Improving competency in safe patient handling through online learning beyond the classroom – a longitudinal study

Word count 4329 (including abstract)

Abstract

Importance

Safe patient handling is intrinsic to healthcare provision; yet, educational provision of the skills for this are inconsistently delivered, without evidence that traditional face-to-face training reduces risk.

Objective

This study assesses the long-term effectiveness of replacing annual practical handling updates with an online training system, combined with competency assessment on levels of skill and safety. This is the largest study of its kind with undergraduate occupational therapy students.

Design

Quasi-experimental longitudinal three-year study to track practical people handling skill development in undergraduate occupational therapy students. All participants had access to a multimedia online training system (to replace tutor led practical training) used in combination with annual competency evaluations to measure skills and safety in four people handling tasks.

Setting / participants

Competency assessments took place with all participants (n = 243) at three data collection points at beginning of year 2 + 3 and end of Year 3.

Outcomes / Measures

Each participant attended an individual 45-minute competency evaluation, data collected using competency assessment tool by trained assessors.

Results

Results demonstrate significant increases in skill level for sit-to-stand and repositioning in the chair ($p<0.05$), hoisting and slide sheet manoeuvres ($p<0.0001$), with 100% safety scores achieved for repositioning in the chair and hoisting.

Conclusions / relevance

Students using the online system performed significantly better compared with previous students receiving traditional annual practical updates, providing an evidence base to reduce tutor-led training hours whilst increasing skills and safety levels utilizing a combination of the online system and competency assessment.

What this article adds

Results contribute to the evidence base supporting an alternative approach using an online moving and handling training system to improve skills, competence and safety whilst reducing time in delivering annual people handling updates. This approach was found to reinforce safe handling techniques, increase independence, competency, safety, of service users and carers working in health and social care environments, whilst reducing time spent delivering annual people-handling updates. Research findings may have potential to replace face-to-face training updates, particularly in the current climate of social distancing.

Implications for occupational therapy rehabilitation

- Active engagement with the online system and learning tools within it combined with regular "skill checking" encourages a learner centred, problem solving and reflective approach to practical skill development using a just in time approach.
- Suitable for a range of qualified therapists and care givers for skill updates and continuing professional development.
- The increased competency of participants will promote enablement, patient safety, tissue viability and harm free care with service users.
- Reduction in associated training costs is possible by utilising an effective multimedia online moving and handling and risk assessment learning system combined with competency assessment approach.

Introduction

Safe moving and handling of people is an integral part of patient care with a range of legislation and guidance available to protect the health and well-being of employees in the U.K. (Health and Safety at Work Act, 1974; The Manual Handling Operations Regulations,1992; Management of Health and Safety at Work Regulations,1999; Smith: The National Back Exchange, 2010). A study by Alnaser (2015) identified patient handling as the primary factor where 23% of occupational therapy practitioners experienced musculoskeletal injuries over a 12-months working period, with patient handling named specifically as the primary factor. Research suggests that, in order to decrease risk of injury, educators of health care professionals (HCP's) should teach safe patient handling techniques as a standard of practice (Menzel et al., 2007; Waters, Collins, Galinsky, & Caruso, 2006). However, evidence exists to demonstrate that traditional manual handling training is largely *ineffective* in reducing back pain and back injury (Clemes et al 2010) as appropriate techniques and evidence-based principles often fail to transfer into the workplace (Haslam et al, 2007). A

lack of opportunity to practice within the working environment (Ling et al, 2011; Brown and McCraken, 2009), combined with loss of clarity in recollection of procedures and knowledge, may result in an increase in errors, resulting in increased risk of injury for the patient or employee.

The delivery of moving and handling skills training for occupational therapy students is an essential factor providing the necessary practical skills and underpinning knowledge of legislation and back care for safe practice. The College of Occupational Therapists (COT) (2006) states that each student should be provided with generic manual handling training as part of their undergraduate training in the Higher Education Institution (HEI) (Health and Care Professions Council (HCPC) 2013). Regular updates of these skills are recommended by a range of literature focussing on qualified HCP's, yet standardised delivery of practical skills training for undergraduate students varies across HEI's and may or may not be delivered as part of practice placement.

Advice regarding safe people handling techniques is a key support provided by HCP's to both formal and informal carers to support their family members (RCOT,2018). Bartley, Webb and Bailey (2015), cite the importance of a combination of skills and knowledge of up to date equipment to recommend safe handling interventions in a timely way. It is therefore essential that therapists are competent and confident in *their own* people handling skills, including knowledge of a range of equipment and legislation before they can deliver safe advice and training for carers. There is a need for HCP's to have an increasing knowledge and skills base around people handling methods and equipment, considering that one size does not fit all. Frost & Barkley (2012) advocate the development of new approaches to practical skills training to embed people handling skills whilst reinforcing the HCPC recommendations that students take responsibility for their learning and professional accountability (HCPC, 2013).

Electronic learning is the use of information and communication technologies, such as interactive web-services as tools to support the learning process, allowing learners to "access more diversified learning experiences without the limitations of time, space, and place" (Chen, 2011 p. 1501). Gallagher, Gilligan & McGrath (2014) explored the comparison between DVD-assisted training and face-to-face instructions for final year occupational therapy students in completing a hoist transfer (n=12). They found no significant difference between the 2 groups although noted that students who received face to face training had higher levels of perceived confidence than those who engaged in DVD-assisted training. The use of videos as a training resource is known to be an effective additional resource to traditional training (Wieling & Hofman, 2010) providing the videos are relevant (Zhang et al, 2006), resulting in improved learning goals (Siedel et al, 2013; Blomberg, 2014).

Online-learning is now considered part of mainstream medical and health professionals' education (Masters & Ellaway, 2008; Miller et al, 2010). The A1 online system (A1 Risk Solutions® Ltd) incorporates a range of videos and learning resources to meet different learning styles. This system has been designed to facilitate learning for all HCP's and covers a wide range of equipment and techniques for learners to access at any time, supporting the theory of "just in time" training. According to Tiernan (2014), this practice-learning approach meets a learner's demand just before it is required, maximizing the educational outcome, is particularly effective when implementing practice guidelines. There is currently one other e-learning programme specifically aimed at manual handling for use within a healthcare setting across medical and nursing groups (Anderson, 2014), but this is, however, limited to a short on-line test and limited video base. Due to these limitations, it was decided that the multimedia online A1 system was more appropriate to explore to meet the needs of the undergraduate occupational therapy students.

An earlier study by Webb, Harrison and Szczepura (2016) with volunteer undergraduate occupational therapy students (n=130), demonstrated positive results using videos from the A1 online system to reduce the risks for the handler and the patients, whilst increasing skills. The follow up longitudinal study reported in this article evaluates the impact of the replacement of traditional tutor-led annual practical update sessions (3 hours duration) with a combination of the A1 online system plus an individual 45-minute competency evaluation.

Method

A quasi-experimental design in the form of a three-year longitudinal study was used to evaluate the impact of a change in teaching style on people handling skill development. From September 2016, the pedagogical methods to moving and handling training were changed from annual tutor-led group practical updates to an individual classroom competency approach in combination with access to the A1 online learning system. Practical updates with returning Year 2 and Year 3 students were removed and replaced with an annual 45-minute competency evaluation (See Table 1) consisting of four common moving and handling tasks. Practical hands on sessions were delivered to Year 1 students *only*, after which they have access to all the learning resources and videos within the A1 online system for the remainder of their undergraduate training.

Insert Table 1

Participants

All students enrolled on the BSc (Hons) Occupational Therapy programme at the University of Salford were included in this study. All student participants (n=243, see Table 2) had completed the tutor led moving and handling practical training in Year 1. Students were excluded if they did not meet the safe working load of the equipment, had not attended the

Year 1 training or had an existing medical condition or injury that prevented them from carrying out moving and handling techniques.

Procedure

Each student participant attended an individual 45-minute competency evaluation session where they demonstrated their practical skills and competency carrying out 4 common moving and handling tasks. All the tasks included had been demonstrated and practiced as part of their Year 1 mandatory 6-hour training:

1. Assisted sit-to-stand (Task 1a);
2. Repositioning back in a chair using one-way glide sheet (Task 1b);
3. Inserting flat slide sheets to move someone up the bed (Task 2);
4. Fitting universal sling in sitting and hoisting from a chair (Task 3).

Practical skill stations containing the moving and handling equipment necessary for each practical task were set up within one clinical room at the University of Salford. Each practical station had one patient and one assessor to maintain consistency throughout the data collection, and screens were used to avoid students observing each other and to ensure privacy. Each station was allocated 15 minutes (including scoring time and brief feedback). On completion of the task each student was moved on to the next practical skill station until all three were completed (Tasks 1a and 1b were combined in one practical station completed in 15 minutes). Total attendance time for all four tasks was 45 minutes.

Assessors

To ensure objective and robust assessment of the practical tasks, assessors were recruited from the occupational therapy teaching team to observe the students carrying out each task and score their performance. To minimise assessor variability, all assessors attended training and debriefing sessions at the university prior to data collection. The study aims were

outlined to the assessors and role play was used to apply the competency assessment tool (see Appendix 1) to each task, ensuring a standardised and objective approach and minimising misinterpretation of the evaluation tool. Each assessor was only to be involved in assessing one practical station (i.e. one specific moving and handling task) to improve reliability and consistency of scoring.

Patients

In order to evaluate skills effectively without introducing any bias or assistance from fellow students, patients were recruited to take part in each of the four tasks to be assessed. The volunteer patients involved in the study were older people who were not known to the students (Ethical approval through University of Salford ethics panel: HSCR14/123). Prior to data collection, these volunteer patients were briefed on their role within each task. Risk assessments approved through University ethics procedure were adhered to throughout data collection and there was no incidence of injury to students or patients throughout the three-year study. All were to be co-operative but were advised they should not assist or prompt the students in any way throughout the assessment.

Outcome Measure – Competency Assessment Tool (see Appendix 1)

The Competency Assessment Tool (CAT) was developed using standard guidelines from "The Guide to the Handling of People" (6th edition) (Smith, 2011) using activity analysis of each manual handling task linked to risk assessment and safe practice. The CAT has been piloted throughout the previous study (Webb, Harrison and Szczepura, 2016), is used within the assessor training and is now available as the Salford Moving and Handling Competency Passport (Webb and Harrison, 2019; ISBN 978-1-912337-26-2). The CAT generates 3 different scores:

- Skill level (elements of task performed correctly);
- Number of errors (elements of tasks performed incorrectly);
- Assessor's perception of student's level of safety.

Data collection points occurred at 3 critical stages of the undergraduate programme using the competency assessment tool (see Outcome Measures: Appendix 1):

1. Beginning of Year 2 (September 2016);
2. Beginning of Year 3 (September 2017);
3. End of Year 3 (June 2018).

Insert Table 2

Results

Baseline data from Webb, Harrison and Szczepura (2016) were used as a comparator for each year group at each data collection point to compare scores between the *before* 2016 and *from* 2016 teaching styles (See Table 1) and to measure the impact of access to the online system on skill level and errors as they progress throughout their undergraduate studies.

Normality analysis informed the use of parametric statistical tests, so following calculation of Means / S.D's, data were analysed using ANOVA for all tasks to compare differences between the *before* 2016 and *from* 2016 groups (post pedagogical change to remove practical training and replace with online system) as they progress through the programme at the three data collection points in 2016, 2017 and 2018. In addition to the ANOVA using Bonferroni post-hoc tests, the means of several combinations of Year 2 and Year 3 data were analysed via *t*-tests using R Statistical Software (R Core Team, 2018, Vienna, Austria). To avoid false positive readings and increase reliability of the results, of the multiple comparisons, the *p-values* were adjusted using a false discovery rate (FDR) method (Pawitan et al, 2005). FDR is

designed to control the expected proportion of incorrect rejections of the null hypotheses, (false discoveries) and minimise the likelihood of these happening by chance, and is a less restrictive post-hoc test compared with Bonferroni, which does reduce the probability of getting a false positive, but can also increase the probability of getting a false negative (Pawitan et al,2005).

Table 3 shows mean percentage scores for each individual task as the students' progress through the programme and identifies significance at comparisons of Year 2, Sept 16 and 17 for Tasks 1b, 2 and 3 and again when comparing Year 3 at data collection points June 17 and 18 for the same tasks. Overall, the results indicated that in terms of learning and performance, there was no detrimental effect for the post-2016 groups, despite a reduction in direct practical taught sessions, and in some tasks they outperformed the group with traditional training each year.

Insert Figure 1 (Or should Table 3 replace Figure 1?)

Insert Table 3

Figure 2 shows multiple *t*-tests comparing the performance of different cohorts of Year 2 and Year 3 students on four tasks. Control data for each year of study are included in this figure as a comparator with the average score achieved by students at each data collection point using the traditional tutor led training with annual practical updates. In comparison to the pre-2016 group, tasks two and three show the most significant improvements.

Insert Figure 2

A similar trend is observed for Year 2 and Year 3 students. To increase the reliability of the tests, *p-values* were controled via FDR as Bonferroni . Task 1b, 2 and 3 results for Year 3 students suggest a higher consistency on the scores obtained by the post-2016 groups. The

variability of the scores obtained for those tasks is nearly always noticeably lower than the ones obtained by the pre-2016 group. For tasks 2 and 3, this is confirmed by significantly low *p-values*.

Levels of safety

Following each task, the assessors were required to record if they felt the student had displayed unsafe practice. Levels of safety at final data collection point were significantly higher when compared to Year 3 students from the previous tutor led style training with 100% SAFE practice recorded with the new competency approach in Task 1b (Repositioning back in chair using one-way glide sheet) and the more complex Task 3 (Fitting universal sling in sitting position to hoist from a chair). These tasks had been scored at 35% and 55% unsafe, respectively, with the students who had undertaken traditional training throughout their undergraduate programme. Task 1a (Assisted sit-to-stand) also showed a reduction in unsafe practice from 10% to 4% and Task 2 (Inserting flat slide sheets to move someone up the bed) reduced significantly from 65% unsafe practice to 12%.

Discussion

Increased scores / improved skills

Results overall indicate continued positive outcomes with students performing better in the more complex tasks than those trained traditionally with tutor-led sessions and annual updates. Statistically significant increases in scores were noted in Tasks 1b, Task 2 and Task 3 in Year 3 students with a significant rise in competency prior to final placement. Results in the final data set also indicate a reduced range in scores, reflecting a more consistent level of competency in the cohort, rather than a wider range which would suggest some students were

performing very well and others just barely achieving competency, as can be seen in some of the before 2016 data with students who were trained traditionally. This interactive approach is supported by Kolozsvari et al (2011), who substantiate the merits of overtraining to achieve a level of competence beyond a basic pass mark, which ultimately enhances skill transfer in practice. The findings support Barnes (1998) practice learning approach of just in time training with the on-demand learning and fresh revision of contents accessed online closer to the time of use, which positively impacted comprehension, retention of information and helped to reduced errors.

Increased levels of safety

Significant increases in safety levels from the students using the competency approach was noted, in particular with Task 3 (Fitting universal sling in sitting position to hoist from a chair). This task is the most complex of all 4 tasks with 55% of students from the tutor led approach being identified as being unsafe. Despite lack of additional practical training, 100% of Year 3 students at the end point measurement in June were considered safe when observed carrying out this complex task. A similar trend is observed with the second most complex Task 2 (Inserting flat slide sheets to move someone up the bed)) where unsafe practice reduced from 65% to 12%. Access to the online system using a strategic approach may have led to students focusing on what they considered to be the more complex tasks, watching the videos at a time that suited them to help with confidence during the competency assessment. Gallagher, Gilligan and McGrath (2014) noted that video-assisted instruction offers the advantage for students to pace their own learning and, as a permanent resource, allows repetitive practice to aid development and retention of psychomotor skills (Stefandis et al, 2006). The findings of this study support the findings of Van Bruwaene et al (2009) and Gallagher et al (2016) to demonstrate that access to the online system, combined with the

practice within the competency sessions, increases proficiency in skill development.

Increased responsibility for learning by accessing online system

As a previous advocate of "hands-on" skill development through practical tutor led sessions, removal of this opportunity initially challenged the beliefs that the authors of the current study had, who considered it to be a bold step in pedagogical delivery style. The changes held significant risk: What if students did not engage with the online system? How would they respond to taking away the practical sessions? What could this mean to patient safety? How would educators perceive the changes? Would students fail on placement?

What has become clear is that access to the online system is a *permanent* and readily accessible resource (unlike the face to face tutor-led sessions that occurred only once a year). Students have taken more responsibility for their own learning and professional development, demonstrating more positive engagement in preparation for the classroom competency session. This pro-active approach is an improvement on the previous "tick box" approach of students attending an update, signing the register and being deemed "competent" to practice for another year. Although initial feedback from tutors when engaging with the online system is lacking, the competency evaluation process and feedback within the developed competency tool (Webb & Harrison, 2019) meets the recommended feedback by Van Bruwaene et al, (2009) to further motivate students to increase their practical skills. A study by Hills et al (2011) explored changes in educational approaches with typical "Generation Y", tech-savvy occupational therapy students, identifying a shift to multimedia education methods including online learning, recorded lectures and e-books. The study identified emerging technology for developing competence in practice skills and supports the application of simulation for practice placement preparation and debriefing as an experience to produce skills or responses (Merryman, 2010). The combination of the online system alongside the competency

evaluation meets the recommendations of both these studies and supports their positive findings (Van Bruwaene et al, 2009; Hills et al, 2011). This approach is not unique to occupational therapy or the student community, and similar strategies could be advantageous for a range of qualified professionals within the healthcare community, helping to bridge the gap between traditional training and often poor engagement with mandatory update sessions. A combination of access to the system to complete tests and quizzes, and reflect on set problems or hot topics within a work environment, offers an alternative and often more engaging approach to continuing professional development. The system allows continual updates, responding to the common errors identified as part of the research and any changes in guidance from professional bodies or industries within the moving and handling community. Learner engagement is easily tracked and provides evidence of access to safe techniques, which could be useful if any incidences occur in a range of health and social care facilities which need investigation.

Reduced classroom update sessions

Rather than ticking the box for mandatory training attendance every 12 months, this system offers access to support whenever the learner needs it. This is particularly useful when teaching clinical skills relatively early within professional programmes that may not be revisited until a later date, such as on a clinical placement (Gallagher et al, 2014). In this way, the online system and competency approach acts as an aide memoire to encourage safe application of skills and support clinical reasoning by providing an evidence based, 24/7 multimedia risk assessment tool, encouraging active engagement and regular skills updates. Results demonstrate that skills have improved along with levels of safety with a marked observed reduction in student anxieties, particularly in the weeks prior to placement, where the numerous requests for additional practical sessions did not occur, again saving staff

resources in the delivery of "ad hoc" practical workshops to help alleviate this.

Limitations

This study challenged the traditional tutor led training style in moving and handling skills to evaluate a huge change in learning and evaluation style with undergraduate occupational therapy students at The University of Salford. However, some limitations in the study design may need consideration when interpreting the results. The competency assessment tool (CAT) that was used to collect data was not a validated tool although piloted in the previous published study (Webb, Harrison and Szczepura, 2016). Despite attempts to control intra-rater reliability (training of assessors and using one assessor for the same task consistently throughout the study), there may still be a lack of consistency between each assessor (inter-rater reliability) when completing the CAT. Access to the online system is reliant on student motivation and taking responsibility for their learning. Tutor prompts by email, posing questions and challenges, have been used as a reminder for students to access the system, but this is ultimately reliant on student motivation. Factors impacting the ability to access the learning materials online may include limited technical ability or lack of internet access, and this will ultimately impact the level of access and therefore learning and skill development.

Conclusion

Results from this longitudinal study demonstrate statistically significant improvements in skill level when comparing the use of competency evaluation combined with the use of an online multimedia manual handling learning system. Improvements in skill scores were highly significant ($p=<0.0001$) with the more complex tasks of inserting flat slide sheets to move someone up the bed and fitting universal sling in sitting and hoisting from a chair. Students engaged well with the system, and by the end of Year 3 were better equipped in

their moving and handling skills despite LESS actual “hands on” practical teaching of these skills. The system is designed for use by a full range of healthcare practitioners; qualified and unqualified, formal or informal carers from a wide range of employers, statutory, voluntary and private.

Results from this study support a shift away from the annual mandatory update model often used in both Higher Education Institutions as well as statutory health and social care providers. The improved skills and safety levels demonstrated using this competency approach compared with a more passive tutor led style offers a solution to engage both students and registered practitioners more effectively in developing their skills and reinforce the value of just in time training (Tiernan, 2014) and the waste of resources invested in less effective annual updates (Haslam et al, 2007; Ling et al, 2011; Brown & McCraken, 2009). The competency passport gives constructive, itemised feedback and identifies areas for future development to take into practice placement, encouraging a lifelong learning approach. The competency approach used throughout this longitudinal study continues to demonstrate encouraging and significant results and offers an evidenced based, sustainable and effective alternative to tutor-led annual training to support a range of health care professions keep up to date with the necessary skills to support clients and carers in a range of care environments.

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Table 1 Change in pedagogy

Year of Study	1	2	3
Teaching style for people handling training ***before*** September 2016			
Duration of training	6 hours (2 X 3-hour practical workshops)	3 hours	
Activity	Instructor led demonstration followed by practice in student groups		
Teaching style for people handling training ***from*** September 2016			
Duration of training	6 hours	45-minute competency session	
Activity	Instructor led demonstration followed by practice in student groups and competency evaluation. All students registered with A1 online system for access to learning resources 24/7.	Access to A1 online system + individual 45-minute competency evaluation	

Table 2 Demographic data of participants at each data collection point

Year of study	Critical stage	Gender Male: Female	Age Mean (SD)
Year 2 (n=60)	Sept 2016	6:54	Male: 31 (6.8) Female: 30 (7.4)
Year 2 (n=59)	Sept 2017	11:48	Male: 33 (8.7) Female: 29 (7.3)
Year 3 (n=62)	Sept 2016	7:55	Male: 31 (6.4) Female: 31 (8.6)
Year 3 (n=58)	Sept 2017	6:52	Male: 32 (6.9) Female: 31 (7.3)
Year 3 (n=58)	June 2018	6:52	Male: 32 (6.9) Female: 31 (7.3)

Table 3 Mean % score for each task at each data point with F statistic and p values following ANOVA with Bonferroni correction.

Mean % score of each task at each data point				
Group	Task 1a	Task 1b	Task 2	Task 3
F statistic for all groups: p-value	9.4: 0.000	9.32: 0.000	54.84: 0000	21.58: 0.000
Year 2 Sept 16	70.0	64.5α	46.6*	52.6
Year 2 Sept 17	66.1	80.7α	87.2*	73.5
Year 3 Sept 16	85.9	72.5	43.8	55.0#
Year 3 Sept 17	78.5	84.7	90.0	78.0#
Year 3 June 17	86.3	89.7β	85.1*	83.3*
Year 3 June 18	85.7	91.2β	88.3*	93.2*

Table 3: Mean percentage score of each task at each data point. ANOVA indicates significance at the indicated comparisons: α ($p<0.005$),β ($p<0.006$),* ($p<0.000$),# ($p<0.004$).

?? Should we remove Figure 1 and replace with Table 3 or could we include both Figure 1 and Table 3??

Figure 1: Percentage scores in all tasks across all data collection points to show skill development when compared to control data for pre 2016 changes to teaching

Figure 2: Progression in percentage scores across all tasks *before* 2016 teaching style (2015) compared with scores at: (Part A – Year 2 students) beginning of the year (September 2016 and 2017); and (Part B – Year 3 students) beginning of the year (September 2016 and 2017) and end of the year (June 2018). The numbers above the stretched horizontal brackets represent FDR adjusted p-values.

Appendix 1 Competency Assessment Tool

Task	Key Points to Observe	YES = ✓	No = X
1a. Assisted Sit-to-Stand	1. Did they communicate giving effective communication to the person being handled?		
	2. Did they position the persons feet prior to standing?		
	3. Did they consider moving the person forward in the chair or bed?		
	4. Did they ask the person to position their hands on the arms of the chair (to push up)?		
	5 Did they stand with soft/ slightly bent knees?		
	6. Did they position their own feet one in front of the other?		
	7. Did they place their arms across the person's back? Hand on the opposite hip?		
	8. Did they place their far arm on the person's shoulder?		
	9. Did they move forward as the person stands ?(A mobile base)		
	10. Did they end up being stood next to the person at the end of the move?		
	11. Did the person successfully complete the task with no guidance from the assessor?		
	Total Score		
	Total Number of mistakes		
	Would you consider the participant to be safe carrying out this task? YES NO		
Task	Key Points to Observe	YES = ✓	No = X
1b. Repositioning back in a chair	1. Did they communicate effectively with the person being handled?		

using one-way glide sheet			
	2. Did they check which way the glide sheet is positioned on the chair?		
	3. Did they either kneel down/ sit on a chair to perform the task?		
	4. If the person was short in height (their hips are higher than their knees) did they position the person's feet on their leg's or a modular step?		
	5. Did they push the person's knees or below the knees to move the person back in the chair?		
	6. Did the person successfully complete the task with no guidance from the assessor?		
	Total Score		
	Total Number of Mistakes		
	Would you consider the participant to be safe carrying out this task? **YES NO**		
Task	**Key Points to Observe**	**YES = ✓**	**No = X**
2. Inserting flat slide sheets to move someone up the bed	**1. Did they adjust the height of the bed?**		
	2. Did they roll from side to side correctly, to fit the slide sheets?		
	3. Did they position the slide sheets to go under the heels?		
	4. Did they position the slide sheets to go under the pillow?		
	5. Did the handlers adopt the correct stance one leg in front of the other?		
	6. Did they look to the bottom opposite corner of the bed?		
	6. Did they slide the person up the bed without twisting?		
	7. Did they carry out a weight transference technique? (either stepping or moving the weight from the front leg to the back leg)		
	8. Did they remove the slide sheets, by folding both slide sheets together back on themselves? From the foot end.		
	9. Did they communicate with the other and take the lead?		
	10. Did the person successfully complete the task with no guidance from the assessor?		
	Total Score		
	Total Number of Mistakes		
	Would you consider the participant to be safe carrying out this task? **YES NO**		
Task	**Key Points to Observe**	**YES = ✓**	**No = X**
3. Fitting universal sling in sitting and hoisting from a chair			
	1. Did they assess the environment? Moving any obstacles and create enough space.		
	2. Did they bring the person forward in the chair to position the sling behind the person.		

	3. To fit the leg straps and create a gap, did they encourage the person to lift their leg/ place their foot on the handler's leg		
	4. Did they cross the leg straps correctly through the loops?		
	5. Did they bring the hoist into the correct position from the side?		
	6. Did they attach the loops to the hoist in the correct manner?		
	7. Did they communicate effectively with the person being hoisted?		
	8. Did they hoist with the brakes off?		
	9. Did they pause when the person is first elevated? To check the loops are still in position?		
	10. Did the sling appear to be in a good position when the person was hoisted? If not did they lower and redo?		
	11. Did the person successfully complete the task with no guidance from the assessor?		
	Total Score		
	Total Number of Mistakes		
	Would you consider the participant to be safe carrying out this task? **YES NO**		