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**COMMUNITY NURSES' PERSPECTIVES AND EXPERIENCES OF THE
COMMUNITY BASED ON THE GROUND EDUCATION
PROGRAMME IN MANAGING CHRONIC OEDEMA/LEG ULCERS:
A FOCUS GROUP EVALUATION**

March 2017

Dr Tessa Watts

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Glossary of Terms

DN: District Nurse

OGEP: On the Ground Educational Programme

PC: Primary Care

TVN: Tissue Viability Nurse

UHB: University Health Board

FINAL VERSION

Acknowledgements

This report concludes the evaluation of the on the ground education programme for community nurses caring for people in with chronic oedema/lymphoedema/leg ulcers within one area of a University Health Board in Wales. I wish to thank in particular the Community Nurse team leads who were wonderfully cooperative and invited me in to meet with their staff members. I would also like to thank the community nurses who volunteered and gave up their precious time to participate in the focus groups and without whom this work would not have been possible. I would also like to than Karen Morgan, National Lymphoedema Education and Research Lead, who has been most helpful in responding to my questions, providing additional information and clarifying issues about which I was uncertain.

Disclaimer

This evaluation was a component of a larger pilot evaluation evaluating chronic oedema management in community settings. Whilst every effort was made to optimise study design (within the constraints of budget, time and practicalities); the methodological constraints are acknowledged in the report in order to ensure transparency and appropriate interpretation of the findings. The opinions expressed within this report are entirely those of the report author. This report is a final version of the report submitted to the OGEP project team on March 31st 2017.

Executive Summary

This report is a component of a larger study conducted by Swansea Centre for Health Economics, evaluating chronic oedema management in community settings. The aim of the project reported here was to evaluate the on the ground education programme from the perspective of community nursing staff who care for people with chronic oedema/ leg ulcers.

The ultimate goal of the education programme was to enhance community nurses' of chronic oedema/leg ulcer prevention and management. Chronic oedema/leg ulcers have an enduring and profound, impact on the life quality of those who are affected by these conditions. Community nurses spend a considerable proportion of their time caring for people with chronic oedema/ leg ulcers (Chamanga et al. 2014, Benson et al. 2016). Additionally the conditions place an enormous burden on the National Health Service. As financial austerity continues and the prevalence of these conditions is projected to increase, it is essential that innovative, sustainable solutions in terms of prevention and safe, effective management are found so that positive outcomes for patients and clinical efficiency are optimised.

The on the ground education programme for chronic oedema/leg ulcers was conceived and developed by Lymphoedema Network Wales. The intervention was designed to deliver education and support within community nurses' workplaces, thereby reducing the need for study leave and enabling them to:

- Effectively manage chronic oedema/leg ulcers through health technology applications with the right products being utilised at the right time;
- Deliver care safely, reducing waste, harm and variation in prescribed treatments which are ineffective;
- Reduce inefficient treatments and use of time.

This evaluation was conducted over a short period of time at the end of 2016 and utilised a qualitative inductive approach. Data were generated from community nurses ($n=12$) within one University Health Board by means of focus group interviews ($n=3$). Participant anonymity was assured and has been preserved and promoted throughout this report.

Every study will have methodological constraints and this small scale evaluation is no exception. The sample size is small, confined to one small area of Wales. Staff /caseload ratios were quite heterogeneous and covered disparate areas in terms of geography and the affluence-poverty nexus.

The main findings indicated that the education programme had enhanced community nurses' awareness, knowledge and understanding of chronic oedema management. However, concerns were expressed about certain aspects of care promoted within the programme in terms of community nurses' own professional practice and the conditions in which they operated. The community nurses did indicate that they thought by enhancing their knowledge base benefit might be conferred for patients in relation to the following: improved quality of life; self-efficacy and self-management. However, community nurses perceived that the magnitude of perceived benefit was

variable and contingent on engagement with and support for self-management. Finally, while there was broad agreement that the underpinning idea of the intervention was positive, community nurses felt that there was considerable scope for improvement in terms of the intervention's development and implementation and that long term sustainability of practice change was contingent on the presence of a lymphoedema specialist embedded within the locality to work with and across the different teams engaged in chronic oedema/leg ulcer care.

FINAL VERSION

Introduction and Background

This Report focuses on the findings from the evaluation of 'On the Ground' Education Programme (OGEP) for Community Nurses caring for People with chronic oedema/leg ulcers within one University Health Board in Wales. The evaluation was conducted as part of the larger pilot evaluation of the Managing Chronic Oedema in Community Settings and was designed by Dr Ruth Davies of Swansea University. On Dr Davies' retirement Dr Tessa Watts took on the role of Principle Investigator for the evaluation in September 2016.

Chronic oedema is a debilitating, enduring condition connected with several chronic conditions, primary and secondary lymphoedema, obesity and immobility (Todd 2013). It is characterised by atypical swelling lasting for more than three months. Those affected may experience skin changes, recurrent cellulitis, superficial ulceration, exudate, lymphorrhoea and enduring pain and discomfort (Todd 2013). Evidence suggests that the impact of chronic oedema/leg ulcers on an individual's health, well-being, sense of self and quality of life may be profound and extends to all those who are important to the individual. A recent epidemiological study conducted in Derby suggested that 3.99:1000 of the population may be affected (Moffatt & Pinnington 2012). In all probability however, prevalence is underestimated for it is acknowledged internationally that awareness of the chronic oedema is poor and as such it is frequently not recognised (Todd 2014). Prevalence is likely to be greater amongst older people and it is anticipated that with population ageing and rising obesity prevalence will further increase (Todd 2013).

Deficient knowledge and understanding of the importance of prevention, early recognition and effective management of chronic oedema/leg ulcers is of international concern (Stout et al. 2012, Keast et al. 2014). Failure to recognize chronic oedema/leg ulcers and initiate appropriate, effective therapeutic interventions generates adverse outcomes in terms of suffering, disability, disfigurement and distress (Keast et al. 2014). Indeed, the profound, lasting, adverse physical, psychological, psychosocial and economic impact on individuals' well-being, everyday functioning and health related quality-of-life is well documented (Williams et al. 2004, Franks et al. 2006, Symvoulakis

et al. 2010, Okajima et al. 2013). In addition, the impact of treating chronic oedema/leg ulcers on the work of community nurses is immense (Chamanga et al. 2014, Benson et al. 2016) as is the financial cost to the NHS.

Recent work by Ashby et al. (2014) has indicated that in healing venous leg ulcers two layer compression hosiery is viable as an alternative to four layer bandages and that this was possibly due to enhanced self- management and fewer nurse consultations. Moreover, Ashby et al (2014) concluded that hosiery is likely to be cost effective and may result in substantial cost savings for the NHS and enhanced quality of life for people living with venous ulcers.

The intervention

Underpinned by experiential learning theory (Kolb 1983) the on the ground education programme for chronic oedema intervention consisted of a workplace based two day training programme which aimed to equip community nurses with the knowledge and skills to safely, effectively and efficiently manage chronic oedema/leg ulcers. The two day programme was designed and developed by Lymphoedema Network Wales and implemented by lymphoedema educators who had professional backgrounds in either nursing or physiotherapy. Learning was facilitated in the workplace using a range of strategies including a workshops, didactic teaching, demonstration, assessment and feedback on skills acquisition, critical discussion and reflection on practice.

Aims of the evaluation

The aim of this evaluation was to explore and describe the impact of the OGEP on the everyday practice of community nurses who care for and support people with chronic oedema and leg ulcers. Specifically the evaluation sought to address the following research questions:

- In what ways has the OGEP impacted on the way in which community nurses' care for people with chronic oedema and leg ulcers;
- What are community nurses' perspectives on the benefits of the OEGP for patients?

- What recommendations would community nurses make with regard to the OEGP?

Methods

A qualitative exploratory study using focus groups (Kreuger & Casey 2008) was designed. An established form of focused collective discussion on a defined topic, issue or experience, focus groups are ideal for examining individuals' experiences (Kitzinger 1994, 2005). Skilled facilitation capitalizes on participants' interactions and generates rich data which may not be obtained through individual interviews (Webb & Kevern 2001, Ryan et al. 2015). For this research, focus groups provided a platform for participants with an element of common experience to reflect, listen to and share experiences in company and enable natural talk to emerge and flow in a supportive environment.

Purposive sampling was used to recruit primary care nurses working in three localities within one University Health Board (UHB) in Wales and who could share their experiences of the impact of the OEGP on their everyday practice when caring for people with chronic oedema and leg ulcers. Access was granted by each locality's lead practitioner who distributed study information sheets and recruited participants in 2016. Inclusion criteria were that participants were practicing community nurses working with people who have chronic oedema/leg ulcers and had engaged with the OEGP.

Ethical approval was not required as this was a service evaluation and as such did not require ethical approval. Nonetheless the proposal was scrutinised and approved by the University's research ethics committee and the Health Board's Research and Development office. All participants gave written informed consent and at the start of each focus group, confidentiality was established and assured.

Focus group interviews ($n=3$) were conducted in three localities within one University Health Board during November and December 2016. The decision to hold three focus groups was pragmatic, influenced by timescales and the desire to cover the affluent, less affluent, rural and urban geographical areas of the UHB.

TW, an experienced focus group researcher not known to participants, facilitated all focus groups. These lasted approximately 45 minutes, were digitally

recorded and discussion aided by a loose interview guide derived from the literature and expert advice (Table 1). This was adapted during data collection to incorporate emergent themes from preliminary analysis.

Data were analysed using Braun and Clarke’s (2006) framework for thematic analysis and guided by the research aim and questions. Interviews were transcribed into Word© documents and all identifying features removed. To ensure their accuracy transcripts were read while simultaneously listening to corresponding recordings. Two researchers read transcripts repeatedly to ensure familiarity and deep understanding of the data and facilitate dependable analysis. Independently the researchers manually coded transcripts. Consensus regarding codes was achieved during joint discursive review. To visually identify data with shared codes, data segment with a common code were colour highlighted (Coffey et al. 1996).

Findings

Twelve community nurses participated in three focus groups (table 1). Each focus group comprised four participants. All were women.

Table 1

Locality	Geography	Number of Participants
1	Rural and semi-rural Affluent	4
2	Urban Affluent and deprived	4
3	Urban Affluent and deprived	4
Total		12

Community nurses experiences of the oedema on the ground education programme are reported here in three main themes: Professional practice outcomes for community nurses, perceived outcomes for patients and families and the establishing the feasibility of the educational intervention in community practice.

Professional Practice Outcomes for Community Nurses

Across the focus groups participants' perceived that at an individual level the education programme had improved their awareness, knowledge and understanding of chronic oedema management. Some explained how they felt more confident to assess and manage chronic oedema, indicating that the programme had enhanced their knowledge and skills and afforded them additional capability for everyday practice. Nonetheless, concern was raised across focus groups about the impact of certain aspects of care promoted in the education programme in terms of their own everyday professional practice and particularly when these were juxtaposed against the context in which they operated, notably, escalating high intensity workloads, recent changes in the General Medical Services Contract and the concomitant impact on other patients in their caseloads.

The impact of the oedema on the ground education programme in terms of improving community nurses' knowledge base for practice was articulated in all focus groups. Participants across focus groups understood and upheld the importance of preventative care in routine community nursing practice. Yet data suggests the education programme had raised their consciousness of the importance of and strategies for preventing chronic oedema and potential adverse effects:

Megan: Prevention is better than cure. Before they get to the point where they require us going in for wound care and compression and things like that. It's getting them, getting that you know information into them before that happens.

Seren: Educate, educate, **educate** the patient on how **important** it is to wash and cream to hydrate the legs which I don't think they realise do they, you know

Jane: And to go to bed

Sali: (laughs) And (*Seren: and what*) to go to bed (*Seren: bed yeh*). Yeh cos a lot of these patients sit in their chairs and gravity then has a huge effect on their legs (*yeh yeh*). (Emphasis original)

However, there was a sense that aspects of proactive preventative interventions and holistic care included in the programme were core components of everyday community nursing practice, an established, expected professional norm and thus nothing new:

Bethan: Giving dietary advice, elevating legs this is **nothing** new. (Emphasis original)

Seren: You do a holistic assessment anyway on somebody with swollen legs....
What lymphoedema have told us, educate patients, creaming And then refer on to lymphoedema service or the tissue viability tvn as well for the wound may be. I don't think there's anything new to me about this.

There was agreement across the focus groups that the programme had improved their knowledge of chronic oedema management, irrespective of how long they had been practising. This is richly encapsulated in the following exchange between Anwen, who had almost twenty years practice experience, and Eleri who had recently joined the team:

Anwen: The knowledge really, the knowledge of lymphoedema, you know and what we can do about it and signposting [others nodding in agreement]

Interviewer: OK

Eleri : I'm quite new in the community and it definitely helped me with, signposting like you say and just you know having, because there's so many different areas in the community that you can refer people on to but, but it's having that knowledge.

Moreover, it was perceived that the new knowledge could be shared with patients as the following participant explained:

Eleri: It's [the programme] also given me knowledge to pass onto the patients as well cos some of the patients have said, turned round and said 'oh well no one's ever told me this before'.

The new knowledge had equipped some participants with a newfound confidence to change their practice in terms of chronic oedema assessment, the application of compression therapy without dopplering and use of hosiery applicators.

Alys: They did give me the confidence (*Seren: yeh*) and especially when working with them [lymphoedema educators], when you actually visited the patients and saw how they worked it did give me the confidence to try the different types of bandaging and it gave me an understanding of the difference in the way that they taught us to pad the leg out and reshape the lymph so I could understand it better.

Interviewer: How about you Jane?

Jane: It gave me the confidence to apply some compression without dopplering

Interviewer: Ok so applying compression bandaging without dopplering.

Jane: Using clinical signs rather than using the abpi [ankle brachial pressure index] indicators.

In the absence of direct supervision from the specialist educators however, most participants were less certain. Indeed, they spoke purely in terms of signposting and referring patients on to the lymphoedema team:

Mari: I don't think it's made us any more able to deal with the problems that they came in to tackle because (*Sioned: yeh apart from refer on*) we just refer on (*Sioned: yeah*) yeah. (Emphasis original)

Knowing when and how to refer patients to specialist lymphoedema services was highly valued in terms of the positive impact prompt referral could have on the patient experience of care and imbuing in nurses a sense that they were able to do something:

Anwen: If you come across patients and you think 'oh I know' and apparently they've said they'll see anybody so even if it is not lymphoedema at least you get that diagnosis rather than bouncing round the system thinking 'well whose gonna sort this patient out with gross oedema?'

However, whilst acknowledging improved awareness and knowledge of chronic oedema, its prevention and management, data indicate many participants were reticent to change the way in which they managed chronic oedema:

Megan: They were saying 'you can go in, if you say, a patient's got oedema you can just put them in one layer of actico'. We wouldn't, I still wouldn't do that. So I wouldn't say my practice has changed in that sense but I've got a better understanding of it.

Mari: As for us being, physically intervening in the fact that that patient's got swollen legs and doing as they do, which is compress, we wouldn't do that without dopplering. So its education that we've learnt to pass onto the patients but more than that I wouldn't say.

Interviewer: So you would always Doppler?

Mari: Yeah.

Doppler sonography was considered as an established and vital component of the patient assessment process in chronic oedema.

Mari: GP's would say to us right 'go and measure the patient for hosiery.'
Well we can't do that because we have to Doppler first.

Participants in all focus groups were aware of the difficulties in establishing accurate Doppler readings in people with severely oedematous legs. However, almost without exception participants were reluctant to change practice in relation to Doppler sonography. While participants felt they could recognise when a person may benefit

from compression, without the findings of a Doppler sonography all but one preferred to refer the patients on to specialist services. Invariably this was tissue viability.

Ruby: I still look at some people now though and think 'oh I'd love to get a pair of stockings on them' but I haven't got the confidence to say 'yeh I am' they haven't been dopplered. We'd have to refer to (names TVN) (*yeh*)
Bethan: The TVN. So really nothing's changed (*No*) (*No*) at all. We can't just change our practice (*No*) (*No*).

Ensuring doppler sonography was performed meant they were adhering to local protocol and best practice guidance, obtaining a benchmark and assuring and maximising patient safety:

Mari: We don't do anything because of (*Eleri: Yeah*) the protocol with you know dopplered too..... With us it's very clear you know. We don't put people into any kind of compression unless they're dopplered and they're deemed fit to be in compression. I don't think we'd mind if we were just really clear about the process. In the community like you don't even put tubigrip on unless somebody's had a Doppler.

Furthermore, most perceived that they were working within the boundaries of their professional code of practice. As such and in the absence of a locally agreed evidence-based protocol almost all participants were hesitant to change their practice.

Bethan: All patients need Doppler and then if you if you don't can't get a reading you go to your TVN and you've got that guidance you've got that authority to say 'yes go ahead and put them into compression or not' and that protects your PIN.

Some participants explained that they had been encouraged to incorporate opportunistic health promotion in the context of chronic oedema into their routine daily practice in terms of information sharing and direct care in the shape of washing and moisturising legs:

Mari: They definitely taught us to go in and if we're going in for **other** problem unrelated to legs and if we see that and identify it and we think all right.
(Emphasis original)

However, on a practical level and in the context of a community nurses' normal working day engaging in the type of routine opportunistic health promotion promoted to prevent both the deterioration of existing oedematous legs and the onset of chronic oedema was considered to be challenging:

Megan: We were only going in to give them B12 and it was 'right you need to start (Yeh) getting buckets now and washing all of their legs and carrying big heavy buckets when we've been specifically told 'You're not allowed to carry buckets.'

On one level concern was expressed about ensuring the health, safety and well-being of staff in relation to manual handling. However, some participants highlighted a more pressing concern in terms of the impact of such opportunistic health promotion on their responsibilities to other patients within an overstretched community nursing service where priorities had to be set:

Bethan: I don't think they quite understood quite the impact of if we were doing that while we couldn't do that for every patient you know (...). We just haven't got the time or the resources to be going on and doing that we just, we just can't do it, it's impossible.

Nevertheless, despite such concerns, potential benefits for patients in terms of positive outcomes were noted.

There are definitely a lot of positive points: Perceived positive outcomes for patients

In all focus groups there was consensus that the education programme had conferred benefit for patients. The perceived beneficial outcomes included improved quality of life, promoting and enhancing patient self-efficacy and activating self-management. However, the magnitude of perceived benefit was variable and contingent upon engagement with and support for self-management, accessibility of applicators and garments and the nature and flow of information between professionals.

Participants in all groups perceived that the education programme had made a positive difference to patient outcomes and experience, for some patients at least. For most participants benefit was perceived to be connected with patients being able to apply and wear compression hosiery (rather than bandages) and chronic ulcer healing. It was suggested that that being able to put patients in compression hosiery meant that nurse-patient contact could be reduced and that some patients could even be discharged. Nevertheless, one participant did articulate strongly that the programme had an insignificant effect on patient discharge:

Bethan: I honestly hands on heart wish I could say I've got 40 patients of my 300 patient caseload that have you know benefited (yeh) and in all fairness they saw every single patient, not only the lymphoedema patients (...). So in terms of getting patients off the caseload, negligible for a 6 week project.

Ruby: I think there was probably just one wasn't there?

Bethan: One, one yeh.

Some participants also seemed to associate the education programme with positive patient outcomes in terms of the healing of chronic ulcers, as the following data extracts reveal:

Sali: It [education programme] does benefit people and we've had very good, very good results and things [ulcers] that have been really difficult to heal and under wound care [specialists] and they [lymphoedema educators] came in and changed the bandage system and they've tolerated it and it's huge, huge difference. We've seen wounds really come on and begin to heal and some people have ended up in compression with healed wounds.

Sioned: The one's that have seen benefits from their wounds being healed I think, you know, they think that's great so that, you know, there are definitely a lot of positive points.

Others, however, felt that healing sometimes had more to do with the outcome of the tissue viability nurses' interventions than the changes initiated through the education intervention as the following participant explained:

Megan: It [leg ulcer] completely healed then and he is now completely off our caseload (...) The reason he healed [was the tissue viability nurse's care plan. It was on her care plan that he healed (yeh).

Ultimately, most participants perceived that less nurse-patient contact as a consequence of being able to wear compression hosiery and healed wounds meant that patients, notably those who were not housebound, were less dependent on community nurses and could have more time and freedom for themselves and their families.

Sioned: It's [compression hosiery] giving them independence for those who can and if they've got carers you know they are able to self-manage the condition without our input and for a lot of non-housebound patients I think that's good for them because they're not tied down.

Alys: In compression stockings it can change their life really.

Seren: Especially if they've been coming down to the treatment room because sometimes their life is taken over by that room isn't it so obviously the time is more their time that's because they're not coming to see us all the time.

Having for time for themselves was perceived to have a transformative effect, changing and enhancing patients' quality of life. This is encapsulated in the following words of one participant who explained the magnitude of effect for one patient who had been on her caseload, and the wound healing team's books for almost a decade:

Jane: One lady that comes into treatment room she's thrilled absolutely thrilled she feels better and it's [oedema management] impacting on her family less (.....)

Participants also suggested that patients experienced less pain and discomfort. This improved physical functioning as patients had increased mobility. Moreover, there was a perception amongst some participants that patients had better knowledge of their condition and its management and as such they felt more in control and could even manage themselves:

Megan: We had one gentleman that came on just as the lymphoedema team were here, wet legs, oedema to both legs and they managed to get him into compression hosiery. With applicators he managed it himself.

Whilst some concerns about patients' long term non-compliance with compression hosiery were expressed across focus groups, self-management and supported self-management as positive outcomes for patients were articulated by several participants.

Ruby: I think it was good for the people that were already under lymphoedema and in stockings when their legs got a bit bigger then put them in actico to get them back down and back in the stockings I think that has worked (*Yeh Yeh*)

Interviewer: And have you had any feedback from the patients from that?

Ruby: Uhm the one of them yeh. I think she only had to go in the bandages for a week and she was back in her smaller size stockings.

Interviewer: How did she feel about that?

Ruby: Yeh She was really happy (*really*) and her son manages it all now.

However, in all focus groups participants emphasised that whilst patients might be motivated to self-manage, many do require assistance, as the following participant explained:

Seren: We've just had a lady in now and she's been having compression and she said 'oh there's some support hosiery here now Seren isn't there?' 'Yeah' I said 'right let's try it'. She said 'I don't know whether I'm gonna be able to manage Seren'. I said 'right ok let's give it a go and see how you're getting on' (...). So we tried it (...). We sorted that out together and she said 'Seren well I think I might be able to manage it'. I said 'well let's just see how you go', you know (...). She said 'my husband always put my stockings on for me'. (*Ahh*) I know. And of course he's

passed away so that's another thing: we've got to consider, whether they're able to do it, because it's not easy.

While applicators enable patients to put on their own compression hosiery, it was mentioned that currently there are no applicators for removing hosiery. Furthermore, it was suggested that not all patients could use applicators independently:

Mari: some couldn't use the aid

Sioned: Aids' some couldn't apply them if they didn't have (*yeah*) uhm care agencies going (*yeah*) in.

Moreover, some participants perceived that once the lymphoedema education team had left, they would be unable to obtain applicators and even hosiery for patients:

Megan: The problem we've got is we **really** can't order all of these things [applicators and garments] (*No*). It's very difficult for us (*yeh*) to get hold of all of these things. So it's all very well saying 'right you need to have this patient in a pair of stockings' and 'you need this applicator'. (Emphasis original)

Indeed, despite whilst most participants were aware of the all Wales compression garment formulary the predominant view articulated across all focus groups was that participants were hesitant to use this.

Interviewer: Have you come across the all Wales Compression garment formulary?

Bethan Yes they did leave us with that

Interviewer: and how has that been? Lots of laughter **Interviewer: No?**

Bethan: well we're not going to use a formulary [inaudible] are we or look at if our patients are 99.9% non-compliant.

Megan: Again the problem, the problem is they're not, even though it's all that you know you leave use the formulary and say 'right you can order these for your patients and put your patients on compression garments' as already discussed we're not actively gonna go out and decide whether a patient can have compression garments. So really, if we refer them through to the lymphoedema team they would then be deciding what stockings of garments to put on them. So it's completely you know you wouldn't do that anyway.

Interviewer: Have you used it (compression garment formulary) at all?

Alys: Uhm I think we did in the very beginning but it was individual conditions they were ordering, you know they were showing us how to use it.

Interviewer: so you've not used it since?

Alys: I haven't no.

Sali I have recently done a made to measure compression hosiery but I didn't actually use that.

Many participants felt that the nature of their caseloads in terms of demography, epidemiology and social status tended to preclude many patients' active engagement in their own chronic oedema care:

Megan: The majority of our patients are elderly (....).

Bethan: You're talking about housebound, chronically sick with chronic wounds with multiple conditions, dementia, memory problems with the majority of our patients. And these are the patients that they're trying to educate.

Additionally, whilst the concept of health technology in the shape of video film prescriptions to support patient education and thus enhance chronic oedema self-management was applauded, participants who had been able to view the video film prescriptions expressed doubt about their efficacy given that many patients had age related impaired hearing and sight:

Alys: Some of our patients perhaps are a little bit hard of hearing cos I mean I've got really good hearing and I and I had to come up close so. On a small screen it [video prescription] isn't so good and obviously eyesight as well.

'Nothing's really changed': Establishing the feasibility of the educational intervention in practice

There was broad agreement across focus groups that the underpinning idea of the education intervention in terms of both preventative and prudent health care was laudable, relevant and welcome. However, many participants perceived room for improvement in terms of the intervention's development and implementation. Moreover, there was a view across all focus groups that long term sustainability of practice change was contingent on having a chronic oedema specialist permanently embedded within the locality.

Whilst recognising and respecting the education team's specialist subject level knowledge and expertise, several participants articulated a perceived need for thorough, deliberate intervention planning prior to engaging in implementation in order to enhance acceptability, adoption, integration and thus long term sustainability of practice change. It was widely recognised that chronic oedema management was a complex multiprofessional endeavour which could cut across health and social care boundaries. Yet there was a perception amongst some participants that all professions

directly involved in managing chronic oedema in community settings may not have been engaged as partners in the educational intervention's development.

Bethan: The whole project was not prepared enough, i.e. they [lymphoedema team] should have liaised with the Tissue Viability Nurses right through to Podiatry cos the nurses have been given conflict, conflicting sort of care plans. So podiatry are very specific in how they want their wounds nursed, the TVN's have our best interests at heart because they're registered nurses and they know where we stand in terms of our NMC PIN and the lymph lymphoedema team I don't think were quite or had the **necessary** information to be able to give us a care plan that we could follow that would keep everybody happy. (Emphasis original)

Although not all participants had viewed the video prescriptions, most positively received the concept of video film prescriptions delivered via internet technology as a component of the intervention. However it was suggested that some patients, irrespective of age, would benefit from alternative approaches to information dissemination.

Seren: It's a pity they couldn't do copies on dvd on discs isn't it and be able to hand them to patients and for them to watch and take them home and watch them in their own time in their own comfort.

Alys: Here the signal is a big thing. We do have major problems with signals don't we.

Jane: It would probably be effective if we got people in a group.

Sioned: I think it's a good idea. Because we don't know what the videos entail it's a bit difficult to say how the patients would feel.

Mari: But I think it's a useful tool.

Eleri: It is isn't it.

Sioned: Yeh . But you've got most of our patients are 'I can't hear anything'.

Eleri: But if, if they can have, if they've got access to it then and you know they could watch it every so often to refresh their memory and (*yeh*) signs of what to look for and things like that then I think it's a good idea but I don't know how many of our patients would actually use it cos some of them.

Anwen. But then the other thing is your starting now you know if you're seeing people if you see people in their 30's, 40's 50's so then that information will be a rolling ball. I'm not saying that it is too late for people who are in their 90's cos some of our 90 year olds do use computers funnily enough (*Yeah they do, yeah*) but you know it's about getting people presumably when they're younger and then following that through (...)

Mari: It is useful if it is good it depends on what it is but if it is I think it's better if there's lots of pictures instead.

Eleri: A video I think would be useful wouldn't it (*Yeah*), would be handy I do think some of our patients would (*Anwen: engage*) would watch it. Yeah some of them would take it on board.

Furthermore, some participants felt that the quality of the video prescriptions would have been enhanced had community nurses been consulted during the production process. Moreover, one participant expressed '*grave concern*' about the quality of

one video in terms of the Fundamentals of Care practice indicator relating to patient safety, specifically prevention of infection.

In terms of the implementation process participants in all focus groups expressed that the lymphoedema educators were warm, friendly and highly motivated practitioners who were passionate and knowledgeable about their subject.

Bethan: They came in. They were incredibly friendly, very motivated and excited about the project which I think gave us a boost.

Mari: The girls were amazing I felt (*Eleri: Yeah*) when they came. Aand it was a real, felt like (*Anwen: a real push*) we were pushing and we felt like we were learning lots.

Indeed, participants were predominantly positive about the education process in terms of the concept and mode of delivery and most articulated that professional discussion and reflection during education outreach was a motivating force and presented them with opportunities to learn and develop their practical knowledge in the workplace. However, in all focus groups there was uncertainty about the aim of the intervention and a frequently expressed viewpoint was that it was to reduce community nurse's caseloads:

Sioned: I felt that it was very much like they just wanted to go in and get the patient off our caseloads. Did you find? I felt that they just wanted um
Anwen: But isn't that their aim isn't it?

Amongst some participants there was a view that systematic strategic planning in the shape of pre-implementation liaison with District Nursing team leaders may have enabled greater understanding of community nurses' modus operandi.

Julie: They didn't really look into what we did before they came here. Yeh. They didn't do their groundwork, their homework.

Mari: We seem to get them [patients] at the very end (*yeah*) everything's breaking down. Or we get patients with chronic ulcers, oedema and I think there's a bit of a problem there because they manage the oedema, we're managing the wounds and they two don't often mix.

Juxtaposed against this was a perceived lack of awareness of the challenging context in which community nurses were operating on a daily basis. Indeed, one participant described how reduced staffing levels meant the team was '*pushing the limits*' when

the lymphoedema educators arrived in their area. As a consequence attendance at the workshops in particular was quite low:

Bethan: I didn't have the capacity to release nurses and I think how many of you went? Two wasn't it?
(Two). And I would have loved, I am so keen on education and development but at that time it was just impossible.

Mari: I only attended the one. I was on leave for the second. So I didn't. I didn't realise that the second one was when I was on annual leave cos it was just sprung on me (...)

Anwen: I didn't do any of the programmes because I was doing flu vax . But I did go out with one member of the team, yeh.

Some participants felt that careful planning and engagement with District Nursing team leaders would have facilitated timely, proactive deployment of the lymphoedema educators.

Bethan: I think perhaps planning ahead 'oh this locality actually is ok for staff at the moment.' I think let's accommodate the team here first and I think all those issues should have been explored before the team sort of kicked off.

Moreover, it may even have gone some way to allay, even prevent concern about the intervention circulating amongst community nurses once implementation was underway:

Eleri: I think we were all a little bit apprehensive just because we thought, well the message we had was that they were gonna come in and have a look at all our patients. If they were gonna come in and see a patient they might look at their husbands as well or their daughters, whoever was in the property. They were gonna look at everyone just assess everyone's oedema. Which is fair enough. But at the same time I just thought 'oh my god our client list is gonna go' (Mari: Rocket) you know, patients are just gonna, yeh quadruple . Whereas actually that didn't happen.

Several participants articulated that whilst their knowledge and awareness of chronic oedema had been raised once the lymphoedema educators had left their practice areas they were left with a sense of nothingness:

Mari: Then, all of a sudden, nothing. It just feels like, even though as you've said we can ring and we know they're really happy to discuss (Eleri: Yeah) things and issues. But it did kind of feel like that.

In the absence of direct support some participants referred people directly to lymphoedema services. However, mostly participants reverted to their previous modes of familiar practice based on their own known and trusted criteria.

Mari: They [lymphoedema educators] go straight in and they will assess, they, about swelling and everything and about, they won't Doppler but they will put in one layer of compression

Anwen: But they've got their own (*Mari: we don't do that*), they're using their own specific criteria

Mari: Yes but what I'm saying (*Anwen: we can't do that*) is while it's great for them to go and do, but now they've gone we, we're not going to do that.

Megan: We had them for a couple of weeks (*yeh*) and then they went, and then they're [gone]. Ok nothing's really changed, everything's exactly the same.

Participants did understand the time limited nature of the intervention and some believed that there was a need for annual updating. For these participants annual updating would act as a refresher and be valuable for updating about new products, for those who were unable to experience the intervention and even new staff. Nevertheless, for most participants the key to long term sustainability of practice change was to embed a lymphoedema specialist within the locality tissue viability team. However, perspectives on the nature of the role differed and ranged from consultation and education to direct care:

Megan: A lymphoedema specialist available working with the tissue viability team we could like we work with [Tissue viability nurse], request that they go out and Doppler them, look at them, and put them in bandaging you know? Yeh (*yeh*) I think it would be really really helpful for us and definitely for our patients. Especially if they are working with the tissue viability team. If they are working together then it there shouldn't be any issues and I think it would be really useful

Alys: We have got (*Sali: yeah we've got the room*) room for a clinic (*Sali: very good idea*) and that would be really good because then we could we would have somebody to communicate with and

Sali: Support, new staff to come in to, you know, and keep us brushed up on the rationale and all the knowledge behind it so, so that would be good.

Discussion

The primary aim of this evaluation was to identify, explore and describe the impact of the chronic oedema 'on the ground' education programme on community nurses' practice. This is an important area of enquiry given that chronic oedema prevalence is projected to rise placing additional pressures on overstretched nursing and healthcare

systems. To enable nurses to deliver high quality safe and effective person centred care, appropriate, substantive, meaningful education and learning support is vital. Yet in continuing financially austere times accessing education remains challenging for many and to bridge an acknowledged gap in chronic oedema education there is a need for alternative innovative, efficacious approaches to education which, in terms of achieving organisational goals are robust and cost-efficient.

The findings presented here provide valuable insights into the impact of the on the ground education programme on community nurses' professional practice and their perceptions of potential outcomes for patients. Furthermore, in terms of the educational intervention's development, design and implementation the evaluation identified areas which may inform future development and thus strengthen the intervention.

The data reveal that access to the OEGP programme had raised community nurses' awareness, knowledge and understanding of chronic oedema/lymphoedema prevention, assessment and management. This finding does underscore the potential value of professional learning and development within the workplace (which is quite different to work-based learning), where, through co-participation, working, learning and knowledge acquisition can co-occur (Lloyd et al. 2014). It is potentially an important finding given that previous studies have reported that people living with lymphoedema perceive that many health professionals have inadequate knowledge and understanding of the condition and its management (Watts & Davies 2016, Davies 2012, Sneddon et al. 2008). Moreover, while there is a dearth of research investigating community nurses' educational needs in relation to chronic oedema/lymphoedema, recent work has signalled a perceived need amongst generalist healthcare professionals for education to improve their lymphoedema management knowledge base (Noble Jones 2016).

That community nurses' felt able to share new knowledge about chronic oedema/leg ulcer with their patients is an encouraging finding. Of course information sharing and education alone are insufficient in generating and sustaining behaviour change and self-management (Kennedy et al. 2013). Nevertheless, community nurses'

expressed confidence to share knowledge is certainly a step in the right direction in terms of preventative care, behaviour change and supporting self-management.

However, while most community nurses' perceived that the programme had enhanced their knowledge base in relation to chronic oedema/lymphoedema, the degree to which the new knowledge and learning has been retained remains uncertain. Moreover, the extent to which the programme engendered practice change was perceived to be rather limited. The principal barriers to change were practice related in the shape of workloads and protocols. In the context of the community nurses' world of an over stretched workforce juxtaposed against burgeoning complex demands, wide-ranging responsibilities and an uncertainty following recent changes to the General Medical Service contract, many felt that some aspects of opportunistic health promotion and direct preventative care were, in their reality, overly ambitious and unrealistic. Yet for most it was the notion of compression therapy in the absence of a Doppler ultrasound that was a step too far.

The true effect of the education intervention in terms of benefit conferred to patients is elusive given that patients were not included in this study. Nevertheless, the data show that community nurses' had found that the application of new knowledge in practice meant that oedema could be reduced, chronic venous ulcers could heal and some patients could be discharged. As a consequence they suggested patient's quality of life improved. This is an important finding as chronic oedema/lymphoedema and chronic venous ulceration are associated with substantially impaired quality of life (Green et al. 2014, Greene & Meskell 2016, Hopman et al. 2016). For instance physical restraint, unrelenting pain, exudate, malodour and functional loss generate immense challenges, can permeate social networks, restrict employment and everyday activities (Lam et al. 2006, Bogan et al. 2007, Fu & Rosedale 2009, Vassard et al. 2010, Ridner et al. 2012, VanDenKerkhof et al. 2013, Watts & Davies 2016).

The data suggest that community nurses perceived that through effective knowledge and skills transfer patients could experience improved confidence and self-efficacy and that in turn this would enhance the ability to self-manage chronic oedema/lymphoedema. Enduring chronic oedema/lymphoedema self-management is

important to manage regional swelling, reduce the risk of complications, ulcer recurrence and potential psychosocial ramifications and possibly healthcare use and thus costs (Watts & Davies 2016). However, this can be difficult, time-consuming and burdensome, particularly in the absence of additional support. Moreover, research has shown that compression may serve as a visible reminder of an underlying condition and generate discomfort. This in turn may negatively influence adherence with compression therapy (van Hecke et al. 2011). Certainly findings from a recent Cochrane review of compression in preventing venous ulcer recurrence revealed that with high compression hosiery adherence is lower (Nelson & Bell-Sayer 2014). Moreover, reporting findings from their randomised controlled trial of the effectiveness of compression hosiery versus compression bandaging in venous leg ulcer treatment, Ashby et al. (2014) unexpectedly found that participants had more complaints about the comfort of hosiery. Moreover discomfort led many to change their treatment.

Data suggested that community nurses welcomed the learning opportunities the educational intervention offered them. Having access to personable, highly motivated specialist practitioners within the workplace who simultaneously participated in work activity and facilitated formal and informal learning through workshops, close guidance, observation, feedback, peer reflection in and on practice and critical discussion was valued. Access to expertise has been identified as a key enabler of workplace learning (Lloyd et al. 2014). This type of integrated approach to learning within and through the workplace lends itself to the development of specific skills and knowledge for practice and is supported in the literature. Moreover, it may offer one solution to the increasingly problematical matter of protected time or release of healthcare staff for study.

Yet the data did reveal a level of constructive criticism about the ways in which the educational intervention was developed and implemented. Essentially, participants felt that as experts in community nursing they had been unable to make a contribution to these processes. This may make for uncomfortable reading given the pioneering, magnanimous spirit in which the educational intervention was conceived, developed and implemented. However, in order to begin to understand this perception it is instructive to note that the importance of dialogue and partnership working between

education providers and health professionals is widely accepted as the norm in the world of health professional education, and particularly nursing (Clarke & Copeland 2003). Moreover, it is important to accept that the chronic oedema/lymphoedema educational intervention is comprised of a number of interacting components and thus is by its very nature of the complex genre (Craig et al. 2008).

It is widely acknowledged that the development phase of a complex intervention is the most crucial stage for it can shape the success of the design and implementation. Arguably consultation with and feedback from community nurses during the developmental phase, specifically modelling of the intervention prototype and its component parts, may have engendered a greater level of acceptability, uptake and enhanced the feasibility of the intervention. Certainly the nurses would have been able to identify their educational needs and concerns relating to chronic oedema/lymphoedema as they saw them. This is important for the perceived education needs of the community nurses may contrast with lymphoedema specialists' perceptions of community nurses' needs. Moreover, community nurses may have particular views about what may be required to enable them to safely and effectively develop their practice. Crucially they would offer valuable insight into the context in which they operate. Such insight is invaluable for there is an inextricable link between context and the implementation and effectiveness of complex interventions (Pfadenhauer et al. 2017). Moreover, in terms of education the context in which community nurses work and learn shapes capability, performance and learning (Eraut 2007).

Limitations

The study is not without limitations. The sample is small although there is a sense in which it is in accord with the study's aims and, in terms of exploratory qualitative research, adequate. Yet the findings reflect experiences of a sample of self-selecting community nurses in one region of Wales. Moreover, rural and urban areas were represented. It is probable individuals volunteered to participate because they wanted to share their experiences of the oedema on the ground education programme and how this impacted on their practices. Despite these limitations important lessons can

be learnt from the community nurses' experiences about developing and implementing complex educational interventions in community practice settings.

Conclusions

Community nurses play a pivotal role in chronic oedema/leg ulcer management in primary care because of their holistic, relational contribution to individualised care and their cross boundary working. This evaluation focused on an on the ground workplace education programme as an intervention to enhance chronic oedema/leg ulcer management with the ultimate aim of improving quality of life and reducing economic costs. The findings provide a snapshot in time. They illuminate that the community nurses were receptive to this type of educational approach. However, the learning effect in terms of a measurable change in clinical practice is impossible to establish, indicating the need for a robust longitudinal study with a comparator. Areas for future investigation include sustainability of the learning effect and disseminating the education to others who come into contact with people who have chronic oedema/leg ulcers in primary care, notably General Practitioners and social care workers. However, before this is done there is a pressing need to review the development and implementation of the intervention. As this is a complex intervention the Medical Research Council's (2008) Framework for the development and implementation of complex interventions will be an invaluable resource, as will be the key stakeholders in terms of community nurses, General Practitioners, Tissue Viability Nurses, Podiatrists and patients.

References

Ashby R.L., Gabe R., Ali S., Adderley U., Bland J.M., Cullum N..A., Dumville J.C., Pglesias C., Kang'ombe A.R., Soares M.O., Stubbs N.C. & Torgenson D.J. (2014) Clinical and cost-effectiveness of compression hosiery versus compression bandages in treatment of venous leg ulcers (Venous leg ulcer study IV, VenUS IV): a randomised controlled trial. *The Lancet* **383**, 871-879.

Benson M., Gaskin R., Moffat C., Peach V. & Faul C. (2016) Half the community nurse caseload: estimating the prevalence of lower limb chronic oedema. *BMJ Supportive and Palliative Care*, **6** (Suppl. A1) A1-A112.

Braun V. & Clarke V. (2006) Using thematic analysis in psychology. *Qualitative Research in Psychology*, **3**: 77-101.

Chamanga E., Christie J. & McKeown E. (2014) Community nurses experiences of treating patients with leg ulcers. *Journal of Community Nursing* **28** (6): 27-34.

Clarke D.J. & Copeland C. (2003) Developing nursing practice through work-based learning. *Nurse Education in Practice*, **3**: 336-344.

Coffey A. & Atkinson P. (1996) *Making Sense of Qualitative Data: Complementary Research Strategies*. Sage Publications: London.

Coffey A., Holbrook B. & Atkinson P. (1996) Qualitative data analysis: technologies and representations. *Sociological Research Online* **1**. Retrieved from <http://www.socresonline.org.uk/1/1/4.html> on 06 January 2017.

Craig P., Dielppe P., Macintyre S., Michie S., Nazareth I. & Petticrew, M. (2008) *Developing and evaluating complex interventions: new guidance*. Available from: <https://www.mrc.ac.uk/documents/pdf/complex-interventions-guidance/>

Davies R. (2012) *An investigation of the education needs of healthcare professionals in Scotland in relation to lymphoedema care*. Glasgow University, Glasgow. Available at: <http://www.nes.scot.nhs.uk/media/842465/abridged-report-lymphoedema-education-needsofhcps-final3.pdf>

Franks P.J., Moffatt C.J., Doherty D.C., Williams A.F., Jeffs E. & Mortimer P. (2006) Assessment of health-related quality of life in patients with lymphedema of the lower limb. *Wound Repair and Regeneration* **14**, 110-118.

Green J., Jester R., McKinley R. & Pooler A. (2014) The impact of chronic venous leg ulcers: a systematic review. *Journal of Wound Care*, **23** (12): 601-612.

Greene A. & Meskell P. (2016) The impact of chronic lower limb oedema on patients' quality of life. *International Wound Journal* DOI:10.1111/iwj.12648

Hopman W.M., Vandenberg E.G., Carley M.E. & Harrison M.B. (2016) Health related quality of life at healing in individuals with chronic venous or mixed venous leg ulceration: a longitudinal assessment. *Journal of Advanced Nursing* **72** (11): 2869-2878.

Kennedy, A., Bower P., Reeves D., Blakeman T., Bowen R., Chew-Graham C., Eden M., Fullwood C., Gaffney H., Gardner C., Lee V., Morris R., Protheroe J., Richardson G., Sanders C., Swallow A., Thompson D. & Rogers A. (2013) Implementation of self management support for long term conditions in routine primary care settings: cluster randomised controlled trial. *British Medical Journal*, **346**: f2882 doi: 10.1136/bmj.f2882

Kitzinger J. (1994) The methodology of focus groups: the importance of interaction between group participants. *Sociology of Health and Illness*, **16**, 103-121.

Kitzinger J. (2005) Focus group research: using group dynamics to explore perceptions, experiences and understandings. In *Qualitative Research in Healthcare* (Holloway I. ed.) Open University Press: Maidenhead, pp. 56-70.

Kolb D.A. (1983) *Experiential Learning: Experience as the source of Learning and Development*. Prentice Hall: London.

Kreuger R.A. & Casey M.A. (2008) *Focus Groups: A practical guide for applied research* 4th edn. Sage Publications: Thousand Oaks CA.

Lloyd B., Pfeiffer D., Dominish J., Heading G., Schmidt D. & McCluskey A. (2014) The New South Wales Allied Health Workplace Learning Study: barriers and enablers to learning in the workplace. *BMC Health Services Research*, **14**: 134

Moffatt C. & Pinnington L. (2012) Project evaluation report: facilitating development of community based lymphoedema services through clinical education East Midland Health Innovation and education Cluster, East Midlands.

Morgan P.A., Moody M., Franks P.J., Moffatt C.J. & Doherty D.C. (2005) Assessing the community nurses' level of knowledge of lymphoedema. *British Journal of Nursing*, **14** (1): 8-13.

Nelson E.A. & Bell- Sayer S.E.M. (2014) Compression for preventing recurrence of venous ulcers. *Cochrane Database of Systematic Reviews*. **9** Art. NO.: CD002303

Noble- Jones R. (2016) Modelling the development of an online learning resource by health care professionals. Unpublished PhD thesis, University of Glasgow: Glasgow

Okajima S., Hirota A., Kimura E., Inagaki M., Tamai N., Iizaka S., Nakagami G., Mori T., Sugama J. & Sanada H. (2013) Health-related quality of life and associated factors in patients with primary lymphedema. *Japan Journal of Nursing Science* **10**, 202-211.

Pfadenhauer, L.M., Gerhardus, A., Mozygemba, K., Lysdahl, K.B., Booth, A., Hofmann, B., Wahlster, P., Polus, S., Burns, J., Bereton, L. & Rehfues, E. (2017) Making sense of complexity in context and implementation: the Context and Implementation of Complex Interventions (CICI) framework. *Implementation Science* DOI 10.1186/s13012-017-0552-5

Sneddon M. C., Franks P.J. & Pearson J. (2008) *Lymphoedema: Service provision and needs in Scotland*. University of Glasgow, Glasgow. Available at:
<http://eprints.gla.ac.uk/50066/1/50066.pdf>

Symvoulakis E.L., Anyfantakis D.I. & Lionis C. (2010) Primary lower limb lymphedema: a focus on its functional, social and emotional impact. *International Journal of Medical Sciences* **7**, 353-357.

Todd M. (2013) Chronic oedema: impact and management. *British Journal of Nursing*, **22**: 16-20.

Todd M. (2014) Venous disease and chronic oedema: treatment and patient concordance. *British Journal of Nursing*, **23**: 466-460.

VanDenKerkhof E.G., Hopman W.M., Carley M.E., Kuhnke J.L. & Harrison M.B. (2013) Leg ulcer nursing care in the community: a prospective cohort study of the symptom of pain. *BMC Nursing*, **12**: 3.

Van Hecke A., Verhaeghe S., Grypdonck M., Beele H. & Defloor T. (2011) Processes underlying adherence to leg ulcer treatment: A qualitative field study. *International Journal of Nursing Studies*, **48**: 145-155.

Watts, T. & Davies, R. (2016) A qualitative national focus group study of the experience of living with lymphoedema and accessing local multiprofessional lymphoedema clinics. *Journal of Advanced Nursing*, **72**: 3147-3159.

Williams A.F., Moffatt C.J. & Franks P.J. (2004) A phenomenological study of the lived experiences of people with lymphoedema. *International Journal of Palliative Nursing* **19**, 279-286.