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Guest Editorial

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Sharing best practice through publication

According to the Oxford Dictionary Best Practice refers to ‘procedures that are accepted or prescribed as being correct or most effective’. A brief trawl through Google however suggests it is often conflated with ‘evidence based practice’ and, more likely in my own field of social work, ‘research informed practice’. Both are, of course, important but all too often imply a one way direction *from research to practice*. In the hierarchy of evidence, systematic reviews and randomised controlled trials rule the chaotic world of health and social care but these ‘gold standards’ often lack the context of human experience, practice wisdom and social justice. In this time of austerity, my concern is that what is ‘most effective’ quickly becomes what is ‘cost effective’.

It is therefore more important than ever to challenge convention and pose questions to policy makers, commissioners and researchers and ask *what can best evidence learn from best practice?* It needs to be a return journey from research to practice *and back* so that Best Practice is not correct OR effective but correct AND effective. Researchers and practitioners have a responsibility to talk to each other or perhaps more importantly listen to each other and share understanding. It should be a dialogue not a monologue, so it is imperative that one voice does not dominate another. Though it can’t be ‘controlled’, researchers need to recognise the value of practice wisdom and patient experience and, while it may seem removed from reality, practitioners need to understand why ‘standards’ matter. We cannot know everything but we each have a responsibility to share what we do know, however inconsequential it may feel, and start contributing to the conversation.

Whether it’s for a high impact academic journal or the local rag *use your voice*, you have something worth sharing.

How the Chapelhow Enablers are Essential to the Delivery of Care

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Abstract

The Chapelhow Framework was established around six enablers; these are assessment, communication, risk management, managing uncertainty, record keeping and documentation, professional judgement and decision making. These six enablers help to make up the foundations that all healthcare professionals need in order to develop their skills to the best potential to maximise the level of care delivered. This article will discuss two enablers: risk management and communication in relation to the care of a 74 year old dementia patient. It was evident that these two enablers link together to provide holistic, patient-centred care alongside the importance of effective communication.

Keywords

Chapelhow, Risk Management, Communication, Dementia

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Introduction

This article will discuss two Chapelhow et al. (2005) enablers and how they relate to and impact on a patient whose care I was involved in whilst on placement. The two enablers that I have chosen for this article are risk management and communication as I think these interlink well and are vital during the delivery of care to the patient.

Chapelhow et al. (2005) state that learning practical and clinical skills is a fundamental part of becoming a nurse and a skilled practitioner delivering holistic care. This is achieved by combining all aspects of care to meet the individual's needs; therefore any tasks that are performed need to be person-centred and tailored to that individual (Chapelhow et al. 2005). This means that we should act differently towards each patient, depending on what they require, whilst also maintaining equity and ensuring that everyone receives a good quality of care. Chapelhow et al. (2005) believe that as a nurse asking questions and listening are vital aspects of care. They state that every individual has their own anxieties and worries, and what is important to one person may not be important to another. Therefore by asking questions and listening to the patient their worries soon become clear and they can be offered reassurance, which will improve their experience in care (Chapelhow et al. 2005).

In accordance with the Nursing and Midwifery Council (NMC) Code it was essential that I gained consent from the patient whose care I am going to be discussing in this article (NMC 2015). The NMC states that as a nurse you have a duty of confidentiality to all patients receiving care and you should ensure that patients are informed about how and why their information is used (NMC 2015). However, the patient, who I was caring for, did not have capacity to consent; therefore I gained consent from her family who were involved with making decisions around her care. In order to comply with confidentiality any names used throughout this article will be pseudonyms.

The case study that I will be using is a 74 year old lady, called Nahida, whose care I was involved in whilst on placement. Nahida was admitted to hospital with a urinary tract infection and whilst in our care she was found on the floor next to her bed; as she had fallen trying to climb over the bed rails. This led to an x-ray being carried out which did not show signs of a fractured neck of femur. Nahida suffers with dementia which has led to her losing her ability to speak English. Her only language is now Urdu (her first language). In addition she can be very aggressive when staff come into contact with her. Nahida's family come to visit her regularly to assist with meals and communicate with her.

Risk Management

The first Chapelhow enabler will be risk management in relation to the risk assessments carried out during Nahida's care. Chapelhow et al. (2005) state that risk management is not only about identifying the risk but how measures can be put in place to prevent the identified risk from occurring or recurring. As Nahida had a fall, it was important that this was documented and a referral made to the falls team nurses, who subsequently came to assess her condition. The falls assessment that was carried out was vital and enabled the professionals to identify who was at greater risk of falling and why, therefore they can use the information to collaborate and reduce risk (Nazarko 2012). The specialised falls nurses assessed whether there were any further risks of falls taking place and discussed the preventative measures that could be put in place to reduce such risks.

This was the second falls assessment Nahida had during her care, as the NICE (2014) guidelines state that anyone who is age 65 years or older has to have a mandatory assessment when they are admitted to check for any previous falls, and determine the level of risk that they are at (NICE 2014). These guidelines also recommend that a multifactorial risk assessment is carried out for older people who are considered at risk of falling, as this also includes an assessment for any chronic conditions, such as dementia, that could affect mobility (NICE 2014). Therefore, when Nahida was first assessed on admission, her dementia should have identified her as at high risk of falls, and preventative measures should have been put in place to prevent a fall from occurring. According to Age UK (2010) 3.4 million people over the age of 65 years fall each year and this is a major cause of injury and death in over 70's. This suggests that even though the falls risk assessments are carried out on admission, they may not be as effective as they could be, as a high number of elderly patients are still suffering from falls every year.

Also another issue that was present during Nahida's care was the fact that she suffers from dementia and her account of the fall was not very clear, leading to issues of accuracy in the assessment. Schwendiman et al. (2008 cited in: Nazarko 2012 p.231) carried out a study and the findings revealed that patients who were cared for on an elderly care ward were at greater risk of falling compared to patients on a surgical ward due to the complexity of conditions they have.

When the risk assessment was carried out the falls nurses put strategies in place that were in the best interests of Nahida. This resulted in a falls alarm being attached to Nahida and changing her bed to a low profiling one, so that if a fall occurred again it would not be as severe. These preventative measures were an essential core function in maintaining the quality of Nahida's care as they allowed the professionals to be alerted to any risk (Nazarko 2012).

A manual handling risk assessment was carried out as part of Nahida's care. As Nahida could be very aggressive it was difficult to come into any form of contact with her, such as personal care and transferring her as she often gripped onto the furniture or the professionals. This created issues involving the quality of care given to Nahida. At times it was almost impossible to meet her essential needs, as she was at risk of causing injury to herself in addition to the professionals. A risk assessment was carried out to look at the implications of her behaviour on her quality of care and it was decided that Nahida had to be hoisted rather than providing manual assistance, as this reduced the risk of injury to both Nahida and the professionals. This was because many of the professionals had complained about the strain on their backs from transferring Nahida, therefore using a hoist reduced the risk of injury to the professionals and limited the opportunities for Nahida's agression. This reduced the risk for Nahida as she was transferred safely in a hoist rather than the professionals manually lifting her whenever she was moving from bed to chair or vice versa; practice that did not comply with moving and handling policies.

This demonstrates that the risk was managed effectively and in accordance with policy as the Royal College of Nursing (RCN 2017), who state that no professional should manually lift patients as this can put both the professional and patient at risk, and that specialist equipment should be used. They also state that employers must assess the risk of back injury and reduce this risk to its lowest level by carrying out a risk assessment to assess what equipment will be needed and the number of staff to ensure tasks are carried out safely (RCN 2017).

Communication

Having discussed the first Chapelhow enabler, this article will now explore the second enabler: communication. Chapelhow et al. (2005) regard communication as a fundamental skill that all professionals should have developed to a high level, and it is needed in order to collect accurate and meaningful data during an assessment. During Nahida's care it was very difficult to communicate with her due to the language barrier. This gave rise to some challenges as we could not assess her daily needs. Also due to Nahida's dementia her body and mind were no longer under her voluntary control, which meant that at times assessing her needs was even more difficult as she would often get confused and agitated. This resulted in us having to gauge from her reactions what she needed, and we also had to encourage her family, when available, to translate in order to assist with daily assessments.

As well as the language barrier impacting Nahida's communication towards us, it also affected our communication with Nahida as it meant that we could not explain our actions and why we were carrying out certain tasks. Therefore, tasks such as personal care were challenging and took up a lot of time as Nahida would often fight with us as she seemed scared by what we were doing. This was difficult and we had to act in Nahida's best interest as we could not let her have poor hygiene as this was not in her best interest and her condition could have deteriorated.

Also, administering medication was challenging as she refused to take tablets/liquids and we could not explain what the medication was and its importance. Nahida would only take her antibiotic medication when her family arrived at lunchtime and in the evening as they could explain what they were; this meant that on many occasions her morning antibiotic was refused which could cause her urinary tract infection to become worse and antibiotic resistance to develop. According to Nazarko (2009) there is an increase in the incidence of antibiotic resistance. This threatens to undermine antibiotics' usefulness which could result in Nahida's urinary tract infection deteriorating further making it difficult for her to recover fully.

The lack of communication with Nahida also caused issues when working in a multi-disciplinary team as documentation, such a National Early Warning Scale (NEWS), was often limited, which meant that this could not be shared with the multi-disciplinary team, as Nahida refused her observations and would often become aggressive when we tried to take them. This meant that professionals struggled to collect information and sometimes the information was inaccurate due to Nahida not being able to communicate how she felt with her consultant, which also meant in the absence of her family she did not have full involvement in her care. This demonstrates how challenging it can be to comply with the Department of Health (2012) guidelines as they state that in order to work within the 6C's, communication with patients is crucial to ensure that they are fully involved in their care. Also, there should be no decision made without the patient being informed first as this works with the framework: 'No decision about me, without me' (Department of Health 2012).

The level of communication was also an issue with Nahida's family. When she was diagnosed as medically fit and was able to be discharged, her family felt that a nursing home or a package of care best suited her needs. However, Nahida's family were not given much information on these options and found it difficult to decide what the best option would be. This led to a longer stay in hospital for Nahida with a potentially negative impact on her mental health. A research study explored the risks of prolonged hospitalisation and found that depressive symptoms increased during the period of hospitalisation, and that 27.6% of older people met the criteria for minor depression (Chun-Min, Guan-Hua and Chia-Hui 2014).

The environment that Nahida was in also hindered the level of communication between her and the professionals as there was no immediate access to interpreters to aid communication. This links with Nahida's risk assessments as due to the language barrier, the falls nurses could not communicate with Nahida directly and the interpreting service was not available at that time; therefore this meant that her family had to translate for the falls nurses which did not offer the best quality of assessment. McCarthy et al. (2013) reported that nurses found communicating with patients where English was not their first language challenging and that they were concerned about their ability to assess patients and make informed decisions that form the basis for the quality care provision. These nurses also stated that the use of interpreters would improve assessment; however, accessing the services was challenging (McCarthy et al. 2013).

Conclusion

This case study of Nahida has demonstrated how important risk management and communication skills are in the delivery of a patient's care, and how in order to provide holistic care these skills need to be developed to a high level by all health care professionals. During Nahida's admission manual handling risks were managed effectively by tailoring her patient care plan to her individual needs and using a hoist to transfer her, which ensured that any injuries to professionals and Nahida were at the lowest risk possible. However, the level of communication throughout Nahida's care was challenging which meant that it was difficult to include her views/thoughts in her own care, as interpretation services were limited. This made assessing her condition after her fall and throughout her time in hospital challenging. Therefore this suggests that effective communication skills are required when carrying out assessments in order to appropriately manage any risks, and that the two skills overlap well to ensure that good-quality care is provided to all patients. This shows that it is essential for all nurses to develop these skills in order to maximise the level of care they are delivering to their patients.

References

Age UK (2010) *Falls in the over 65s cost NHS £4.6 million a day*. [Online] Available at: http://www.ageuk.org.uk/latest-press/archive/falls-over-65s-cost-nhs/ [Accessed 1 June 2017].

Chapelhow, C., Crouch, S., Fisher, M. and Walsh, A. (2005) *Uncovering skills for practice*. Cheltenham: Nelson Thornes.

Chun-Min, C., Guan-Hua, H. and Chia-Hui, C. (2014) Older patients' depressive symptoms 6 months after prolonged hospitalization: Course and interrelationships with major associated factors. *Archives of Gerontology and Geriatrics*, 58 (3), pp.339-343.

Department of Health (2012) *Compassion in Practice*. [Online] Available at: https://www.england.nhs.uk/wp-content/uploads/2012/12/compassion-in-practice.pdf [Accessed 12 June 2017].

McCarthy, J., Cassidy, I. M., Graham, M. and Tuohy, D. (2013) Conversations through Barriers of Language and Interpretation*.* *British Journal of Nursing*, 22 (6), pp.335-339.

National Institute for Health and Care Excellence (NICE) (2014) *Falls – Risk Assessment* [Online] Available at: https://cks.nice.org.uk/falls-risk-assessment#!scenariorecommendation [Accessed 1 June 2017].

Nazarko, L. (2009) Combating antibiotic resistance in urinary tract infection. N*urse Prescribing*, 7 (10), pp.450-455.

Nazarko, L. (2012) Falls prevention: assessment and intervention. *British Journal of Healthcare Assistants*, 6 (5), pp.230-231 [Online] Available at: https://www.magonlinelibrary.com/doi/pdfplus/10.12968/bjha.2012.6.5.230 [Accessed 1 June 2017].

Nursing and Midwifery Council (NMC) (2015) *The Code: Professional standards of practice and behaviour for nurses*. London: NMC

Royal College of Nursing (2017) *Moving and handling*. [Online] Available at: http://www.rcn.org.uk/get-help/rcn-advice/moving-and-handling [Accessed 12 June 2017].

Linking nursing theory and practice using the Chapelhow Framework: A case study

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Abstract

This article will explore how two Chapelhow enablers were used in the delivery of care to a patient who was at risk of developing pressure ulcers and malnutrition. The enablers chosen were assessment and risk management. It will explore the evidence available to support the efficacy of the tools used during assessment in addition to the nursing skills used and clinical judgement. Consideration will be given to record keeping in relation to the completion and updating of care plans tailored for the patient's specific needs, used as part of the risk management of the patient's current condition, and to prevent further deterioration and improve life expectancy.

Keywords

Chapelhow, Assessment, Risk Management, Pressure Ulcer, Malnutrition,

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Introduction

Chapelhow et al. (2005) describe a skill development model for students to use during their clinical training to enable them to approach their future nursing role holistically as delivering effective, individualised care. The model includes a framework of six components, described as enablers: assessment, communication, professional judgement and decision making, risk management, record keeping and documentation, and managing uncertainty. These are considered fundamental skills that can be used by the nurse across a range of care settings (Chapelhow et al. 2005). For the purposes of this article I will discuss two of these enablers: assessment and risk management, showing how the tools were applied to a patient at risk of developing problems with skin integrity.

During the course of a 4-week placement in a nursing home for the elderly, I observed and participated in the delivery of health care for a resident (who shall be called Michael throughout this article). Permission was granted by Michael's advocate to use his case, in accordance with the *Mental Capacity Act (2005) Code of Practice* (Department for Constitutional Affairs 2007) and with appropriate ethical consideration, personal information will not be disclosed. The setting will not be identified. The protection of Michael's privacy and confidentiality is a fundamental part of the Nursing and Midwifery Council (NMC) *Code of Conduct* (2015).

Assessment

Soon after Michael's arrival, I was involved in assisting in his care delivery in accordance with an individualised care plan. Michael previously had a pressure ulcer which successfully healed. Nevertheless, he needed assistance with all personal care and continence needs, administration of medication, diet and fluids. He had recently been discharged from hospital following a deterioration in his appetite, general health, and significant weight loss. All of these factors are strong predictors of future susceptibility to pressure ulcers, malnutrition and perpetuation of health deterioration, according to the National Institute for Health and Clinical Excellence (NICE 2014a).

Michael was suffering with advanced dementia, and had a pressure ulcer that was assessed as grade 2 according to the National Pressure Ulcer Advisory Panel, the European Pressure Ulcer Advisory Panel and the Pan Pacific Pressure Injury Alliance (NPUAP/EPUAP/PPPIA 2014) pressure ulcer assessment guidelines. Michael was weighed upon hospital admission and was found to have a body mass index (BMI) of 17. This score was an indication of malnutrition according to the British Association for Parental and Enteral Nutrition (BAPEN 2017a). Prior to his hospital stay, Michael was cared for at home by an elderly relative who then suffered a fall. This injury impacted on her mobility, which further impacted on her ability to care for Michael, who was subsequently cared for by his local authority's care services whilst awaiting a place at the nursing home.

According to Chapelhow et al. (2005), an assessment identifies potential risks to health. Identification of risk factors, leads to an appropriate management plan; thus avoiding further decline in function. In Michael’s case, these plans included the use of accepted pressure ulcer and nutritional risk assessment tools. The care plan also facilitated the documentation of clinical observations and evaluation of care provided, the priority being to promote healing of the existing pressure injury and to determine future risk. The further desired outcome was to enable Michael to gain weight and therefore avoid further malnutrition.

The assessment tools used included a validated pressure ulcer risk assessment scale. On this occasion the Waterlow Score was applied, this being the tool used by both the hospital trust and the nursing home. NICE (2014a) recommend using one of a range of tools to support clinical judgement, immediately from diagnosis and grading of the pressure ulcer. This is supported by the European Pressure Ulcer Advisory Panel (EPUAP 2014), and organisational policies in the clinical setting~~.~~ This was the tool recommended for use within the clinical setting and referred to in the local policy.

It should be noted that, during Michael’s hospitalisation his care plan recorded a Waterlow assessment score of 12. On admission to the nursing home, Michael now scored between 10 and 19 and so he was at risk of further pressure ulcers (NICE 2014b). A Malnutrition Universal Screening Tool (MUST) recommended by BAPEN (2017a) was used by nursing staff, using his BMI score of 17. This score is one of the criteria used in generating an overall MUST score (BAPEN 2017a). In using the tool for Michael a score of 10 was calculated, indicating that Michael’s nutrition should be managed by the dietetic service or by the nursing home following discharge. Michael‘s care plan had been adapted to continue the hospital-prescribed regime following discharge from the dietetic service. On admission, Michael's relative was able to supply some details of his medical history (including current medication), and food preferences, although it was unknown how much weight Michael had lost in previous months whilst at home. His relative was not aware of his accurate weight loss, but had noticed that his clothes no longer fitted.

Strength and weaknesses of the tools

Anthony et al. (2009) state that assessment scales can overcomplicate, containing important criteria that are not correctly supported by their value range. Also, in the case of adults, components in the Waterlow tool may be weighted by the number of questions relating to certain aspects of presentation, such as age, which can result in this being given more importance than appetite and continence components. Moreover, Anthony et al. (2009) suggest that there are components which are unnecessary on the Waterlow scale; for example, the biological sex enquiry scoring women higher; this aspect of presentation has not been found to be a determining factor.

Webster et al. (2010) state that the predictive value of the Waterlow tool is so poor that it cannot be relied upon as a means of identifying those patients who may be at risk of developing a pressure ulcer. The rationale for this included the lack of correct height and body weight to successfully calculate body mass index (BMI) scores owing to a lack of weighing scales on the wards, or patients being unable to be moved from their hospital bed - indeed, 27% of prospective subjects were discounted due to the lack of an accurate BMI calculation (Webster et al. 2010). Both BAPEN (2017b) and NICE (2017) suggest a calculation of BMI can be estimated by measurement of the ulna in the forearm and the circumference of the upper arm to estimate height. Furthermore, since other components of the tool, i.e. the degree of mobility and nutrition fluctuate on a daily basis, this evidence could render the tool worthless in some cases (Webster et al. 2010). O'Tuathail and Taqi (2011) concur believing that the Waterlow tool's predictive ability is poor and limited resources could be used better.

Clinical Judgement

During my discussions with colleagues about the use of assessment tools versus clinical judgement, I became interested in the rationale behind the use of these tools. Upon researching these tools in comparison with clinical judgement, I began to see greater relevance and importance of clinical judgement when undertaking a skilled assessment. Skilled nurses use clinical judgement to arrive at decisions that promote good health and improved patient care, by observation skills, logic and deductive reasoning, knowledge and experience that develop over time, and best practice; to arrive at a course of action that achieves the desired outcomes for the patient (Chapelhow et al. 2005; Thompson et al. 2013).

Clinical judgement was involved in Michael's initial assessment by the nurses when he was first admitted to the ward. This included skin inspection and referral to a NICE guideline (NICE 2014b) recommendation such as the European Pressure Ulcer Advisory Panel classification system (EPUAP 2014) The ulcer was categorised as grade 2 and Michael was then referred to the tissue viability specialist nurse. Continued management of the pressure ulcer then passed to the nurses at the nursing home, with input from a district nurse where necessary. With regards to nutrition, clinical judgement was also applied by the in-trust dietician and Michael's GP in his on-going care. Anthony et al. (2009) consider clinical judgement to be an equally valid tool in risk assessment, whilst Pancorbo-Hidalgo et al. (2006) stress the importance of assessment tools to support nursing clinical judgment.

Treatment

The processes of assessment and risk management involve not just identifying the risks, but also managing the risks, and averting undesired outcomes (Chapelhow et al. 2005). In Michael's case these were the lack of healing or deterioration of his existing pressure ulcer, and the potential development of others, and malnutrition. Michael had pressure relief every two hours, to review vulnerable pressure points and erythema (redness) consistent with NICE ulcer prevention and management guidelines (NICE 2014b); any other concerns were reported. Michael also had a higher specification foam mattress on his bed as recommended by the National Pressure Ulcer Advisory Panel & European Pressure Ulcer Advisory Panel (2009). Michael wore special sheepskin boots at all times to support his foot, as bony prominences including heels are prone to friction leading to pressure ulcers in people of low mobility like Michael (NPUAP/EPUAP/PPPIA 2014). Rajpaul and Acton (2016) note a reduction of 43% in pressure ulcers to heels when heel protection devices are in place. Hydrocolloid dressings suitable for grade 2 ulcers were used to reduce the number of changes and the likelihood of pain and promote healing (Fletcher et al. 2011; NPUAP/EPUAP/PPPIA 2014). These strategies had been in place for some time.

I was able to observe and assist in two dressing changes a week apart, and note the changes to the condition of the ulcer over that period, and compare them to photographs of the ulcer at diagnosis. In the second dressing change it was possible to identify an improvement in the size and condition of the pressure ulcer. It was during one dressing change that the nurse noticed soiling due to urinary incontinence following displacement of a continence pad on re-positioning to reduce contraction of limbs (Hickey and Powers 2009). The risk of damage to the skin can be increased because of incontinence. The nurse highlighted the need for the carers responsible for providing pressure relief to ensure that this was not repeated as the risk of future pressure ulcers was increased owing to the presence of moisture (NPUAP/EPUAP/PPPIA 2014).

Risk Management

Michael's care plan also included a risk assessment for diet and fluid consumption, as he was deemed at risk of malnutrition and dehydration. The decision was taken to continue using food and supplements rather than tube feeding due to increased discomfort and agitation in patients with advanced dementia (Lam and Lam 2014). Smith (2008) states that adequate intake of diet and fluids is essential for maintaining health and preventing unintended weight loss. As Michael's appetite had decreased, he continued to receive support from the discharging local hospital trust's speech and language therapy (SALT) team, dietician, and his GP. Dietary supplements were also provided as recommended in the NICE guidelines (2017) for delivering effective patient-centred care.

Following assessment by the SALT team, a pureed diet was decided upon, due to his problems with swallowing (dysphagia). Unfortunately, Michael did not like it, and he was given a normal diet with softer options. Fortunately, Michael's dysphagia improved with the soft food diet when he returned to the nursing home. Other recommendations included regular weight monitoring, a diet rich in fruit and vegetables and a daily fluid intake of 1500 - 2000mls. The dietician supplied a list of suggested foods such as porridge, thick soups, full-fat desserts and scrambled eggs. Ideally, providing foods tailored to Michael's preferences would help to optimise eating (Dunne 2010); however, Michael was unable to express his preferences to staff due to his deteriorating cognitive functioning. It was therefore necessary to rely on family to inform staff of Michael's tastes.

Other nutritional issues included Michael's expressed dislike of the dietary supplement drinks, and his preference for sugary drinks or tea. The staff were challenged at times to ensure Michael took on enough fluids, and adequate amounts of food particularly during busy mealtimes when there are other residents with similar needs. To assist with this, staff documented his intake on diet and fluid charts, which were monitored by the nurse in charge. I was involved in assisting Michael with his diet and fluid consumption, and understood these challenges. Trying at quieter times rather than meal times, often produced success. Noisy environments can be distracting and discouraging for dementia patients and inhibit successful feeding (Chang and Roberts 2011). At other times Michael seemed to lose interest part way through feeding. It is recommended that a 'little and often' approach be taken; however, this depends upon the context in which care is given (Dunne 2010, p.116). It is not always possible in a nursing home or hospital setting where there may be staff shortages and busy environments which can lead to negative impacts on person-centred nutritional care (Murphy, Holmes and Brookes 2014). Despite these challenges, since leaving the hospital Michael gained a little weight, giving a positive evaluation of the implementation of the care plans.

Conclusion

During my experience on this placement, I gained some insight into how nursing practice occurs in the community, and how to relate this to nursing theory. I have looked at the tools and skill used during assessment. There is a wealth of evidence of the strengths and weaknesses of pressure ulcer risk assessment tools; focusing particularly on the Waterlow assessment tool (Anthony et al. 2009; Webster et al. 2010). I also looked at the use of a malnutrition screening tool in determining Michael’s malnutrition (BAPEN 2017a) and therefore the hospital dietitian’s responsibility for his nutritional needs. In addition, I considered the skill of clinical judgement, where practitioners of different specialties provided a range of informed, specialist experience and knowledge in providing effective, person-centred care to achieve desired outcomes (Chapelhow et al. 2005).

The evidence of the efficacy of structured screening tools in supporting clinical judgement was called into debate in my discussion, concluding that clinical judgement plays an equally valuable role in risk management in nursing to that played by the tools (Anthony et al. 2009). In Michael’s case, the process of nursing care, using accepted guidelines and good clinical judgement, produced good outcomes in the short time I was involved in his care. I observed improvements to Michael’s health due to the planning and implementation of his care plan, despite some issues, e.g. determining foods that Michael liked to aid adequate intake of diet and fluids. I also witnessed improvement in his pressure ulcer in appearance and experienced the role of nursing expertise in recognising where the care plan was not implemented correctly, and is an example of best practice intervention (Chapelhow et al. 2005; Thompson et al. 2013).

Overall, my experience demonstrated the role of nursing theory in practice, where, following assessment and risk management, patient-centred care could be adapted in accordance with the patient’s individual needs; critical in achieving the desired health outcomes (Chapelhow et al. 2005; Thompson et al. 2013).

References

Anthony, D., Papanikoloau, P., Parboteeah, S. and Saleh, M. (2009) Do risk assessment scales for pressure wounds work? *Journal of Tissue Viability* 19 (4), pp.132-136. [Online] Available at: https://www.sciencedirect.com/science/article/pii/S0965206X09000588 [Accessed 25 November 2017]

BAPEN (2017a) *'MUST' Calculator.* [Online] Available at: http://www.bapen.org.uk/screening-and-must/must-calculator [Accessed 1 November 2017].

BAPEN (2017b) *Alternative measurements: instructions and tables* [Online] Available at: http://www.bapen.org.uk/pdfs/must/must_page6.pdf [Accessed 26 November 2017].

Chang, C. and Roberts, L. (2011) Strategies for Feeding Patients with Dementia. *The American Journal of Nursing.* 111(4), pp.36-46. [Online] Available at: https://journals.lww.com/ajnonline/Abstract/2011/04000/Strategies_for_Feeding_Patients_with_Dementia.18.aspx [Accessed 1 December 2017]

Chapelhow, C., Crouch, S., Fisher, M. and Walsh, A. (2005) *Uncovering skills for practice.* Cheltenham: Nelson Thornes

Department for Constitutional Affairs (2007) *The Mental Capacity Act 2005 Code of Practice*. London: TSO

Dunne, A. (2010) Nutrition and dementia. *Nursing and Residential Care.* 12 (3), pp.112-116. [Online] Available at: https://www.magonlinelibrary.com/doi/10.12968/nrec.2010.12.3.46668 [Accessed 5 December 2017]

EPUAP (2014) *Prevention and Treatment of Pressure Ulcers: Quick Reference Guide* [Online] Available at: http://www.epuap.org/wp-content/uploads/2016/10/quick-reference-guide-digital-npuap-epuap-pppia-jan2016.pdf [Accessed 5 December 2017].

Fletcher, J., Moore, Z., Anderson, I. and Matsuzaki, K. (2011) Pressure ulcers and hydrocolloids made easy *Wounds International* Vol. 2 (4), pp.1-6 [Online] Available at: http://www.woundsinternational.com/media/issues/516/files/content_10143.pdf [Accessed 5 December 2017]

Hickey, J.V. and Powers, M.B. (2009) Management of patients with a depressed state of consciousness. In: Doughherty, L., Lister, S. and West-Oram, A. (eds.) *The Royal Marsden Manual of Clinical Nursing Procedures*. 9th ed. London: Wiley Blackwell pp. 201-246

Lam, R.E. and Lam, P.J. (2014) Nutrition in dementia. [Online] *Canadian Medical Association Journal.* 186 (17), pp.1319-1319. [Online] Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4234718/ [Accessed 5 December 2017]

Murphy, J.L., Holmes, J. and Brooks, C. (2014) Nutrition and dementia care: developing an evidence-based model for nutritional care in nursing homes. *BMC Geriatrics.* 17:55 [Online] Available at: https://bmcgeriatr.biomedcentral.com/articles/10.1186/s12877-017-0443-2
[Accessed 5 December 2017]

National Institute for Health and Care Excellence (2014a) *Patient-centred care* [Online] Available at: https://www.nice.org.uk/guidance/cg32/chapter/Patient-centred-care [Accessed 25 November 2017].

National Institute for Health and Care Excellence (2014b) *Pressure ulcers: prevention and management* [Online] Available at: https://www.nice.org.uk/guidance/cg179/chapter/1-Recommendations#prevention-adults [Accessed 25 November 2017].

National Institute for Health and Care Excellence (2017) *Screening for malnutrition and the risk of malnutrition in hospital and the community.* [Online] Available at: https://www.nice.org.uk/guidance/cg32/chapter/1-Guidance [Accessed 25 November 2017].

NMC (2015) *The Code: Professional standards of practice and behaviour for nurses and midwives.* London: NMC

NPUAP/EPUAP (2009) *International Guideline: Pressure Ulcer Treatment Technical Support* [Online] Available at: http://www.npuap.org/wp-content/uploads/2012/03/Final-2009-Treatment-Technical-Report1.pdf [Accessed 26 March 2018]

NPUAP/EPUAP/PPPIA (2014) *Prevention and treatment of pressure ulcers: Quick reference guide.* [Online] Available at:http://www.epuap.org/wp-content/uploads/2016/10/quick-reference-guide-digital-npuap-epuap-pppia-jan2016.pdf [Accessed 20 November 2017].

O'Tuathail, C. and Taqi, R. (2011) Evaluation of three commonly used pressure ulcer risk assessment scales. [Online] *British Journal of Nursing* 20 (6), Sup2 s27-34 Available at:
https://www.magonlinelibrary.com/doi/abs/10.12968/bjon.2011.20.Sup2.S27
[Accessed 1 December 2017]

Pancorbo-Hidalgo, P.L., Garcia-Fernandez, F.P., Lopez-Medina, I.M., and Alvarez-Nieto, C. (2006) Risk assessment scales for pressure wound prevention: a systematic review. [Online] *Journal of Advanced Nursing,* 54 (1) pp.94–110 [Online] Available at: https://onlinelibrary.wiley.com/doi/full/10.1111/j.1365-2648.2006.03794.x [Accessed 5 December 2017]

Rajpaul, K. and Acton, C. (2016) Using heel protectors for the prevention of hospital-acquired pressure ulcers. *British Journal of Nursing.* 25 (6), s18-26 [Online] Available at: https://www.magonlinelibrary.com/doi/pdf/10.12968/bjon.2016.25.6.S18 [Accessed 28 March 2018]

Smith, A. (2008) Nutrition in care homes: going back to basics. *Nursing and Residential Care,* 10 (2) pp.68-72 [Online] Available at: https://www.magonlinelibrary.com/doi/abs/10.12968/nrec.2008.10.2.28122 [Accessed 25 March 2018]

Thompson, C., Aitken, L., Doran, D. and Dowding, D. (2013) An agenda for clinical decision making and judgement in nursing research and education. *International Journal of Nursing Studies,* 50 (12), pp.1720-1726. [Online] Available at: http://www.journalofnursingstudies.com/article/S0020-7489(13)00144-2/fulltext [Accessed 5 December 2017]

Waterlow, J. (2007) *The Waterlow Assessment Tool.* [Online] Available at: http://www.judy-waterlow.co.uk/waterlow_score.htm [Accessed 1 November 2017]

Webster, J., Gavin, N., Nicholas, C., Coleman, K. and Gardner, G. (2010) Validity of the Waterlow scale and risk of pressure injury in acute care. [Online] *British Journal of Nursing.* (Tissue viability supplement), 19 (6), s14-22. Available at: https://www.magonlinelibrary.com/doi/pdf/10.12968/bjon.2010.19.Sup2.47246 [Accessed 25 November 2017].

The importance of communication and professional values relating to nursing practice

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Abstract

This is a discussion about communication and professional values: two areas of nursing that are important in delivering safe and effective care to patients/service users. Communication is defined and explored and barriers to communication are identified in line with how they impact patient care. The impact on patient care of a nurse's own values are also explored.

Keywords

Professional Values, Communication, Nursing, Patient Care.

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This article will discuss two elements of nursing: communication and professional values. The discussion will explore verbal communication relating to nursing practice. In addition, it will discuss professional values and how upholding these protects the patient and the nurse. The Nursing and Midwifery Council (NMC) is the regulator of registered nurses and midwives in the United Kingdom. All registered nurses and midwives have a set of regulations that they must always adhere to and these can be found in *The Code of Conduct 2015*. Following this code "…as a nurse or midwife, you owe a duty of confidentiality to all those who are receiving care." (NMC 2015, p.6). Which will be maintained throughout.

Communication

Communication is the transfer of information between a source and the receiver (Kennedy-Sheldon 2009). De Vito (2011) adds that the transfer of information can be between two or more people. Communication in relation to nursing is predominantly interpersonal; it helps the healthcare professionals convey compassion and support for patients. Information is shared by communication, and decisions are reached when healthcare professionals and the patient have communicated effectively (McCabe and Timmins 2013).

Nurses spend an extended amount of time with patients and they develop a trusting relationship, often referred to as building a rapport with patients. This relationship is very important to both the patient and the nurse. Patients need to be able to encounter an effective connection and a sense of being treated as an individual by the staff they come into contact with (Webster and Bryan 2009; Thorne et al. 2005). Nurses can do this by asking the patient open-ended questions when they first meet them such as "How are you feeling today?" (Fleishcher et al. 2009; Williams 2001). Sometimes patients do not wish to share thoughts and feelings and it is up to the nurse to recognise/respect this (Dougherty, Lister and West-Oram 2015). Learning how to build a rapport with patients is something that student nurses need to focus on before qualifying; once they are qualified they are expected to understand the nurse-patient relationship (NMC 2015).

Throughout the NMC *Code of Conduct* (2015), it states that nurses and midwives must be able to communicate effectively with patients and colleagues to protect patient safety and work well in a team. Every standard set in the code relates to communication to some degree. Standard one (NMC 2015) recognises that people should be treated as individuals and their dignity must be maintained. Nurses and midwives need to understand the person to treat them as an individual, and this can only be achieved if they ask the right questions and actively listen to the answers. Silverman, Kurtz and Draper (2013) suggested that when healthcare professionals meet a patient they should consider how they greet the patient, they should introduce themselves and find out the patient's name. Nurses should always make sure they have the correct name from the patient and that it matches patient records as this can help to reduce mistaken identity and potentially harmful errors (Makoul, Zick and Green 2007).

"Patients in their journey through the healthcare system are entitled to be treated with respect and honesty and to be involved, wherever possible, in decisions about their treatment". (Kennedy 2001, p.280). If communication has been effective for patients then they will feel empowered to make decisions about their care and treatment (Hibbard and Greene 2013). Communication is also important when obtaining consent. Healthcare professionals need to inform patients of the risks and benefits of a treatment or procedure before the patient can make an informed decision about whether they would like to give or refuse consent (NMC 2015). The National Health Service (NHS) *Constitution* (Department of Health (DoH) 2012b) acknowledged that the NHS must reflect the needs and preferences of the patient and involve patients and their family members where possible.

Standard seven of the *Code of Conduct* (NMC 2015) relates to communicating clearly; it instructs nurses and midwives to use terms that people can understand. Standard seven (NMC 2015) also instructs nurses to take reasonable steps to ensure service users have their communication needs met and they should regularly check their understanding. Nurses and midwives must be able to communicate well in English and use a range of verbal and non-verbal communication.

Effective communication plays a big part in patient engagement, satisfaction and recovery (Dwamena et al. 2012; Webster and Bryan 2009). However, ineffective communication is one of the most common concerns raised by patients in healthcare (DoH 2013; Strachan 2004). During a health visiting placement, I witnessed miscommunication between the health visitor and the parent of the children we were visiting. The father asked if the children would always be small but the health visitor did not hear what he had said because she was busy filling in the documentation. This was an example of ineffective communication because the father did not receive an answer to his question that may have been worrying him. This could be considered a barrier to communication. Barriers can be from the environmental conditions such as time pressures on nurses which mean they may not form good relationships with their patients (Hemsley, Balandin and Worrall 2012; Henderson et al. 2007). In addition, healthcare professionals and patients can also have personal barriers, such as attitudes and beliefs, defense mechanisms and prejudices which can negatively affect communication. Hindle (2006) calls them filters and when present they can distort a message.

Dementia may create barriers to communication. Dementia is defined as an umbrella term which describes a syndrome (Westerby and Howard 2011). It is not part of the normal ageing process and it is both progressive and incurable (Weatherhead and Courtney 2012). It can be hard for health professionals to communicate with people living with dementia but it can be equally challenging for the person with dementia. Jootun and McGhee (2011) found that healthcare professionals often avoid communicating with people living with dementia, which consequently has a negative impact on the patient's behaviour. Tonkins (2011) argues that allowing the individual living with dementia to indicate what they want by pointing can help communication. This kind of communication can take longer, but would be beneficial to both the nurse and the patient. It can be hard for the healthcare professional to build up a good rapport with a patient who has dementia, which is why giving personal care sensitively can help build that relationship (Baillie, Cox and Merritt 2012).

Professional Values

Values are important in nursing as they underpin all aspects of professional practice. They can influence attitudes in both a positive and a negative way, which is why it is very important for nurses to understand how this can affect patient care (Baillie and Black 2015). Rassin (2008) stated that values are at the heart of the diverse world of human behaviour and are demonstrated in every human action and decision. Rokeach (1973) provided an in-depth definition of values; he argues that a value is a persistent belief that one manner of conduct is more socially acceptable or personally acceptable than the opposite manner of conduct.

The NMC (2010) suggested that newly qualified nurses should have an awareness of their own values and how they can have an influence on interactions with others. Naden and Eriksson (2004) conducted a study in Sweden and found that nurses who had a genuine desire to help patients also possessed personal values such as honesty, respect and responsibility. Rokeach (1973) suggested that personal values were learned, and recognised that society, culture and personality contributed to a person’s values. According to Chan and Chan (2009) stigmatisation of people with dementia is entrenched in our society. McSherry and Coleman (2011) noted that older people sometimes feel useless or unwanted in a society that values beauty and youthfulness over experience, knowledge and wisdom.

As well as adhering to their own personal and professional values nurses must observe the values of the National Health Service if they work within the NHS (Baillie and Black

2015). The Department of Health (DoH 2013) published the *NHS Constitution* which set out the core values that patients and NHS staff should expect. These include compassion, respect and dignity, quality of care, working together for patients, improving lives and everyone counts. The *NHS Constitution* was created so that all members of staff and even those who do not have to adhere to a professional code, such as porters and catering staff, would understand how to provide the best level of care to patients. However, as the Francis Inquiry shows not all staff possess the values of the *NHS Constitution* (Francis 2013).

The DoH (2012b) published *Compassion in Practice: Nursing, Midwifery and Care Staff: Our Vision and Strategy* which is based around six core values that all members of NHS and social care staff should be adhering to. These six values are: care, commitment, courage, competence, communication and compassion. They were proposed by Roach (2002) who studied caring in health care. She believed that these values were needed to humanise and counteract the technology used.

All nurses are required to register with the Nursing and Midwifery Council (NMC). In 2015 *The Code: Professional Standards of Practice and Behaviours for Nurses and Midwives* was updated, setting out the core principles of what is expected of a professional nurse. *The Code* is there to safeguard the public and give registered nurses a set of guidelines to follow when they are caring for service users.

Keeping clear and accurate records is essential for a nurse. Irving et al. (2006) stated that information contained in nursing documentation can be lost to the reader. In addition, Hyde et al. (2005) argued that advocating for a patient and teaching them is less likely to be recorded in patient documentation. The NMC (2015) published a sixteen-step guide for nurses to follow. Glasper (2011) suggested an easy to remember mnemonic, CIA: records must be Clear, Intelligible and Accurate. All records are accessible to service users/patients so they should not contain judgmental phrases or emotive language (Prideaux 2011).

The DoH (2009) stated that people have the right to say what happens to their body therefore valid consent must be obtained before any personal care, treatment or examination takes place. The legal view of children and young people giving consent is different from that of adults. The *Family Law Reform Act* (1969) advised that young people aged 16-17 years old do have the capacity to consent to treatment. Furthermore, children under 16 years of age can give consent to medical treatment or procedures if they have been assessed by the nurse or health care professional under the Gillick competency test (1986). Children who are assessed as having sufficient intelligence and understanding do not have to seek the involvement of their parent or guardian. Nevertheless, children who are deemed to be Gillick competent and who refuse treatment may have their withdrawal of consent overturned if failure to have treatment may cause death or permanent injury (DoH 2009).

As previously discussed, nurses must adhere to the NMC (2015) *Code of Conduct* which sets out standards of expectations and behaviours for nurses to follow. In addition, nurses must also comply with the *Seven Principles of Public Life*, which aimed to have a comprehensive set of standards for all workers who are in a public position (Nolan 1995). The Committee was established to combat the fear among the public that people who work in public life such as health and social care workers, politicians and teachers do not always behave in an acceptable manner (Baillie and Black 2015). The Committee recommended that these seven principles should be included in the NMC (2015) *Code of Conduct*. However, in 2013 a report produced by the Committee of Standards in Public Life stated that they still had concerns about the behaviour of some nurses. This shows that work still needs to be done to follow these principles (Baillie and Black 2015).

The *NMC Standards for Competence for Registered Nurses* (2014) stated that nurses must work in partnership with patients, carers and families and they should practice in a holistic manner. Holistic care is an approach which provides care to a patient based on them as a whole person. It takes into account the patient's physical, sociological, spiritual and psychological elements (Byatt 2008). McEvoy and Duffy (2008) agreed that holistic nursing encompasses the mind, body and spirit of the patient. Sessanna, Finnell and Jezewski (2007) argued that there was evidence to suggest that there was a link between spirituality and health and wellbeing. Miner-Williams (2006) advised that nurses could ask questions such as "How are your spirits today?" which allows nurses to find out about a patient's spirituality and the patient feels that the nurse is genuinely interested in them.

The *Equality Act (Sexual Orientation)* (2007) stated that lesbian, gay, bisexual and transgender (LGBT) people cannot be refused treatment that would be given to anybody else (Edwards 2010). However, Phillips-Angeles et al. (2004) found that healthcare workers behaved in a judgmental and negative way when a woman stated she was a lesbian. Although this does not show that healthcare professionals are refusing to treat a patient, this kind of prejudice can be alienating and can encourage disengagement with healthcare services. The Royal College of Nursing and Unison (2004) instruct healthcare workers that they should not make a record of a patient's sexual orientation without permission. Although this is maintaining patient confidentiality by not disclosing information that is not relevant to the care of the patient, healthcare professionals do not need to know the sexual orientation of a patient to deliver effective care. Patients should be treated as individuals. A study by Neville and Hendrickson (2006) showed that approximately three quarters of participants were "always" or "usually" presumed to be heterosexual by healthcare professionals.

Sexual health is an area of nursing that many would think is at the forefront of challenging this kind of prejudice, A study by Stonewall (2008) emphasised that less than half of the 6,000 homosexual and bisexual women who participated in the study had never been screened for sexually transmitted diseases. Four percent of the women were told by healthcare workers that they did not need to be tested for sexually transmitted diseases. This study also highlighted that 15% of the over 25-year-old group have never had a cervical smear test, compared to the 7% of women in general. One in five of the women had been told by healthcare professionals that they were not at risk of cervical cancer. This shows that patients may be put at risk because of some healthcare professionals' own views and beliefs. In addition to that, nurses can be held accountable, the NMC

(2015) states that if a nurse does not follow national screening guidelines and a woman later develops invasive cancer the nurse will be held accountable for her actions.

To conclude, two very important topics have been discussed, which are essential in nursing. An explanation has been given to highlight the Nursing and Midwifery Council's (NMC) role in protecting patients and nurses. How effective communication can improve the patient's experience of healthcare has been explored. The article highlights the importance of adhering to professional values and guidelines. Communication and professional values are intertwined. For a nurse they go hand in hand, one cannot be effective without the other. I have also learned about the importance of adhering to professional values and guidelines.

Without effective communication patient care may be negatively affected. Nurses are in a unique position as they are very close to the patient but also heavily involved in the multi-disciplinary team. Therefore, they need to be able to adapt to interact with a wide variety of people. If nurses do not adhere to their professional values, they may put their patients at risk of serious harm as well as themselves. The most crucial point is that behaving like a professional and communicating like a professional at all times is vital to becoming a competent nurse. Nurses should never presume things about their patients, and they should use their communication skills to ask relevant questions even about sensitive issues. This enables the nurse to be fully informed about the patient and for them to be able to treat the patient as an individual.

References

Baillie, L. and Black, S. (2015) *Professional Values in Nursing.* London: Taylor & Francis.

Baillie, L., Cox, J. and Merritt, J. (2012) Caring for older people with dementia in hospital. Part one: challenges. *Nursing Older People,* 24(8), pp.33-37.

Byatt, K. (2008) Holistic care. In Mason-Whitehead, E., Mcintosh, A., Bryan, A., and Mason, T. (eds), *Key concepts in Nursing.* Los Angeles: Sage, pp.168-174.

Chan, P.A. and Chan, T. (2009) The impact of discrimination against older people with dementia and its impact on student nurses' professional socialization. *Nurse Education in Practice* 9(4) pp.221-227.

Committee on Standards in Public Life (2013) *Standards Matter. A Review of Best Practice in Promoting Good Behaviour in Public Life. Fourteenth Report of the Committee on Standards in Public Life*. London: TSO.

Department of Health (2009) *Reference Guide to Consent for Examination or Treatment,* 2nd ed. London: Department of Health. [online] Available at: https://www.gov.uk/government/publications/reference-guide-to-consent-for-examination-or-treatment-second-edition [Accessed 15 May 2017].

Department of Health (2012b) *Compassion in Practice Nursing, Midwifery and Care Staff: Our Vision and Strategy*. Leeds: Department of Health. [online] Available at: https://www.england.nhs.uk/wp-content/uploads/2012/12/compassion-in-practice.pdf [Accessed 16 May 2017].

DeVito, J.A. (2011) *Essentials of Human Communication,* 7th ed., London: Pearson.

Dougherty, L., Lister, S. and West-Oram, A. (2015) *The Royal Marsden Hospital manual of clinical nursing procedures,* 9th ed. Oxford: Wiley-Blackwell.

Dwamena, F., Holmes-Rovner, M., Gaulden, C. M., Jorgenson, S., Sadigh, G., Sikorskii, A., Lewin, S., Smith, R.C., Coffey, J. and Olomu, A. (2012) Interventions for providers to promote a patient-centred approach in clinical consultations. *Cochrane Database of Systematic Reviews*. Issue *12*. Art. No.: CD003267
DOI: 10.1002/14651858.CD003267.pub2

Edwards, M. (2010) *Communication Skills for Nurses: A Practical Guide on How to Achieve Successful Consultation*. London: Quay.

The Equality Act (Sexual Orientation) Regulations 2007 [online] available at: http://www.legislation.gov.uk/uksi/2007/1263/contents/made [Accessed 18 April 2017].

The Family Law Reform Act 1969 [online] available at: http://www.legislation.gov.uk/ukpga/1969/46 [15 May 2017].

Fleischer, S., Berg, A., Zimmermann, M., Wuste, K. and Behrens, J. (2009) Nurse-patient interaction and communication: A systematic literature review. *Journal of Public Health,* 17(5), pp.339-53.

Francis, R. (2013) *Report of the Mid-Staffordshire NHS Foundation Trust Public Inquiry*. London: House of Commons.

Gillick v. West Norfolk and Wisbech Area Health Authority (1986) *3* All ER 492.

Glasper, A. (2011) Improving record keeping: Important lessons for nurses. *British Journal of Nursing* 20(14), pp.886-887.

Hemsley, B., Balandin, S. and Worrall, L. (2012) Nursing the patient with complex communication needs: time as a barrier and a facilitator to successful communication in hospital. *Journal of Advanced Nursing,* 68(1), pp.116-126.

Henderson, A., Van Eps, M.A., Pearson, K., James, C., Henderson, P. and Osborne Y. (2007) 'Caring for' behaviours that indicate to patients that nurses 'care about' them. *Journal of Advanced Nursing,* 60(2), pp.146-153.

Hibbard, J. and Greene, J. (2013) What the evidence shows about patient activation: better health outcomes and care experiences; fewer data on costs. *Health Affairs.* 32 (2), pp.207-214.

Hindle, S.A. (2006) Psychological factors affecting communication. In Ellis, R.B., Gates, B. and Kenwothy, N. (eds) *Interpersonal Communication in Nursing,* 2nd ed. Edinburgh: Churchill Livingstone, pp. 53-70.

Hyde, A., Treacy, M., Scott, A., Butler, M., Drennan, J., Irving, K., Byrne, A., MacNeela, P. and Hanrahan, M. (2005) Modes of rationality in nursing documentation: Biology, biography and the 'voice of nursing'. *Nursing Inquiry* 12(2), pp.66-68.

Irving, K., Treacy, M., Scott, A., Hyde, A., Butler, M. and MacNeela, P. (2006) Discursive practices in the documentation of patient assessments. *Journal of Advanced Nursing* 53(2), pp.151-159.

Jootun, D. and McGhee, D. (2011) Effective communication with people who have dementia. *Nursing Standard,* 25(25), pp.40-46.

Kennedy, I. (2001) *Learning from Bristol: the Report of the Public Inquiry into children's heart surgery at the Bristol Royal Infirmary*. London: The Stationery Office

Kennedy-Sheldon, L. (2009) *Communication for Nurses: talking with patients.* Sudbury, MA: Jones and Bartlett.

Makoul, G., Zick, A. and Green, M. (2007) An Evidence-based Perspective on Greetings in Medical Encounters*. Archives of Internal Medicine* 167 (11), pp.116-117.

McCabe, C. and Timmins, F. (2013) *Communication Skills for Nursing Practice,* 2nd ed. Basingstoke: Palgrave Macmillan.

McEvoy, L. and Duffy, A. (2008) Holistic practice – a concept analysis. *Nurse Education in Practice* 8(6), pp.412-419.

McSherry, W. and Coleman, H. (2011) Dignity and older people. In Matiti, M. and Baillie, L. (eds), *Dignity in Healthcare: A Practical Approach for Nurses and Midwives*. London: Radcliffe, pp.109-125.

Miner-Williams, D. (2006) Putting a puzzle together: Making spirituality meaningful for nursing using an evolving theoretical framework. *Journal of Clinical Nursing.* 15(7), pp.811-821.

Naden, D. and Erikson, K. (2004) Understanding the importance of values and moral attitudes in nursing care and preserving human dignity. *Nursing Science Quarterly.* 17(1), pp.86-91.

Neville, S. and Hendrickson, M. (2006) Perceptions of lesbian, gay and bisexual people of primary healthcare services. *Journal of Advance Nursing.* 55(4), pp.407-15.

Nolan, M.P. (1995) *Standards in Public Life. First Report of the Committee on Standards in Public Life.* London: HMSO.

Nursing and Midwifery Council (2010) *Standards for Pre-Registration Nursing Education*. London: NMC.

Nursing and Midwifery Council (2014) *Standards for Competence for Registered Nurses*. London: NMC.

Nursing and Midwifery Council (2015) *The Code: Professional Standards of Practice and Behaviour for Nurses and Midwives.* London: NMC.

Phillips-Angeles, E., Wolfe, P., Myers, R., Dawson, P., Marrazzo, J., Soltner, S. and Dzieweczynski, M. (2004) Lesbian Health Matters: A Pap Test Education Campaign Nearly Thwarted by Discrimination. *Health Promotion Practice* 5(3), pp.314-25.

Prideaux, A. (2011) Issues in nursing documentation and record keeping practice. *British Journal of Nursing* 20(2), pp.1450-1454.

Rassin, M. (2008) Nurses' Professional and Personal Values. *Nursing Ethics.* 15(5), pp.614-630.

Roach, M. S. (2002) *Caring, the Human Mode of Being: A Blueprint for the Health Professions,* 2nd ed. Ottawa: Canadian Hospital Association Press.

Rokeach, M. (1973) *The Nature of Human Values.* New York: Free Press.

Royal College of Nursing & Unison (2004) *Not 'just' a friend: Best practice guidance on healthcare for lesbian, gay and bisexual service users*. London: RCN & Unison

Sessanna, L., Finnell, D. and Jezewski, M.A. (2007) Spirituality in nursing and health related literature: A concept analysis. *Journal of Holistic Nursing* 25(4), pp.252-262.

Silverman, J.D., Kurtz, S.M. and Draper, J. (2013) *Skills for Communicating with Patients,* 3rd ed. London: Radcliffe.

Stonewall (2008) *Prescription For Change.* [online] Available at: https://www.stonewall.org.uk/resources/prescription-change-2008 [Accessed 18 April 2017].

Strachan, H. (2004) Nursing Information. *Communication. Research and Theory for Nursing Practice* 18(1), pp.7-10.

Thorne, S.E., Kwo, M., Armstrong, E.A., McPherson, G., Harris, S.R. and Hislop T.G. (2005) 'Being Known': patients perspectives of the dynamics of human connection in cancer care*. Psycho-Oncology,* 14 (10), pp.887-898.

Tonkins, S. (2011) *Dementia Care.* (Based on NS581 Joutun, D. and McGhee, G. (2011) Effective communication with people who have dementia*. Nursing Standard*, 25, pp.40-46.) *Nursing Standard*, 25 (50), p.59.

Weatherhead, I. and Courtney, C. (2012) Assessing the signs of dementia. *Practice Nursing,* 23(3), pp.114-118.

Webster, C. and Bryan, K. (2009) Older people's views of dignity and how it can be promoted in a hospital environment. *Journal of Clinical Nursing,* 18(12), pp.1784-1792.

Westerby, R. and Howard, S. (2011) Dementia Part 1: Early recognition and diagnosis. *Practice Nurse,* 42(16), pp.42-47.

Williams, A. (2001) A study of practicing nurses' perceptions and experiences of intimacy within the nurse-patient relationship. *Journal of Advanced Nursing,* 32(2), pp.188-96.

Impact of Telemedicine in Management of Chronic Diseases

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Abstract

Diagnosis of chronic diseases has an impact on the patient's quality of life and the healthcare system. Telemedicine facilitates the delivery of medical intervention at home to improve health outcomes and reduce cost to the NHS. Adoption of telemedicine for routine management of chronic diseases positively impacts on the healthcare of patients and healthcare professionals. However, there are several challenges affecting the adoption of telemedicine into routine healthcare delivery. Lack of universal regulations and quality assurance protocols can impact the wide scale implementation of telemedicine into routine healthcare. Therefore, further research, support and training is required for successful adoption for routine management of chronic diseases.

Keywords

Telemedicine, Chronic Diseases, Heart Disease, COPD, Diabetes, Quality Assurance

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Introduction

The rising population of people affected with chronic conditions is one of the major challenges affecting the health and social care system in the United Kingdom (UK) as observed by Salisbury et al. (2015) and accounts for 7 out of 10 deaths each year in the United States of America (USA) (Center for Disease Control and Prevention (CDC) 2017). Chronic diseases such as chronic obstructive pulmonary disease (COPD), heart disease and diabetes affect over 15 million people in both the UK and USA, with almost a third of the population affected with multiple chronic conditions (NICE 2016, CDC 2017). Salisbury et al. (2015) reported that 30% of the population worldwide suffers from at least one chronic condition, accounting for 70% of the total health service costs in the UK, and 86% of the USA's health care cost (CDC 2017). According to NICE (2016), COPD accounts for over 1 million hospital bed use and 1.4 million GP consultations annually, costing the health service over £982 million per year while coronary heart disease affects 2.3 million people with over 500,000 cases of heart failure (SIGN 2016). In addition to the rising cost of healthcare due to these chronic conditions, quality of life is reduced in addition to life expectancy of patients affected (Vestbo et al. 2013). Chronic diseases are major contributors to sickness and disability worldwide, with Vestbo et al. (2013) estimating that COPD would be the third leading cause of death worldwide by 2020. It is therefore important to address the risk factors for these diseases and implement strategies for diagnosis, management and prevention (NICE 2016).

There are several global resources dedicated to applying different forms of telemedicine to manage chronic conditions worldwide. This article will discuss the international initiatives of implementing telemedicine for chronic diseases across the USA and the

United Kingdom. The benefits and challenges surrounding effective implementation of telemedicine will be discussed before rounding up with recommendations followed by a conclusion.

Policies and Directives

Currently, the use of information technology for delivering care at home, and remotely through telemedicine interventions appears to be one of the internationally recognised innovations in managing health challenges associated with chronic diseases (Salisbury et al. 2015). There are several international initiatives based on telemedicine to facilitate better diagnosis and management of chronic diseases, thereby ensuring positive patient outcomes (Zamarrón, Morete and González 2014).

According to the CDC (2017) management and prevention of diseases is based on governmental policy to improve disease awareness, global health promotion initiatives, and improving health care interventions. The World Health Organization (WHO) (2015) estimates that over 200 million people in Europe and America suffering from one or more of these chronic diseases could benefit from home treatment, thereby decreasing the costs and burden on health care. Home management of diseases also provides efficient health care delivery and improves the sustainability of the healthcare system (Campion, Dorsey and Topol 2016).

The Department of Health (2011) undertook the largest randomised control trial of telehealth and telecare in the world (The Whole System Demonstrator (WSD)) to evaluate their effectiveness and benefits in managing diabetes, heart disease and COPD. The outcome of the WSD forms the basis of the ‘3 million lives’ campaign and the mandate to the NHS Commissioning Board to empower and support the increasing number of people living with long-term conditions in the UK to self-manage their conditions at home (Department of Health 2013, Bond and Worswick 2015).

Process of Telemedicine

According to Merrell (2015) telemedicine (also referred to as telehealth) facilitates the improvement of the patient’s health status through a two-way interactive audio-visual communication technology, between patient and healthcare practitioner at a distance to support healthcare. The variety of telecommunication tools used include telephones, smartphones, tablets, laptops and mobile wireless devices such as connected blood glucose meters and blood pressure monitors (Zamarrón, Morete and González 2014). These telecommunication tools facilitate independent monitoring of a patient’s weight, blood pressure and oxygen saturation over a period and allow clinicians to evaluate clinical information provided by patients and medical data captured to diagnose and treat patients remotely (Wallace et al. 2012, Bond and Worswick 2015). Medical data transmitted could be shared appropriately with specialists around the world to facilitate diagnosis, management of complex cases, maintain follow-up appointments, report health concerns and detect early signs of health deterioration through a wide range of healthcare apps (Campion, Dorsey and Topol 2016, Schneider and Biglan 2017). It offers convenient and easy access to quality person-centred care according to the Department of Health (2015), thereby reducing health inequalities for housebound patients (Beck 2016).

Impact of Policy Directives on Healthcare

Telemedicine is a rapidly growing component of healthcare in both the USA and the UK, due to the continual growth of technology (Standing and Hampson 2015). According to the American Telemedicine Association (2015), over 200 telemedicine networks with 3,500 service sites were available in the USA as of 2015 with over 1 million Americans accessing different forms of the innovation to monitor their chronic conditions. Approximately 4.9 million people use a form of integrated cellular connectivity for home monitoring devices in USA and Europe as at the end of 2016 as reported by Gupta et al. (2017). Telemedicine in healthcare is estimated to increase by 38.7 percent over the next five years worldwide, with an estimated increase to 25.2 million people using it by 2021 due to government initiatives to move healthcare delivery from hospital to the patient's home (Gupta et al. 2017). Worldwide, millions of diabetic, heart disease and COPD patients monitor and maintain their health and control their disease using telemedicine, reducing the burden on the emergency services, cutting hospital admissions and length of stay in the hospital thereby decreasing healthcare costs as compared to traditional care (O'Connell 2015).

Comparing the uptake of telemedicine in the management of chronic diseases between UK healthcare and USA healthcare, the USA appear to have a higher uptake according to Standing and Hampson (2015), despite the UK being the first country to adopt telemedicine and having larger government funded programs for telemedicine (Sanders et al. 2012). Over half of all USA hospitals use some form of telemedicine to maintain patients' chronic conditions and they are rapidly moving towards larger scale implementation in all healthcare for all diseases, as observed by Buquet (2016). However, Standing and Hampson (2015) observed that larger scale implementation of telemedicine in the UK healthcare was currently restricted by lack of infrastructure to drive the growth in the sector.

The implementation of telemedicine in the management of chronic diseases is not without its challenges such as the search for more supportive evidence as observed by Gorst et al. (2014), which affects the large-scale implementation and adoption of telemedicine within routine healthcare in both the UK and USA.

Cost Implication to Healthcare Providers

The basic telemedicine equipment required for the self-management of heart disease, COPD and diabetes includes a visual base unit (a television set, laptop or desktop) with attachments such as spirometer, weigh scales, glucometers, blood pressure cuff and pulse oximeters (Henderson et al. 2013). One of the challenges as observed by Clark and Goodwin (2010) is the lack of evidence for capital return on investment and the potential to increase costs due to the need for more diagnosis and assessment of patients using the technology. Telemedicine is also considered to be too costly, particularly the equipment needed, to implement on a larger scale within the NHS infrastructure as observed by the Department of Health (2015). Clark and Goodwin (2010), however, suggested that the price of equipment could be reduced with new procurement models and significant take-up through the consumer market. Henderson et al. (2013) further highlight the additional costs of telemedicine which include, cost of monitoring staffing, supervisors, project managers, direct and indirect administrative costs, technology support and staff training.

Patient Acceptance and Adherence to Technology

Achieving cost effective management of chronic diseases and better health outcome is directly influenced by patient compliance and adherence to the use of telemedicine tools provided, as observed by Hamine et al. (2015). Patients' acceptance has been acknowledged as the major influence on the future implementation of telemedicine according to Gorst et al. (2014) but there is a perception that most patients often refuse or abandon telemedicine. Factors affecting patient's acceptance and adherence are discussed below.

Technology Usability and Costs

Digital innovative tools could unintentionally promote health disparities as observed by Hamine et al. (2015), especially among the elderly due to lack of knowledge, inability to use and access to technology. However, Bond and Worswick (2015) reported that most patients found the telemedicine system easy to use, even without prior experience with computers. Berkel et al. (2016), however, highlight the link between a patient's literacy level and their ability to use the technology. Although, Reider-Demer et al. (2017) suggested that patients often declined participation in telemedicine due to lack of access to the technology's supporting equipment, as purchase of these technologies could incur extra costs for patients (Beck 2016). Hamine et al. (2015) also reported issues with the cost of the technology applications (apps) as a barrier to patient's adherence, as patients with low income are less likely to purchase apps updates for the telemedicine systems.

Internet Access

Schneider and Biglan (2017) identify inadequate internet access as a barrier to patients' acceptance and adherence to telemedicine. Global distribution of the internet is uneven, as observed by Brake (2017), with only 85% of households worldwide having access to the internet. Within the UK, approximately 14% of individuals have never had any access to the internet with only 12% in the USA (Schneider and Biglan 2017). To reduce disparities due to lack of internet access, especially within the ageing population, internet facilities need to be made widely available and training opportunities are required to facilitate easier access to the internet, increase familiarity with necessary technology and improve experiences with telemedicine (Gorst et al. 2014).

Currently in both the USA and the UK, there are several government incentives such as, the UK government's £400 million Digital Infrastructure Investment Fund (DIIF) and the US Federal Communication Commission's Connect America Fund (CAF) to improve broadband infrastructure, internet access to the remote areas of the country and subsidise the cost of internet access (Brake 2017, HM Treasury 2017). This helps facilitate better adherence to telemedicine, as patients are more likely to be able to afford the cost of internet access, consequently facilitating their participation in telemedicine systems to better manage their conditions (Berkel et al. 2016).

System Failure

Real-time exchange of patient data is important to facilitate the timely diagnosis of a patient's situation and provide interventions before the condition escalates (Vestbo et al. 2013). However, data transmission delay is one of the issues experienced with telemedicine, which could lead to patient dissatisfaction with the service, re-hospitalisation and relapse of condition especially with COPD and heart disease, which could have been prevented (Steinman et al. 2015). O’Connell (2015), however, suggested that delay in data interpretation could also be due to unavailability of healthcare workers to pick up the trend and attend to patients in a timely manner.

Patient Capacity

Sanders et al. (2012) identified the length of time it took for some elderly patients to gain confidence in using the system as one of the barriers. They further suggested that it took some patients several months to be competent, this is supported by Kolltveit et al. (2017) who suggest that patient’s noncompliance with telemedicine might be due to their inability to use the equipment provided competently, thereby increasing their negative perception. Issues surrounding failed readings of telemedicine equipment have also been identified especially among the elderly, as observed by Gorst et al. (2014), which could be due to lack of capacity and lack of healthcare workers to help with readings on a regular basis (Kolltveit et al. 2017). Reider-Demer et al. (2017) also highlight other co-morbidities like a patient’s physical, neurological and cognitive impairment, as a barrier to use of telemedicine, which might affect their participation and suitability to use the system. Therefore, Beck (2016) identified that healthcare professionals need to recognise that telemedicine is not appropriate for all patients as some patients might benefit more from home visits.

Psychosocial Factor

The patient's discomfort with the concept of telemedicine is another challenge to widescale implementation of telemedicine into routine healthcare delivery (Merrell 2015). Office Practicum (2015) reported that less than 75% patients were comfortable communicating with their healthcare providers using telemedicine systems. They also reported that 16% of patients who had access to telemedicine services choose to present in the emergency department for minor complaints (Campion, Dorsey and Topol 2016). Gorst et al. (2014) reported 32% of participants refused telemedicine outright due to lack of interest, or a belief that monitoring was unnecessary. Clark and Goodwin (2016) also report some patients' perception of telemedicine as unnatural and restrained compared to personal interaction.

Wang et al. (2017) suggested early referral to a telemedicine service was essential, to reduce a patient's attachment and expectation of in-person visits from healthcare professionals and to reduce their discomfort of telemedicine service. Bond and Worswick (2015), reported issues surrounding patients stepping-down from telemedicine programs when they can effectively self-manage. Bond and Worswick (2015) reported that most patients are dependent on the system after 12 weeks of the telemedicine program, and are reluctant to have the equipment removed after the program, which has the potential to create further issues regarding the cost for new equipment for other patients and patient dependency. Therefore, Henderson et al. (2013) suggested further governmental intervention to the issue surrounding stepping-down as the tools are integral to a patient's continual self-management (O'Connell, 2015). NICE (2016) emphasise the need for structured educational programmes to empower patients to improve self-care and management of chronic diseases, reduce technology anxiety, and improve perception of telemedicine.

Impact on Healthcare Professionals

Healthcare professionals, according to Gorst et al. (2014) have an important role to play in patient recruitment and successful implementation of the interventions (Kolltveit et al. 2017). Bond and Worswick (2015), evaluate the benefits of using telemedicine in managing chronic disease for healthcare professionals, which include better understanding of a patient's health status, less demand on healthcare professionals, and more flexibility to meet acute patients' medical needs (Brewster et al. 2014). Office Practicum (2015), however, suggests that only 84% of healthcare executives feel that telemedicine services are important to their organisation, which can affect wider scale implementation.

Healthcare Staff's Attitude and Acceptance

Brewster et al. (2014) in their study highlight the preference of staff, especially nurses, for face-to-face autonomous interaction with patients rather than remote interactions, which are perceived to affect negatively the nurse–patient relationship and job satisfaction (Sanders et al. 2012). Brewster et al. (2014) also concluded that some nurses feel telemedicine shifts the focus away from direct contact with patients and creates a trust issue which could be avoided with direct contact.

One of the issues reported by Steinman et al. (2015) was the lack of awareness of telemedicine services amongst healthcare professionals. A study carried out by Bond and

Worswick (2015) suggested that while healthcare professionals believed they had a role to play in promoting patients' self-management, their role in educating through telemedicine was unclear. The adoption of telemedicine systems into routine healthcare requires the acceptance of all users, it is therefore important to improve awareness of the technology amongst staff to facilitate better understanding and up-take of the intervention (Gorst et al. 2014).

Organisational Culture and Beliefs

Clark and Goodwin (2010) argued that replacing direct contact with remote technology could be an issue for healthcare professionals, as it challenged their perception of the norm in the health and social care services. A study of healthcare professionals' views on telemedicine carried out by Brewster et al. (2014), highlighted staff's scepticism towards telemedicine and the belief that the technology may leave them redundant, with some healthcare professionals especially nurses stating that it was not real nursing. Their studies also discussed the staff's low expectation of the positive outcomes, therefore making telemedicine highly unlikely for the management of COPD, diabetes and heart disease (Sanders et al. 2012).

Gorst et al. (2014) reported organisational culture of not sharing knowledge and skills among professionals and patients as one of the barriers to telemedicine. This also challenges the organisational change management process, which according to Steinman et al. (2015) was not dependent on resource availability or regional need for telemedicine solutions. There is a need for policymakers to support healthcare professionals to overcome the barriers associated with existing professional and organisational cultures through self-directed support, personal budgets and resource allocation systems to facilitate effective change management (Clark and Goodwin 2010, Gorst et al. 2014).

Lack of Technology Expertise

Kuria (2017) found in their study that the level of knowledge and practice of nurses in telemedicine varied and were

dependent on individual technical expertise. Studies carried out by Brewster et al. (2014), noted that some staff felt the technology was not user-friendly, and 25% of staff involved in the study named technical issues and lack of technical skills in installing and using the technology as a barrier when recommending it to a patient.

Lack of confidence about the safety and reliability of the equipment was also one of the issues discussed by Gorst et al. (2014). Bond and Worswick (2015) suggested the need to make telemedicine a requirement for all healthcare professionals to promote confidence and reduce discomfort experienced with the use of the system. This was further supported by the study carried out by Bradford and Penny (2016) suggesting that policy makers and nursing organisations need to empower nurses to incorporate telemedicine into their practice. The Royal College of Nurses recommended integrating telemedicine modules for nurses in the UK to equip them with skills required for telemedicine healthcare delivery (Wright 2014), whereas the National Organisation of Nurse Practitioners has already incorporated telemedicine curriculum into their core competencies for nurse practitioners in the USA (Bradford and Penny 2016).

Quality Assurance for Telemedicine

Quality assurance, as described by Wootton et al. (2015), is essential for good medical decision making and can be defined as the systematic process of ensuring a quality standard of care. Considering the increasing drive for the adoption of telemedicine in the self-management of chronic diseases within the two countries, Wootton et al. (2015) and Buquet (2016) suggested that limited quality assurance has been incorporated into telemedicine. Currently, according to Clark and Goodwin (2010), there are no mandatory minimum clinical standards for telemedicine services in the UK; however, there is a trade association Code of Practice. Whereas the American Telemedicine Association (2015), responsible for telemedicine quality assurance, has released several practice guidelines and technical guidance for healthcare practitioner in the USA.

According to the American Telemedicine Association (2015), the standards for the protection and privacy of patients' information are governed by the *Health Insurance Portability and Accountability Act* (HIPAA) (1996) under the USA federal law. However, in the UK, European law sets the standard for patient safety. According to Raposo (2016), telemedicine in the UK is regarded as two processes: a health service and an information service. Consequently, regulation occurs through two different directives. The health service aspect of telemedicine, according to Kelly (2011), is regulated by *E-Commerce Directive 2011/24/EU* and *Medical Device Directive 93/42/EEC* while the *Data Protection Act (1998)* and *E-Privacy Directive 2002/58/EC* govern the processing of personal information. The Department of Health also set a regulation for all telemedicine operators working within the NHS to comply with their Confidentiality Code of Practice and Guidelines on information security (NHS England 2016; Raposo 2016). The major challenge with the quality assurance of telemedicine in both countries according to Buquet (2016) and Raposo (2016) is the fact that there are no uniform regulations for telemedicine services potentially causing confusion for health professionals using the equipment with patients.

Recommendation

To address the inequalities associated with the use of telemedicine, it is important for the government to design and develop systems targeting user groups with limited or no knowledge of the technology and diverse patient groups, thereby reducing the disparities and ensuring a better global uptake of telemedicine. To improve the acceptance of telemedicine amongst staff and its use within the care pathway, it is necessary for policy makers to invest in implementing strategies to encourage use of telemedicine such as training, support and universal guidelines as to when it is appropriate to refer patient to the service and universal regulations. To improve future uptake, telemedicine modules could also be included in the university curriculum to facilitate the sensitisation of future nurses and clinicians, thereby improving their knowledge to promote the use of the service.

Conclusion

The impact of telemedicine in self-management of chronic disease appears to be mainly positive. Implementation of telemedicine into routine healthcare is a governmental priority both in the UK and the USA due to its potential to increase efficiency in healthcare. However, more policies and directives involving education, support and research into long-term use of the technology are required to promote adoption within both countries. Limited independent research has been carried out to analyse the role of nursing staff in supporting a patient to self-manage their chronic disease. Research on the impact of telemedicine on a patient's cultural beliefs, disease management and ease of use is also limited. Therefore, further research on the impact of telemedicine in improving the outcome of chronic diseases is required. Despite the challenges to telemedicine especially the lack of legal framework, privacy protection, rules and regulations, it appears to be a positive and rapidly expanding concept.

References

American Telemedicine Association (2015) *About Telemedicine*. [Online] Available at: http://www.americantelemed.org/main/about/about-telemedicine/telemedicine-faqs [Accessed 21 September 2017].

Beck, M. (2016) How Telemedicine Is Transforming Health Care. [Online] *Wall Street Journal.* Available at: https://www.wsj.com/articles/how-telemedicine-is-transforming-health-care-1466993402 [Accessed 21 September 2017].

Berkel, C., Smith, M., Horsefield, D. and McManus, H. (2016) Evidence for Supported Self Care at Scale: A population approach to evaluating technology enabled support for long term condition management. *International Journal of Integrated Care,* 16 (5), S.44. DOI: 10.5334/ijic.2595

Bond, C. and Worswick, L. (2015) Self- Management and Telehealth: Lessons Learnt from the Evaluation of a Dorset Telehealth Program. *Patient-Centered Outcomes Research,* 8 (4), pp.311-316.

Bradford, N. K., and Penny, R. A. (2016) Registered nurse and midwife experiences of using videoconferencing in practice: a qualitative systematic review protocol. *JBI Database of Systematic Reviews and Implementation Reports*, 14 (5), pp.3-9.

Brake, D. (2017) *A Policymaker's Guide to Rural Broadband Infrastructure*. Information Technology and Innovation Foundation. [Online] Available at: https://itif.org/publications/2017/04/10/policymakers-guide-rural-broadband-infrastructure [Accessed 10 October 2017].

Brewster, L., Mountain, G., Wessels, B., Kelly, C. and Hawley, M. (2014) Factors affecting frontline staff acceptance of telehealth technologies: a mixed method systematic review. *Journal of Advanced Nursing,* 70 (1), pp.21-33.

Buquet, L. (2016) The Impact of Telemedicine on Healthcare. *Physician Issues and Best Practices,* pp.1-3. [Online] Available at: http://www.chmbinc.com/impact-telemedicine-healthcare/ [Accessed 28 March 2018].

Campion, E., Dorsey, E., and Topol, E. (2016) State of Telehealth. *New England Journal of Medicine*, 375, pp.154-161.

CDC (2017) *National Center for Chronic Disease Prevention and Health Promotion*. Center for Disease Control and Prevention. [Online] Available at: https://www.cdc.gov/chronicdisease/ [Accessed 3 June 2017].

Clark, M. and Goodwin, N. (2010) *Sustaining innovation in telehealth and telecare.* WSD Action Network, pp.1-32. [Online] Available at: https://www.kingsfund.org.uk/sites/default/files/Sustaining-innovation-telehealth-telecare-wsdan-mike-clark-nick-goodwin-october-2010.pdf [Accessed 28 March 2018].

Department of Health (2011) *Whole system demonstrator programme: Headline findings.* [Online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/215264/dh_131689.pdf [Accessed 25 May 2017].

Department of Health (2013) *The Mandate - A mandate from the Government to the NHS Commissioning Board: April 2013 to March 2015*. [Online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/256497/13-15_mandate.pdf [Accessed 3 June 2017].

Department of Health (2015) *2010 to 2015 government policy: long term health conditions*. Policy Paper. [Online] Available at: https://www.gov.uk/government/publications/2010-to-2015-government-policy-long-term-health-conditions/2010-to-2015-government-policy-long-term-health-conditions [Accessed 25 May 2017].

Gorst, S. L., Armitage, C. J., Brownsell, S. and Hawley, M. S. (2014) Home Telehealth Uptake and Continued Use Among Heart Failure and Chronic Obstructive Pulmonary Disease Patients: a Systematic Review. *Annals of Behavioural Medicine*, 48(3), pp.323-336.

Gupta, A., Cavallerano, J., Sun, J. and Silva, P. (2017) Evidence for Telemedicine for Diabetic Retinal Disease. *Seminars in Ophthalmology*, 32(1), pp.22-28.

Hamine, S., Gerth-Guyette, E., Faulx, D., Green, B. B. and Ginsburg, A. S. (2015) Impact of mHealth chronic disease management on treatment adherence and patient outcomes: a systematic review. *Journal of Medical Internet Research*, 17 (2), pp.e52. DOI: 10.2196/jmir.3951.

Henderson, C., Knapp, M., Fernandez, J., Beecham, J., Hirani, S., Cartwright, M., Rixon, L., Beynon, M., Rogers, A., Bower, P., Doll, H., Fitzpatrick, R., Steventon, A., Bardsley, M., Hendy, J. and Newman, S. (2013) Cost effectiveness of telehealth for patients with long term conditions (Whole Systems Demonstrator telehealth questionnaire study): nested economic evaluation in a pragmatic, cluster randomised controlled trial. *BMJ*, 346, pp.1-19.

HM Treasury (2017) *Billion pound connectivity boost to make buffering a thing of the past*. [Online] Available at: https://www.gov.uk/government/news/billion-pound-connectivity-boost-to-make-buffering-a-thing-of-the-past [Accessed 10 October 2017].

Kelly, B. (2011) E-Health: Ethical and data privacy challenges in the EU. *Clinica*, pp. 27-28. [Online] Available at: https://www.cov.com/~/media/files/corporate/publications/2011/04/e-health---ethical-and-data-privacy-challenges-in-the-eu.pdf [Accessed 10 September 2017].

Kolltveit, H., Gjengedal, E., Graue, M., Iversen, M. M., Thorne, S. and Kirkevold, M. (2017). Conditions for success in introducing telemedicine in diabetes foot care: a qualitative inquiry. *BMC Nursing*, 16 (2), pp.1-10.

Kuria, C. (2017) *Nurses' current and future eHealth competencies for patients' education: Recommendations for eHealth curriculum development*. [Online] Available at: https://www.theseus.fi/bitstream/handle/10024/132234/Kuria_Catherine.pdf?sequence=1&isAllowed=y [Accessed 28 March 2018].

Merrell, R. C. (2015) Geriatric Telemedicine: Background and Evidence for Telemedicine as a Way to Address the Challenges of Geriatrics. *Healthcare Informatics Research*, 21 (4), pp.223-229.

NHS England, (2016) *Confidentiality Policy*. [Online] Available at: https://www.england.nhs.uk/wp-content/uploads/2016/12/confidentiality-policy-v3-1.pdf [Accessed 10 October 2017].

NICE (2016) *Home health monitoring compared with usual care for patients with moderate to severe chronic obstructive pulmonary disease: evidence note 60.* Healthcare Improvement Scotland. [Online] Available at: https://www.evidence.nhs.uk/Search?q=statistics+data+chronic+diseases+UK [Accessed 25 May 2017].

O'Connell, P. (2015) Advantages and Challenges to using Telehealth Medicine. *Global Journal of Medical Research for* Diseases, 15 (4), pp.1-5.

Office Practicum (2015) *Trends in Telemedicine: Healthcare of the Future, Now*. [Online] Available at: http://officepracticum.com/cms/assets/Telemedicine-Trends-Whitepaper-op.pdf [Accessed 11 September 2017].

Raposo, V. L. (2016) Telemedicine: The legal framework (or the lack of it) in Europe. *GMS Health Technology Assessment*, 12(3), pp. 1-12. DOI: 10.3205/hta000126.

Reider-Demer, M., Raja, P., Martin, N., Schwinger, M. and Babayan, D. (2017) Prospective and retrospective study of videoconference telemedicine follow-up after elective neurosurgery: results of a pilot program. *Neurosurgical Review,* 41(2), pp.497-501.

Salisbury C, Thomas C, O'Cathain A, Rogers, A, Pope, C., Yardley, L., Hollinghurst, S., Fahey. T., Lewis, G., Large, S., Edwards, L., Rowsell, A., Segar, J., Brownsell, S., Montgomery, A. (2015) Telehealth in Chronic disease: mixed-methods study to develop the TECH conceptual model for intervention design and evaluation. *British Medical Journal*, 5 (2), pp. 1-12.

Sanders, C., Rogers, A., Bowen, R., Bower, P., Hirani, S., Cartwright, M. and Chrysanthaki, T. (2012). Exploring barriers to participation and adoption of telehealth and telecare within the Whole System Demonstrator trial: a qualitative study. *BMC Health Services Research*, 12: 220.

Schneider, R.B and Biglan, K.M. (2017) The promise of telemedicine for chronic neurological disorders: the example of Parkinson's disease. *The Lancet Neurology*, 16 (7), pp.541-551.

SIGN (2016) *Management of chronic heart failure*. Edinburgh: Scottish Intercollegiate Guidelines Network (SIGN), 147. [Online] Available at: http://www.sign.ac.uk [Accessed 25 May 2017].

Standing, M. and Hampson, E. (2015) *Digital Health in the UK: An industry study for the Office of Life Sciences*. [Online] Office of Life Sciences, pp. 1-64. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/461479/BIS-15-544-digital-health-in-the-uk-an-industry-study-for-the-Office-of-Life-Sciences.pdf [Accessed 22 September 2017].

Steinman, M., Morbeck, R., Pires, P., Abreu Filho, C., Andrade, A., Terra, J., Teixeira Junior, J. and Kanamura, A. (2015) Impact of telemedicine in hospital culture and its consequences on quality of care and safety. *Einstein (São Paulo)*, 13 (4), pp.580-586. DOI: 10.1590/S1679-45082015GS2893

Vestbo, J., Hurd, S., Agustí, A., Jones, P., Vogelmeier, C., Anzueto, A., Barnes, P., Fabbri, L., Martinez, F., Nishimura, M. and Stockley, R. (2013). Global strategy for the diagnosis, management, and prevention of chronic obstructive pulmonary disease: GOLD executive summary. *American journal of respiratory and critical care medicine*, 187 (4), pp.347-365. DOI: 10.1164/rccm.201204-0596PP

Wallace, D., Hussain, A., Khan, N. and Wilson, Y. (2012) A systematic review of the evidence for telemedicine in burn care: With a UK perspective. *Burns*, 38 (4), pp.465-480.

Wang, G., Lin, S., Mullen-Fortino, M., Sokolsky, O. and Lee, I. (2017) Transmission delay performance in telemedicine: A case study, *2017 39th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, pp.3723-3727.

WHO (2015) *Preventing Chronic Diseases: A Vital Investment.* [online] Available at: http://www.who.int/chp/chronic_disease_report/contents/part2.pdf [Accessed: 30 April 2018].

Wootton, R., Liu, J., Bonnardot, L., Venugopal, R., and Oakley, A. (2015) Experience with Quality Assurance in Two Store-and-Forward Telemedicine Networks. *Frontiers in Public Health*, 3 (261), pp.1-10.

Wright, R. (2014) Be confident in a digital world: More structured IT training could make a difference to nurses' working lives. Richard Wright reports. *Nursing Standard*, *28* (20), pp.64-65.

Zamarrón, C., Morete, E. and González, F. (2014) Telemedicine system for the care of patients with neuromuscular disease and chronic respiratory failure. *Archives of Medical Science*, 10(5), pp.1047-1051.

Population Health Needs Analysis: Victims of Modern Slavery and Human Trafficking in the UK

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Abstract

Modern slavery and human trafficking in the United Kingdom presents a series of new challenges for those working within the healthcare sector (Dalphins 2016). Healthcare professionals have unique access to those involved in modern slavery, with over 88 percent of survivors reporting that they had accessed medical care on numerous occasions throughout their ordeal (Polaris Project 2016). The variation in victim demographic, the differing forms of exploitation experienced and the traumatic nature of their ordeal can greatly affect the health of modern slavery victims (Adams 2012). The enormity of the issue must be acknowledged and pre-emptive action taken to overcome barriers to satisfactory health and ultimately end the cycle of abuse.

Keywords

Human Trafficking, Modern Slavery, Health,

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Introduction

According to the All-Party Parliamentary Group on Human Trafficking and Modern Slavery (2017), there are more people entrapped in slavery today than in the entire 350-year history of the slave trade. The Global Slavery Index (2016a) estimates that there are 48.5 million modern slaves worldwide and approximately 1.3 million trafficked into Europe, with over 60 percent of victims aged between 18 and 34.

The Blue Campaign (2017) defines human trafficking as coercion with the intent to ensnare a person or people for exploitative means. The Borgen Project (2015) asserts that human trafficking is synonymous with modern slavery as over 90 percent of people that are trafficked find themselves entrapped in the modern slavery market: the third most lucrative criminal industry in the world, earning approximately $150 billion a year in profit - with only the illegal firearms trade and the illegal narcotics trade earning more per annum (Klobuchar 2016). Despite this, it is only in recent years that the ubiquity of the issue has been acknowledged by legislative action.

The population of victims of modern slavery and human trafficking in the United Kingdom (UK) is increasing and many of the victims have complex health needs. This health needs analysis will discuss health and illness in relation to this population and consider key concepts as regards improving their health and wellbeing by combatting health inequalities.

Population Demographics

Europol (2016) states that 70 percent of identified victims of modern slavery and human trafficking in Europe are European nationals, with 43 percent of these victims trafficked domestically within national borders. Victims across Europe originated from 108 countries (United Nations Office on Drugs and Crime 2016). Of those from outside Europe, 28 percent of victims within the UK are from Albania, which Carmichael (2016) believes is due to low average income thresholds and poverty throughout the country. However, Hodge (2014) believes that it is the lack of education and employment opportunities that feeds the victim pool of the human trafficking industry. Additionally, Hernandez and Rudolph (2015) demonstrate that unstable social and political conditions within a country act as a breeding ground for corrupt or illegal practices, with the Freedom Fund (2016) highlighting conflict as a crucial factor in the exploitation of vulnerable people for modern slavery. McGhee, Moreh and Vlachantoni (2017) conclude that an increase in the number of victims trafficked into the UK is a direct result of poverty, conflict and a lack of education and employment opportunities in origin countries.

The prevalence of modern slavery and human trafficking in the UK has steadily increased over the last few years, with an increase of 17 percent in reported incidents since 2015 and a 245 percent increase since 2011 (Unseen 2017). Rudd (2017) states that despite 3805 reported incidents of human trafficking and modern slavery last year, the UK Government estimates that there are between 10,000 and 13,000 people currently living in the UK as modern slaves, whilst The NSPCC (2017) estimates that one in five victims are minors - a potential increase of 30 percent since 2015.

Many believe the increase in prevalence of modern slavery and human trafficking is in direct correlation with the political movements of UK society. The Thomson Reuters Foundation (2016) attributes the increase in numbers to Brexit creating uncertainty about the economic future of the UK. Crane (2017) concurs that in the wake of the exit, smaller companies will be looking to reduce expenses; creating demand for cheaper labour, potentially increasing the number of victims trafficked into the UK for forced labour exploitation. Townsend (2016) agrees, stating that economic uncertainty has already led to a rapacious demand for cheaper goods, labour and commercial sex – creating an environment for opportunistic traffickers to flourish in the UK.

The UK Home Office has been inundated with residency applications in the last year, receiving over 140 times more applications than the number of visas granted (Forum for Expatriate Management 2016). The number of visa applications rejected has led those applicants to explore other methods of gaining residency within the UK (Smith 2016). A recent investigation by the Home Office found that marriage fraud is a particularly common method, in which European nationals are trafficked into the UK and then married to non-European nationals who subsequently gain residency status by proxy (Department of UK Visas and Immigration 2015). This has led to a dramatic increase in the number of European nationals trafficked into the UK for exploitation, with the number of reports regarding marriages such as this doubling between 2010 and 2014 (Holehouse 2014).

In terms of population location, the Crown Prosecution Service (2016) states that reported incidents of human trafficking and modern slavery generally occurr in multicultural areas such as large cities or industrial towns. The Independent Anti-Slavery Commissioner

(2016) claims that reports in England accounted for 92 percent of the total incidences within the UK in 2016, perhaps because the country is the most densely populated area in the UK (Industrial Communities Alliance 2015).

Forced labour is the most common form of exploitation reported in England (Bradley 2016). For example, in the North West of England, industrial cities such as Manchester noted increases of 197 percent and Liverpool of 733 percent in referrals from businesses regarding forced labour between 2014 and 2015 alone (Bulman 2017). A recent documentary on BBC One Scotland found that the most common form of exploitation in Scotland was of a sexual nature, uncovering an enormous network of organised crime and marriage fraud in Glasgow (BBC Scotland Investigates: Humans for Sale 2017). Bloomer (2016) explains that Glasgow is a city with many multicultural communities and known ties to Eastern European and Asian crime gangs, creating a perfect setting for traffickers to exploit their victims for maximum profit. In Wales, criminal exploitation is particularly prevalent with over 80 percent of victims believed to be minors (RED 2016) and in Northern Ireland, the most common form of exploitation was forced labour, closely followed by sexual exploitation (Department of Justice 2016).

Therefore, it can be argued that victims living as modern slaves exist in these multicultural pockets due to the type of exploitation the victims are facing. However, until the number of reported incidents begins to reflect the true enormity of the situation in line with government estimates, there is no method of accurately determining either the size or the location of the population of victims of modern slavery and human trafficking in the UK.

Health Needs

The World Health Organization (1948) conceptualises health, describing a holistic perception in the place of a merely physical focus. However, Brun et al. (2017) believe that this definition should be built upon to incorporate factors such as environmental equilibrium; the idea being that if our surroundings are unhealthy so are we. Morton (2016) combines both concepts and contextualises them by relating them to the population of victims of modern slavery and human trafficking, who have a variety of complex health needs due to the nature of the ordeal they experience and the environment in which they live.

Robjant, Roberts and Katona (2017) believe that modern slavery and human trafficking victims suffer chronic exposure to psychological trauma and abuse throughout their ordeal, leading to a sense of hopelessness and mental defeat. A recent study conducted by the Helen Bamber Foundation (2015) found that anxiety, depression and post-traumatic stress disorder (PTSD) were more prevalent in victims of modern slavery and human trafficking, when compared to the general population of the UK. Abas et al. (2016) concur, finding that 78 percent of female victims and 40 percent of male victims suffered with anxiety and depression more than a year after their ordeal and over half of all victims displayed symptoms indicative of PTSD. In comparison, a survey of the UK general population found that 19.7 percent of people over the age of sixteen had displayed symptoms of anxiety or depression and only 1.9 percent of participants involved had been diagnosed with PTSD by a healthcare professional (Mental Health Foundation 2016). While it is evident that the population of victims of modern slavery and human trafficking have similar mental health needs to those of the UK population, the prevalence is higher in those who have experienced trafficking and slavery.

Hemmings et al. (2016) report that victims of modern slavery and human trafficking are at increased risk of sustained maltreatment, neglect and violence which can lead to the development of complex physical health needs. The Department of Health (2015a) states that 80 percent of female victims and 45 percent of male victims claim to have endured multiple incidences of physical violence throughout their ordeal at the hands of their captors. In comparison, 8.2 percent of women and 4 percent of men in the general population of the UK reported similar violence at the hands of someone close to them (Office for National Statistics 2016). Gibbons and Stoklosa (2016) acknowledge the correlation between modern slavery and domestic violence but state that modern slavery and human trafficking victims most commonly present with symptoms associated with prolonged malnutrition, abuse and neglect, such as severe weight loss, headaches, poorly healed older injuries and dental issues. On the other hand, Bagness and Donovan (2016) suggest that in contrast a minority of the UK population present with similar symptoms. Thus, it can be argued that although there are some similarities between the physical health needs of modern slavery victims and a minority of the UK population, ultimately victims of modern slavery and human trafficking require different forms of care provision in contrast to the indigenous UK population.

Public Health England (2017a) states that victims of modern slavery and human trafficking are at greater risk of acquiring sexually transmitted infections when compared to the population of the UK due to the exploitative nature of their ordeal. A study conducted by Dhavan et al. (2015) found that 60 percent of modern slavery and human trafficking victims reported experience of sexual violence and rape throughout their entrapment. The British Association for Sexual Health and HIV (2016) reports that 23 percent of female victims and 8 percent of male victims were diagnosed with sexually transmitted infections upon liberation from trafficking and slavery, perhaps because 67 percent of victims were never or very rarely allowed to use condoms whilst having sex throughout their ordeal. Moreover, Debaca and Sigmon (2014) discovered that approximately 30 percent of victims in post-trafficking services had been diagnosed as HIV positive. In contrast, Public Health England (2017b) reports that approximately 1 percent of the UK general population were diagnosed with a sexually transmitted infection in 2016, 0.2 percent of which were diagnosed as HIV positive. Thus, it is evident that the sexual health needs of victims of modern slavery and human trafficking trend in far greater intensity and prevalence than the sexual health needs of the UK population. Ultimately, the combination of all of these factors leads to victims of modern slavery and human trafficking requiring a more multi-faceted and comprehensive approach to care provision in comparison to the general population of the UK.

Modern slavery and human trafficking has recently been acknowledged as a global issue by legislative action and although the Global Slavery Index (2016b) reports that preventative and combative action has been taken by 124 countries, efforts to cater to the health needs of victims involved is distinctly lacking. As a result of UK Government policy, identified victims of modern slavery and human trafficking are enrolled in a state-funded 45 day ‘decompression period,’ in which the victims are housed in secure accommodation and receive targeted support from healthcare professionals for both their mental and physical health needs (National Crime Agency 2017). However, the Human Trafficking Foundation (2016) believes that this is not enough, stating that just as the victims manage to acclimatise and begin to receive the help they need, the support ends and victims are vulnerable once more to being re-trafficked and entrapped in the modern slavery cycle. It can be argued that following the 45 day decompression period, local charities and organisations are left to pick up the slack.

In 2016 alone, 2013 adult victims accessed long term accommodation in safe houses and specialist support from psychologists, healthcare clinicians and legal aid workers through the Salvation Army – an increase of 27 percent from 2015 (Salvation Army 2016). There are also three specialist support centres for adolescent victims of modern slavery and human trafficking in the UK, in which victims receive support regarding housing, education and health needs from trained volunteers (Barnardo’s 2017). However, Ventrella (2016) admits that more could be done to support both adult and adolescent victims of modern slavery and trafficking but a lack of funding has led to the closure of vital support services previously available to the victims. Therefore, it can be argued that more can be done to provide satisfactory support for victims of human trafficking and modern slavery in the UK.

Barriers

Maslow (1954) created a hierarchy of human needs fundamental to survival and personal development, believing that denial of any or all of these needs negatively influenced a person's health and ultimately quality of life. Dahlgren and Whitehead (1991) developed this idea, believing that socioeconomic, cultural and environmental factors had a significant impact on health and wellbeing. The Department of Health (2015b) states that victims of modern slavery and human trafficking generally have poorer health than the UK population as they are denied basic human needs such as food, shelter and rest, with most victims living in squalid conditions. Thus, it can be argued that factors that influence health can become barriers to satisfactory health and wellbeing.

Effective communication between healthcare professionals and their patients is key to the provision of patient-centred holistic care. However, Tugcu (2017) explains that funding reductions in the UK healthcare sector have led to a reduction in the amount of time clinicians can spend assessing, treating and communicating with their patients. Cassidy et al. (2013) agree and go on to explain that, if a significant language barrier is present, the quality of care provided may be substantially affected, as the clinician is unable to conduct a comprehensive patient assessment unless an interpreter is present.

Many victims of modern slavery and human trafficking originate outside the UK so English may not be their first language. If they are unable to acquire an interpreter when accessing the National Health Service (NHS) victims can find themselves unable to explain their situation and health issues (King's College London 2017). Gallois et al. (2015) believe that this means healthcare clinicians often resort to utilising the biomedical model of treatment – treating only the manifestation of symptoms – in the place of the preferred biopsychosocial model which encourages a holistic approach to healthcare (Engel 1977).

It is evident that communication can be a barrier to good health for victims of modern slavery and human trafficking as English is rarely their first language and limited access to interpreters when accessing the NHS leads to a lack of holism in healthcare clinicians' approach to the assessment and treatment of victims.

NHS England (2015) states that one in eight healthcare professionals has interacted with a patient they suspected or knew to have been a victim of modern slavery and human trafficking. Davies (2017) believes that NHS healthcare professionals are in a unique position to identify and aid victims of modern slavery and human trafficking within the UK; however, many staff lack the knowledge to do so effectively. The Department of Health (2017) agrees, stating that 87 percent of NHS staff do not know how to identify potential victims of modern slavery and human trafficking, with 78 percent of staff believing that there is insufficient training regarding the issue.

If NHS staff are unable to identify potential victims in order to initiate safeguarding and specific care pathways, victims of modern slavery and human trafficking within the UK remain vulnerable to maltreatment, abuse and violence (Royal College of Nursing 2017). Therefore, a lack of education and training for NHS staff surrounding the issue of modern slavery and human trafficking can act as a barrier to satisfactory health for the population of victims within the UK.

Berkman and Syme (1976) propose that there is a direct correlation between a person's environment and their health, assuming that a negative living environment increases illness susceptibility. Richards (2014) concurs, attributing the poor health of victims of modern slavery and human trafficking to the fact that they are generally forced to live in squalor - in addition to a culture of violence and abuse from their traffickers. Furthermore, Baldwin et al. (2013) claim that traffickers remove identity documents from the possession of their victims and use psychological scaremongering tactics to dissuade victims from accessing healthcare services, community outreach programmes or attempting to escape their exploitation. Thus, environmental factors such as poor living conditions and manipulation by traffickers act as barriers to good health for victims of modern slavery and human trafficking by increasing susceptibility to illness whilst simultaneously preventing victims from seeking access to healthcare services.

Victims of human trafficking and modern slavery have complex health needs that require comprehensive support and treatment. Many factors influence their health, including their environment, domestic situation and limited social interaction which already disadvantages them in respect to achieving satisfactory health or accessing treatment. It is imperative that barriers such as inadequate NHS staff training or failed communication are overcome to prevent the continuation of the exploitative cycle that is so evidently detrimental to their health.

Moving Forward

According to Albright and D’Adamo (2017) the human trafficking for exploitation industry is booming on a global scale. Raphael (2017) believes that the number of victims of modern slavery and human trafficking within the UK will increase, as will the prevalence of significant health needs within the population. It is only recently that legislative action has been taken to address the issue within the UK; however, Fry and Muraya (2016) maintain that there is a distinct lack of legislation regarding the management of the health needs of victims. Konstantopoulos (2016) feels that more must be done to break down the barriers to good health faced by the population of victims of modern slavery and human trafficking within the UK, which ultimately requires the allocation of sufficient funding by the government.

More funding is necessary to ensure the provision of high quality interpreters within the NHS to break down the communication barriers many victims face when accessing services (Curran, Mchunu and Naidoo 2017). However, Gerada et al. (2016) believe that this would be futile unless specific and accessible training for all NHS staff surrounding the identification and support of victims is implemented nationally. Vigar (2017) agrees, stating that frontline NHS staff are at a unique advantage in terms of access to victims and so should be trained accordingly through practical sessions and online modules. Helton (2016) suggests a multi-faceted approach to victim identification and assistance in terms of a joint task force between healthcare professionals and the police. Although Chacon (2017) questions whether this would be effective in breaking the barriers to good health faced by victims or merely create further barriers in the form of bureaucratic limitations.

Modern slavery and human trafficking victims are non-specific in terms of geographical location and can be found across the UK but Atkins et al. (2017) feel that local neighbourhoods are failing victims, as targeted support is non-existent at a community level. Alpert and Chin (2017) believe that the creation of accessible community outreach programmes will not only aid in the identification of victims but also significantly improve health outcomes for the majority of a population unable to access mainstream healthcare. Chang and Hayashi (2017) agree, reporting that community outreach programmes in America have been successful in improving the health of victims through the provision of anonymous healthcare clinics accessible to all. However, Chisolm-Straker et al. (2016) are mindful that limited resources and funding greatly deter innovation and discourage governmental action.

Conclusion

In conclusion, it is evident that the population of victims of modern slavery and human trafficking within the UK is likely to increase. As the population grows, so will the intensity and prevalence of complex health needs requiring comprehensive and specialist care provision. It is apparent that healthcare services must become more accessible and support must be more readily available as the victims face many barriers to good health and lack the means and resources to overcome these barriers themselves. Therefore, as a society we must accept responsibility for breaking down these barriers by taking pre-emptive action and allocating more funding towards research, frontline staff training and community outreach programmes to break the exploitative cycle. It is only then that victims of modern slavery and human trafficking can equal the UK population in terms of health and wellbeing.

References

Abas, M., Bick, D., Boyle, A., French, R., Howard, L., Jakobowitz, S., Khondoker, M., Oram, S., Stanley, N., Trevillion, K. and Zimmerman, C. (2016) Human Trafficking and Health: A Survey of Male and Female Survivors in England [online] *American Journal of Public Health.* 106 (6), pp.1073–1078 Available through PubMed [Accessed: 24 June 2017].

Adams, P. (2012) Identifying Victims of Human Trafficking [online] *Practice Nursing.* 23 (9), pp.463–464 Available through internurse [Accessed: 7 June 2017].

Albright, E. and D'Adamo, K. (2017) The Media and Human Trafficking: A Discussion and Critique of the Dominant Narrative. In: Chisolm – Straker, M.and Stoklosa, H. (eds) *Human Trafficking is a Public Health Issue.* New York: Springer, pp.363–378.

All-Party Parliamentary Group on Human Trafficking and Modern Slavery (2017) *Human Trafficking: The Nature of Exploitation* [online] Available at: http://allpartygrouphumantrafficking.org [Accessed: 7 June 2017]

Alpert, E and Chin, S. (2017) Human Trafficking: Perspectives on Prevention. In: Chisolm – Straker, M. and Stoklosa, H. (eds) *Human Trafficking is a Public Health Issue.* New York: Springer, pp.379-400

Atkins, B., Born, K., Dell, N., House, W., Maynard, B. and Wagner, E. (2017) Helping Survivors of Human Trafficking: A Systematic Review of Exit and Postexit Interventions [online] *Trauma, Violence and Abuse* 17(2), pp.1-14 Available through SAGE Journals [Accessed: 8 July 2017]

Bagness, C. and Donovan, H. (2016) *Domestic Abuse: What Healthcare Professionals Need to Know* [online] Available at: https://rcni.com/nursing-standard [Accessed: 25 June 2017]

Baldwin, S., Chuang, K., Eisenman, D., Ryan, G. and Sayles, J. (2013) Identification of Human Trafficking victims in Healthcare Settings [online] *Health and Human Rights Journal* 13 (1), pp.138–142 Available through CINAHL [Accessed: 5 July 2017]

Barnardo's (2017) *Child trafficking: the Services Barnardo's Provide* [online] Available at: https://www.barnardos.org.uk [Accessed: 1 July 2017]

BBC (2017) *Scotland Investigates: Humans For Sale.* [TV Programme] BBC One Scotland, 10 May 2017

Berkman, L. and Syme, S. (1976) Social Class, Susceptibility and Sickness [online] *American Journal of Epidemiology*104 (1), pp.1–8 Available through NCBI [Accessed: 5 July 2017]

Bloomer, N. (2016) *Rats, Filth & Cockroaches: What it's Like to Live in Nicola Sturgeon's Constituency* [online] Available at: http://www.politics.co.uk [Accessed: 5 June 2017]

Blue Campaign (2017) *What is Human trafficking?* [online] Available at: https://www.dhs.gov [Accessed: 6 June 2017]

Borgen Project (2015) *Causes of Human trafficking* [online] Available at: https://borgenproject.org [Accessed: 6 June 2017]

Bradley, K. (2016) *UK Takes Further Action to Prevent Forced Labour* [online] 22 January 2016 Available at: https://www.gov.uk [Accessed: 11 June 2017]

British Association for Sexual Health and HIV (2016) *Healthcare and Human Trafficking* [online] Available at: https://www.bashh.org [Accessed: 30 June 2017]

Brun, L., Calfin, C., Charlier, P., Coppens, Y., Deo, S., Hassin, J., Herve, C., Hoang-Opermann, V., Kepanga, M., Malaurie, J., Schor, X. and Ushiga, M. (2017) A New Definition of Health? An Open Letter of Authochonous Peoples and Medical Anthropologists to the WHO [online] *European Journal of Internal Medicine* 37 (1), pp. 33–37 Available through Science Direct [Accessed: 17 June 2017]

Bulman, M. (2017) Human Trafficking Victim Referrals Surge Almost 80% Across UK Amid Calls for Heightened Public Awareness [online] *The Independent*. 24 March 2017 Available at: http://www.independent.co.uk [Accessed: 11 June 2017]

Carmichael, C. (2016) Top 10 Poorest Countries in Europe – 2017 Update [online] *Gazette Review* Available at: http://gazettereview.com [Accessed: 14 June 2017]

Cassidy, I., Graham, M., McCarthy, J. and Tuohy, D. (2013) Conversations Through Barriers of language and Interpretations [online] *British Journal of Nursing*22 (6) pp. 335-339 Available through ResearchGate [Accessed: 2 July 2017]

Chacon, J. (2017) Human Trafficking, Immigration Regulation and Sub Federal Criminalisation [online] *International and Interdisciplinary Journal* 20 (1), pp.96-129 Available through CINAHL [Accessed: 8 July 2017]

Chang, K. and Hayashi, A. (2017) The Role of Community Health Centers in Addressing Human Trafficking. In: Chisolm-Straker, M. & Stoklosa, H. (eds) *Human Trafficking is a Public Health Issue.* New York: Springer, pp.347-362

Chisolm-Straker, M., Duber, H., Findlay, S., Munoz, J., Schmitz, G., Shandro, J. and Stanzer, M. (2016) Human Trafficking: A Guide to Identification and Approach for the Emergency Physician [online] *Annals of Emergency Medicine* 68 (4), pp.501-508 Available through ScienceDirect [Accessed: 9 July 2017]

Crane, A. (2017) Brexit Likely to Increase Modern Slavery in the UK [online] *Bath, Business and Society* [blog] 29 March 2017. Available at: http://blogs.bath.ac.uk [Accessed: 9 June 2017]

Crown Prosecution Service (2016) *Trafficking Prosecutions on the Rise as British Prosecutors Sign-Up to New Anti-Trafficking Commitments* [online] 26 February 2016 Available at: http://www.cps.gov.uk [Accessed: 11 June 2016]

Curran, R., Mchunu, G and Naidoo, J. (2017) A Theory for Aftercare of Human Trafficking Survivors for Nursing Practice in Low Resource Settings [online] *Applied Nursing Research* 35 (1), pp.82-85 Available through ScienceDirect [Accessed: 8 July 2017]

Dahlgren, G. and Whitehead, M. (1991) *Policies and Strategies to Promote Social Equity in Health: Background Document to WHO – Strategy Paper for Europe* [online] Available at: https://core.ac.uk [Accessed: 2 July 2017]

Dalphins, J. (2016) Protecting Against Harm: Safeguarding Adults [online] *Practice Nursing* 27 (2), pp.84-88 Available through MAG Online Library [Accessed: 3 June 2017]

Davies, T. (2017) Exploring the Nature and Scope of Clinicians' Obligations to Respond to Human Trafficking [online] *AMA Journal of Ethics* 19 (1), pp.4-7 Available through NCBI [Accessed: 5 July 2017]

Debaca, L. and Sigmon, J. (2014) Combatting Trafficking in Persons: A Call to Action for Global Healthcare Professionals [online] *Global Health: Science and Practice* 2 (3), pp.261-267 Available through CINAHL [Accessed: 30 June 2017]

Department of Health (2015a) *Final Report for the Department of Health Policy Research Programme: Optimising Identification, Referral and Care for Trafficked People Within the NHS* [online] Available at: https://www.kcl.ac.uk [Accessed: 25 June 2017]

Department of Health (2015b) *Supporting Victims of Modern Slavery Through Healthcare Services* [online] 2 December 2015 Available at: https://www.gov.uk [Accessed: 2 July 2017]

Department of Health (2017) *Policy Brief - Human Trafficking: Improving the UK's Healthcare Response* [online] Available at: https://www.kcl.ac.uk [Accessed: 5 July 2017]

Department of Justice (2016) *Northern Ireland Human Trafficking and Modern Slavery Strategy 2016/17* [online] Available at: https://www.justice-ni.gov.uk [Accessed: 11 June 2017]

Department of UK Visas & Immigration (2015) *Criminal Investigation: Sham Marriage.*

Enforcement and Criminal Investigations (Modernised Guidance) [online] Available at: http://www.aboutimmigration.co.uk [Accessed: 9 June 2017]

Dhavan, P., Dickson, B., Kiss, L., Khoeler, J., Naisangruansri, V., Nguyen, V., Pocock, N., Sirisup, K., Suos, S., Thuy, D. and Zimmerman, C. (2015) Health of Men, Women and Children in Post-Trafficking Services in Cambodia, Thailand and Vietnam: A Cross-Sectional Study [online] *The Lancet Global Health* 3 (3), pp.154-161 Available through CINAHL [Accessed: 30 June 2017]

Engel, G. (1977) The Need for a New Medical Model: A Challenge for Biomedicine [online] *Science* 196 (4286), pp.129-136 Available through NCBI [Accessed: 2 July 2017]

Europol (2016) *Situation Report: Trafficking in Human Beings in the European Union* [online] Available at: https://ec.europa.eu [Accessed: 14 June 2017]

Freedom Fund (2016) *Modern Slavery and Trafficking in Conflict: The UN's Response* [online] Available at: http://freedomfund.org [Accessed: 15 June 2017]

Forum for Expatriate Management (2016) *Immigration: UK Visa Application Increase Due to Brexit Vote* [online] Available at: https://www.forum-expat-management.com [Accessed: 9 June 2017]

Fry, D. and Muraya, D. (2016) Aftercare Services for Child Victims of Sex Trafficking: A Systematic Review of Policy and Practice [online] *Trauma, Violence & Abuse*17 (2), pp. 204-220 Available through SAGE Database [Accessed: 8 July 2017]

Gallois, C., Hocking, J., Meuter, R, Ryder, A. and Segalowitz, N. (2015) Overcoming Language Barriers in Healthcare: A Protocol for Investigating Safe and Effective Communication When Patients or Clinicians Use a Second Language [online] *BMC Health Services Research* 15 (1), pp.371-375 Available through NCBI [Accessed: 2 July 2017]

Gerada, C., Howard, L., Oram, S., Stanley, N., Westwood, J. and Zimmerman, C. (2016) Access to, And Experience of, Healthcare Services by Trafficked People: Findings from a Mixed-Methods Study in England [online] *British Journal of General Practice* 66 (652), pp.794-801 Available through NCBI [Accessed: 8 July 2017]

Gibbons, P. and Stoklosa, H. (2016) Identification and Treatment of Human Trafficking Victims in the Emergency Department [online] *Journal of Emergency Medicine* 50 (5), pp.715-719 Available through Elsevier [Accessed: 25 June 2017]

Global Slavery Index (2016a) *Global Slavery Index 2016: A Country By Country Estimate of the Number of People Living in Modern Slavery Today* [online] Available at: https://www.globalslaveryindex.org [Accessed: 8 June 2017]

Global Slavery Index (2016b) *Government Response: How Many Governments are Tackling Modern Slavery?* [online] Available at: https://www.globalslaveryindex.org [Accessed: 1 July 2017]

Helen Bamber Foundation (2015) *Addressing Mental Health Needs in Survivors of Modern Slavery: A Critical Review and Research Agenda* [online] Available at: http://freedomfund.org [Accessed: 24 June 2017]

Helton, M. (2016) Human Trafficking: How a Joint Task Force Between Healthcare Providers and Law Enforcement Can Assist with Identifying Victims and Prosecuting Traffickers [online] *Health Matrix: The Journal of Law-Medicine* 26 (1), pp.432-473 Available through NCBI [Accessed: 8 July 2017]

Hemmings, S., Howard, L., Oram, S., Ottisova, L. and Zimmermann, C. (2016) Prevalence and Risk of Violence and the Mental, Physical and Sexual Health Problems Associated with Human Trafficking: An Updated Systematic Review [online] *Epidemiology and Psychiatric Sciences* 25 (4), pp.317-341 Available through Cambridge Core [Accessed: 24 June 2017]

Hernandez, D. and Rudolph, A. (2015) Modern Day Slavery: What Drives Human Trafficking in Europe? [online] *European Journal of Political Economy* 38 (1), pp.118–139 Available through CINAHL [Accessed: 15 June 2017]

Hodge, D. (2014) Assisting Victims of Human Trafficking: Strategies to Facilitate Identification of Victims, Exit From Trafficking and the Restoration of Wellness [online] *Social Work* 59 (2), pp.111-118 Available through Oxford Academic [Accessed: 15 June 2017]

Holehouse, M. (2014) Sham Marriages 'Double in Four Years,' Home Office Figures Show. [online] *The Telegraph.* 23 June 2014 Available at: http://www.telegraph.co.uk [Accessed: 9 June 2017]

Human Trafficking Foundation (2016) *Day 46: Is There Life After the Safe House for Survivors of Modern Slavery* [online] Available at: http://www.humantraffickingfoundation.org [Accessed: 1 July 2017]

Independent Anti-Slavery Commissioner (2016) *Annual Report for the Period 1 August 2015-30 September 2016* [online] Available at: http://www.antislaverycommissioner.co.uk [Accessed: 10 June 2017]

Industrial Communities Alliance (2015) *Growth Beyond the Big Cities: The Role of Britain's Industrial Towns in Delivering Jobs and Prosperity* [online] Available at: http://www.industrialcommunitiesalliance.org [Accessed: 11 June 2017]

King's College London (2017) *PROTECT – Provider Responses, Treatment and Care for Trafficked People* [online] Available at: https://www.kcl.ac.uk [Accessed: 2 July 2017]

Klobuchar, A. (2016) *Speech to the Democratic Convention.* Democratic National Convention 2016, Tuesday 26 July 2016, Philadelphia. Available at: https://www.youtube.com/watch?v=ep9WsigadFM [Accessed: 8 July 2017]

Konstapoulos, W. (2016) Human Trafficking: The Role of Medicine in Interrupting the Cycle of Abuse and Violence [online] *Annals of Internal Medicine*165 (8), pp. 582–588 Available through ACP [Accessed: 8 July 2017]

Maslow, A. (1954) *Motivation and Personality.* Boston: Addison-Wesley

McGhee, D. Moreh, C. and Vlachantoni, A. (2017) An 'Undeliberate Determinacy'? The Changing Migration Strategies of Polish Migrants in the UK in Times of Brexit [online] *Journal of Ethnic and Migration Studies* 43 (1), pp.1-22 Available through Taylor & Francis Online Library [Accessed: 15 June 2017]

Mental Health Foundation (2016) *Fundamental Facts About Mental Health 2016* [online] Available at: https://www.mentalhealth.org.uk [Accessed: 25 June 2017]

Modern Slavery Act 2015 [online] Available at: http://www.legislation.gov.uk [Accessed: 3 June 2017]

Morton, C. (2016) *Prevalence of Human Trafficking and Resources to Alleviate its Effects in Tennessee.* [online] Undergraduate Degree Honours Project Thesis, University of Tennessee. Available at: http://trace.tennessee.edu [Accessed: 17 June 2017]

National Crime Agency (2017) *Protecting Victims of Human Trafficking* [online] Available at: http://www.nationalcrimeagency.gov.uk [Accessed: 1 July 2017]

NHS England (2015) *New Tool Helps NHS Staff to Identify Trafficking Victims* [online] 28th October 2015 Available at: https://www.england.nhs.uk [Accessed: 5 July 2017]

NSPCC (2017) *Child Trafficking: Facts & Statistics* [online] Available at: https://www.nspcc.org.uk [Accessed: 7 June 2017]

Office for National Statistics (2016) *Intimate Personal Violence and Partner Abuse* [online] Available at: https://www.ons.gov.uk [Accessed: 25 June 2017]

Polaris Project (2016) *Healthcare Professionals on the Frontline of Helping Trafficking Victims* [online] Available at: https://polarisproject.org [Accessed: 3 June 2017]

Public Health England (2017a) *Human Trafficking: Migrant Health Guide* [online] Available at: https://www.gov.uk [Accessed: 29 June 2017]

Public Health England (2017b) *Sexually Transmitted Infections and Chlamydia Screening in England, 2016* [online] Available at: https://www.gov.uk [Accessed: 30 June 2017]

Raphael, J. (2017) Returning Trafficking Prevalence to the Public Policy Debate: Introduction to the Special Issue [online] *Journal of Human Trafficking* 3 (1), pp.1-20 Available through Taylor & Francis Online [Accessed: 8 July 2017]

RED (2016) *Forced Labour Exploitation* [online] Available at: http://www.redcommunity.co.uk [Accessed: 11 June 2017]

Richards, T. (2014) Health Implications of Human Trafficking [online] *Nursing for Women's Health* 18 (2), pp.155-162 Available through Science Direct [Accessed: 5 July 2017]

Robjant, K., Roberts, J. and Katona, C. (2017) Treating Posttraumatic Stress Disorder in Female Victims of Trafficking Using Narrative Exposure Therapy: A Retrospective Audit [online] *Frontiers in Psychiatry* 8: 63 Available through NCBI [Accessed: 25 June 2017]

Royal College of Nursing (2017) *Modern Slavery: Next Steps* [online] Available at: https://www.rcn.org.uk [Accessed: 5 July 2017]

Rudd, A. (2017) *Keynote Speech at RUSI Launch of the Report on the Role of Financial Institutions in Disrupting Human Trafficking* [online] Speech 15 May, London Available at: https://www.gov.uk [Accessed: 14 June 2017]

Salvation Army (2016) *Supporting Adult Victims of Modern Slavery: Update on the Fifth Year of the Salvation Army's Victim Care and Co-ordination Contract* [online] Available at: https://www.salvationarmy.org.uk [Accessed: 1 July 2017]

Smith, L. (2016) *How Illegal Immigrants Enter the UK* [online] Available at: http://www.aboutimmigration.co.uk [Accessed: 9 June 2016]

Thomson Reuters Foundation (2016) *Slavery Victims in UK 'Worse Off' After Brexit Negotiations, Says Parliamentary Watchdog Chair* [online] Available at: http://uk.reuters.com [Accessed: 9 June 2017]

Townsend, M. (2016) Modern Slavery and Human Trafficking on the Rise in the UK [online] *The Guardian* 10 July 2016 Available at: https://www.theguardian.com [Accessed: 9 June 2017]

Tugcu, I. (2017) Breaking Down the Barriers [online] *Practice Management* 27 (3), pp. 34-37 Available through MAG Online Library [Accessed: 2 July 2017]

United Nations Office on Drugs and Crime (2016) *Global Report on Trafficking in Persons 2016* [online] Available at: http://www.unodc.org [Accessed: 14 June 2017]

Unseen (2017) *Human Trafficking: Facts and Figures* [online] Available at: http://www.unseenuk.org [Accessed: 3 June 2017]

Ventrella, M. (2016) *The Control of People Smuggling and Trafficking in the EU: Experiences from the UK and Italy.* New York: Routledge

Vigar, P. (2017) Patient Confidentiality and Safety: A Classic Conundrum [online] *Journal of Paramedic Practice* Vol. 9 (5), pp.214-218 Available through MAG Online Library [Accessed: 5 July 2017]

World Health Organization (1948) Constitution of the World Health Organization. *Preamble to the Constitution of WHO as Adopted by the International Health Conference.* [online] New York. 19-22 June. Available at: http://www.who.int [Accessed: 17 June 2017]