td>4</td>
</tr>
<tr>
<td>Orthopaedics</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Paediatrics</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Rehab</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>Surgical Ward</td>
<td>26</td>
<td>1</td>
</tr>
<tr>
<td>Theatres</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>101</td>
<td>8</td>
</tr>
</tbody>
</table>

A final cross tabulation frequency of interest was the area of speciality and private or public hospital employment. The numbers of participants from the public hospital setting were significantly higher (n=95) in comparison to those participating from the private hospital setting (n=14). Of interest in the findings of the cross-tabulation was the number of areas of specialty represented by public and private hospital participants (see table 6).
Table 6

Q-Role: Area of Specialty v Private or Public hospital Cross-tabulation

<table>
<thead>
<tr>
<th>Area of Specialty</th>
<th>Private or Public hospital</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Private</td>
<td>Public</td>
</tr>
<tr>
<td>Aged Care</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Critical Care</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Emergency Department</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Medical Ward</td>
<td>5</td>
<td>35</td>
</tr>
<tr>
<td>Orthopaedics</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Paediatrics</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Rehab</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>Surgical Ward</td>
<td>6</td>
<td>21</td>
</tr>
<tr>
<td>Theatres</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>14</td>
<td>95</td>
</tr>
</tbody>
</table>

The participants from the public hospital setting were distributed across all of the ten specialty categories. In comparison those participating from the private hospital setting were distributed across four specialties; medical, surgical, orthopaedics and other. This may be the result of low numbers of participants from the private hospital setting, or possibly due to a difference in graduate nurse allocation and placement in the private sector hospitals.

**Q-Role: Core findings**

Following the nominal demographic data, the Q-Role asked the participants to indicate their level of agreement with 75 statements relating to the eight core themes from the literature review. A five point Likert scale response was used to provide a ranked order level of agreement during the Q-Role. The Likert scale responses were further collapsed from a five point to a three point response scale. Initially the ranked order frequency distributions were calculated for all of the responses.
The next stage of data analysis was to compare the ordinal data levels of agreement with the demographic variables to look for possible association. As the number of participants in some of the demographic variables categories was low, the Fisher’s exact test was used to calculate the level of independence. This was done using the SPSS™ Ver.24 (IBM SPSS, 2016).

**Theme 1: Definition, Detection and Frequency of clinical deterioration.**

The participants were asked to rate their level of agreement with eight statements focusing upon the definition, detection and frequency of clinical deterioration in their areas of work. This request was achieved by clicking the Likert scale response that best matched their level of agreement with the statement item. A summary of the eight statement findings is presented below (see figure 9 below).

![Figure 9. Q-Role: definition, detection & frequency of clinical deterioration.](image-url)
Statements 1 and 2 focused on ascertaining a definition of deterioration from the participants. The first statement defined clinical deterioration as a progressive decline in the patient’s physiological state to which 93.6% of participants agreed. The second statement suggested clinical deterioration often leads to disrupted organ function with 95.4% agreeing.

The next statements asked participants about the frequency of clinical deterioration within their areas of specialty and the hospital as a whole. From the data, 89% of participants indicated acute illness was common within the hospital setting. Around 78% of participants indicated that acutely ill patients were often admitted to their ward area with 6.4% undecided and 15.6% disagreeing.

Participants were then asked about sudden changes and physiological decline in hospital patients. From the data, 74.3% of participants indicated that this was a common event within the hospital with 11.9% undecided and 13.8% disagreeing. Interestingly, only 56.8% of participants agreed that sudden decline and clinical deterioration was common in their clinical areas with 29.4% disagreeing it was a common issue and 13.8% undecided.

The final statements within the theme asked participants about the challenge of detecting clinical deterioration in their patients. From the data 58.7% of participants felt clinical deterioration could be easily detected, with 27.5% suggesting they were undecided and 13.8% disagreeing. A second statement reversed the wording and stated clinical deterioration was challenging to detect in patients. This time 39.4% of participants agreed, 24.8% were undecided and 35.8% disagreed that clinical deterioration was challenging to detect.
Theme 1: Fisher’s exact results.

The data collected from the eight statements in theme 1 was analysed for independence using the Fisher’s exact test in relation to the demographic variables of the participants. Calculation and analysis of 40 Fisher’s exact P values was undertaken. Four were identified as significant:

1. Difference across private or public hospital employment in the level of agreement to the statement “sudden decline and clinical deterioration of the patients’ condition is a common event in the hospital” (Fisher’s exact test, P Value = 0.037). Seen to be more common in public hospitals.
2. Difference by area of specialty in the level of agreement to the statement “clinical deterioration often leads to a disruption in organ function” (Fisher’s exact test, P Value = 0.039). Rehab area was less inclined to agree with the statement.
3. Difference by area of specialty in the level of agreement to the statement “acutely ill patients are often admitted to my clinical area (Fisher’s exact test, P Value = 0.000). Rehab and Aged Care area less inclined to agree with the statement.
4. Difference by area of specialty in the level of agreement to the statement “sudden decline and clinical deterioration of the patients’ condition is a common event in my current clinical area of work” (Fisher’s exact test, P Value = 0.000). All areas other than Critical Care, ED and Medical Ward were less inclined to agree.

Theme 2: Undergraduate & Graduate Preparation.

Theme 2 of the Q-Role focused on the preparation of the participants to manage the deteriorating patient. The participants were asked to rate their level of agreement with nine statements related to undergraduate and postgraduate education. A summary of
the data findings for the nine statements in theme 2 is presented below (see Figure 10 below).

**Figure 10. Q-Role: undergraduate & graduate preparation.**

Statements 1 to 5 in theme 2 asked the participants about their undergraduate education and in particular clinical competencies gained during their undergraduate nursing program. The participants were asked if they were taught relevant clinical competencies firstly to care for ward patients in general, 80.8% of participants agreed they had, with 11.9% undecided and 7.3% disagreeing.

Participants were then asked if they had been taught clinical competencies within their undergraduate studies to assess (statement 2), to monitor (statement 3) and to provide treatment (statement 4) to the deteriorating ward patient. The level of agreements were similar; 75.2% (statement 2), 76.2% (statement 3) and 68.9% (statement 4). The participants were next asked to rate their agreement with a reverse worded statement (statement 5) suggesting there was very little focus on clinical
competencies during the undergraduate program. Around 32.1% of participants agreed with this statement, 19.3% were undecided and 48.6% disagreed.

Participants were asked about their clinical practicum placements during their undergraduate education. Specifically they were asked if they had practicum placements that provided opportunities to assess and manage the deteriorating ward patient (statement 6). From the responses, only 52.3% agreed they had relevant placements, 13.9% were undecided and 33.9% disagreed. Statement 7 asked if a clear set of clinical competencies to assess and manage the deteriorating patient would have been useful in their undergraduate preparation, to which 86.3% agreed they would.

The final statements of theme 2 focused upon the graduate program the participants were undertaking. They were asked if the graduate program provided clinical competencies for assessment and monitoring (statement 8) and treatment and management (statement 9) of the deteriorating patient. Only 59.6% felt the graduate program provided clinical competencies for assessment and monitoring, whilst less 57.8% felt it provided clinical competencies for treatment and management of the deteriorating patient.

**Theme 2: Fisher’s exact results.**

The data collected from the nine statements in theme 2 was analysed for independence using the Fisher’s exact test in relation to the five demographic variables of the participants. This led to the calculation and analysis of 45 Fisher’s exact P values. None of the P values returned less than 0.05, therefore, no significant association between the statements and the demographic variables was found.

**Theme 3: Role in Deterioration**

Theme 3 asked participants to rate their level of agreement with 23 statements focusing upon their clinical role as a GRN in managing the deteriorating ward patient
and their understanding of the role. The theme contained a mix of both positively and negatively framed statements to measure the participants’ rating of agreement.

The initial seven statements focused upon the expectations of the participants’ role when dealing with a deteriorating patient. Around 86.2% of participants expected to look after acutely ill patients within their current area of work and 93.6% of participants agreed it was currently their role to assess and monitor the acutely ill deteriorating ward patient. When asked if they thought the GRN role should be to assess and monitor the deteriorating ward patient, 77.1% agreed with 15.6% undecided and 7.3% disagreeing (see Figure 11 below).

**Figure 11.** Q-Role: clinical role statements 1.

The next statements asked participants about the main role of the GRN when dealing with the deteriorating ward patient. Of the participant responses, 57.8% agreed the main role of the GRN was to record the patients vital signs, 68.8% agreed the main role was overall monitoring of the deteriorating patient and 67% of participants felt the main role included interpretation of monitoring and adjustment of the frequency of monitoring. The participants were asked if their main role went beyond monitoring to
include initiating a clinical management plan. From this statement 31.2% disagreed that their role included clinical management, 17.4% were undecided and only 51.4% agreed.

The following set of statements examined the GRNs role in alerting other health care professionals to the condition of the deteriorating ward patient. From the data, 99.1% of participants agreed it was their role to alert senior nursing staff when concerned about a ward patient deteriorating. Comparatively 95.4% of participants agreed it was their role to alert medical staff to the deteriorating patient (see Figure 12 below).

Figure 12. Q-Role: clinical role statements 2.

Interesting only 75.2% of participants agreed it should be their role to provide initial treatment to prevent further decline of the deteriorating patient with 14.7% undecided and 10.1% disagreeing. In relation to calling the Medical Emergency Team (MET), 88.1% agreed it was their role to call, 6.4% were undecided and 5.5% disagreed that it was their role.

The subsequent set of statements focused on the participants’ awareness of responsibilities in dealing with the deteriorating ward patient. Overall, 78.9% of
participants agreed they had a clear understanding of their responsibilities when dealing with the deteriorating patient with 12.8% undecided and 8.3% disagreeing. When asked if they often felt confused about their responsibilities, 63.3% disagree, 16.5% were undecided and 20.2% agreed (see Figure 13 below).

*Figure 13. Q-Role: clinical role statements 3.*

From the data, 98.2% of participants agreed it was their responsibility to detect clinical deterioration in the ward patient. Again 89.9% agreed that the responsibility of calling for help lies with the person detecting the patients decline. However, 5.5% of GRNs disagreed with this and 4.6% were undecided.

The final set of statements from theme 3 focused on the participants overall understanding of their role in dealing with the deteriorating ward patient (see Figure 14).
Figure 14. Q-Role: understanding of role statements.

When asked if they had a clear understanding of their role as a GRN in dealing with the deteriorating patient, 75.2% agreed, 17.4% were undecided and 7.4% disagreed. A negative statement suggesting that the GRN had no idea what their role was when faced with an acutely ill deteriorating ward patient was also presented. The participants responses showed 75.2% disagreed with the statement, 21.1% were undecided and 6.4% agreed.

The participants were next questioned if they often felt confused about their role with the deteriorating ward patient to which 17.4% agreed they were, 60.6% disagreed, 22% were undecided. When asked if a lack of clarity concerning the GRN role and responsibilities with deteriorating patients often led to frustration, 39.4% agreed it did, 22% were undecided and 43.1% disagreed.

The participants were asked if they often felt out of their depth caring for the deteriorating patient. From this 67% agreed they did, 13.8% were undecided and 19.2% disagreed. When questioned about formulating a management plan for the deteriorating patient, 20.2% indicated that this was not their role, 28.4% were undecided and 51.4% felt it was part of the GRN role. When canvassed about their role in decision making, 50.5% agreed that they were an important part of the decision
making process, 24.8% were undecided and 24.7% felt they were not important in decision making.

**Theme 3: Fisher’s exact results.**

The data collected from the 23 statements in theme 3 were analysed for independence using the Fisher’s exact test in relation to the demographic variables of the participants. This led to the calculation and analysis of 115 Fisher’s exact P values. From these, seven were identified as significant. These were:

1. Difference by gender in the level of agreement to the statement “there are often times when I feel out of my depth in my role caring for the acutely ill deteriorating ward patient” (Fisher’s exact test, P Value = 0.042). Males less likely to indicate they felt out of their depth.

2. Difference by age group in the level of agreement to the statement “I am an important part of the decision making process” (Fisher’s exact test, P Value = 0.018). As age group increases less inclined to agree with statement.

3. Difference by age group in the level of agreement to the statement “I have a clear understanding of my role when dealing with the acutely ill deteriorating ward patient” (Fisher’s exact test, P Value = 0.048). As age group increases less inclined to agree with statement.

4. Difference by age group in the level of agreement to the statement “I often feel confused about my role when dealing with the acutely ill deteriorating ward patient” (Fisher’s exact test, P Value = 0.037). As age group increases more inclined to agree with statement.

5. Difference by age group in the level of agreement to the statement “my role goes beyond recording vital signs and includes interpreting measurements and initiating a clinical management plan e.g. commencing oxygen therapy, insertion of airway adjuncts, selection of Intravenous fluids and administration of a bolus of fluid” (Fisher’s exact test, P Value = 0.033). As age group increases less inclined to agree with statement.

6. Difference by age group in the level of agreement to the statement “I have no idea what my role is when faced with an acutely ill deteriorating ward patient”
(Fisher’s exact test, P Value = 0.012). As age group increases more inclined to agree with statement.

7. Difference by private or public hospital employment in the level of agreement to the statement “it is my responsibility to detect clinical deterioration in the ward patient” (Fisher’s exact test, P Value = 0.015). Staff from private hospital setting less inclined to agree with the statement.

**Theme 4: Knowledge Levels**

Theme 4 asked participants to rate their level of agreement with 5 statements focusing upon the knowledge levels of the GRN in relation to the deteriorating ward patient. Initially the GRNs were asked about specific areas of knowledge to undertake their clinical role (see Figure 15 below).

![FIGURE 15](image)

**Figure 15.** Q-Role: knowledge levels.

The first statement questioned if participants had the right level of knowledge to assess and monitor the acutely ill deteriorating ward patient. Approximately 62.4%
agreed they had, 27.5% were undecided and 10.1% felt they had insufficient knowledge to assess and monitor.

The participants were then asked if they have the right knowledge to make decisions about the deteriorating patient’s management. Only 53.3% agreed they had this knowledge, 33% were undecided and 13.8% felt they did not have the right knowledge to make decisions. Next the participants were asked if they felt able to interpret the findings of assessments and formulate a management plan for the deteriorating patient. Approximately 58.7% of GRNs agreed they could interpret and formulate a management plan with 34.9% indicating they were undecided and 6.4% disagreeing.

The focus then shifted to whether the participants’ knowledge and clinical competence could be improved in relation to assessment and monitoring and subsequent treatment and management of the deteriorating ward patient. The responses indicated the participants overwhelmingly agreed knowledge and competence could be improved. Around 95.4% (assessment and monitoring) and 97.2% (treatment and management) agreed knowledge could be improved.

**Theme 4: Fisher’s exact results.**

The data collected from the five statements in theme 4 was analysed for independence using the Fisher’s exact test in relation to the five demographic variables of the participants. This led to the calculation and analysis of 25 Fisher’s exact P values. None of the P values were returned less than 0.05, therefore, no significant association between the statements and the demographic variables was found.

**Theme 5: Confidence Levels**

Theme 5 asked participants to rate their level of agreement with seven statements focusing upon the confidence levels of the participants in relation to managing the
deteriorating ward patient. The statements measured confidence in relation to clinical monitoring, intervention and communication (see Figure 16 below).

![Figure 16. Q-Role: confidence levels.](image)

The initial statement asked GRNs about their level of confidence to assess and monitor the acutely ill patient with 65.1% agreeing they felt confident, whilst 17.4% were undecided and a further 17.4% indicating they did not feel confident. Next the participants were asked if they were confident calling for help when a patient becomes unwell. Around 88.1% of GRNs agreed they felt confident to call for help, 8.3% were undecided and 3.7% disagreed.

Communication was the focus of the next question, the participants were asked if they felt confident explaining their concerns about the deteriorating ward patient to senior nursing staff. The results showed 93.6% agreed they felt confident talking to senior nurses, 2.8% were undecided and 3.7% disagreed. Confidence in talking to the medical staff and explaining concerns about deterioration was then asked in the next question. Interestingly, 71.6% agreed they were confident raising concerns with medical staff. Approximately 13.8% were undecided and 14.7% did not agree.
The participants were subsequently questioned about their confidence to initiate treatment before the medical team had reviewed the deteriorating patient. Interestingly 45% agreed they felt confident. On further questioning about specific treatments such as giving high concentration oxygen or suctioning a patient prior to medical team review, 67.9% of participants agreed they felt confident to initiate this treatment. However, 20.2% of participants did not feel confident to initiate simple treatment prior to medical review with 11.9% indicating they were undecided. When asked if they often felt out of their depth assessing and managing the deteriorating patient, 63.3% of participants agreed they did, 16.5% were undecided and 20.2% disagreed.

**Theme 5: Fisher’s exact results.**

The data collected from the seven statements in theme 5 was analysed for independence using the Fisher’s exact test in relation to the demographic variables of the participants. This led to the calculation and analysis of 35 Fisher’s exact P values. From the 35 P values analysed, four were identified as significant:

1. Difference by gender in the level of agreement to the statement “there are often times when I feel out of my depth assessing and managing the deteriorating ward patient” (Fisher’s exact test, P Value = 0.024). Male respondents less inclined to agree with statement.

2. Difference by age group in the level of agreement to the statement “I feel confident calling for help when a patient becomes unwell” (Fisher’s exact test, P Value = 0.030). As age group increases more inclined to disagree with statement.

3. Difference by age group in the level of agreement to the statement “I feel confident talking to nursing staff and explaining my concerns about the deteriorating ward patient” (Fisher’s exact test, P Value = 0.030). As age group increases more inclined to disagree with statement.

4. Difference by age group in the level of agreement to the statement “I feel confident to initiate treatment before the medical team have reviewed the
deteriorating ward patient” (Fisher’s exact test, P Value = 0.029). As age group increases more inclined to disagree with statement.

**Theme 6: Competence Levels**

Theme 6 asked participants to rate their level of agreement with six statements focusing upon the competence levels of the participants in relation to managing the deteriorating ward patient (see Figure 17 below).

![Figure 17. Q-Role: competence levels.](image)

Generally, participants agreed that clinical competence was important in providing effective care for patients, with 100% of GRNs agreeing. The participants were asked if being clinically competent in the assessment and management of the deteriorating ward patient was important for them, to which 97.2% agreed.

The participants were questioned about their current level of competence. They were asked if they had the right level of competence to assess and monitor the acutely ill deteriorating ward patient. Approximately 65.1% agreed they did have the right level of competence, 24.8% were undecided and 10.1% disagreed. Next the
participants were asked if they had the right level of competence to make decisions about the deteriorating ward patient’s management. Surprisingly, only 40.4% agreed they had the competence to make clinical management decisions. Around 42.2% were undecided and 17.4% suggested they did not have the competence to make clinical decisions.

The focus of the theme statements then moved to the development of competence. The participants were asked if their current clinical area encouraged the development of relevant clinical competencies. The first statement concerned competencies to assess and monitor the deteriorating ward patient with 73.4% agreeing they were encouraged, 7.3% were undecided and 19.3% disagreed. The second statement concerned encouragement of competencies to manage the deteriorating ward patient to which 68.8% agreed they were encouraged, 12.8% were undecided and 18.3% disagreed.

**Theme 6: Fisher’s exact results.**

The data collected from the six statements in theme 6 was analysed for independence using the Fisher’s exact test in relation to the demographic variables of the participants. This led to the calculation and analysis of 30 Fisher’s exact P values. From the 30 P values analysed, one was identified as significant:

1. Difference by age group in the level of agreement to the statement “my current clinical area of work encourages the development of relevant clinical competencies to assess and monitor the deteriorating ward patient” (Fisher’s exact test, P Value = 0.018). As age group increases more inclined to disagree with statement.

**Theme 7: Clinical Management of Deterioration**

Theme 7 asked participants to rate their level of agreement with thirteen statements focusing upon the clinical management of the deteriorating patient. The statements
focused on a number of areas including response to deterioration, delays in providing intervention and clinical policies to guide practice (see Figure 18 below).

![Figure 18. Q-Role: clinical management of deterioration 1.](image)

Initially the participants were asked about overall management of the deteriorating patients within the hospital setting. Around 64.2% of participants agreed that deteriorating patients were well managed in their hospital with 22.9% undecided and 12.8% disagreeing. When a negatively framed statement was used indicating the deteriorating patients were often poorly managed within the hospital with delays in assessment and treatment, 40.4% of participants agreed, with 22% undecided and 37.6% disagreeing.

When questioned about overall management of the deteriorating patients within their clinical area, 72.5% of participants agreed deteriorating patients were well managed in their areas. Again when negatively framed suggesting the deteriorating patients are often poorly managed within my current clinical area of work with delays in assessment and treatment 23.9% of participants agreed, around 19.3% were undecided and 56.0% disagreed.

The next focus concerned the timeliness of clinical management for the deteriorating patient (see Figure 19 below).
Participants were asked if it was important to call for help quickly when a patient condition deteriorates, with 99.1% agreeing it was important. Participants were then questioned as to whether management of the deteriorating ward patients was given priority by staff in their area. Around 86.2% agreed that the deteriorating patient was always given priority by nursing staff, 10.1% were undecided and 3.7% disagreed. Around 68.8% agreed the deteriorating patient was always given priority by medical staff, 22% were undecided and 9.2% disagreed.

Participants were asked if decisions about deteriorating patient management were made quickly. Around 68.8% agreed decisions were made quickly, 22% were undecided and 9.2% disagreed. The participants were asked if delays in medical review occurred often with 46.8% agreeing delay in review was common event. Around 34.9% of participants also agreed, that treatment of the deteriorating patients was often delayed by medical staff.

Finally participants were asked about clinical policies to support practice (see figure 20). Around 91.7% of participants agreed there was a clear policy and procedure in their area of work for alerting help when a patient deteriorates. Also 79.8% of participants agreed their current clinical area of work had specific policies.
and procedures and 75.2% agreed their area had policies and procedures for the management of the deteriorating patient (see Figure 20).

Figure 20. Q-Role: clinical management of deterioration 3.

Theme 7: Fisher’s exact results.

The data collected from the thirteen statements in theme 7 were analysed for independence using the Fisher’s exact test in relation to the five demographic variables. This led to the calculation and analysis of 65 Fisher’s exact P values. None of the P values were returned less than 0.05, therefore, no significant association between the statements and the demographic variables was found.

Theme 8: Clinical Support.

Theme 8 was the final set of statements within the Q-Role questionnaire. The participants were asked to rate their level of agreement with four statements focusing upon the clinical support of the GRN (see Figure 21).
Figure 21. Q-Role: clinical support of GRNs.

The participants were asked if they felt supported by both nursing and medical colleagues when they called for help. Around 84.4% agreed they felt supported by their nursing colleagues, with 9.2% undecided and 6.4% disagreeing. In contrast 60.5% agreed they felt supported by their medical colleagues when calling for help with 30.3% undecided and 9.2% disagreeing.

Next the participants were questioned about guidance and clarification when dealing with the deteriorating patient. Around 76.1% agreed their nursing colleagues were able to guide me and clarify roles and responsibilities when dealing with the deteriorating ward patient. However, 49.5% agreed that medical staff provided guidance and clarification of roles and responsibilities when dealing with the deteriorating ward patient.

**Theme 8: Fisher’s exact results**

The data collected from the four statements in theme 8 was analysed for independence using the Fisher’s exact test in relation to the five demographic variables of the participants. This led to the calculation and analysis of 20 Fisher’s exact P values.
None of the P values were returned less than 0.05, therefore, no significant association between the statements and the demographic variables were found.

**Q-Comp Findings: Parts 2, 3 and 4**

Within this section of the chapter the analysis and findings from the Q-Comp questionnaire will be presented. The Q-Comp was developed from the Department of Health UK (2009) document entitled “Acutely ill Competency Framework”. This document prescribed a list of 79 key competencies to be used by healthcare practitioners in the hospital setting, to manage the acutely ill deteriorating ward patient.

The Q-Comp was formatted to initially collect nominal demographic data from the GRNs. The data provided scope for understanding the background and context of the participants’ practice. It also facilitated the discovery of possible associations between demographic variables and the participants’ selection of important competencies together with the chain of response (COR) level they were currently working in their clinical practice.

Q-Comp centred on collecting ranked ordinal data on the importance of the 79 pre-determined key clinical competencies. To measure the participants rating of the importance of each competency, the questionnaire utilised a 4 point Likert scale.

Ordinal data for the chain of response (COR) level at which the participants were currently working in their clinical practice was collected. This related to the acute care competencies that the participants had identified as important. An algorithm within the Q-Comp questionnaire identified if the participant had identified a competency as important. These participants were then directed to answer a secondary set of statements to indicate the COR level they were working at in relation to the specific competency.
The Q-Comp questionnaire was divided into three sections, which the participants could complete over a period of six weeks. This led to a variation in the number of participants completing each section and a different demographic profile for each of the three Q-Comp sections. Each section will present the relevant demographic information collected, followed by the findings for each related competency.

These three sections comprises parts 2, 3 & 4 of the quantitative questionnaires, containing the following competency domains from the UKDH competency document:

- Part 2 Q-comp: Domain 1: Airway, Breathing, Ventilation and Oxygenation (15 competency groups in total)
- Part 3 Q-Comp: Domain 2: Circulation (27 competency groups in total)
- Part 4 Q-Comp consisted of: Domain 3: Acute Neurological Care (14 competency groups in total); Domain 4: Transport & Mobility (3 competency groups in total); Domain 5: Patient Centred Care: Team Working and Communications (20 competency groups in total)

**Domain 1: Airway, Breathing, Ventilation and Oxygenation Competencies**

The invitation to participants to complete the Q-Comp was sent via email to 941 GRNs who met the inclusion criteria. Initially 4.78% (n=45) opted out of the study. From the remaining 896 GRNs invited to participate, 10.93% (n=98) undertook the online part 2 Q-Comp. From this number, 59.1% (n=58) were fully completed. Disappointingly 40.8% (n=40) of questionnaires were excluded as there were large volumes of missing data.

**Domain 1 Demographics**

The nominal data concerning the demographics identified some of the characteristics of the sample and provided variables that could be used in comparative analysis with
other data. A total of 58 valid part 2 Q-Comp questionnaires were analysed from the participants.

**age group.**

The participants were asked to identify their age group from nine categories. The age categories ranged from 18-20 years of age through to 56 years and over. The sample included participants with age ranges 18-20 years through to 46-50 years. The greatest number of participants were in the 21-25 years age range (n=29). The age ranges of 51-55 years and 56 years and over, were not represented.

**gender.**

As part of the demographic data, the participants were asked to identify their gender. As found previously in the Q-Role, the vast majority of participants in the Q-Comp were female equating to 93.6% (n=55) with a small number of males 6.4% (n=3).

**private or public hospital employment.**

The next demographic variable that was recorded was type of employing hospital. The participants were given two categories to choose from: public hospital; or private hospital employers. Of the total, 82.8% (n=48) of participants were employed within the public hospital, 17.2% (n=10) within the private hospital.

**area of speciality.**

The participants were asked to identify their current area of specialty from a list of 10 options. All of the participants were employed within an acute care hospital and the specialty in which they were employed varied in acuity level. The most frequent area of specialty in which the GRNs were working was identified as the medical ward accounting for 39.7% (n=23) of participants. This specialty was followed by the surgical ward accounting for 25.9% (n=15), and Rehab and Emergency Department both with 8.6% (n=5) participants. The other six specialty areas accounted for just 25.8% (n=15) of the total number of participants. The specialty of Orthopaedics did not have participants in the study.
undergraduate nursing education.

The participants were asked to identify the university where they had completed their undergraduate nursing studies. They were again given a choice of six categories, five containing local Perth universities and an option of “other university”. Participants represented all of the Perth universities. The largest number educated at Edith Cowan University with 29.3% (n=17) of the sample. The next largest numbers were entered under “Other University” at 24.1% (n=14), UNDA with 20.7% (n=12), Curtin with 17.2% (n=10), UWA with 5.2% (n=2), and Murdoch with 3.4% (n=2),

Domain 1: Overview

Within the Q-Comp, the 15 Domain 1 competencies, were reviewed and rated. These competencies related to the assessment and management of the acutely ill patient in terms of airway, breathing, ventilation and oxygenation. Two different measures were undertaken within the questionnaire. The first rated the level of importance of the competency, and the second measured the level at which the participants were working in relation to the competencies.

The participants were asked to rate the importance of each of the competencies in managing the deteriorating ward patient in their current clinical role. Initially the ranked order frequency distributions were calculated for all of the responses. The process was done for each of the 15 individual competencies within Domain 1.

The second rating asked the participants to choose from a list of pre-determined competency elements, the ones that best described their current practice with the deteriorating ward patient. These competency elements were the COR level descriptors that would identify the participants level of working and complexity of the role undertaken. The ranked order frequency distributions were calculated for all of the responses using the SPSS 24 statistical software package (IBM, 2016). Measures of central tendencies were undertaken to calculate the mode of the COR level for each competency group.
The final stage of data analysis was to compare the ranked ordinal data with the demographic variables to investigate possible associations. As the number of participants in some of the demographic variables categories was low, the Fisher’s exact test was used to calculate the level of independence.

**Level of importance.**

All groups were related to the processes involved in assessing and maintaining an airway, adequate breathing, ventilation and oxygenation of an acutely ill patient. The 15 competency groups, ranged in focus and complexity. The rank ordered frequency of distribution for participants’ indicating agreement to the importance of competency was important was calculated (see Figure 22 below).

![Figure 22. Domain 1: level of importance.](image)

The level of agreement on importance for an individual competency group across the participants ranged from 58.6% (n=34) for the Peak Flow/Spirometry competency group to 100% (n=58) for the Respiratory Rate, the Common causes of Breathlessness & Oxygen Saturation competency groups.
Generally the participants identified the competency groups related to assessment and monitoring as being the most important. These included: respiratory rate; common causes of breathlessness; and oxygen saturation competencies. These were all rated as important by 100% (n=58) of the participants. This was followed closely by the assessment of adequacy of ventilation and oxygenation competency group, which was rated as important by 98.3% (n=57) of participants.

Some of the more complex assessment strategies were identified as less important. The peak flow & spirometry competencies scored the lowest level of importance for Domain 1, with only 58.6% (n=34) of participants agreeing it was an important competency for their clinical practice. The arterial blood gas sampling competency group was rated important by 70.7% (n=41) of participants.

Overall, the participants rated the intervention competencies as less important than the assessment and monitoring competencies. The intervention competencies included the administration of drugs via nebuliser rated important by 94.8% (n=55) and the use of airway adjuncts and suction rated important by 87.9% (n=51) of GRNs. Also within the intervention competencies were the high flow and controlled oxygen therapy which was rated important by 84.5% (n=49) and the continuous positive airway pressure and/or non-invasive pressure supported ventilation rated important by 70.7% (n=41) of participants.

Generally, the more complex management competencies within the domain were rated the least important. The groups ranged from chest drain rated by 81.0% (n=47) of participants as important, down to chest xray rated by only 63.8% (n=37) as an important competency for their clinical practice. Other complex management competencies included tension pneumothorax rated which was rated important by 72.4% (n=42), urgent endotracheal intubation rated important by 69.0% (n=40) and tracheostomy (spontaneous ventilation) rated important by 63.8% (n=37) of participants.

The average rating of importance of the Domain 1 competencies for managing the deteriorating patient was calculated at 81% (n=47).
Importance by area of speciality.

Following on from the ratings of individual competency groups, the measure of central tendency was calculated using the average rating of importance by area of speciality. This process measured the ratings given by participants working within the different speciality area to identify any differences (see Figure 23 below).

![Overall Importance Domain 1 by Speciality](image)

**Figure 23.** Domain 1: importance by area of speciality.

The area of speciality that rated the Domain 1 competencies with the highest level of importance to their clinical practice was the critical care speciality. The overall average rating of importance was 100% (n=1). The lowest level of importance was given by the “Other” speciality with an average rating of 59.9% (n=3) followed by Rehab with an average rating of 66.6% (n=5).

**Competencies: Chain of response level.**

Next the participants identified the COR level that they were currently working at for the competencies they rated as important. This data was gathered for all the 15 competency groups within Domain 1 (see Figure 24 below).
From the data, ranked order frequency distributions were calculated for each of the competencies. A measures of central tendency using the mode was also calculated for each competency to identify the most commonly occurring COR level of working for each of the competencies.

The mode for the COR level of working ranged from a mode of level 1 (COR Level = Non-clinical supporter) for the continuous positive airway pressure (CPAP) and/or non-invasive pressure supported ventilation (NIV) competencies to a mode of level 4 (COR Level = Primary Responder) for chest Radiograph competency group.

The majority of competencies reviewed by the participants in Domain 1 fell into two main COR levels. The most commonly occurring level was level 3 (The Recogniser) with seven competencies being applied at this level. The second most common level of working was level 2 (The Recorder) with six competencies being applied at this level.

Only one competency group was undertaken at level 1 (Non-clinical supporter) and at level 4 (Primary Responder). None of the competency groups were undertaken at level 5 (Secondary Responder). Interestingly both assessment orientated
competencies and intervention were represented almost evenly in the COR levels of working.

A further measure of central tendency was calculated using the average measure of the COR levels of working by area of speciality. This was done to highlight any differences in the levels of working of GRNs between the speciality areas (see Figure 25 below).

Figure 25. Domain 1: COR by area of speciality.

Notably, the area of speciality with the highest level of working in relation to the COR was the speciality of critical care with a mode of level 5 (Secondary Responder). The next highest speciality was the Emergency Department with a mode of level 4 (Primary Responder). Interestingly the remaining seven specialities all had the same level of working with level 3 (The Recogniser).

Fisher’s exact results.

The data collected from the 15, Domain 1 competencies was analysed for independence using the Fisher’s exact test in relation to the demographic variables and the ratings of importance and the COR levels of working.
The rating of the importance of competencies was compared with the five demographics variables. This rating of importance led to the calculation and analysis of 75 Fisher’s exact P values. None of the P values returned less than 0.05, therefore, no significant association between the level of importance and the demographic variables was found.

The 15 competency groups were then analysed for independence in regards to the COR level of working and the five demographic variables. This led to the calculation and analysis of further 75 Fisher’s exact test P values. From this 75 P values, five were identified as significant:

1. Difference by gender in the COR level of working in relation to the Respiratory Rate competency group (Fisher’s exact test, P Value = 0.041).
2. Difference by private or public hospital employment in the COR level of working in relation to the Chest Radiograph competency group (Fisher’s exact test, P Value = 0.003).
3. Difference by private or public hospital employment in the COR level of working in relation to the Use of airway adjuncts and suction competency group (Fisher’s exact test, P Value = 0.035).
4. Difference by area of specialty in the COR level of working in relation to the High flow and controlled oxygen therapy competency group (Fisher’s exact test, P Value = 0.035).
5. Difference by area of specialty in the COR level of working in relation to the Chest Drain competency group (Fisher’s exact test, P Value = 0.048).

**Domain 2: Circulation Competencies**

In total the part 3 Q-Comp invitation was sent via email to 896 GRNs who met the inclusion criteria. Initially 2.45% (n=22) of graduate registered nurses opted out of the study. From the remaining 874 GRNs invited to participate, 7.89% (n=69) undertook the online Q-Comp. From the submitted part 3 Q-Comp, only 68.1% (n=47) were fully
completed. Approximately 31.8% (n=22) of questionnaires were submitted with large volumes of missing data and were excluded from the study findings.

**Domain 2: Demographics**

*age group.*

The participants were asked to identify their age group. These ranged from 18-20 years of age through to 56 years and over. The sample included participants with age ranges from 18-20 years through to 56 and over. The greatest number of participants were in the 21-25 years age range making up 46.8% (n=22) of participants. The age ranges of 51-55 years had no representation (n=0).

*gender.*

The participants were asked to identify their gender. As found previously in the other Domain, the vast majority of participants were female equating to 93.6% (n=44). A small number of males 6.4% (n=3) participated.

*private or public hospital employment.*

Again the GRNs were given two categories to choose from: public hospital; or private hospital employers. Of the total, 87.2% (n=41) of participants were employed within the public hospital, and 12.8% (n=6) within the private hospital.

*area of speciality.*

The GRNs were given the same ten categories of speciality to choose from. The most frequent area identified was the medical ward which accounted for 38.3% (n=18) of participants. This was followed by the surgical ward with 23.4% (n=11), and the Emergency Department with 10.6% (n=5) of participants. The speciality of Orthopaedics did not have any participants.

*undergraduate nursing education.*

The participants were asked to identify the university where they had completed their undergraduate nursing studies leading to registration. They were again given a choice
of six categories, five containing local Perth universities and an option of “other university”. There was representation of participants from all of the university groups. The largest number of participants were educated at Edith Cowan University with 31.9% (n=15) of the sample. This was followed the University of Notre Dame at 23.4% (n=11) and the Curtin University 21.3% (n=10). The other 3 options made up just 23.4% (n=11) of the sample.

**Domain 2: Overview**

Within the part 3 Q-Comp, Domain 2 with twenty seven ‘Circulation’ competencies were reviewed and rated. These competencies related to the assessment and management of the acutely ill patient in terms of cardiovascular function and perfusion. The participants were asked to rate the level of importance of the individual competencies to their current practice using a Likert scale. They were asked to identify the level at which they were working in relation to the competencies. This was achieved using the COR competency elements, selecting the ones that best described their current level of practice.

The ranked order frequency distributions were calculated for all of the participants across each competency within the Domain for the level of importance. Measures of central tendencies were calculated for the COR for each competency group.

The final step of statistical analysis compared the ranked ordinal data with the demographic variables for possible association. As previously discussed, the number of participants in a number of the demographic variables categories was low so the Fisher’s exact test was used to calculate the level of independence.

**Level of importance.**

The participants were asked to rate the level of importance of the Domain 2 competencies to current clinical practice as a graduate nurse. This was achieved using
the Likert scale responses to calculate the rank ordered frequency distribution of agreement (see Table 7 below).

Table 7

**Domain 2: Competencies Level of Importance**

<table>
<thead>
<tr>
<th>Ranked Order</th>
<th>Domain 2 Circulation Competency Group</th>
<th>Level of Importance (% Agreement)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Measurement of Heart Rate</td>
<td>100</td>
</tr>
<tr>
<td>2.</td>
<td>Measurement of Blood Pressure</td>
<td>100</td>
</tr>
<tr>
<td>3.</td>
<td>Fluid status and balance assessment</td>
<td>100</td>
</tr>
<tr>
<td>4.</td>
<td>Measurement of Temperature</td>
<td>100</td>
</tr>
<tr>
<td>5.</td>
<td>Care of peripheral venous access</td>
<td>100</td>
</tr>
<tr>
<td>6.</td>
<td>Collapsed/unresponsive patient</td>
<td>100</td>
</tr>
<tr>
<td>7.</td>
<td>ECG monitoring and recording of trace</td>
<td>97.9</td>
</tr>
<tr>
<td>8.</td>
<td>External chest compressions</td>
<td>97.9</td>
</tr>
<tr>
<td>9.</td>
<td>Urinary catheter</td>
<td>95.7</td>
</tr>
<tr>
<td>10.</td>
<td>Peripheral Venous Cannula</td>
<td>95.7</td>
</tr>
<tr>
<td>11.</td>
<td>Intravenous fluid maintenance and resuscitation</td>
<td>95.7</td>
</tr>
<tr>
<td>12.</td>
<td>IV infusions (giving sets and pumps)</td>
<td>95.7</td>
</tr>
<tr>
<td>13.</td>
<td>Emergency drugs</td>
<td>95.7</td>
</tr>
<tr>
<td>14.</td>
<td>Automated external defibrillator</td>
<td>95.7</td>
</tr>
<tr>
<td>15.</td>
<td>External haemorrhage</td>
<td>93.6</td>
</tr>
<tr>
<td>16.</td>
<td>Blood sampling equipment</td>
<td>93.6</td>
</tr>
<tr>
<td>17.</td>
<td>Administration of blood products including warming</td>
<td>93.6</td>
</tr>
<tr>
<td>18.</td>
<td>Alternatives to peripheral venous access</td>
<td>93.6</td>
</tr>
<tr>
<td>19.</td>
<td>Anaphylaxis</td>
<td>93.6</td>
</tr>
<tr>
<td>20.</td>
<td>Cardiac arrest rhythms (VF, pulseless VT, PEA and asystole)</td>
<td>93.6</td>
</tr>
<tr>
<td>21.</td>
<td>Assessment of cardiac output</td>
<td>91.5</td>
</tr>
<tr>
<td>22.</td>
<td>Central venous catheter</td>
<td>83</td>
</tr>
<tr>
<td>23.</td>
<td>Hypodermic needles and syringes</td>
<td>78.7</td>
</tr>
<tr>
<td>24.</td>
<td>Nasogastric tube</td>
<td>76.6</td>
</tr>
<tr>
<td>25.</td>
<td>Non-automated external defibrillation</td>
<td>74.5</td>
</tr>
<tr>
<td>26.</td>
<td>Arterial catheter</td>
<td>70.2</td>
</tr>
<tr>
<td>27.</td>
<td>Ultrasound machine</td>
<td>61.7</td>
</tr>
</tbody>
</table>
The number of rating of importance ranged from 100% (n=47) to 61.7% (n=29). On average, 91.4% of GRNs rated Domain 2 competencies as important to their clinical role.

The Domain 2 competencies ranged in focus and complexity. They were related to assessment and monitoring of heart rate, cardiovascular function and circulatory status, along with intervention and emergency resuscitation of cardiovascular function in the acutely ill patient.

The participants identified the competencies related to assessment and monitoring of circulation and cardiovascular function as being the most important circulation competencies overall (see Figure 26 below).

**Figure 26.** Domain 2: level of importance for assessment of circulation competencies.

Six of the top seven highest rating competencies within Domain 2 were concerned with assessment or monitoring. These included: measurement of heart rate; measurement of blood pressure; fluid status and balance assessment; measurement of temperature; care of peripheral venous access; and ECG monitoring. These were all rated as important by 100% (n=47) of participants. Interestingly, a number of more complex assessment competencies were still rated as important by the participants.
including the assessment of cardiac output rated as important by 91.5% (n=43) of participants.

The participants rated the intervention competencies as less important than the assessment and monitoring competencies. However, the intervention group was still rated highly, with the majority of the intervention competencies rated as important by more than 90% of the participants. The emergency intervention competencies were rated as the most important (see Figure below).

![Domain 2: Emergency Intervention Competency Groups](chart)

*Figure 27. Domain 2: level of importance for emergency intervention competencies.*

Participants noted that the collapsed unresponsive patient competency, related to recognising cardiac arrest and commencing CPR, was rated as important by 100% (n=47) of participants. This was closely followed by the external chest compressions competency rated as important by 97.9% (n=46) of participants. The emergency drugs and automated external defibrillator competencies were also rated as important by 95.7% (n=45) of participants.

Some of the non-emergency interventions also scored highly and included: urinary catheter; peripheral venous cannula; intravenous fluid maintenance and resuscitation; and IV infusions (giving sets and pumps) were all rated as important by 95.7% (n=45) of participants.
The more complex technical intervention and management competencies within the domain were rated the least important. These included the non-automated external defibrillation (manual defib) competency rated as important by 74.5% (n=35) of participants, the arterial catheter competency rated as important by 70.2% (n=33) of participants and the ultrasound machine competency rated as important by 61.7% (n=29) of participants (see Figure 28 below).

![Domain 2: Intervention Competency Groups](image)

**Figure 28.** Domain 2: level of importance for complex intervention competencies.

The measure of central tendency was calculated using the average rating of importance, by area of speciality for the Domain 2 competencies. This enabled identification of any differences between the areas of speciality and the importance of the competencies for clinical practice (see figure 29 below).
Figure 29. Domain 2: importance of circulation competencies by area of speciality

Generally the Domain 2 competencies were rated as important by the majority of participants, within all specialities. The area of speciality that rated the Circulatory competencies with the highest level of importance to their clinical practice was the Emergency Department with an average rating 94.8%. The lowest level of importance was given by participants working in Aged Care, with an average of 79.6%.

Domain 2: Chain of response level.

Participants were asked to identify the COR level they currently worked at, in relation to the Circulatory competencies they noted as important. From the data, ranked order frequency distributions were calculated for each competency. A measures of central tendency using the mode of the responses was calculated for each competency to identify the most commonly occurring level of working for each of the competencies.

The initial grouping of competencies related to the seven competency groups focused on the assessment of circulation. The COR level of working of the participants ranged from level 3 (The Recogniser) to level 4 (Primary Responder). The mode of the GRNs level of working for these competencies was at level 3 (The Recogniser) (see Figure 30 below).
The next grouping of Domain 2 competencies related to the nine competency groups focusing on the emergency intervention. The COR level of working of the participants ranged from level 1 (Non-clinical supporter) to level 4 (Primary Responder). The competency group of anaphylaxis had the highest level of working at COR level 4. The mode of the participants COR level of working for these competencies was level 1 (Non-clinical supporter). This result contrasted sharply to the level of working identified in the assessment of circulation competencies (see figure 31).

**Figure 30.** Domain 2: assessment of circulation COR level.

**Figure 31.** Domain 2: circulation emergency intervention competencies COR levels.
The final grouping of Domain 2 competencies focused on both complex and non-complex interventions for circulation (see Figure 32).

![Domain 2: Intervention Competency Groups](image)

Figure 32. Domain 2: complex and non-complex circulation interventions COR levels.

The chain of response level of working of the participants ranged from level 1 (Non-clinical supporter) to level 3 (The Recogniser). The mode of the participants COR level of working for this competency grouping was level 2 (The Recorder).

The level of working for the Domain 2 Circulation competencies ranged from level 1 (Non-clinical supporter) through to level 4 (Primary Responder). The majority of competencies in Domain 2 fell into the COR level 3 (The Recogniser) with ten competencies being applied clinically at this level. The second most common level of working was level 2 (The Recorder) with nine competencies being applied clinically at this level.

Of the remaining seven competencies, five were undertaken at level 1 (Non-clinical supporter) with three competencies undertaken at level 4 (Primary Responder). None of the competencies were undertaken at level 5 (Secondary Responder). Interestingly, the assessment orientated competencies were most likely undertaken at the higher levels of working.
Chain of response: areas of speciality.

Following on from the individual competencies’ COR levels, a further measure of central tendency was calculated using the average measure of the COR level of working by area of speciality. This was undertaken to highlight differences in the levels of working of GRNs between the speciality areas (see Figure 33).

![Figure 33. Domain 2: circulation COR levels by area of speciality.](image)

Interestingly the area of speciality with the highest level of working in relation to the Domain 2 Circulation competencies was the speciality of theatres (perioperative) with a mode of level 5 (Secondary Responder). It must be noted, however that there was only one respondent (n=1) working in theatres.

From the remaining eight speciality areas, five areas indicated that they were working at level 3 (The Recogniser) and the remaining three areas were working at level 2 (The Recorder). The overall mode for the COR level of working across all speciality areas was level 3 (The Recogniser).
Fisher’s exact results.

The data collected from the Domain 2 competencies was analysed for independence [using the Fisher’s exact test] in relation to the demographic variables and the ratings of importance and COR levels of working. This rating of importance led to the calculation and analysis of 135 Fisher’s exact P values. None of the P values returned less than 0.05, therefore, no significant association between the level of importance and the demographic variables was found.

The competencies were then analysed for independence in regards to the COR level of working and the five demographic variables. This led to the calculation and analysis of further 135 Fisher’s exact test P values. From this 135 P values, nine were identified as significant:

1. Difference by age group in the COR level of working in relation to the Measurement of temperature competency group (Fisher’s exact test, P Value = 0.021).
2. Difference by gender in the COR level of working in relation to the External haemorrhage competency group (Fisher’s exact test, P Value = 0.048).
3. Difference by gender in the COR level of working in relation to the Administration of blood products including warming competency group (Fisher’s exact test, P Value = 0.015).
4. Difference by area of specialty in the COR level of working in relation to the Blood sampling equipment competency group (Fisher’s exact test, P Value = 0.044).
5. Difference by area of specialty in the COR level of working in relation to the Anaphylaxis competency group (Fisher’s exact test, P Value = 0.024).
6. Difference by private or public hospital employment in the COR level of working in relation to the Central venous catheter competency group (Fisher’s exact test, P Value = 0.035).
7. Difference by private or public hospital employment in the COR level of working in relation to the External chest compressions competency group (Fisher’s exact test, P Value = 0.035).
8. Difference by private or public hospital employment in the COR level of working in relation to the Cardiac arrest rhythms (VF, pulseless VT, PEA and asystole) competency group (Fisher’s exact test, P Value = 0.044).

9. Difference by private or public hospital employment in the COR level of working in relation to the Peripheral Venous Cannula competency group (Fisher’s exact test, P Value = 0.002).

Domains 3, 4 & 5 Competencies

An invitation to participate in the Q-Comp was emailed to 874 GRNs. Initially 1.25% (n=11) GRNs opted out of the study. From the remaining 863 GRNs invited to participate, 5.52% (n=69) undertook part 4 of the Q-Comp. Approximately 81.2% (n=39) were fully completed. Around 18.8% (n=22) of questionnaires were missing data and had to be excluded from the study. A total of 39 Q-Comp questionnaires were analysed.

In part 4 of the Q-Comp questionnaire, three separate competency domains were rated. These domains included;

- Domain 3. Acute Neurological Care (14 competency groups in total)
- Domain 4. Transport & Mobility (3 competency groups in total)
- Domain 5. Patient Centred Care: Team Working and Communications (20 competency groups in total)

The participants were again asked to rate the level of importance of the individual competencies to their current clinical practice using a Likert scale. Next they were asked to identify the level at which they were working in relation to the competency groups from the pre-determined COR.

The level of importance ranked order frequency distributions were calculated across each of the individual competencies, within the three Domains. Measures of central tendencies were undertaken to calculate the mode of the COR for each
competencies to indicate the level at which the GRN were working. Finally the ranked ordinal data was analysed with the demographic variables for possible association. The Fisher’s exact test was used to calculate the level of independence.

**Demographics (Domains 3, 4 & 5)**

*age group.*

The participants were asked to identify their age group. The sample included participants with age ranges from 18-20 years through to 46-50 years. The greatest number of participants were in the 21-25 years age range making up 38.5% (n=15) of participants. The age ranges of 51-55 years and 56 years & over were not represented.

*gender.*

The vast majority of participants were female equating to 94.9% (n=37). A small number of males 5.1% (n=2) participated in the questionnaire.

*private or public hospital employment.*

The participants were asked to identify their type of employer from the two categories: public hospital; or private hospital. Of the total, 94.9% (n=37) were employed within the public hospital. Approximately 5.1% (n=2) of participants worked within the private hospital.

*area of speciality.*

With regards to the area of speciality, the participants were given a choice of 10 categories. The most frequent area of speciality was the medical ward accounting for 41% (n=16) of participants. This was followed by the surgical ward accounting for 20.5% (n=8), and the Emergency Department with 12.8% (n=5) participants. The speciality areas of critical care, orthopaedics and theatres were not represented.

*undergraduate nursing education.*

Similar to the other questionnaires, a choice of six categories was provided to participants. The largest number were educated at Edith Cowan University with 30.8%
(n=12). This was followed by Curtin University 23.1% (n=9) and the University of Notre Dame with 20.5% (n=8). The remaining universities made up just 25.6% (n=10) of the sample.

**Domain 3: Acute Neurological Care Overview**

Within the part 4 Q-Comp, Domain 3 with 14 Acute Neurological Care competencies were reviewed and rated. The Domain 3 competencies related to assessment of neurological function, recognition of neurological decline and intervention or management of acute neurological changes including unconsciousness. The participants were asked to rate the level of importance of the individual competencies to their current practice using a Likert scale. Participants were asked to identify the level at which they were working in relation to the competencies. This was achieved using the COR competency elements, selecting the ones that best described their current level of practice.

The ranked order frequency distributions were calculated for all of the participants across each competency within the Domain for the level of importance. Measures of central tendencies were calculated for the COR for each competency group.

The final step of statistical analysis compared the ranked ordinal data with the demographic variables for possible association. As previously discussed, the number of participants in a number of the demographic variables categories was low so the Fisher’s exact test was used to calculate the level of independence.

**Level of importance.**

The participants were asked to rate the level of importance of the Domain 3 competencies to their current clinical practice as a graduate nurse. A Likert scale was used to calculate the rank ordered frequency distribution of agreement (see Figure 34).
Figure 34. Domain 3: acute neurological care level of importance.

The rating of importance of Domain 3 ranged from 100% (n=39) to 59% (n=23) of participants, with an average of 93%. The competencies in this domain ranged in complexity and included elements of assessment and clinical intervention in the COR levels.

The participants identified the competencies concerning major elements of assessment and monitoring of neurological function as being the most important. Five of the top six competencies were rated as the most important had a major focus on patient assessment and monitoring. These competencies included: blood glucose measurement and interpretation; unconsciousness; AVPU scale; assessment of pupil and light reflex; and Glasgow Coma Score. All these were rated important by 100% (n=39) of the GRN participants.

The majority of complex competencies which involved elements of more intricate assessment and intervention, also rated as important. These competencies included: acute confusional states; and altered motor / sensory function competencies which were rated as important by 97.4% (n=38). The swallowing difficulties and seizures competencies were also rated as important by 94.9% (n=37) of participants. The competency rated as the least important was the lumbar puncture competency with 59% (n=23) identifying it as important to clinical practice.
Following the ratings of individual competencies, the measure of central tendency was calculated using the average rating of importance by area of speciality (see Figure 35).

**Figure 35.** Domain 3: acute neurological care level of importance by area of specialty.

Generally, the majority of participants rated highly important, domain 3 competencies, within all specialties. Interestingly, the two specialties that rated the Domain 3 competencies with the highest level of importance were the Aged Care and the Surgical Ward specialties. Both averaged 100% of GRNs rating the competency groups as important. The lowest level of importance was given by the Paediatrics specialty, with an average of 85.7% rating the competencies as important.

**Chain of response level.**

Participants were asked to identify the COR level they currently worked at, in relation to the Acute Neurological Care competencies they noted as important. Ranked order frequency distributions were calculated for the responses for each competency group. A measures of central tendency using the mode of the responses was calculated for each competency to identify the most commonly occurring level of working for each of the competencies (see Figure 36).
Figure 36. Domain 3: acute neurological care competencies COR levels.

The level of working for the Domain 3 competencies ranged from level 1 (Non-clinical supporter) through to level 3 (The Recogniser). The majority of competency groups rated by the participants fell into the level 3 (The Recogniser) with nine competency groups being applied clinically at this level.

Four competencies were identified as at level 2 (The Recorder). One competency groups was identified at level 1 (Non-clinical supporter). None of the Domain 3 competencies were practiced at level 4 (Primary Responder) or level 5 (Secondary Responder).

Chain of response by areas of speciality.

A further measure of central tendency was calculated using the average measure of the COR level by area of specialty. This was to highlight any differences in the levels of working between the specialty areas (see figure 37).
Interestingly all but one of the speciality areas were identified as working at level 3 (The Recogniser) for the Domain 3 competencies. Those participants working within the Surgical Ward area identified level 2 (The Recorder) as the most common level of working.

**Fisher’s exact results.**

The data collected from the Domain 3 competencies was analysed for independence using the Fisher’s exact test. The rating of the importance of competencies was compared with the demographics variables. This process led to the calculation and analysis of 70 Fisher’s exact tests with P values. One was identified as significant:

1. Difference by university of education in the level of importance given to the Lumbar Puncture competency group (Fisher’s exact test, P Value = 0.028).

Domain 3 competencies were analysed for independence in regards to the COR level of working. This led to the calculation and analysis of further 70 Fisher’s exact test P values, with two identified as significant:
1. Difference by private and public hospital employment in the COR level of working in relation to the Cervical spine protection competency group (Fisher’s exact test, P Value = 0.022).

2. Difference by area of speciality in the COR level of working in relation to the Glasgow Coma Score competency group (Fisher’s exact test, P Value = 0.03).

Domain 4: Transport and Mobility Overview

The Transport and Mobility Domain 4 was the smallest domain with three competencies included. The competencies focused upon the set up and use of equipment needed to manage the acutely ill patient. The participants were asked to rate the level of importance of the individual competencies to their current practice using a Likert scale. They were asked to identify the level at which they were working in relation to the competencies. This was achieved using the COR competency elements, selecting the ones that best described their current level of practice.

The ranked order frequency distributions were calculated for all of the participants across each competency within the Domain for the level of importance. Measures of central tendencies were calculated for the COR for each competency group.

The final step of statistical analysis compared the ranked ordinal data with the demographic variables for possible association. As previously discussed, the number of participants in a number of the demographic variables categories was low so the Fisher’s exact test was used to calculate the level of independence.

Level of importance.

Participants were asked to rate the level of importance of the Domain 4 competencies to their current clinical practice. The three competency groups were rated by all participants (n=39) to provide an overall level of importance for each (see Figure 38).
Figure 38. Domain 4: transport and mobility competencies level of importance.

The rating of importance ranged from 94.8% (n=37) for the portable suction competency to 87.2% (n=34) for the patient handling equipment & beds competency. The average level of importance across Domain 4 was 91.4%.

The measure of central tendency was calculated using the average rating of importance by area of specialty for the Domain 4 competencies (see Figure 39).

Figure 39. Domain 4: transport and mobility competencies level of importance by area of specialty.
Interestingly, the Domain 4 Transport and Mobility competencies had a difference in rating of importance by participants from the different speciality areas. The level of importance ranged from 100% of GRNs in the Emergency Department to 66.7% in the “Other” specialty category. On average, 86% of participants rated the Domain 4 competencies as important to their practice.

**Chain of response level.**

The participants were asked to identify the chain of response level they currently worked at in relation to the Domain 4 competencies. Ranked order frequency distributions were calculated for the responses for each of the competencies. A measure of central tendency using the mode was calculated for each competency, which provided the most commonly occurring level of working for each of the competency (see Figure 40).

*Figure 40. Domain 4: transport and mobility competencies COR levels*

From the responses, the level of working for the Domain 4 competencies was narrow, ranging from level 1 (Non-clinical supporter) through to level 2 (The Recorder). None of the Domain 3 competency groups were practice at level 4 or above.
Chain of response by areas of speciality.

A measure of central tendency was calculated using the mode of the COR levels from each area of speciality (see figure 41 below).

![Figure 41. Domain 4: transport and mobility competencies COR by areas of specialty.](image_url)

Interestingly all but one of the speciality areas were identified as working at level 3 (The Recogniser). Those participants working with the surgical ward area identified level 2 (The Recorder) as the most common level of working.

Fisher’s exact results.

The data collected from the Domain 4 competencies was analysed for independence using the Fisher’s exact test in relation to the demographic variables and the ratings of importance and COR levels of working. This led to the calculation and analysis of 15 Fisher’s exact test P values. None of the P values returned less than 0.05, therefore, no significant association between the level of importance and the demographic variables was found.

The competencies were then analysed for independence in regards to the COR level of working and the demographic variables. This led to the calculation and analysis of further 15 Fisher’s exact test P values. From this 15 P values, one was identified as significant:
1. Difference by area of speciality in the COR level of working in relation to the Patient handling equipment and beds competency group (Fisher’s exact test, P Value = 0.011).

**Domain 5: Communication; Team working; and Patient Safety Overview**

Domain 5 was the final domain of the Q-Comp. There were 20 Domain 5 competencies subdivided into three parts: Communication; Team working; and Patient Safety. The participants were asked to rate the level of importance of the individual competencies to their current practice using a Likert scale. They were asked to identify the level at which they were working at relation to the competencies. This was achieved using the COR competency elements, selecting the ones that best described their current level of practice.

The ranked order frequency distributions were calculated for all of the participants across each competency within the Domain for the level of importance. Measures of central tendencies were calculated for the COR for each competency group.

The final step of statistical analysis compared the ranked ordinal data with the demographic variables for possible association. As previously discussed, the number of participants in a number of the demographic variables categories was low so the Fisher’s exact test was used to calculate the level of independence.

**Level of importance.**

Participants were asked to rate the level of importance of these competencies using a Likert scale. Communication was the objective of the first part of Domain 5 and contained eight competency groups. The focus of these competencies included recording information clearly, communication of management plans, raising concerns when a patient is not improving, breaking bad news and end of life care (see Figure 42).
Figure 42. Domain 5: communication competencies level of importance.

The rating of importance for the eight competency groups ranged from 100% (n=39) to 79.5% (n=31). On average 95.5% of participants indicated that the eight communication competencies were important to their clinical practice.

From the eight competency groups, three were rated important by 100% (n=39) of the participants. These included: documentation; call for help patient sick or cause for concern; and call for help arrested or unconscious patient competencies. The breaking bad news competency, was rated least important with 79.5% of participants indicating this was important in their current practice.

Team working was the objective of the second part, with six competency groups directed towards: personal accountability; decision making; leadership; team communication; and review of the acutely ill patient (see Figure 43).
The rating of importance ranged from 100% (n=39) to 76.9% (n=30). On average, the team working competencies were viewed as important by 92.3% of participants.

From the six team work competencies, the personal responsibility and accountability competency was rated important by 100% (n=39) of participants. This was closely followed by the ethics/medico-legal competency with 97.5% (n=38) of participants. Interestingly participants placed a higher importance on scope of practice and hospital policies than they did on decision making and leadership in managing the acutely ill.

Patient Safety was the main focus of the final part of Domain 5. There were six competencies directed towards: equipment safety; patient handling; reducing risk; and detecting infection in the acutely ill patient (see Figure 44).

**Figure 43.** Domain 5: team working competencies level of importance.
The rating of importance by participants ranged from 100% (n=39) to 82.1% (n=32). The average rating for the patient safety competencies was high, with 91% of GRN participants rating the competencies as important.

Interestingly, the highest rated competencies within patient safety was related to assessment: the falls competency. This was rated as important by 100% of the GRNs. It was closely followed by applies infection control policies competency, rated important by 97.5% (n=38) of participants. The procedure, blood cultures, was rated the least important by 82.1% (n=32) of participants.

Following the ratings of individual competency groups, the measure of central tendency was calculated using the average rating of importance by area of specialty (see Figure 45).
Generally, the Domain 5 Patient Centred Care competencies, were rated as important by the majority of participants within all specialties. Communication focused competencies had the highest overall rating of importance with 95.5% of participants agreeing. The Team working competencies were rated important by 92.3% of participants. The Patient Safety competency groups were rated important by 91% of participants.

The specialty that rated the highest level of importance was the paediatrics area with 100% of participants. This was followed closely by the Emergency Department 98.9% and Aged Care 97.3%. The lowest level of importance was in the Surgical Ward participants, with an average of 82.2% rating the competencies as important.

**Chain of response level.**

The COR level of working, in relation to the Domain 5 competency groups, was measured. Ranked order frequency distributions were calculated for the responses for each competency group. A measure of central tendency using the mode of the responses was calculated for each competency. This provided the most commonly occurring level of working for each of the competencies (see Table 8).
Table 8

**Domain 5: Competencies Chain of Response Levels**

<table>
<thead>
<tr>
<th>Domain 5 Competency Groups</th>
<th>Chain of Response MODE</th>
<th>Chain of Response AVERAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Part 1: Communication</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Documentation</td>
<td>2</td>
<td>2.6</td>
</tr>
<tr>
<td>End of shift handover</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Need for management plan</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Patient not improving</td>
<td>3</td>
<td>3.1</td>
</tr>
<tr>
<td>Call for help: patient sick or cause for concern</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Call for help: arrested or unconscious patient</td>
<td>1</td>
<td>2.3</td>
</tr>
<tr>
<td>Breaking bad news</td>
<td>2</td>
<td>2.7</td>
</tr>
<tr>
<td>End of Life Care</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td><strong>Part 2: Team Working</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provides information in a structured format that conveys clinical urgency</td>
<td>2</td>
<td>2.3</td>
</tr>
<tr>
<td>Participation in whole team review and reassessment</td>
<td>2</td>
<td>2.9</td>
</tr>
<tr>
<td>Personal Responsibility and Accountability</td>
<td>5</td>
<td>4.4</td>
</tr>
<tr>
<td>Decision Making</td>
<td>3</td>
<td>3.3</td>
</tr>
<tr>
<td>Leadership</td>
<td>3</td>
<td>3.9</td>
</tr>
<tr>
<td>Ethics/ medico-legal</td>
<td>3</td>
<td>2.9</td>
</tr>
<tr>
<td><strong>Part 3: Patient Safety</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient Safety: Electrical Safety</td>
<td>1</td>
<td>2.4</td>
</tr>
<tr>
<td>Moving and Handling</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Falls</td>
<td>2</td>
<td>2.3</td>
</tr>
<tr>
<td>Applies Infection control policies</td>
<td>2</td>
<td>1.7</td>
</tr>
<tr>
<td>Microbiology samples</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>Blood culture</td>
<td>3</td>
<td>2.6</td>
</tr>
<tr>
<td><strong>OVERALL DOMAIN 5 Competencies</strong></td>
<td>3</td>
<td>2.8</td>
</tr>
</tbody>
</table>

From the participants responses, the COR level of working for the Domain 5 competencies ranged from level 1 (Non-clinical supporter) through to level 5 (Secondary Responder). The mode for all Domain 5 competencies was COR level 3 (The Recogniser).
Chain of response by areas of speciality.

A measure of central tendency was calculated using the mode of the COR from each area of speciality. To identify differences in the speciality areas more clearly, the Domain 5 competencies were again subdivided into three parts; Communication; Team working; and Patient Safety (see Figure 46).

![Diagram showing COR levels by area of specialty](image)

*Figure 46. Domain 5: communication competencies COR levels by area of specialty.*

For the Communication competencies, the majority of participants in the specialties were working at level 3 (The Recogniser). The exception was the “Other” specialty category where GRNs identified as working at level 5 (Secondary Responder).

Overall within Domain 5, the participants worked at the highest COR levels in relation to the Team Working competencies. Three of the specialty areas: Aged Care; Rehab; and “Other”, they identified as working at level 5 (Secondary Responder) for the Team working competencies. The Surgical ward specialty identified working at level 2 (The Recorder) in relation to team working (see Figure 47).
Figure 47. Domain 5: team working competencies COR levels by area of specialty.

Within the third part of Domain 5, Patient Safety competencies appeared to have the lowest level of working (see Figure 48).

Figure 48. Domain 5: patient safety competencies COR levels by area of specialty.

Interestingly the mode across the specialty areas for the Patient Safety competencies was level 1 (Non-clinical supporter). Participants working within the speciality of the Emergency Department worked at the highest level in relation to patient safety, identifying level 4 (Primary Responder). Three specialties, Aged Care,
Medical Ward and Surgical Ward identified working at level 1 (Non-clinical supporter) for patient safety.

**Fisher’s exact results.**

The data collected from the Domain 5 competencies was analysed for independence using the Fisher’s exact test. The rating of the importance of competencies was compared with the demographics variables. This process led to the calculation and analysis of 100 Fisher’s exact test P values. From this 100 P values, one was identified as significant:

1. Difference by area of specialty in the level of importance given to the Participation in whole team review and reassessment competency group (Fisher’s exact test, P Value = 0.013).

Domain 5 competencies were analysed for independence in regards to the COR level of working. This led to the calculation and analysis of a further 100 Fisher’s exact test P values, with three identified as significant:

1. Difference by age group in the COR level of working in relation to the End of shift handover competency (Fisher’s exact test, P Value = 0.007).
2. Difference by private or public hospital employment in the COR level of working in relation to the Personal Responsibility and Accountability competency (Fisher’s exact test, P Value = 0.049).
3. Difference by area of specialty in the COR level of working in relation to the Need for management plan competency (Fisher’s exact test, P Value = 0.008).

**Summary: Q-Comp Findings**

The findings from all of the five competency domains were combined to provide a summary of the average levels of importance for the competency domains across all speciality areas (see Figure 49).
Figure 49. Q-Comp overall importance of competency domains by area of speciality.

The findings from all of the five competency domains were combined to provide a summary of the average COR level of working for each competency domain across all speciality areas (see Figure 50).

Figure 50. Q-Comp overall COR levels by area of specialty.

It was apparent from combining the average ratings that there were high levels of consistency across the participant group in both ratings of importance for competency domains and COR levels of working.
The overall ratings of importance and COR level of working by all GRNs across the five acute care competency domains again demonstrate a high level of consistency (see Figure 51).

![Graph showing Q-Comp Domains: Importance & Chain of Response Level]

**Figure 51.** Overall importance and COR level across competency domains.

The majority of participants rated as ‘important’ managing the deteriorating ward patient in all of the five competency domains. The COR level of working also demonstrated consistency, with the majority of GRNs working at COR level 3 “The Recogniser” across four out of the five competency domains.

**Summary**

This chapter presented the findings from Phase 2 of the study. Initially the Q-Role findings were presented, including the demographics of the participants followed by the eight core theme findings. This was followed by the findings of the Q-Comp. The key findings related to the acute care competencies, their importance and the level of working of the participants. Finally a summary of the Q-Comp domain data was provided including the overall importance of the competencies and level of work.