



# University of HUDDERSFIELD

## University of Huddersfield Repository

Cook, Leanne

Final year student nurses' experiences of wound care: an evaluation

### Original Citation

Cook, Leanne (2013) Final year student nurses' experiences of wound care: an evaluation. *British Journal of Community Nursing Wound Care Supplement*, 18 (3). S7-S16. ISSN 1462-4753

This version is available at <https://eprints.hud.ac.uk/id/eprint/16942/>

The University Repository is a digital collection of the research output of the University, available on Open Access. Copyright and Moral Rights for the items on this site are retained by the individual author and/or other copyright owners. Users may access full items free of charge; copies of full text items generally can be reproduced, displayed or performed and given to third parties in any format or medium for personal research or study, educational or not-for-profit purposes without prior permission or charge, provided:

- The authors, title and full bibliographic details is credited in any copy;
- A hyperlink and/or URL is included for the original metadata page; and
- The content is not changed in any way.

For more information, including our policy and submission procedure, please contact the Repository Team at: [E.mailbox@hud.ac.uk](mailto:E.mailbox@hud.ac.uk).

<http://eprints.hud.ac.uk/>

## **Final year student nurses experiences of learning about wound care: an evaluation**

*Karen Ousey, Reader, School of Human and Health Sciences, Centre for Health and Social Care Research, University of Huddersfield, Queensgate, Huddersfield, Yorkshire, HD1 3DH.  
Tel: 0044 (1) 484473462; E-Mail: [k.j.ousey@hud.ac.uk](mailto:k.j.ousey@hud.ac.uk)*

*John Stephenson, Senior Lecturer, School of Human and Health Sciences, Centre for Health and Social Care Research, University of Huddersfield, Queensgate, Huddersfield, Yorkshire, HD1 3DH*

*Leanne Cook, Lecturer/Practitioner, School of Human and Health Sciences, Centre for Health and Social Care Research, University of Huddersfield, Queensgate, Huddersfield, Yorkshire, HD1 3DH*

*Laura Kinsey, Senior Lecturer Adult Nursing, Faculty of Health and Applied Social Sciences  
Liverpool John Moores University*

*Sarah Batt, Senior Lecturer, School of Human and Health Sciences, Centre for Health and Social Care Research, University of Huddersfield, Queensgate, Huddersfield, Yorkshire, HD1 3DH*

### **Abstract**

#### **Purpose**

To explore if pre registration nursing students felt prepared to manage patients' skin integrity effectively on registration.

#### **Methods**

Final year nursing students completing adult, child and mental health fields of nursing were invited to complete questionnaires to investigate the amount of formal teaching sessions pre registration nursing students received in relation to managing skin integrity during their 3 year training programme, to discover if pre registration nursing students received supplementary management of skin integrity teaching in the clinical areas, and to explore which member of staff in the clinical areas supported the students learning in the area of skin integrity. Data was collected on 217 final year students (196 females and 21 males) at two Higher Education Institutions in the North of England.

#### **Discussion**

The majority of respondents (146; 67.9%) reported receiving less than 10 hours formal teaching at both Universities on the subject of skin integrity over their 3-year courses. In general, students registered on degree courses reported less formal teaching on the subject of skin integrity at both Universities than students on diploma courses. Of those registered on degree courses, 134 students (70.9%) reported receiving less than 10 hours formal teaching over their 3-year courses, compared with only 12 students (46.2%) registered on diploma courses. 198 (98.6%) of respondents reported that their clinical teaching was undertaken by registered nurses all or some of the time. Other health professionals were reported to provide substantially less clinical teaching; with the next largest contribution reported to be provided by specialist nurses, who provided all clinical teaching to 36 respondents (18.6%) and some clinical teaching to 115 respondents (59.3%). 149 respondents (70.3%) reported that the teaching they received had developed their knowledge and skills to maintain skin integrity for all patients. Respondents claimed that teaching received had developed their knowledge and skills, reporting an average of 16.9 hours spent in directed study; whereas those who did not claim that teaching they had received had developed their knowledge and skills reported an average of 7.64 hours spent in directed study. This difference was found to be significant using an independent samples t-test corrected for unequal variances ( $t_{174}=4.70$ ;  $p<0.001$ ).

### **Conclusion**

The results of this study suggest that diplomat nurses are more likely to feel more confident and competent than their graduate counterparts, despite spending the same amount of time with mentors and their peers.

### **Key words**

Pre-registration, education, wound, clinical practice

## Background

Tissue viability is an area of care that all nurses will be involved in at some point in their careers. Currently there is no consensus as to what constitutes tissue viability, although the United Kingdom National Tissue Viability Society (2012) defined the speciality as: a growing specialty that primarily considers all aspects of skin and soft tissue wounds including acute surgical wounds, pressure ulcers and all forms of leg ulceration. Additionally, White (2008) identified that tissue viability included: managing acute and chronic wounds; pressure ulcer prevention and management; infection control in wound care; and protecting skin at risk from trauma.

The social and economic impact of wounds across all age groups of the population have been discussed by Posnett et al. (2009), with Posnett and Franks (2008) calculating that 200,000 people in the United Kingdom had chronic wounds, with an estimated cost of treatment being £2.3-£3.1 billion per year. Across Europe the prevalence of wounds has been estimated to be 0.37% (Posnett et al., 2009; Vowden et al., 2009). Indeed, the Patient Association (2010) presented results of a survey that sampled 79 Trusts, and identified that approximately £1.4 billion was spent on the treatment of pressure ulcers alone. The Department of Health [DH] (2008:11) stated that *"it is imperative that in order to achieve high quality care for all we must build on existing local governance"*. They identified steps to achieve this that included the recognition of benchmarks to raise standards, safeguard quality and to stay ahead. It is therefore important that student nurses are prepared for, and aware of, research and evidence underpinning effective prevention and management strategies of preserving skin integrity, to maintain and promote quality of care upon completion of their nurse education programmes.

There have been reports that pre registration nurses do not receive adequate tissue viability education: Ayello et al. (2005) reported that 70% of nurses felt they did not receive sufficient education on chronic wounds in their basic nurse training. Furthermore, Fletcher (2007) suggested that education provision for clinicians could be haphazard, with little if any information on wound care delivered in pre-registration programmes, and access to post-registration programmes being restricted by availability and funding.

This evaluation study undertaken in two Higher Education Institutions in the North of England, will provide base line data relating to the level and amount of wound care/management of skin integrity education delivered in pre registration nursing curricula.

## **Study Aim**

To explore if pre registration nursing students felt prepared to manage patients' skin integrity effectively on registration.

## **Project objectives**

1. To ascertain how many formal teaching sessions pre registration nursing students receive in relation to managing skin integrity during their 3-year training programme
2. To discover if pre registration nursing students receive supplementary management of skin integrity teaching in the clinical areas
3. To explore which member of staff in the clinical areas supports the students' learning in the area of skin integrity

## **Data Collection**

All participants received a comprehensive letter of invitation explaining the study objectives. Potential participants were given time to consider the information and to decide if they were willing to take part. Students were invited to take part in the study as part of the final evaluation of their Degree or Diploma nurse education programme, and to complete a questionnaire consisting of demographic data and ten questions relating to their experience of learning about managing patients' skin integrity needs. Additionally there was room for qualitative comments from the participants. Students were not obliged to participate and there was no coercion for them to do so. Module leaders were asked to distribute the questionnaires, and students completed them that day, or completed and posted them at a later date to the principal investigator. Ethical approval was successfully received from each School's research and ethics panel to undertake the study.

## **Results**

### ***Summary of demographic data***

Data was collected on 217 final year students (196 females and 21 males) at two Higher Education Institutions in the North of England.

Demographic data is presented in table 1:

**Table 1: Demographic Data**

Field	Number of students	Percentage
Adult	152	70.0%
Child	25	11.5%
Mental Health	40	18.5%
Total	217	100%

Of these students; 191 students (88.0%) were studying at degree level; 26 (12.0%) were studying at diploma level.

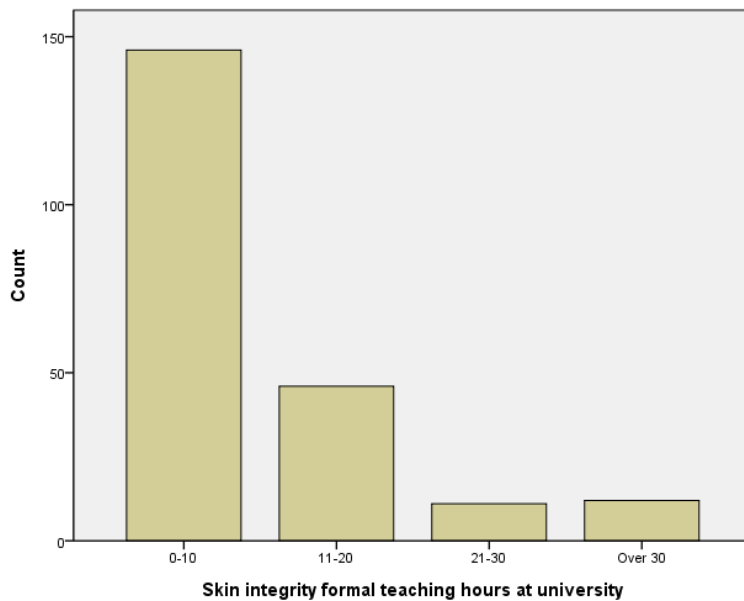
***Formal teaching of skin integrity within University***

Respondents were asked to estimate the amount of time spent in formal teaching on the subject of skin integrity at University, over their 3-year courses.

The majority of respondents (146; 67.9%) reported receiving less than 10 hours formal teaching at both Universities on the subject of skin integrity over their 3-year courses.

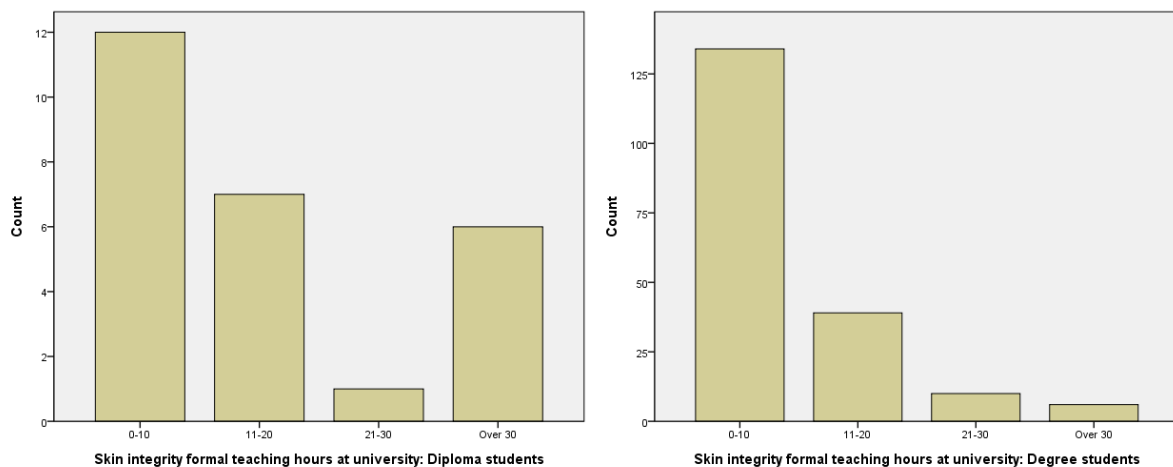
Most of the remainder (46 students; 21.4%) claimed to have received between 11 and 20 hours formal teaching. Only 11 students (5.1%), and 12 students (5.6%) reported receiving between 21 and 30 hours, and over 30 hours formal teaching on the subject of skin integrity respectively over the 3-year period (Figure 1).

**Figure 1: Representation of formal teaching received in University**



**Figure 1: Summary of distribution of skin integrity formal teaching hours at university**

In general, students registered on degree courses reported less formal teaching on the subject of skin integrity at both Universities than students on diploma courses. Of those registered on degree courses, 134 students (70.9%) reported receiving less than 10 hours formal teaching over their 3-year courses, compared with only 12 students (46.2%) registered on diploma courses. Correspondingly a larger proportion of students on diploma courses (6 students; 23.1%) reported receiving over 30 hours of formal teaching than did students on degree courses (6 students; 3.2%), as illustrated in Figure 2.



**Figure 2: Comparison of distribution of skin integrity formal teaching hours at university: Diploma-registered and Degree-registered students**

After merging low-frequency categories, the association between course type and university hours of teaching was found to be significant using the  $\chi^2$  test for association ( $\chi^2_{(2)}=9.76$ ;  $p=0.008$ ). The associated Cramer’s V coefficient of 0.213 indicates an effect low to medium in magnitude.

The full course type-university teaching hours cross-tabulation is given in Table 2 below.

**Table 2: Cross-tabulation of course type versus university teaching hours**

			Wounds teaching hours at university				Total
			0-10	11-20	21-30	Over 30	
Course	Diploma	Count	12	7	1	6	26
		% within Course	46.2%	26.9%	3.8%	23.1%	100.0%
	Degree	Count	134	39	10	6	189
		% within Course	70.9%	20.6%	5.3%	3.2%	100.0%
Total		Count	146	46	11	12	215
		% within Course	67.9%	21.4%	5.1%	5.6%	100.0%

Within fields, there also appeared to be some differences in the amount of formal teaching on the subject of skin integrity. Mental Health and Child fields were similar, with 80% of respondents in both fields reporting the lowest category (less than 10 hours) of formal teaching, with negligible numbers of respondents from either field reporting greater than 21 hours formal teaching. By contrast only 62.7% of respondents in the Adult field reported fewer than 10 hours formal teaching, and a total of 12.7% of respondents in this field reported 21 hours or more. However, after merging low-frequency categories, the apparent association between course type and university hours of teaching was found to be non-significant using the  $\chi^2$  test for association ( $\chi^2_{(4)}=6.65$ ;  $p=0.162$ ).

The full nursing field – university teaching hours cross-tabulation is given in Table 3 below.

**Table 3: Cross-tabulation of nursing field versus university teaching hours**

			Wounds teaching hours at university				Total
			0-10	11-20	21-30	Over 30	
Field	Mental Health	Count	32	5	2	1	40
		% within Field	80.0%	12.5%	5.0%	2.5%	100.0%
	Child	Count	20	4	0	1	25
		% within Field	80.0%	16.0%	.0%	4.0%	100.0%
	Adult	Count	94	37	9	10	150

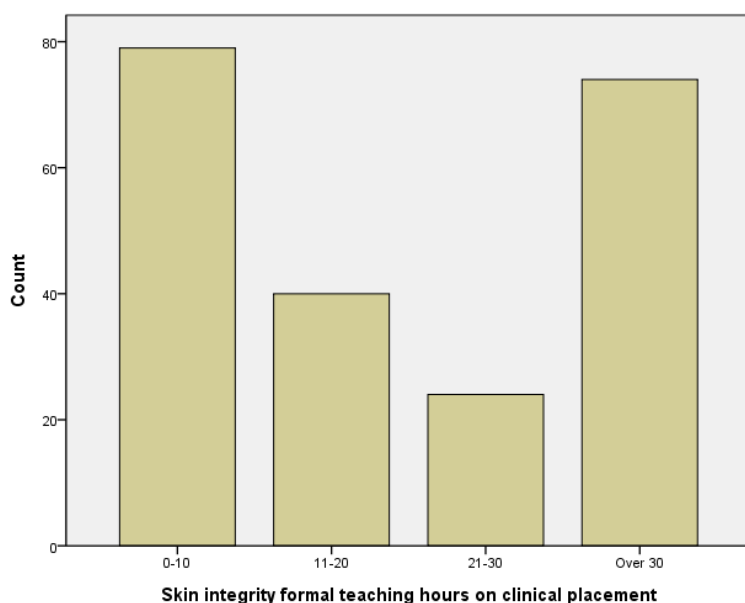


	% within Field	62.7%	24.7%	6.0%	6.7%	100.0%
Total	Count	146	46	11	12	215
	% within Field	67.9%	21.4%	5.1%	5.6%	100.0%

**Formal teaching of skin integrity on clinical placement**

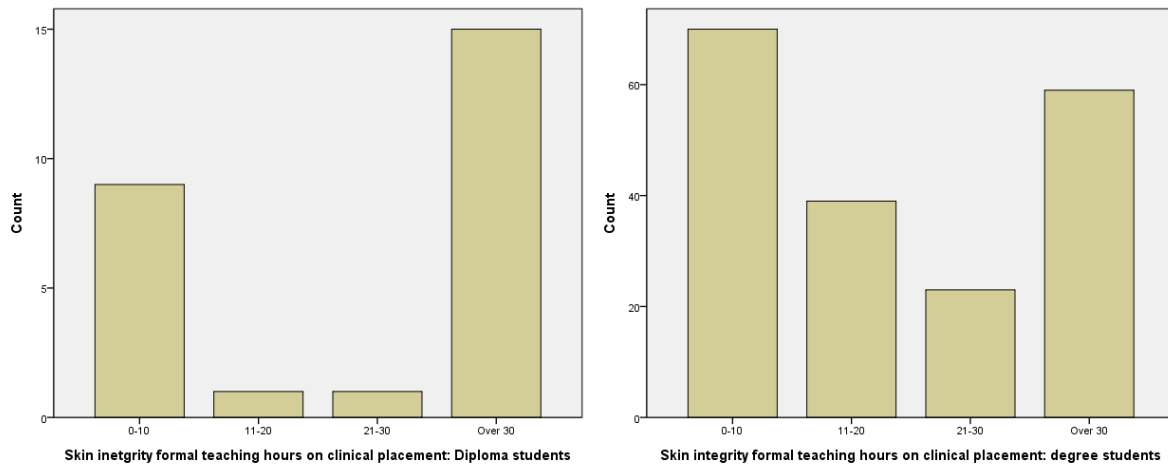
Respondents were also asked to estimate the amount of time spent in formal teaching on the subject of skin integrity whilst on clinical placement, over their 3-year courses.

The distribution of the amount of formal teaching on the subject of skin integrity whilst on placement was less skewed than the corresponding distribution for teaching at University. 79 respondents (36.4%) reported receiving less than 10 hours formal teaching over their 3-year courses; 40 respondents (18.4%) reported receiving between 11 and 20 hours in total; 24 respondents (11.4%) reported receiving between 21 and 30 hours in total; and 74 respondents (34.1%) reported receiving over 30 hours in total (Figure 3).



**Figure 3: Summary of distribution of skin integrity formal teaching hours on clinical placement**

The bimodal distribution of teaching hours was also apparent when considering diploma-registered and degree-registered students separately (Figure 4):



**Figure 4: Comparison of distribution of skin integrity formal teaching hours on clinical placement: Diploma-registered and Degree-registered students**

After merging low-frequency categories, the association between course type and clinical hours of teaching was found to be significant using the  $\chi^2$  test for association ( $\chi^2_{(3)}=9.65$ ;  $p=0.022$ ). The associated Cramer's V coefficient of 0.221 indicates an effect low to medium in magnitude.

The full course type – clinical teaching hours cross-tabulation is given in Table 3 below.

**Table 3: Cross-tabulation of course type versus clinical teaching hours**

			Wounds teaching hours on placement				Total
			0-10	11-20	21-30	Over 30	
Course	Diploma	Count	9	1	1	15	26
		% within Course	34.6%	3.8%	3.8%	57.7%	100.0%
	Degree	Count	70	39	23	59	191
		% within Course	36.6%	20.4%	12.0%	30.9%	100.0%
Total	Count		79	40	24	74	217
	% within Course		36.4%	18.4%	11.1%	34.1%	100.0%

Within fields, as for university teaching hours, there also appeared to be some differences in the amount of formal teaching on the subject of skin integrity reported. Mental Health field had the largest proportion of respondents reporting the least amount of formal teaching (29; 72.5%) and Adult field had the smallest proportion (35; 23.0%). Conversely Adult field included the largest proportion of respondents who reported the largest number of teaching hours (69; 45.4%); whilst Mental Health and Child fields reported much lower proportions in this category. The association between nursing field and clinical hours of teaching was found to be significant using the  $\chi^2$  test for association ( $\chi^2_{(6)}=51.0$ ;  $p<0.001$ ). The associated Cramer's V coefficient of 0.485 suggests an effect of medium magnitude.

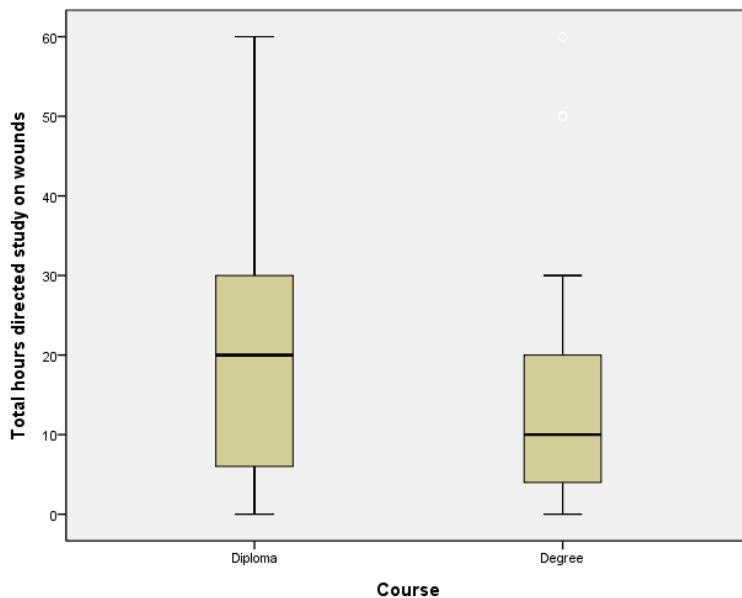
The full nursing field – clinical teaching hours cross-tabulation is given in Table 4 below.

**Table 4: Cross-tabulation of nursing field versus clinical teaching hours**

			Wounds teaching hours on placement				Total
			0-10	11-20	21-30	Over 30	
Field	Mental Health	Count	29	4	3	4	40
		% within Field	72.5%	10.0%	7.5%	10.0%	100.0%
	Child	Count	15	8	1	1	25
		% within Field	60.0%	32.0%	4.0%	4.0%	100.0%
	Adult	Count	35	28	20	69	152
		% within Field	23.0%	18.4%	13.2%	45.4%	100.0%
Total		Count	79	40	24	74	217
		% within Field	36.4%	18.4%	11.1%	34.1%	100.0%

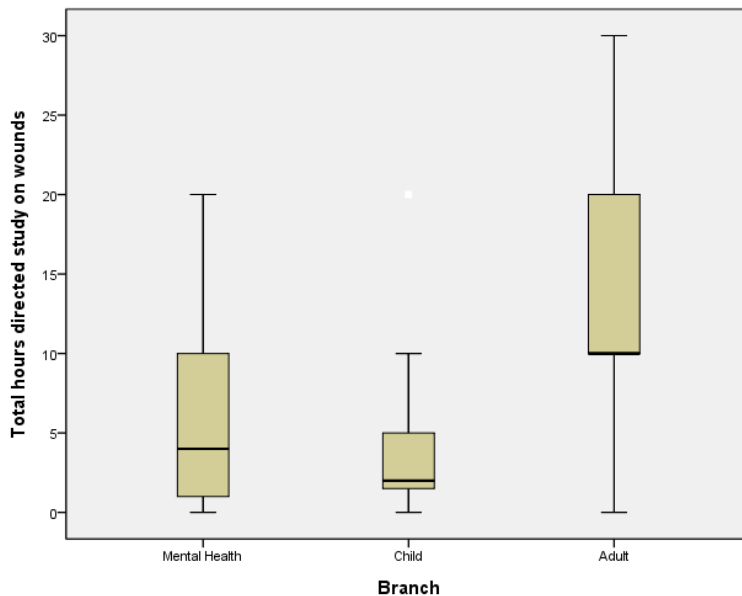
**Directed study time**

The mean total hours of directed study time relating to skin integrity reported by all study respondents was 14.25 hours. Large differences were observed between students on different course types; comprising a mean of 13.37 hours for students registered for degree courses and 20.67 for students registered for diploma courses. This difference was statistically significant using an independent samples *t*-test ( $t_{197}=2.079$ ;  $p=0.039$ ). (Figure 5)



**Figure 5: Comparison of distribution of skin integrity directed study hours: Diploma-registered and Degree-registered students (outliers excluded)**

Large differences were also observed between students in different nursing fields: adult nurses reported a mean of 17.79 hours directed study time: more than double the mean number of hours reported by nurses in Child field (6.75 hours) or Mental Health field (5.05 hours). Overall differences between fields were found to be statistically significant using a one-way analysis of variance ( $F_{2,196}=12.9$ ;  $p<0.001$ ), with statistically significant differences between the Adult and Child fields ( $p=0.002$ ) and between the Adult and Mental Health fields ( $p<0.001$ ) found using the Games-Howell post-hoc procedure correcting for unequal variances.



**Figure 6: Comparison of distribution of skin integrity directed study hours: Mental Health, Child and Adult nursing students (outliers excluded)**

#### **Correlations between different types of study**

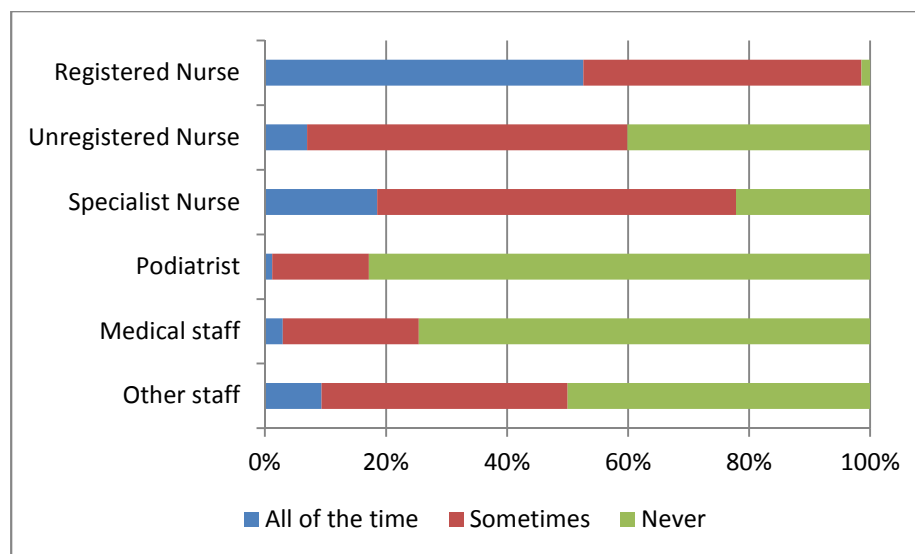
A rank correlation analysis conducted on the number of hours of formal teaching on skin integrity at University and on clinical placement found a moderately strong positive correlation ( $r_c=0.386$ ) between these variables which was statistically significant ( $p<0.001$ ). Hence students who received greater amounts of teaching hours in University could expect to receive greater amounts of teaching whilst on placement and vice-versa. These correlations remained significant when conducted on sub-groups partitioned by course type or nursing field, but with reduced strength.

A rank correlation analysis conducted on the total number of directed study, and hours of formal teaching on skin integrity both at University and on clinical placement also found significant correlations ( $r_c=0.343$  for University teaching;  $r_c=0.560$  for clinical placements). Both of these correlations were statistically significant ( $p<0.001$  in both cases). Corresponding analyses conducted

on sub-groups partitioned by course type and nursing field remained significant in all cases except for correlations conducted on child and mental health nurses only.

**Teaching methods**

198 (98.6%) of respondents reported that their clinical teaching was undertaken by registered nurses all or some of the time. Other health professionals were reported to provide substantially less clinical teaching; with the next largest contribution reported to be provided by specialist nurses, who provided all clinical teaching to 36 respondents (18.6%) and some clinical teaching to 115 respondents (59.3%). Only 7 students (4.2%) reported that all clinical teaching was delivered by professionals other than nurses (podiatrists or other medical staff) (Figure 7).



**Figure 7: Comparison of distribution of health professionals involved in teaching**

**Confidence with knowledge**

149 respondents (70.3%) reported that the teaching they received had developed their knowledge and skills to maintain skin integrity for all patients. This outcome appeared to be related to the number of hours spent on directed study; with respondents claiming that teaching they had received had developed their knowledge and skills reporting an average of 16.9 hours spent in directed study; whereas those who did not claim that teaching they had received had developed their knowledge and skills reported an average of 7.64 hours spent in directed study. This difference was found to be significant using an independent samples t-test corrected for unequal variances ( $t_{174}=4.70$ ;  $p<0.001$ ).

Respondents who claimed that the teaching they had received had developed their knowledge and skills to maintain skin integrity also reported higher amounts of formal teaching. 88.9% of respondents who did not claim knowledge/skills development reported receiving less than 10 hours of wounds teaching at university, and all such respondents reported receiving less than 20 hours. By

contrast 15% of respondents claiming knowledge/skills development reported receiving over 20 hours university teaching, and 39.5% reported receiving over 10 hours.

The full knowledge development – university teaching hours cross-tabulation is given in Table 5 below.

**Table 5: Cross-tabulation of knowledge development versus university teaching hours**

		Wounds teaching hours at university				Total	
		0-10	11-20	21-30	Over 30		
Has teaching developed knowledge	Yes	Count	89	36	11	11	147
		% within Has teaching developed knowledge	60.5%	24.5%	7.5%	7.5%	100.0%
	No	Count	56	7	0	0	63
		% within Has teaching developed knowledge	88.9%	11.1%	.0%	.0%	100.0%
Total		Count	145	43	11	11	210
		% within Has teaching developed knowledge	69.0%	20.5%	5.2%	5.2%	100.0%

The relationship between development of knowledge/skills and clinical teaching hours was similar, with the majority (55.8%) of respondents claiming knowledge/skills development, reporting to have experienced over 20 hours clinical teaching. By contrast 70.9% of those not claiming knowledge/skills development reported having experienced less than 20 hours clinical teaching. The full knowledge development – clinical teaching hours cross-tabulation is given in Table 6 below.

**Table 6: Cross-tabulation of knowledge development versus clinical teaching hours**

		Wounds teaching hours on placement				Total	
		0-10	11-20	21-30	Over 30		
Has teaching developed knowledge	Yes	Count	41	25	19	64	149
		% within Has teaching developed knowledge	27.5%	16.8%	12.8%	43.0%	100.0%
	No	Count	37	14	5	7	63
		% within Has teaching developed knowledge	58.7%	22.2%	7.9%	11.1%	100.0%
Total		Count	78	39	24	71	212
		% within Has teaching developed knowledge	36.8%	18.4%	11.3%	33.5%	100.0%

Teaching appeared to be more effective amongst students registered on diploma courses than amongst students registered on degree courses. 25 students (96.2%) on diploma courses reported claiming knowledge/skills development, compared with 124 students (66.7%) registered on degree courses. The association between course type and knowledge/skills development was found to be significant using the  $\chi^2$  test for association ( $\chi^2_{(1)}=9.50$ ;  $p=0.002$ ). The associated Cramer's V coefficient of 0.212 indicates an effect low to medium in magnitude.

By contrast, there was no significant difference in proportions of respondents claiming knowledge/skills development in the different nursing fields, with 23 Mental Health nursing students (60.5%); 16 Child nursing students (66.7%) and 110 Adult nursing students (73.3%) claiming knowledge/skills development. This association was not found to be significant using the  $\chi^2$  test for association ( $\chi^2_{(2)}=2.55$ ;  $p=0.279$ ).

***Preparedness to undertake clinical procedures***

Respondents were asked to assess whether they felt confident in undertaking a variety of procedures. The frequency and percentage of respondents giving a positive response is summarised in Table 7 below. Most students were confident in undertaking a majority of procedures, with only the procedure of choosing an appropriate wound product being selected by less than 50% of students. 88 students (40.5%) felt confident in applying all 8 procedures listed, with the median student listing 6 out of 8 procedures which they felt confident to apply.

In terms of the number of procedures that respondents felt confident to apply, diploma students reported confidence in applying a greater number of procedures (median 8 procedures out of 8) than degree students (median 6 procedures out of 8). A Mann-Whitney test found this difference to be significant ( $Z=4.13$ ;  $p<0.001$ ). Adult nursing students also reported confidence in applying a greater number of procedures (median 7 procedures out of 8) than either Child or Mental Health nurses, both of whom reported a median of 5 procedures out of 8. A Kruskal-Wallis test found this difference to be significant ( $\chi^2_{(2)}=23.5$ ;  $p<0.001$ ).

***Table 7: Numbers of students prepared to undertake wound procedures***

Procedure	N (valid %) prepared to undertake procedure
Wound assessment	169 (78.2%)
Dressing selection	124 (57.1%)
Aseptic technique	207 (95.4%)
Cleansing of wound	198 (91.7%)
Recognition of wound infection	188 (86.6%)
Assessment of skin integrity (at risk of developing pressure ulcer)	193 (88.9%)

Choosing appropriate wound product	100 (46.5%)
Choosing appropriate pressure-relieving device	140 (64.8%)

Respondents were also asked more general questions relating to perceived levels of exposure to wound care and prevention of pressure ulcer development. 120 students (55.6%) reported that they had had sufficient exposure to wound care. 165 students (77.1%) reported that they had had sufficient exposure to prevention of pressure ulcer development. These responses were closely related, with 115 of the 120 students (95.8%) who reported sufficient exposure to wound care also reporting sufficient exposure to prevention of pressure ulcer development. However, a significant minority of students (50 students; 53.2% of total sample) reported sufficient exposure to prevention of pressure ulcer development but insufficient exposure to wound care.

Variation in responses to these questions followed a similar pattern to variations in responses to the specific questions. Students registered on the diploma course responded more positively than those registered on the degree course, with 23 diploma students (88.5%) reporting sufficient exposure to wound care; compared to 97 degree students (51.1%). Furthermore 24 diploma students (92.3%) reported sufficient exposure to prevention of pressure ulcer development, compared to 141 degree students (75.0%).

The association between course type and satisfaction with exposure to wound care was found to be significant using the  $\chi^2$  test for association ( $\chi^2_{(1)}=13.0$ ;  $p<0.001$ ). The associated  $\phi$  coefficient of 0.245 indicates an effect low to medium in magnitude. The association between course type and satisfaction with exposure to prevention of pressure ulcer development was found to be borderline significant using the  $\chi^2$  test for association ( $\chi^2_{(1)}=3.87$ ;  $p=0.049$ ). The associated  $\phi$  coefficient of 0.135 indicates an effect low in magnitude.

Adult field nurses responded more positively than students registered on Child or Mental Health fields, with 104 Adult nursing students (68.4%) reporting sufficient exposure to wound care; compared to 8 Child nursing students (32.0%) and 8 Mental Health nursing students (20.5%). Furthermore 138 Adult nursing students (91.4%) reported sufficient exposure to prevention of pressure ulcer development; compared to 11 Child nursing students (47.8%) and 15 Mental Health nursing students (38.5%).

The association between field and satisfaction with exposure to wound care was found to be significant using the  $\chi^2$  test for association ( $\chi^2_{(2)}=35.2$ ;  $p<0.001$ ). The associated Cramer's V coefficient of 0.404 indicates an effect medium in magnitude. The association between field and



satisfaction with prevention of pressure ulcer development was also found to be significant using the  $\chi^2$  test for association ( $\chi^2_{(2)}= 61.9$ ;  $p<0.001$ ). The associated Cramer's V coefficient of 0.538 indicates an effect medium in magnitude.

### ***Skills updating***

Respondents were asked how they intended to continue updating their knowledge and skills. The most popular method quoted was attending study days; claimed by 193 (89.8%) of all respondents. 137 students (63.1%) claimed to intend to use 4 or more methods of skills updating. The median number of methods claimed was 5 by students registered on diploma courses and 4 by students registered on degree courses. A Mann-Whitney test found this difference to be significant ( $Z=2.77$ ;  $p<0.006$ ). The median number of methods claimed by Adult field nursing students was 4; on Child and Mental Health the corresponding value was 3. A Kruskal-Wallis test found this difference to be significant ( $\chi^2_{(2)}=11.9$ ;  $p=0.003$ ).

Responses to all possible knowledge/skills updating options are summarised in Table 8 below.

**Table 8: Methods of knowledge/skills update**

Procedure	N (valid %) prepared to undertake procedure
Reading journals	163 (75.5%)
Reading text books	122 (56.7%)
Attending study days	193 (89.8%)
Attending University for specialist courses	132 (61.1%)
E-learning	109 (50.7%)
Specialist staff	156 (72.6%)
Other	15 (7.1%)

### **Discussion**

The results of this study have demonstrated a disparity between diplomat and graduate nurses perceived levels of teaching and learning about skin integrity and wound management at point of registration. Diplomats stated that they received more taught hours about wound integrity at university and in practice; completed more directed study hours and used more methods to update their skills than graduates. Therefore not surprisingly results demonstrated that diplomats perceived themselves to be better prepared for wound management and pressure ulcer prevention than graduates. The Nursing and Midwifery Council (NMC) (2010) standards for pre-registration nursing education dictate the competencies to be met by all student nurses at point of registration. This document stated that all new nursing courses from September 2013 would be graduate courses.

Prior to this set of standards, the NMC made no differentiation in competency levels between diplomat and graduate courses for pre-registration nursing (NMC 2004).

Researchers have long attempted to analyse the advantages and disadvantages of moving nurse education from schools of nursing, based in hospitals to higher education institutions (Maslin-Prothero, 2005; Meerabeau, 2001) and more recently the move to an all graduate profession (Taylor et al., 2010). The developing emphasis on clinical competence for all nursing students studying at all levels has been discussed by Maslin-Prothero (2005), with Calman (2006) also exploring patients' views of nursing competence. Patients in the Calman study identified concerns centring on nurses' abilities to be able to competently undertake technical skills or to be able to understand the need to be empathic. The notion of student nurses being '*confident*' in performing clinical skills was investigated by Roberts (2009) who concluded that there was no definite understanding of how confidence was developed in student nurses. However, she suggested that the mentor role was pivotal in being able to nurture and develop confidence. In our study both diplomat and graduate students identified that they worked closely with their mentors in developing their knowledge and skills suggesting that this enhanced their confidence in being able to undertake wound care interventions.

It was reassuring to note, that all respondents stated they would ensure their knowledge was kept up to date on registration through attendance at study days (89.8%, n=193) and accessing specialist courses at university (61.1%, n=132). There was also a recognition that skills could be developed and updated by working and learning from specialist staff (72.6%, n= 156).

The results of the present study suggest that diplomat nurses are more likely to feel more confident and competent than their graduate counterparts, despite spending the same amount of time with mentors and their peers. Our results concur with Clinton et al., (2004) that compared pre registration nurses preparation for practice, diplomats self-reported better planning and social participation than those prepared through degree courses. However when results in Clinton's study were controlled for background variables, the results became non-significant.

Pre registration students need to be encouraged to be involved in clinical decision making in wound assessment and dressing choice. This will ensure they are fit for purpose upon registration with regard to Tissue viability care delivery. According to the results of this research emphasis on tissue viability care needs to be reinforced within all fields of nursing, especially mental health and child. Therefore, curriculum development for degree undergraduate programmes needs to place specific focus on a tissue viability thread over the 3 year programme, as appears apparent in the Diplomat

approach to learning. As the curriculum progresses for year 1-2-3- so will the tissue viability experience of the students. This will enable the degree student to link theory to practice more readily and make tissue viability care delivery more meaningful. In response to this the quality of patient care and satisfaction should be enhanced.

## References

- Ayello EA, Baranoski S, Salati D (2005) A survey of nurses' wound care knowledge. *Adv Skin Wound Care* **18(5)**: 268–75
- Calman, L. (2006) Patients view of nurses competence. *Nurse Education Today*, 26, p719-725.
- Clinton, M., Murrells, T. and Robinson, S. (2004) Assessing competence in nursing: a comparison of nurses prepared through degree and diploma programmes. *Journal of clinical nursing*, 14, p 82-94
- Department of Health (2008) High Quality Care For All NHS Next Stage Review Final Report CM78432 HMSO; London
- Fletcher J (2007) A collaborative approach to education provision will help save our specialism. *J Wound Care* **16(10)**: 421–3
- Maslin – Prothero, S. E. (2005) Commentary on “Nurse teachers in higher education- Without clinical competence, do they have a future?” by I. Cave [Nurse Education Today 14 (5) (1994) 394-399] *Nurse Education Today*. Vol 24, p 652-654
- Meerabeau, E. (2001) Back to the bedpans: the debates over preregistration nursing education in England. *Journal of Advanced Nursing*, 34,4, p 427-435
- Nursing and Midwifery Council (2004) *Standards of proficiency for pre registration nursing education*. London: NMC
- Nursing and Midwifery Council (NMC)(2010) *Standards for pre registration nursing education*. London: NMC
- Patients Association (2010) Meaningful and comparable information? Tissue Viability Nursing services and Pressure Ulcers Patient Association, Harrow, London
- Posnett and Franks (2008) The burden of chronic wounds in the UK. *Nurs Times* 2008: 104(3): 44–5
- Posnett, J., Gottrup, F., Lundfren, H. and Saal, G. (2009) The resource impact of woundson health-care providers in Europe. *Journal of Wound Care*, 18(4), 154-161.
- Taylor, J., Irvine, F., Bradbury-Jones, C. & McKenna, H. (2010) On the precipice of great things: The current state of UK nurse education. *Nurse Education Today*. 30, p239-244
- Tissue Viability Society.(2012) Available At :<http://www.tvs.org.uk/aboutus/>
- Vowden, K., Vowden, P. & Posnett, J. (2009) The resource costs of wound care in Bradford and Airedale primary care trust in the UK. *Journal of Wound Care*, 18(3), 93-102.
- White RJ. (2008) Tissue viability in tomorrow's NHS. *Journal of Wound Care* :17(3): 97-100