Changes noticed following a pressure injury link nurse programme

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ABSTRACT

Health quality and safety improvement is every health worker's responsibility. Nurses have the knowledge and skills to take leadership roles in this field. Link nurses are an example of nurses filling practice-specific quality management roles. In this research, where a pressure injury prevention link nurse programme was instituted, nurses embraced the quality improvement project.

Aim: The aim of this study was to identify changes link nurses noticed in their practice areas as a result of participation in a pressure injury prevention link nurse programme.

Design: Qualitative results from a mixed methods study are reported here.

Methods: Data were collected in three nurse focus groups. The technique used to collect data was Aspinal's (2005) Nominal Group Technique. Twenty-two participants answered a question on the changes they had noticed in pressure injury prevention in their area following a link nurse programme.

Findings: All nurses noted an increase in their colleagues' knowledge and awareness of pressure injury prevention; patients were reported as now being part of the care team; assessment tool use and documentation/reporting was noted to have improved in all areas; a policy created in the aged residential care and rural groups led to the acquisition of new pressure injury prevention equipment; blame culture was reported to be reduced in aged residential care.

Conclusion: Following the link nurse programme, nurses were encouraged and empowered by the changes they were able to institute in their workplaces. Such nurse-led programmes fulfill a need in quality improvement action and further inception of such programmes should be encouraged for nurses and practice colleagues.

Relevance to clinical practice: This research has highlighted that many positive changes in care can come about when nurses are supported to lead quality improvement processes.

What does this research contribute to the wider global community?

- A highlighted outcome was that link nurses educated and empowered colleagues across the health-care team, following the mantra "quality is everyone's business".
- The link nurse project led to increased consumer education and involvement in their own care. This is vital in a person-centred care model.

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KEYWORDS

Pressure injury, link nurse, resource nurse, quality improvement, change, patient safety, pressure injury prevention

INTRODUCTION

There is increased international awareness that health quality and safety depends on all health-care workers (Altmiller & Hopkins-Pepe, 2019). However, a recent review found nurses' attitudes to pressure injury prevention were substandard, at around 75 per cent of the expected level, and concluded that nurses required further education to be effective in preventing and treating pressure injuries (Rostamvand et al, 2022). This finding is important because health-care associated pressure injuries are a nurse-sensitive outcome measure, used as an indicator of health-care performance (Needleman et al, 2002). Nurses report being hindered in their efforts to provide optimum prevention and care for pressure injuries (Barakat-Johnson et al, 2019). In New Zealand this also appears to be an issue. In 2015, a report on pressure injuries in New Zealand was completed by KPMG for the Health Quality & Safety Commission, the Accident Compensation Corporation (ACC), and the Ministry of Health. That report found staff responsible for caring for pressure injuries felt they lacked the authority to make decisions about care. Consequently, a quality improvement programme to reduce pressure injuries was suggested by the authors (KPMG, 2015).

There is an obvious need for change in practice to ensure quality care, and this is occurring. Following the 2015 KPMG report, nurses have been actively addressing the issue. As a member of the Pan-Pacific Pressure Injury Alliance (PPPIA), the New Zealand Wound Care Society hosted the online launch of the 2019 Clinical Practice Guideline for Prevention and Treatment of Pressure Ulcers/ Injuries (Kottner et al, 2019). The mission of the PPPIA is to improve outcomes for people with pressure areas by increasing knowledge and research (https://pppia.org/). Also, as a result of the KPMG report, a link nurse programme was introduced in one district health board (DHB) in New Zealand.

BACKGROUND

A Canadian-based paper encourages nurses to take the lead in improvement science, by initiating and directing quality improvement projects (Flynn et al, 2017). Resource or link nurses can take up this leadership role. A link nurse can be involved in all aspects of quality improvement such as inception and leading of projects, monitoring and auditing, education of colleagues, purchase and maintenance of equipment, reporting to the quality and safety team, and potentially setting up a topic-specific community of practice (Pyrko et al, 2017) . Such positions have been used successfully to increase knowledge and skillful care in a range of areas, including pressure injury prevention and infection control (Quinn-O'Neil et al, 2011; Rowe et al, 2018). Evidence suggests that when link nurses were given specific roles in pressure injury prevention, there was reduction in pressure injuries from 10/1000 patient days to 2.17/1000 patient days. In part this was achieved by link nurses feeling more autonomous in initiating work to reduce pressure injuries (Quinn-O'Neil et al, 2011). Evidence of nursing leadership, and consequently autonomy in nursing care, must be recognised and emulated, and should add to the evidence on which nursing practice is based.

The research reported here involved a New Zealand link nurse programme starting in 2018 and funded by ACC to reduce pressure injury harm. Link nurses were educated and supported in quality improvement practice and pressure injury prevention through a DHB quality improvement service, and a local education provider. Link nurses were, in turn, to educate their practice colleagues and initiate a quality improvement project in their workplace. This report aims to fill a gap in research as there are no evident reports which specifically outline the changes pressure injury prevention (PIP) link nurses observed from their endeavours. The unique and positive outcomes reported are important to nursing practice because they have the potential to reduce the extensive cost of pressure injury care with a comparatively small financial outlay, and more broadly, because they enhance the initiation and ongoing support of autonomous evidence-based nursing practice.

The link nurse programme process is explained here before the study procedure.

Table 1. Link nurse project objectives

1) Develop and implement a quality improvement education programme, enabling PIP link nurses to improve their understanding of pressure injury prevention and management, while equipping them to lead and foster change specifically related to pressure injury issues.

2) Enhance the clinical staff's knowledge of evidence-based strategies to prevent the occurrence of pressure injuries, and to assess this knowledge, before, and one year after, the introduction of the PIP link nurse role.

3) Assess pressure injury outcomes across the clinical sites involved in this project, before, and one year after, the implementation of the PIP link nurse role.

4) Assess the feasibility and value of having a PIP link nurse resource by exploring the experiences of the PIP link nurse and key stakeholders with whom they work.

5) Determine critical factors needed to make a PIP link nurse role successful.

6) Establish a PIP link nurse community of practice to enable networking and share information to support and enhance their role.

PIP link nurse project

The PIP link nurse programme is outlined to provide a context for the data collection that occurred during this study. The objectives of the link nurse programme are listed in Table 1 (see p20).

PIP link nurse programme participants and setting

The PIP link nurse project was offered in two areas in the region, an urban area with a population of 380,000, and the largest town in the rural area with a population of approximately 30,000. The urban group included nurses working in an 800-bed public hospital, community home visiting, and aged residential care (ARC). The rural area included nurses working in the 120-bed local base hospital and ARC facilities.

Fifty-eight registered nurses (RNs) were initially recruited into PIP link nurse roles across the region in hospital sites and community settings. Recruitment to the PIP link nurse role occurred via advertising in staff update web notifications, appointment by nurse leaders, and staff self-nomination. Candidates were then appointed via a competitive process in which nurses made an application to participate in the project against specified selection criteria, which required them to have at least three years of clinical nursing experience and be working in the delivery of direct patient care at the time of application. Prerequisites included the completion of an online pressure injury prevention course, having a current professional portfolio, prior training in preceptorship/clinical teaching, computer literacy skills and demonstrable clinical leadership skills that would enable them to be a change agent in their practice area. The nurse was required to have their application signed by their nurse manager, affirming the nurse met the selection criteria and had appropriate qualities to fulfil the role and that they would support them in the programme. Only nurses who both met the selection criteria and were formally approved by their nurse manager were successful with their application. Funding was provided for backfill staff to release the nurses once a month and for the time for the pressure injury academic education.

During 2019, a bespoke pressure injury prevention course was delivered to recruited link nurses. A local education institution provided graduate-certificate level education on pressure injury identification and management. The PIP link nurses were provided with detailed education on a range of quality improvement tools to enable them to identify gaps in care or care processes, and to develop change ideas alongside a plan for change implementation. The course consisted of 110 hours that combined face-to-face and self-directed learning, along with time to complete assessments and implement change ideas for pressure injury prevention in practice. Time release was assured for PIP link nurse activities, with their shifts being filled by other nurses. This was paid for by project funds, as research has identified issues such as limited organisational commitment, and lack of release time for the nurse, affecting the success of such projects (Shepherd et al, 2005; Barr et al, 2021) . Education sessions were held in local DHB education facilities in both city and rural areas.

Link nurses were required to complete at least one pressure injury prevention quality improvement project in their clinical area during the 12-month period. Link nurses used a locally developed maturity matrix of management and work systems to assess their workplace to determine where improvement was needed. Once completed, quick projects were identified and actioned, while the CDHB Process for Improvement (2015) was used for longer project work. In June 2019, nurses developed the scope of their local project, outlined in a specific driver diagram (Provost & Bennett, 2015). The driver diagram was a visual display of factors that helped achieve the project aim. These factors included leadership, improvement data, education and training, equipment and resources, individual care and assessment, and continuity of care. PIP link nurses then each focused on one change idea. Using Deming's "Plan, Do, Study, Act" cycle, nurses tested, refined and implemented changes, supported by the project manager, nurse educator and quality facilitator to make use of the quality tools provided for them at project briefings (Deming, 2018). Thirty-two PIP link nurses completed change ideas and implemented them in their practice settings.

Of the 32 PIP link nurses who completed the programme, seven were from ARC, 15 from DHB medical/surgical nursing, two were from older person's health community service, one was from women and children's health, and seven from other unspecified areas. Twenty-six nurses withdrew from the PIP link nurse programme. Reasons for withdrawal were that they did not attend the first project briefing (n=5), personal circumstances (n=5), overcommitted/no resource to cover (n=5), left their workplace or change of position (n=5), role was not as expected (n=5), and other – not specified (n=1).

The aim of this study was to identify changes that link nurses noticed in their practice areas as a result of participation in a PIP link nurse programme.

METHODS

Design

A mixed-methods exploratory sequential design guided data collection and analysis. In this design, qualitative data was collected from focus groups which explored the experience of the PIP link nurses. The results of the focus groups informed the questions for subsequent surveys sent to all PIP link nurses, their managers, and colleagues, that then provided quantitative data. Results on the barriers and facilitators experienced in the PIP link nurse programme, with both qualitative and quantitative data, have been reported elsewhere (Moir et al, 2022). This paper focuses on qualitative results from the focus group interviews regarding changes noticed by the PIP link nurses in their areas of practice. Only aspects of the methodology relevant to the focus groups will be included here.

Study procedures were reviewed and approved by the University of Otago Ethics Committee (number 19/123). As research was carried out in association with a DHB, locality consent was gained internally by the DHB. All participants were informed of the focus group process, signed consent forms, and completed a short demographic questionnaire.

Data collection – focus groups

Three focus groups were held on the same day in September 2019; two in one city and one in a rural area. Of the 32 nurses who could be included, 22 attended while 10 decided not to participate. One group had nine participants and was hospital-based; the second group had eight participants and comprised community care and ARC nurses; the third group had five participants from the rural setting who were a

mix of ARC and hospital nurses.

Nominal group technique (NGT) technique was used as the procedure for the focus groups. This technique allows for open discussion and consultation on the research questions. Data are collected at the time of the focus group, with the themes understood and voted on by the participants (Aspinal et al, 2006). The facilitators of all focus groups were experienced PhD-qualified academics who had experience with focus group methodology, agreed on the questions, and were not known to the PIP link nurses. The key question asked in the focus group relevant to this report was: *What changes have you noticed as a result of the link nurse role in your area?*

Data analysis

All focus groups followed the four-step NGT process, for which outcomes are reported as priorities, voted on by the group. This process began with participants identifying factors they saw as facilitators of, or barriers to, the PIP link role, and any changes they had noticed as a result of the link nurse project. The first step in the focus group was for participants to individually record their ideas on the research questions. In the second step, participants' ideas were recorded, one at a time, on a whiteboard in an open discussion session. During the third clarification step, the meaning of each idea was explored to ensure participants could make informed decisions when ranking their priorities. During the final ranking step, participants ranked each idea in order of importance, and a consensus among participants was reached on priorities. Priorities for the barriers and facilitators questions have been reported elsewhere (Moir et al, 2022). In the case of the key question reported here regarding changes the link nurses noticed, answers were not prioritised as the changes were all evident; so all were recorded once a common theme was agreed on (see Table 3, opposite page). The focus groups took approximately 90 minutes to complete.

RESULTS

The three focus groups were comprised of 22 of the 32 PIP link nurses (66 per cent) actively working in the role at the time of data collection. All participants were registered nurses (RN) working in New Zealand.

Table 2 (right) shows the demographics of the three focus groups. One male participated in one focus group; the rest were female. Consistent with the demographics of the RN workforce in New Zealand, the ARC nurses were predominantly of Asian ethnicity with fewer years of experience than the DHB group, who were predominantly New Zealand European; the rural group was of relatively evenly mixed ethnicity.

Table 3 (see p23) shows the changes in pressure injury prevention observed by the three focus groups in their work areas.

Outcomes nurses noticed from the PIP link nurse programme related to change were wholly positive. Table 3 shows nurses in all areas noticed an increase in colleagues' knowledge and awareness of pressure injury prevention. Not only was there an increase in awareness however, but also the active dissemination of skills on pressure injury prevention and care to the staff, leading to more responsive and efficient care. In all focus groups, patients were reported as now being part of the team working to prevent PI. Use of assessment tools and documentation/reporting was noted to have improved in all areas. Also, a policy created in the ARC and rural groups led to the acquisition of new PIP equipment. In ARC the blame culture was reported to be reduced.

Table 2. Demographics of focus group participants for three groups

DHB n=9	ARC/community n=8	Rural mixed n=5
Ethnicity		
NZ European 8 Asian other 1	NZ European 1 Indian 4 Asian other 3	NZ European 3 Indian 2
Years as RN		
1-5 1 6-10 2 16-20 3 21-25 1	1-5 3 6-10 4 35-40 1	1-5 3 6-10 2

DISCUSSION

The aim of this aspect of the research was to elucidate the changes the PIP link nurses had noticed in their workplaces as a result of the link nurse project. The link nurses said they learnt a raft of new knowledge and skills that they were able to carry forward to their practice areas and colleagues, not only about pressure injury but also about how to plan and implement quality improvement processes. The latter was not necessarily what they had expected; however they rose to the challenge of carrying out their own quality improvement project. The focus group responses also indicated that their work had fostered involvement of the whole health-care team, which has been previously identified as an important factor in the success of quality improvement projects (Altmiller & Hopkins-Pepe, 2019; Moir et al, 2022). The more familiar the concept of "QI as everyone's business" becomes in practice, the greater ease with which it will be part of every health professionals' work, and their own and their employer's expectation of their work.

The notion of "blame culture" was taught in the link nurse course and emphasised as not enhancing quality improvement activity. One of our focus groups (city ARC/community) mentioned that the culture of blame had decreased as a result of the PIP link nurse programme. Nurses discussed this as meaning that responsibility for the development of pressure injuries was previously regarded as being due to neglect, and therefore someone was to blame. In a review of papers on barriers to incident reporting, Hamed and Konstantinidis

Table 3. Changes in pressure injury prevention observed by the three focus groups in their work areas

City hospital	City ARC/community	Rural hospital/ARC/community
Better care and improved outcomes	Increased education and staff knowledge and use of PIP link nurse as support	Generating support for equipment
Increased staff awareness of pressure injuries and information-seeking	Increased awareness, and inclusion in orientation of new staff	Policy on pressure injuries updated
Improved assessment tool	Blame culture awareness taught in course has helped reduce this	Increased awareness among clinical staff and patients
Improved patient knowledge	Able to buy new equipment	Education from ARC supported staff who had struggled with skills required
	Staff making PI their business and documenting more	Safety first form for pressure injuries Increased ease of reporting
	Didn't have a policy before and do now	Community support workers owned responsibility for PI care, leading to earlier recognition of problems
	Community nursing now have information for clients in the pack	Wards with TrendCare now have all the assessment information in one place, which increases efficiency

(2022) noted that nurses were afraid of reporting adverse events due to the punitive and blaming reaction of co-workers and managers. They suggested a "culture of learning" replace the "culture of blame" so that all health-care workers could report errors without fear. In the case of the PIP link nurse project in the ARC sector, it seems a culture of learning emerged and was noticed as a positive change in the work culture. This could be seen as the start of a community of practice – one of the goals of the link nurse programme.

According to the focus group nurses, awareness, assessment tool use, documentation and development of policies had all increased following the PIP link nurse project. While this is a positive outcome, research in Australia implies discretion is needed in the use of such processes. Lovegrove et al (2020) assessed 200 case notes for the pressure injury action reported. While there were 14 cases, including four at-risk and three high-risk patients, in which no preventative interventions were prescribed, 88.7 per cent of not at-risk patients had (unnecessary) preventative interventions prescribed. This surprising result indicates that documentation and actions should be appropriate to the situation, and the work of link nurses could ensure this.

All focus groups noticed that patients/residents were more informed of prevention of pressure injuries than before the PIP link nurse project. The nurses said this increased knowledge fostered patients' involvement in their own care. Consumer involvement in policy-making on pressure injury prevention was addressed in the protocol for the International Clinical Practice Guidelines; the authors acknowledged the lack of consultation with consumers that has previously taken place in this area (Kottner et al, 2019). Latimer et al (2014) noted that patient preferences for involvement in pressure injury prevention are unknown. Their research into the topic found that patients experienced barriers to pressure injury prevention in the health-care environment that impeded their participation. A strategy of including "patients as partners in care" is recommended to involve both health-care providers and consumers in the prevention of pressure injuries. This current project has encouraged more "patients as partners" in the areas where the link nurses worked.

STRENGTHS AND LIMITATIONS

The strengths of this study lie in the range of nursing roles that were represented in the focus groups. The mix of hospital-based, ARC/community and rurally-based nurses allowed a range of views – however, for the most part, the similarity of their experiences is noteworthy. When planning such programmes, health quality and safety organisations would be advised to note these results and the results of the other aspects of this study (Moir et al, 2022). However, this research was limited to one link nurse programme in one relatively small area and would benefit from the support of other similarly designed studies. Limitations also include the lack of follow-up of nurses who left the programme, as it is possible changes occurred in their workplaces that may have differed from those reported here. Also, there was no objective measurement of change, or pressure area reduction. Pressure injuries can increase

following such a project before levelling out and eventually reducing (Beinlich & Meehan, 2014). Further research on the sustainability and outcomes of the project is required.

RELEVANCE TO CLINICAL PRACTICE

Nurses and other health workers have previously mentioned they felt a lack of autonomy when working to prevent pressure injuries (Barakat-Johnson et al, 2019; KPMG, 2015). This may have contributed to the poor attitude to pressure injury care expressed by nurses in the study by Rostamvand et al (2022). Following the PIP link nurse programme reported here, nurses were encouraged and empowered by the changes they were able to institute in their workplaces. Support of employers and managers and engagement of colleagues encouraged the link nurses (Moir et al, 2022). Leading by example and being seen to be able make improvements, such as in new equipment purchases, increased link nurses' autonomy. Recognising a need and leading their own change project was a positive process for the nurse, management and colleagues. Such nurse-led programmes fill a gap in quality improvement action and further inception of such programmes should be encouraged by nurses for nurses and their colleagues. While follow-up has been started on pressure injury incidence since the link nurse programme, these results are not yet available, which is a limitation to this report. Also valuable to follow up is the movement of the link nurses from their areas of practice, and whether they carried their skills to new areas. All these factors should be considered when assessing the outcomes of the programme.

REFERENCES

Altmiller, G., & Hopkins-Pepe, L. (2019). Why quality and safety education for nurses (QSEN) matters in practice. *Journal of Continuing Education in Nursing, 50*(5), 199-200. https://doi.org/10.3928/00220124-20190416-04

Aspinal, F., Hughes, R., Dunckley, M., & Addington-Hall, J. (2006). What is important to measure in the last months and weeks of life?: A modified nominal group study. *International Journal of Nursing Studies, 43*(4), 393-403. https://doi.org/10.1016/j.ijnurstu.2005.06.005

Barakat-Johnson, M., Lai, M., Wand, T., & White, K. (2019). A qualitative study of the thoughts and experiences of hospital nurses providing pressure injury prevention and management. *Collegian, 26*(1), 95-102. https://doi.org/10.1016/j.colegn.2018.04.005

Barr, T. L., Malloch, K., Ackerman, M. H., Raderstorf, T., & Melnyk, B. M. (2021). A blueprint for nursing innovation centers. *Nursing Outlook, 69*(6), 969-981. https://doi.org/10.1016/j.outlook.2021.05.006

Beinlich, N., & Meehan, A. (2014). Resource Nurse Programme. *Journal of Wound, Ostomy and Continence Nursing, 41*(2), 136-141. https://doi.org/10.1097/won.0000000000000001

Canterbury District Health Board. (2015). Process for Improvement. In *Clinical Governance Policy*. https://edu.cdhb.health.nz/Hospitals-Services/Health-Professionals/CDHB-Policies/Clinical-Manual/Documents/Clinical-Governance-Policy.pdf

Deming, W. E. (2018). *Out of the Crisis* (reissue). MIT Press.

Flynn, R., Scott, S. D., Rotter, T., & Hartfield, D. (2017). The potential for nurses to contribute to and lead improvement science in health care. *Journal of Advanced Nursing, 73*(1), 97-107. https://doi.org/10.1111/jan.13164

Hamed, M. M. M., & Konstantinidis, S. (2022). Barriers to incident reporting among nurses: a qualitative systematic review. *Western Journal of Nursing Research, 44*(5), 506-523. https://doi.org/10.1177/0193945921999449

Kottner, J., Cuddigan, J., Carville, K., Balzer, K., Berlowitz, D., Law, S., Litchford, M., Mitchell, P., Moore, Z., Pittman, J., Sigaudo-Roussel, D., Yee, C. Y., & Haesler, E. (2019). Prevention and treatment of pressure ulcers/injuries: The protocol for the second update of the International Clinical Practice Guideline 2019. *Journal of Tissue Viability, 28*(2), 51-58. https://doi.org/10.1016/j.jtv.2019.01.001

KPMG. (2015). *The case for investment in: A quality improvement programme to reduce pressure injuries in New Zealand.* Report prepared for the Health Quality & Safety Commission, Ministry of Health and Accident Compensation Corporation. https://www.hqsc.govt.nz/resources/resource-library/the-case-for-investment-in-a-quality-improvement-programme-to-reduce-pressure-injuries-in-new-zealand/

Latimer, S., Chaboyer, W., & Gillespie, B. (2014). Patient participation in pressure injury prevention: giving patients a voice. *Scandinavian Journal of Caring Sciences, 28*(4), 648-656. https://doi.org/10.1111/scs.12088

Lovegrove, J., Fulbrook, P., & Miles, S. (2020). Relationship between prescription and documentation of pressure injury prevention interventions and their implementation: An exploratory, descriptive study. *Worldviews on Evidence-Based Nursing, 17*(6), 465-475. https://doi.org/10.1111/wvn.12473

Moir, C., Taylor, P., Seaton, P., & Snell, H. (2022). An Evaluation of Barriers and Facilitators for a Pressure Injury Prevention Link Nurse Role: A Mixed-Methods Study in New Zealand. *Journal of Wound, Ostomy and Continence Nursing, 49*(4), 314-321. https://doi.org/10.1097/WON.0000000000000888

Needleman, J., Buerhaus, P., Mattke, S., Stewart, M., & Zelevinsky, K. (2002). Nurse-staffing levels and the quality of care in hospitals. *New England Journal of Medicine, 346*(22), 1715-1722. https://DOI: 10.1056/NEJMsa012247

Provost, L., & Bennett, B. (2015). What's your theory? Driver diagram serves as tool for building and testing theories for improvement. *Quality Progress, 7, 36-43.* http://www.apiweb.org/QP_whats-your-theory_201507.pdf

Pyrko, I., Dörfler, V., & Eden, C. (2017). Thinking together: What makes communities of practice work? *Human Relations, 70*(4), 389-409. https://doi.org/10.1177/0018726716661040

Quinn-O'Neil, B., Kilgallen, M. E., & Terlizzi, J. A. (2011). Cultivating quality: Creating a unit-based resource nurse program. *American Journal of Nursing, 111*(9), 46-51. https://doi: 10.1097/01.NAJ.0000405062.20646.b7

Rostamvand, M., Abdi, K., Gheshlagh, R. G., Khaki, S., Dehvan, F., & Barzgaran, R. (2022). Nurses' attitude on pressure injury prevention: A systematic review and meta-analysis based on the pressure ulcer prevention instrument (APuP). *Journal of Tissue Viability, 31*(2), 346-352. https://DOI: 10.1016/j.jtv.2021.12.004

Rowe, A. D., McCarty, K., & Huett, A. (2018). Implementation of a nurse driven pathway to reduce incidence of hospital acquired pressure injuries in the pediatric intensive care setting. *Journal of Pediatric Nursing, 41,* 104-109. https://doi.org/10.1016/j.pedn.2018.03.001

Shepherd, M., Hattersley, A., & Ellard, S. (2005). Integration of the MODY link nurse project: 20-month evaluation. *Journal of Diabetes Nursing, 9*(2), 47-52. https://www.diabetesonthenet.com/wp-content/uploads/jdn9-2-47-52-1.pdf