Aysha Mendes provides a synopsis and brief review of a selection of recently published research articles that are of interest to community nurses

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Diabetes management and district nursing workload in the UK

Diabetes in the UK is at an all-time high and its management therefore forms an increasing component of the district nursing workload. In a study, Martin et al distributed a survey to district nursing teams in the UK through social media and key stakeholder networks.

In total, 159 district nursing teams completed the survey. The median caseload per team was 300 patients, 21 of whom had diabetes. There were an average of 1.09 home visits per day per person living with diabetes, with each visit lasting 13.8 minutes, not including travel time. Most of these required insulin administration. It was found that for some patients, a large majority (96%) of teams actually carried out multiple daily visits. Most teams (91%) also reported that their workload related to diabetes management had increased over the last 2 years. Factors relating to the increase included more use of insulin, increased referrals and a lack of ability or willingness among patients to self-administer insulin. More than three-quarters (76%) of district nursing teams stated that they found their current diabetes caseloads to be unsustainable.

The authors concluded that possible solutions to this problem included improving collaboration between health professionals, simplifying the administration of insulin and monitoring of glucose, improving training and upskilling healthcare assistants, as well as promoting patient self-efficacy.

Figure 1: Diabetes in the UK is at an all-time high

Martin L, Hill S, Holt R. The effect of diabetes management on the workload of district and community nursing teams in the UK. 2024;27:e15367. https://doi.org/10.1111/dme.15367

Pelvic floor muscle training for female urinary incontinence

Urinary incontinence negatively impacts women around the world. Pelvic-floor muscle training (PFMT) is a complex intervention, with multiple components, that aims to decrease the symptoms of incontinence, but its ability to achieve and maintain such results has been rarely examined.

Bugge et al looked at women's experiences of both PFMT and biofeedback-assisted PFMT to determine and understand the influences of self-reported adherence, and of urinary incontinence outcomes in women over time. Self-efficacy was considered particularly important, as a person's belief in their ability to carry out the behaviours necessary to achieve the desired outcome is important for self-management of urinary incontinence and for adherence to those behaviours, which in this case would be PFMT to reduce or eliminate incontinence.

This was a longitudinal case study within a randomised controlled trial that included 40 women with either stress or mixed urinary incontinence, 20 in the PFMT group and 20 in the biofeedback-assisted PFMT group. Four semi-structured interviews were carried out with each woman at four time points: before beginning PFMT, one post treatment (6 months), one at 12 months and one at 24 months.

The authors stated that the UK Medical Research Council guidance for developing and evaluating complex interventions noted the importance of developing a programme theory that can explain the interaction that

takes place between the intervention, the wider context and the desired outcomes. In this case, the study analytic traditions were followed, which resulted in a programme theory that demonstrated various factors that motivated women to seek treatment, and how these factors influenced their adherence in the long term. Therapists who delivered PFMT played a crucial role in supporting women to know how to undertake it. Some women developed self-efficacy. Adherence was poor for those who did not and for those who did, adherence was more likely, although contextual factors were found to have the ability to intercede and inhibit adherence.

A programme theory was developed in this longitudinal case study, which offered a visual representation of a woman's pathway from her seeking out urinary incontinence treatment to long-term PFMT treatment outcome. Self-efficacy and adherence are central in this pathway to outcome. According to this study, PFMT is a complex interaction between multiple and varied factors. Begge et al concluded that enquiring about a woman's motivation to seek treatment and having insight into contextual factors that may affect her enable practitioners and health professionals to support long-term adherence. While this study looked at the experiences of women, the authors suggested that future research should expand the pathway to include health professional and systemic factors.

Bugge C, Hay-Smith J, Hagen S, Grant A, Taylor A, Dean S. Pelvic floor muscle training for female urinary incontinence: development of a programme theory from a longitudinal qualitative case study. BMC Womens Health. 2024;24(1):478. https://doi.org/10.1186/s12905-024-03308-4

Representation of frailty in primary care

In the UK, one in 10 adults aged 65 years and older experience frailty; this number rises to closer to between a quarter and half of older adults aged over 85 years (Age UK, 2024). Frailty results in negative health-related outcomes, as well as increased expenditure. A frailty tool has been developed in the UK; however, some countries are still without a standardised method to screen older adults for frailty.

In a study, Canadian researchers Thandi et al explored the application of the UK-developed 36-factor electronic frailty index (eFI) to the Canadian primary care context, where there is still no standardisation of frailty screening. As the clinical terminology used to represent frailty differs across geographical regions, the authors sought to adapt the UK tool so that it may apply to primary care clinicians and older adults in the Canadian province of British Columbia.

Using a modified Delphi approach, Thandi et al shared three rounds of questionnaires regarding the 36-factor eFI with a panel of 23 experts, which included five nurses, five nurse practitioners, four allied health professionals, five family physicians and four older adults. Questions involved rating the importance of each factor of frailty from 1 through 10, along with a rationale for the ratings given and the opportunity to suggest other factors that they thought should be included. These were also rated in two delphi rounds.

Of the 36 factors, 33 of them received a rating of 8 or above, by more than 80% of panel members. Those that did not achieve this consensus were hypertension, thyroid disorder and peptic ulcer, as they were considered to be easily manageable and/or not viewed as reflective of frailty individually. There were several factors suggested by panelists that also achieved consensus. These included cancer, challenges to healthcare access, chronic pain, communication challenges, faecal incontinence, food insecurity, liver failure/cirrhosis, mental health challenges, medical non-compliance, poverty or financial difficulties, racial/ethnic disparities, sedentary/low activity levels and substance use/misuse.

The authors found that the conceptualisation of frailty varied among panel members. They also concluded that identifying frailty in community and primary care remains challenging, and that social determinants of health have an impact on clinicians' assessments and perceptions of frailty status. The authors plan to carry out another phase of this study, in the form of a broader mixed-methods sequential study in order to build a screening tool for frailty that can become the standard of practice in Canadian primary care as early detection is key to achieving both patient and system-level outcomes.

Thandi M, Wong ST, Price M, Baumbusch J. Perspectives on the representation of frailty in the electronic frailty index. BMC Prim Care. 2024;25(1):4. https://doi.org/10.1186/s12875-023-02225-z

Age UK. Understanding frailty. 2024. https://www.ageuk.org.uk/our-impact/policy-research/frailty-in-older-people/understanding-frailty/ (accessed 21 September 2024)

Skin barrier development and early-onset atopic dermatitis

Atopic dermatitis is common in infancy. However, Chittock et al noted that it is unclear whether differences in skin barrier development define this period or whether it may signal disease onset in those who are predisposed.

In a longitudinal, observational cohort study, the authors aimed to determine if remote skin testing from birth might provide a feasible option for monitoring skin barrier maturation and modeling an association with a diagnosis of atopic dermatitis by the age of 12 months. There were 128 infants who completed the study, 20% of whom developed mild disease.

An experienced team of midwives and technical researchers trained in the instrumentation and clinical scoring were overseen by a senior dermatologist, who provided consultancy where needed. They captured the incidence of atopic dermatitis, they carried out a preliminary exploration of the association between subclinical barrier breakdown and disease risk by age 12 months.

There were significant changes observed longitudinally in permeability barrier function, desquamatory protease activity and molecular composition, which were assessed spectroscopically. However, evidence of differential skin barrier development between infant subgroups was subtle. Common filaggrin risk alleles were strongly associated with early-onset disease and resulted in a significant reduction in natural moisturising factor and water content by the age of 4 weeks.

After accounting for a family history of atopic dermatitis, these parameters were associated with the condition, as well as a greater lipid/protein ratio and reduced chymotrypsin-like activity at birth. The authors highlighted that early detection and intervention of at-risk babies remained an unmet clinical need. The more severe and persistent cases predisposed infants to further atopic comorbidities in childhood. The authors observed that skin barrier dysfunction lacked an acquired modality, but was considered proportional to cohort severity. They concluded that this suggested there was an important role for a portfolio of tests used in a community setting, to hopefully improve current atopic dermatitis risk evaluations from birth. **BJCN**

Chittock J, Kay L, Brown K et al. Association between skin barrier development and early-onset atopic dermatitis: a longitudinal birth cohort study. J Allergy Clin Immunol. 2024;153(3):732-741. https://doi.org/10.1016/j.jaci.2023.10.017