Invasive Clinical Intervention Education for Social Care Support Workers of Adults: A Review of the Current Literature


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Keywords: social care support worker, invasive clinical interventions, education, intellectual disabilities

Abstract

Background: As with the general population, people with intellectual disabilities are ageing, are living longer often with co-existing complex needs and with more requiring care and support. The focus of care is community-based rather than institutional and it is therefore necessary to ensure that the workforce responsible for delivering care has the appropriate knowledge and skills to safely deliver the interventions required.

Aims: The aim of this review is to evaluate the scope of invasive clinical interventions that social care support workers are currently delivering and the preparation received to undertake these procedures or the knowledge held about the intervention.

Methods: A search of educational, health, psychology, and social science databases was conducted, using a variety of combinations of search words to detect relevant literature. Only five studies published between 1999-2013 were identified and included in the review.

Findings: The evidence shows that education can improve social carer’s knowledge and when education is undertaken it needs to involve both a theoretical and practice-related component. The current evidence is limited due to the small number of studies identified and the limitations of the study designs that were adopted.

Discussion: More research is required to identify whether invasive clinical interventions currently being delivered by these social care support workers and the effectiveness and appropriateness of the education staff are receiving in relation to these.
Invasive clinical intervention education for social care support workers of adults: A review of the current literature.

Introduction

Meeting changing care needs

Due to increasing longevity, more people with ID are living into older age with a range of complex health needs that render them technologically dependent and in need of regular on-going health interventions necessary to maintain their health and wellbeing (Glendinning et al. 2001, MacKay et al. 2010, Bardsley et al. 2011, WHO 2011). However, it is not only those with ID who require increasing levels of care within the community. Other groups including people with: cerebral palsy, multiple sclerosis, motor neurone disease, brain injuries, physical injuries, dementia and diabetes may also require increasing levels of care. This has significant implications for the way in which care services are and will be provided in the future (Emerson & Baines 2010, WHO 2011).

Due to the changes in social care and the policy shift to care within the community within many countries, it is anticipated that Social Care Support Workers (SCSWs) (these SCSWs can also be known as: paid carers, support workers, social care staff, social care workers, caregivers, and carers) may take on more complex roles and be involved in the provision of invasive clinical interventions (ICIs) that were previously within the domain of qualified healthcare professionals.

The need for changing models of care to address a new policy-focus where more care is provided in the community, is now recognised as an international concern (WHO 2011, Beard et al. 2012). There is a range of wider drivers leading to changed models of care. These include: demographic changes, the shifting of disease burden, health inequalities, medical advancements, public expectations and EU regulations (Ham 2009), the need for hospital services to be delivered within local communities as opposed to hospitals and the need for more responsive patient-centred services, workforce pressures and a reduced/static public service funding (Hanratty et al. 2012). In
order to deliver this agenda globally it is vital that the workforce has the appropriate skills and knowledge.

Although family carers make up a large proportion of carers in the United Kingdom and throughout the world, there are also large numbers of people who provide care in different types of paid employment (Saks & Allsop 2007). SCSWs facilitate competence in daily living skills and enable access to a wide range of daily living and community activities (Felce & Perry 1995, Windley & Chapman 2010). The focus of this article is on those provide care in paid employment globally. SCSWs facilitate competence in daily living skills and their roles generally include: food preparation and service, domestic tasks, administration, education and attending meetings. However, SCSWs are increasingly taking on additional roles such as diabetes management, changing surgical dressings, administering medication, inserting catheters and taking venous blood samples. Yet their preparation to undertake these new roles varies significantly and employers need to ensure that they are meeting their duty to employ staff who are competent regardless of country.

ICI’s are recognised as interventions that are carried out by healthcare providers in order to assess, maintain, treat or improve the health of an individual. ICIs can include both invasive and non-invasive procedures. As highlighted by Gerrard et al. (2010) there is no agreed objective definition of a health care intervention as invasive, either nationally or internationally, and the terms procedure and intervention are often used interchangeably. For the purpose of this review the term invasive intervention will be used. An invasive intervention can be therapeutic or diagnostic (METeOR 2005) and they can include the puncturing of the skin, insertion of medical instruments into the body, providing non-oral medication, utilisation or care of medical devices (see for example: Bulechek et al. 2008, Forbes 2009). This is quite a narrow view of the term, however, a broader view can also be taken, for example, Henderson & Knapp (2005) refer to the measures taken to resuscitate a patient as an “invasive intervention”, and ‘The Keys to Life’ (Scottish Government 2013:102-3) state that invasive interventions are ‘not only life enhancing but
lifesaving’. Having reviewed the literature and in the absence of an agreed definition, the authors offer the following definition:

‘An ICI is when a foreign object invades the body. This includes the puncturing of the skin, administration of non-oral medication, insertion of medical devices, care following medical procedures (e.g. stoma care, catheter care). ICIs require close contact between provider and recipient and will be personal in nature’.

There has been little research published into the delivery of ICIs by paid SCSWs for adults, including those with ID or PMLD either within the UK or more widely. One important research study was conducted between PAMIS and the University of Dundee and looked at the ICIs that are commonly provided for people with ID. This report focused on the issues that could lead to failures in the delivery of interventions within the service setting (Gerrard et al. 2010). Barriers ranging from failures in policy through to a lack of staff competence were identified. The study suggested that a lack of competence on the part of staff was the most common concern for families caring for individuals with PMLD. Little other evidence has been found in relation to the skills training of paid SCSWs. Most other literature focuses on family members caring for individuals or qualified professionals (such as nurses).

In 2008 the Royal College of Nursing (RCN) in the United Kingdom published details of the range of ICIs that could be delegated to non-registered practitioners involved in the care of children and training required. While the RCN publication relates to children there could be relevance when applied to carers of adults who are undertaking ICIs. The RCN publication details that preparation should occur at two levels: 1. General education about complex needs and 2. Education about a specific individual and the interventions or care that a person requires (RCN 2012: 5). There are also key elements which should be incorporated into a program which include: a competency-

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1 PAMIS is a Scottish organisation which was established in 1992 to provide support for people with profound and multiple learning disabilities (PMLD), their family and carers and interested professionals (PAMIS 2010).
based approach; agreed clinical protocols; written goals for individuals; audit cycles (regular updating and reassessing of competence); evaluation criteria; statements of accountability; confidentiality; care of the required equipment; medical device education; emergency management and risk assessment (RCN 2012: 5). There is no equivalent list of ICIs for adults that could be delegated to non-registered practitioners staff. This raises a question of what occurs once these children reach adulthood and move into adult care and who may provide the ICIs.

The aim of this review is to identify and evaluate the type of ICIs that paid SCSWs are currently delivering in the community and the preparation they receive prior to undertaking an ICI or the knowledge they hold on the intervention. This study aims to assess the literature currently available on this topic as a starting point so that we can begin to understand what is needed for future development within this area. A systematic review of the research literature was undertaken to identify relevant journal articles. The review specifically aimed to:

- Identify the extent of the literature regarding the preparation of paid SCSWs in specific invasive clinical interventions.
- Identify the invasive clinical interventions being undertaken by paid SCSWs and the service user groups that are receiving such interventions globally.
- Identify the educational approaches and frameworks used in the teaching of a clinical skill to paid SCSWs.
- To establish the level of knowledge provided to paid SCSWs when involved in education in relation to invasive clinical interventions.
- Discuss how appropriate and effective the preparation of paid SCSWs is in delivering invasive clinical interventions.
- Discuss the issue of accountability when paid SCSWs deliver invasive clinical interventions.
Methods

A literature review (Bryman 2012, Bettany–Saltikov 2012) was conducted in order to evaluate the range of ICIs delivered by SCSWs in the community, the preparation received to undertake the role and the knowledge held about the intervention. Due to the changes in policy and provision of services, the literature review concentrated on primary data, peer reviewed publications between 1999-2013. It was decided that this time period reflects changes and policy developments in caring for adults with ID within the community. The review includes international studies and it was a requirement that the articles were peer reviewed and published in English.

Literature searches were carried out in the following databases: Cochrane, ASSIA, Medline, CINHAL, AMED, ERA, British Educational Index, ERIC, PsycINFO, Social Care Online, Web of Science and The British Journal of Learning Disabilities. The search terms used can be seen in Table 1. The same key search terms were used across all the databases.

Insert Table 1 about here

Various combinations of these search terms using Boolean terms to combine the terms were used to identify relevant results. Of the articles found any duplicates were removed and the articles evaluated as to their relevance. Inclusion criteria can be seen in Table 2.

Insert Table 2 about here

A total of 1403 articles were initially identified. Fig. 1 shows the review selection process. The articles were manually evaluated by their titles, and then by analysing the abstracts and full texts to determine if they fit the inclusion criteria. If they did not focus on paid SCSWs then they were excluded from the study. This left the total number of five articles. These articles were then assessed using quality criteria based on PHRU (2010) and Caldwell (2011) as seen in Table 3. The quality of the articles were assessed to ensure that the research design that has been used within the
articles minimises bias and are appropriate to be included in the study (Jones 2013). Following this assessment all five articles have been included in the study.

**Insert Figure 1 about here**

**Insert Table 3 about here**

All studies were organised in a table format in relation to author, article title, study population, ICI, geographical location of research, aims of study, design, educational components, evaluation and key findings (Table 4). The review article aims to provide a narrative account of the included studies, and the findings will be discussed in relation to the questions that this article seeks to answer. In addition to the core review papers, additional literature such as project reports and government documents were drawn upon to provide context and supporting evidence where relevant.

**Findings**

*Characteristics of Studies*

Three of the studies in this review were conducted in the United Kingdom, two in England and one in Scotland. One study was realised in Australia and the final study in Japan. In none of the publications, was the source of funding reported.

*Sample characteristics*

The search strategy allowed retrieving articles between 1999 and 2013; three of the five articles were published within the last four years (Tredinnick & Cocks 2013, Donley et al. 2011, Imaiso & Yamauchi 2009). One article was published in early 2000’s (Chadwick et al. 2002) and one late 1990’s (Sterrick & Foley 1999).

The methodologies of the studies comprised of a survey methodology \((n =3)\), a mixed method design involving questionnaires and interviews \((n =1)\) and another mixed method design involving
structured questionnaires and observations ($n = 1$). All studies had a survey element, but only one of the studies involved both an educational intervention group and control group (Tredinnick & Cocks 2013). All of the studies provided a comprehensive up-to-date literature review, the methodology was identified, and the rationale for undertaking the research clearly outlined. However, ethical considerations were only mentioned in two of the five articles (Imaiso & Yamauchi 2009, Tredinnick & Cocks 2013). None of the papers were excluded due to poor quality.

For reasons of clarity and comprehensibility, the term SCSWs has been adopted throughout this review even though the original study may have referred to a paid carer or support worker.

**Scope of Invasive Clinical Interventions**

The range of interventions were different within the studies: two focused on the management of dysphagia (Chadwick et al. 2002, Tredinnick & Cocks 2013), one on tracheal suctioning of mechanically ventilated adults (Imaiso & Yamauchi 2009), one on the use of psychotropic medication for the purpose of restraint (Donley et al. 2011) and the final study included focused on the use of rectal diazepam during seizures (Sterrick & Foley 1999). Four of the studies focused on adults with ID requiring interventions; however the study by Imaiso & Yamauchi (2009) concentrated on people with amyotrophic lateral sclerosis (ALS), known motor neurone disease (MND).

**Educational Models and Frameworks for Education**

With regards to education, in the study by Sterrick & Foley (1999) the skills training for the administration of rectal diazepam involved a course in three parts: part 1 – general awareness, 2 – theoretical and practical training in rectal diazepam along with basic first aid, 3 – formal assessment. Chadwick et al. (2002) described an educational package where individualised training was provided to SCSWs, using instructional and modelling interventions (Jahr 1998), and personalised written guidelines. Information was given on the risks and difficulties and visual aids were used as part of the training and results from the client’s video-fluoroscopic investigation was
used to further enhance the training. The training was provided by speech and language therapists (SLTs) and it was individually tailored for client and their specific carer. Guidelines were produced that were personalised for the individual but written in a standardised format. Carers were then observed by the SLTs and feedback given to the carer to improve practice. Tredinnick & Cocks (2013) described a one-day dysphagia educational package delivered by an SLT. It focused on the anatomy and physiology of swallowing, signs of dysphagia, recognition of swallowing difficulties, making referrals, and workshops activities looking at food textures and preparing thickened fluids. The education involved PowerPoint presentations, group discussions, workshop activities and a confidential group discussion. When comparing the education approaches detailed in the three studies, all involved both a theoretical and practical element. The studies by Imaiso & Yamauchi (2009) on tracheal suctioning, and Donley et al. (2011) on psychotropic medication did not include a theory component, but focused on assessing the knowledge levels of SCSWs regarding the particular ICI. In the case of the study by Imaiso & Yamauchi (2009), training had been delivered to caregivers (but no detail is given regarding this training) and the article focuses identifying the essential items required by nurses to instruct paid caregivers in how to undertake tracheal suctioning on clients with an invasive mechanical ventilation at home. The views of nurses and caregivers with regards to the importance of difference competencies when undertaking tracheal suctioning were assessed using the Delphi technique. Thus assessing the understanding and knowledge of caregivers compared to nursing staff. Within the study by Donley et al. (2011), participants were asked about the support they had received with regards to training and their general knowledge about chemical restraint via a survey and this was the followed up with semi-structured interviews with some of the participants to explore more in-depth their knowledge and experiences.

Within four of the papers, guidance is given with regards to developing the educational framework. Sterrick & Foley (1999) highlight that full written information from an employer as to when and how to carry out an ICI, in this case the use of rectal diazepam, should be provided by the
completion of a comprehensive and individualised care plan and that adequate skills must be obtained by attending a recognised course. They also highlight the importance of refresher courses or reassessment to ensure that SCSWs continue to remain competent. Although not focusing on specific skills training, the questionnaire in the Imaiso & Yamauchi (2009) study highlighted key areas that staff felt would be essential knowledge, skills and attitudes required to carry out tracheal suctioning. These were: the anticipation of risk, the manner of handling an emergency situation and the observations of a patients breathing. Imaiso & Yamauchi (2009) found that nurses needed to educate SCSWs in the risks of the intervention and how to intervene early if a situation arises, provide information on the anticipated risks and also on who to contact in case of an emergency in order to reduce the anxiety of the SCSWs in performing tracheal suctioning. Education was needed to enhance the skills of SCSWs in tracheal suctioning: “competence should include not only the skills and knowledge but also critical thinking, clinical judgement, the formulation of attitudes, and the determination of the feasibility of an action” (Imaiso & Yamauchi 2009: 423).

Chadwick et al. (2002: 354) found anecdotal evidence that, within SCSWs there was “fossilization of incorrect knowledge for both the appropriate and inappropriate management strategies employed during mealtimes may occur”. Part of the reasoning for this is that staff can become fixed in their routine and then do not refer to management guidelines post initial training. This may also lead to incorrect knowledge being passed to other colleagues, via a “culture of ‘Chinese whispers’...where misinformation is passed from staff to staff and management strategies are no longer followed correctly” (Chadwick et al. 2002: 354). Their results indicate that it is vital that educational packages “accurately describe, demonstrate and observe required strategies, and the conditions under which these should occur” (Chadwick et al. 2002: 355) and further to this, they found that simplified, shorter guideline documents covering fewer more essential management strategies could increase knowledge of SCSWs. This is important for all preparation regardless of the ICI. Similarly, the study by Tredinnick & Cocks (2013), looked at knowledge and confidence as opposed to the content of the education, although the package given to participants involved
practical workshops, discussions and theory delivered over a day, this approach was based on a previous conducted by Jenkins et al. (1998). Tredinnick & Cocks (2013), found that knowledge and confidence was increased by a 1-day training course on dysphagia and that this knowledge was retained over a month period.

Level of knowledge of social care support workers
None of the studies provided any details regarding the education attainment of those participating in the studies. However, with regards to knowledge, Donley et al. (2011) administered a survey to identify social care staff perceptions about the support provided to them and their knowledge of chemical restraint. The questionnaire adopted a self-perception rating scale. From the survey respondents, six participated in a semi-structured interview, which focused on their education in relation to chemical restraint, when they would consider giving psychotropic medication and other approaches that could be used instead of medication. Results showed that generally social care staff felt they required more knowledge about the medication in order to maintain client safety and to help act as an advocate at appointments. Imaiso and Yamauchi (2009) designed a questionnaire consisting of twelve knowledge, eight skill and seven attitude items and used a five point Likert scale, rated from very important to not important. The study did not identify the knowledge currently held by SCSWs, but questioned the knowledge they would like to possess prior to undertaking an ICI. From this study, the most important competencies in relation to tracheal suctioning were identified as needing to understanding the risks, managing an emergency situation and observing a patient's breathing. There was no reference to the level of knowledge of staff involved with the educational courses within the remaining three studies (Sterrick & Foley 1999, Chadwick et al, 2002, Tredinnick & Cocks 2013).

Evaluation of Education
Chadwick et al. (2002) conducted observations on SCSWs who had attended a general 2-day training workshop and the SCSWs member then completed a short interview. The interview
transcripts were then compared to a checklist of the service users written dysphagia management recommendations and results were scored. Chadwick et al. (2002) found that SCSWs tended to remember the more technical elements of the course (e.g. altering of food and drink consistency) and specialised equipment but tended to overlook the prompting and social interactions which should accompany meal times. In order to assess knowledge Tredinnick & Cocks (2013) provided three questionnaires to each SCSWs member, once immediately before, one immediately after and one a month post training delivery to measure confidence and knowledge. The questionnaires consisted of six confidence questions with rating scales and knowledge questions on a with 4-point rating scales. A control group was included who did not attend any training, but completed a questionnaire at the beginning of a chosen shift, another at the end of the same shift and one a month later. Results indicated that there was an increase in confidence reported after course attendance and this was maintained one month post training, however, confidence scores did not change for the control group. There was a significant difference in knowledge between the trained and control participants. Sterrick & Foley (1999) did not look at SCSWs knowledge and the impact of educational preparation on knowledge on the use of rectal diazepam within their study. Instead they focused on the course itself and how participants found the course. Overall, 161 student evaluations have been received and from this 96% felt that the course was appropriate for practice, 70% felt the lend of the course was appropriate, 89% gave a positive response with regards to teaching methods used and 71% were positive about the assessment methods used (Sterrick & Foley 1999). Imaiso & Yamauchi (2009) questioned the preferred knowledge staff would like to possess following an educational intervention and did not undertake any form of training within their study. Donley et al. (2011) also focused on levels of knowledge and did not undertake any skills training.

Responsibility and Accountability

One study, Sterrick & Foley (1999), specifically referred to the legal aspects of educating SCSWs in an ICI. They highlighted the need to consider legal aspects within the training. They suggested
that consideration need to be given to the issue of liability if the delivery of an ICI goes wrong and that this needs to be addressed prior to the commencement of an educational programme. Chadwick et al. (2002) suggest that mechanisms should be in place to ensure that staff are aware of their responsibilities to review guidelines. However, they did not address any accountability aspects. Within the remaining three studies there is no reference regarding responsibility for practice, assessment and re-assessment. Also there is no reference regarding who would be accountable: the individual practitioner, the employing organisation the provider of the education or the provider of on-going supervision and review.

Limitations of the Studies

A range of limitations could be identified within all the studies. None of the studies included information on age, gender, level of qualifications or previous backgrounds. This information is important as this gives an indicator to the level of experience and knowledge individuals possess. This is also important when developing educational packages, so as to ensure that the material is at the appropriate level. The level of education or previous backgrounds could influence the knowledge and skills the participants held prior to the educational intervention. The study by Tredinnick & Cocks (2013) did not specifically look at whether educating individuals in the ICI actually improved practice but instead it focused on SCSWs confidence and knowledge of the ICI. Furthermore, this study only assessed knowledge and confidence up-to one month post course attendance, and therefore knowledge maintenance has not been assessed beyond this point. The study by Imaiso & Yamauchi (2009) had a high dropout rate for paid caregivers (round 1 =59.1% response rate, round 2 = 30.8%) and there were new participants recruited part way through (at round 2) which could have had an influence of the findings reported. As with the study by Tredinnick & Cocks (2013), it focused on SCSWs knowledge as opposed to their actual practice. This was because at the time of publication Japanese law did not permit SCSWs to carry out tracheal suctioning (Imaiso & Yamauchi 2013: 428).
The study by Chadwick et al. (2002) did not differentiate between the responses from SCSWs and those of family carers but did establish the practices being undertaken by SCSWs through the form of observations. However, there was no follow up to determine whether information and skills had been retained in staff practices. The study by Sterrick & Foley (1999) was a small scale piece of research aiming at with the evaluation of an educational intervention comprising of 161 evaluation questionnaires, which focused specifically on how participants found the course rather than on the skills and knowledge administering the intervention to service users. Donley et al. (2011) had a sample of 117 SCSWs (response rate of 46.8%) and also conducted 6 semi-structured interviews with those survey respondents who volunteered to be interviews. However, the study only focused on perceptions and knowledge and not on education or practices specifically and so cannot inform the understanding of how specific education can enhance (or not) SCSWs skills.

**Ethical Approval with the Included Studies**

All research studies have ethical implications and consideration must be given to these (Social Research Association 2009, Lewis 2008). Within the five studies, two made any mention of ethical considerations. Imaiso & Yamauchi (2009) and Tredinnick & Cocks (2013) both stated that they were in receipt of ethical approval from their university institution, but did not specifically mention how consent was obtained from the participants. Donley et al. (2011), Chadwick et al. (2002) and Sterrick & Foley (1999) made no mention of ethical considerations or consent. However, these the journals may not have had specific guidelines around discussing ethics and this could explain the omission of this information.

**Discussion**

In relation to the aims of this review, only 5 studies were identified that met inclusion criteria. This is despite current international evidence suggesting that healthcare professionals are increasingly delegating tasks to other workers such as SCSWs (Nancarrow et al. 2005, Moran et al. 2012). Only four ICIs were identified (dysphagia management, rectal diazepam administration, training on
chemical restraint and tracheal suctioning in mechanically ventilated individuals) across studies in relation to paid SCSWs delivering ICIs to adults.

In those studies included in this review, where an educational component was included, this comprised both a theoretical component and a practical element for education. However, there was no consistency across the studies with regards to the written information provided, the need for update sessions or supervision in practice or how the studies were evaluated. As there was no consistent approach to education; it was not possible to compare the different types of approaches or their effectiveness. The studies by McKenzie et al. (2002) and Hogg et al. (2012) both found significant improvements in knowledge post educational intervention when looking at general education of staff in relation to ID. These articles help to support the view that education can increase knowledge and confidence in providing ICIs. If staff are in receipt of the appropriate education it may also reduce the concern families have with the lack of competence and knowledge of SCSWs. Gerrard et al. (2009) highlight that a lack of competence and knowledge on the part of staff was the most common concern for families. Windley & Chapman (2010) highlighted that an emphasis on trial and error as a way to develop skills should be of concern as it could lead to inappropriate interventions and perhaps fatal errors.

The RCN (2012) when looking at invasive interventions education for SCSWs caring for children, found that education should comprise of key elements: a competency-based approach; agreed clinical protocols; written goals for individuals; audit cycles (regular updating and reassessing of competence); evaluation criteria; statements of accountability; confidentiality; care of the required equipment; medical device training; emergency management and risk assessment (RCN 2012: 5). However, there is no such model available for SCSWs caring for adults. Information on of these areas are provided to some degree within the three studies (Sterrick & Foley 1999, Chadwick et al. 2002, Tredinnick & Cocks 2013), however none cover all of the elements.
There was no information included in any of the studies regarding the level of knowledge held by SCSW’s prior to undertaking the education about an ICI. Wong & Wong (2008) highlight that educating staff in specific skills without attempting to increase knowledge and enhance attitudes may not provide the desired results. McVilly (1997) indicates that the role of value-based education is essential in developing an effective staff workforce. Although Rose et al. (2012) suggest that this assumption may be anecdotal as there is limited evidence to support their findings at present. Furthermore, none of the review studies suggested the inclusion of service users, informal carers or support staff as part of the development of the educational package. Biswas et al. (2009) believe that the participation of these groups in developing an education package is essential. This should be considered in the development of any education resources for the delivery of ICIs.

None of the studies addressed responsibility or accountability when SCSWs undertake ICIs once they have been educated in an ICI. If SCSWs are to carry out ICIs, then the question of clinical supervision becomes relevant. The Scottish Government (2012) in their report ‘Strengthening the Commitment’ recommend that education providers and services must work in partnership to ensure that educational and developments opportunities for non-registered staff are developed and strengthened whereas benefits are evidenced through appraisal (Recommendation 13, page 42). Nancarrow et al. (2005) point out that there can be difficulties for supervision and access to support from professionals in home-based care provisions for support workers. Also, due to high ratios of support staff to registered practitioners, it may be challenging to be able to supervise or provide input to all SCSWs.

The level of staffing and education of SCSWs needs to be carefully considered to ensure the support required is available and the ICIs are effective. There also needs to be effective support from service managers, including emotional support, in order for SCSWs to carry out their work (Windley & Chapman 2010). This will be particularly important when supporting workers undertaking new ICIs. This need for clinical supervision was not addressed in any of the studies despite recognition
of the importance. Therefore, this needs further research and to be built in when developing education and when SCSWs are delivering ICIs.

Implications and Recommendations for Policy and Practice and Research Effective evidence-based practice in the delivery of SCSWs would help to appropriately support individuals, particularly people with ID within the community. Internationally, there is evidence that healthcare professionals are increasing passing on tasks to other workers, such as SCSWs, as this then allows the registered practitioner to respond to other needs (Buchan & Dal Poz 2002, Nancarrow et al. 2005, Moran et al. 2012). If this is the case then it is important that SCSWs are properly prepared to undertake ICIs. There needs to be further exploration of the roles which SCSWs are currently undertaking, as currently there is little evidence on the levels of provision or types of ICIs they are undertaking. If SCSWs will be taking on these extended roles then careful consideration needs to be paid to the form that such education takes and how it can be assessed. Furthermore, only one study considered the issues relating to accountability and the legal implications of preparing SCSWs to undertake ICIs. This is a critical issue that needs to be considered by the organisations providing the preparation, the employer of the SCSWs and the workers themselves. Each of these groups will have differing legal responsibilities and accountability.

None of the studies addressed the level of knowledge or previous backgrounds that SCSWs should have when being involved in being education in the delivery of an ICI; however this needs to be considered when proposing that these individuals take on any form of ICI. Within the studies in the review, there was no consistent method for evaluation and none of the studies evaluated the long-term impact of education or the impact it has had on the service users themselves. This is an interesting area that requires further research to ensure that education is effective and appropriate for both staff and service users. This review focuses on the need for the re-designing and re-skilling of the SCSW workforce in order to meet the needs of service users in the community and not about the re-framing of professionals roles. From this review it can be concluded that there needs to be
more research into the education of SWCs in ICIs, in order for providers of services to be able to develop the most appropriate and effective educational methods for staff. Organisations must also give consideration to the need for regular refresher sessions to ensure that support workers are aware of their responsibilities and remain competent at the ICI. Furthermore, with the increasing focus on the role of independent and voluntary sectors in service delivery there is a need to ensure that the developments taking place in health and social care services are translated more widely and supported by a robust evidence base of the outcomes.

Conclusion

This review demonstrates that there is currently little information on SCSWs taking on clinical roles within the social care area, as only five relevant articles were identified. This demonstrates a large gap in the research literature regarding the education of SCSWs to deliver ICIs. This is an important area and there needs to be wider research into the provision of training of paid SCSWs to deliver ICIs.

References


**Tables and Figures**

**Table 1: Search terms for database searches**

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<th>Population</th>
<th>Exposure</th>
<th>Interventions</th>
<th>Outcomes</th>
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<td>Clinical intervent*</td>
<td>Train*</td>
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<td>Carer</td>
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</tbody>
</table>

*denotes truncation.

**Table 2: Inclusion criteria**
Inclusion
Literature published between 1999-2013
Literature published in English
Literature published in peer-reviewed journals
Studies were only included if paid carer/support workers (or their synonyms, not healthcare) were the primary focus of the article
Only community-based studies were included (not acute settings)
Only literature that reported on adults were included
Only literature reporting on an invasive clinical intervention being undertaken by support staff were included.

Table 3: Quality criteria and results

<table>
<thead>
<tr>
<th>Quality Criteria</th>
<th>yes</th>
<th>No</th>
<th>Partly/Unclear</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Does the title reflect content?</td>
<td>5</td>
<td></td>
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<tr>
<td>2. Are the authors credible?</td>
<td>5</td>
<td></td>
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<tr>
<td><strong>Background and literature review</strong></td>
<td></td>
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<tr>
<td>3. Does the abstract summarize the key components?</td>
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<td>4. Is the rationale for undertaking the research clearly outlined?</td>
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<tr>
<td>5. Is the literature review comprehensive and up-to-date?</td>
<td>5</td>
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<tr>
<td>6. Is the aim of the research clearly stated?</td>
<td>5</td>
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<tr>
<td><strong>Methods</strong></td>
<td></td>
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<tr>
<td>7. Is the methodology identified and justified?</td>
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<tr>
<td>8. Are the philosophical background and study design identified and the rational for choice of design evident? (Was the research design appropriate?)</td>
<td>4</td>
<td>1</td>
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<tr>
<td>10. Is the selection of participants described and the sample method identified?</td>
<td>4</td>
<td>1</td>
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<tr>
<td>11. Have ethical considerations been taken into consideration? (ethical approval sought where appropriate)</td>
<td>2</td>
<td>3</td>
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<tr>
<td><strong>Data Analysis</strong></td>
<td></td>
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<tr>
<td>12. Is the method of data analysis credible and confirmable/valid and reliable?</td>
<td>4</td>
<td>1</td>
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<tr>
<td>13. Is there a description of the analysis process?</td>
<td>3</td>
<td>1</td>
<td>1</td>
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<tr>
<td><strong>Results</strong></td>
<td></td>
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<tr>
<td>14. Are the results presented in a way that is appropriate and clear?</td>
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<tr>
<td>15. Are the findings discussed in relation to the original research question?</td>
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<tr>
<td><strong>Discussion</strong></td>
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<tr>
<td>16. Is the discussion comprehensive?</td>
<td>3</td>
<td>2</td>
<td></td>
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<tr>
<td><strong>Conclusions and implications</strong></td>
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<tr>
<td>17. Is the conclusion comprehensive?</td>
<td>2</td>
<td>3</td>
<td></td>
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<tr>
<td>18. Is the research valuable?</td>
<td>5</td>
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<tr>
<td>19. Does the researcher discuss the contribution to existing knowledge and understanding?</td>
<td>4</td>
<td>1</td>
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<tr>
<td>20. Are any limitations to the study identified?</td>
<td>3</td>
<td>2</td>
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</tbody>
</table>

Figure 1: Flow chart of study selection process

Initial articles titles identified and screened
N=1403 → Excluded n=1372

Abstracts retrieved and screened
n=31 → Excluded n=23
Not support worker focused, n = 9
Not reporting specific ICI, n= 12
Not adult focused, n=2

Full article copies retrieved and assessed for eligibility
n=8 → Excluded n=2
Not support worker focused, n = 1
Not reporting specific ICI, n = 1

Publications meeting criteria
n=5 → Excluded due to quality n=0

Publications included in review
N=5
<table>
<thead>
<tr>
<th>Author(s), Year, Funding</th>
<th>Location</th>
<th>Sample/Population</th>
<th>Clinical intervention</th>
<th>Types of intervention/ training given</th>
<th>Aims/Purpose of study</th>
<th>Methodology</th>
<th>Evaluation component</th>
<th>Key findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tredinnick, G. and Cocks, N. (2013) No funding stated</td>
<td>UK</td>
<td>Support workers working with adults with an intellectual disabilities 38 staff to part, 25 receiving training and 13 acting as control group (not in receipt of training)</td>
<td>Dysphagia management</td>
<td>A one day dysphagia training package – delivered by a speech and language therapist. Focused on anatomy and physiology of swallowing, signs of dysphagia, recognition of swallowing difficulties, making referrals, workshops activities looking at food textures and preparing thickened fluids. 3 questionnaires given to each support worker immediately before, immediately after and a month after the training delivery – measuring confidence and knowledge</td>
<td>To establish whether or not a 1-day dysphagia course delivered to support staff who work with adults with an intellectual disability was effective in increasing staff knowledge and confidence and whether this has been maintained over a month period.</td>
<td>Questionnaires 3 questionnaires to establish if there is an increase in level of knowledge and confidence, using a control group</td>
<td>There was a significant increase that was largely maintained over a 1-month period for those who received training. There were no significant changes in knowledge or confidence in the control group</td>
<td></td>
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<tr>
<td>Donley, M., Chan, J., Webber, L. (2011) No funding stated</td>
<td>Australia</td>
<td>Paid support workers working with individuals with intellectual disabilities 250 surveys – 117 results 6 interviews</td>
<td>Chemical restraint (use of psychotropic medication for the purpose of restrain)</td>
<td>A survey was undertaken to examine support workers knowledge and perceptions of chemical restraint. Follow-up interviews with six of the survey participants exploring their knowledge and perception in more detail</td>
<td>To explore the perceptions of support workers in the support provided and their knowledge of chemical restraint and to explore the training needs in relation to the administration of chemical restraint</td>
<td>Mixed methods - Questionnaires and interviews N/A</td>
<td>Majority of support workers feel they have the skills and support to cope with people with a disability to display challenging behaviours. These workers feel they lack the information with regards to side effects of and alternatives to chemical restraint. All support workers should be provided with training about chemical restraint as part of their orientation to their role</td>
<td></td>
</tr>
<tr>
<td>Author(s)</td>
<td>Location</td>
<td>Sample Description</td>
<td>Intervention</td>
<td>Assessment Method</td>
<td>Results</td>
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<tr>
<td>Imaiso, J and Yamauchi, T. (2009)</td>
<td>Japan</td>
<td>Paid caregivers working with individuals with ALS requiring mechanical ventilation. 80 home-visit nurses and 22 paid caregivers recruited.</td>
<td>Delphi approach used to achieve consensus of the opinions between nurses (the instructors) and paid caregivers (the learners). Surveys were used to gather the information. 3 rounds of surveys, data calculated based on five-point likert scale for each item and an agreement rates sets for each question. To identify the most important issues for nurses when training paid caregivers in tracheal suctioning for persons with mechanical ventilators in their own home.</td>
<td>Questionnaires N/A</td>
<td>Nurses need to educate caregivers on how to recognise the risks and to intervene early and to provide information on anticipated risks.</td>
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<tr>
<td>Chadwick, D., Joliffe, J. and Goldbart, J. (2002)</td>
<td>UK - Manchester</td>
<td>Paid carers supporting adults with intellectual disabilities and dysphagia working in a day centre. Involved 46 carers and 40 adults with intellectual disabilities.</td>
<td>1. Structured interviews to establish knowledge and observational data collected on behaviour. Recommendations given from these. Individual training was provided to carers (using instructional and modelling procedures) and personalised written guidelines (written in a standard format) developed for each individual. To investigate carer knowledge of dysphagia management strategies and adherence.</td>
<td>Mixed methods - structured interviews and observations Short interview responses compared to a checklist and a score given.</td>
<td>Carers tend to remember management strategies pertaining to alternation of the consistency of food/drinks and using specialised equipment/utensils more readily than providing support/prompting and social interaction. There is a need of up-date or refresher sessions on an infrequent but regular basis.</td>
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<tr>
<td>Sterrick, M and Foley, J. (1999)</td>
<td>Edinburgh, Scotland</td>
<td>Course participants (161 to date) – from private social care organisations and social work department facilities caring for individuals with intellectual disabilities requiring rectal diazepam.</td>
<td>Use of rectal diazepam for seizures in individuals with intellectual disabilities. Training developed for lay care staff working with intellectual disabled adults in community home settings. Course in 3 parts – part 1 – general awareness, 2 – theoretical and practical training in rectal diazepam and basic first aid, 3 – formal assessment. Descriptive write-up of the training programme and its evaluation via questionnaires completed by participants.</td>
<td>Outlines a training programme to educate lay community care staff on epilepsy awareness and in the administration of rectal diazepam in individuals with intellectual disabilities. Questionnaires N/A</td>
<td>This type of training can be adapted and implemented in other areas. Assessment and gaining of a certificate is taken seriously by employers. Feedback on the assessment for participants (strengths and weaknesses is important). Legal issues with regards to training must be considered.</td>
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