Iatrogenic incontinence in older people and people living with dementia: potentially modifiable contributing factors within institutional cultures of care

CSIRO PUBLISHING

DISCUSSION
https://doi.org/10.1071/CJ25008

AUSTRALIAN AND NEW ZEALAND Continence Journal
Continence Health Australia
continence NZ

Iatrogenic incontinence in older people and people living with dementia: potentially modifiable contributing factors within institutional cultures of care

Joan Ostaszkiewicz[A,B,C,D,*], Katie Featherstone[D] and Tiina Vaittinen[A,D,E,F]

For full list of author affiliations and declarations see end of paper

***Correspondence to:**
Joan Ostaszkiewicz
National Ageing Research Institute, Parkville, Vic, Australia
Email: j.ostaszkiewicz@nari.edu.au

Received: 31 August 2025
Accepted: 20 April 2026
Published: 12 May 2026

Cite this: Ostaszkiewicz J *et al.* (2026) Iatrogenic incontinence in older people and people living with dementia: potentially modifiable contributing factors within institutional cultures of care. *Australian and New Zealand Continence Journal* **32**, CJ25008. doi:10.1071/CJ25008

ABSTRACT

This discussion paper illuminates pervasive systemic inequalities for older people and people living with dementia who require support to maintain continence or manage incontinence in institutional care settings. Utilising an expert-led narrative synthesis approach and drawing on a large body of research, we identify five potentially modifiable causes of iatrogenic incontinence associated with the organisation and delivery of care in these settings. We call for greater attention to safeguard the continence of older people and people living with dementia as a welfare issue and human rights issue.

Keywords: cultures of care, dementia, hospital, iatrogenesis, incontinence, long-term residential aged care homes, new-onset incontinence, older people.

Background

The public rightly expects high quality dignified care for all, including older people and people living with dementia (PLWD) who require care within institutional care settings including in hospitals and long-term residential aged care homes. However, in many countries, care quality within these institutions falls far below the public's expectations, particularly the prevention and management of urinary incontinence (UI). Internationally, a series of public enquiries, government reports, and audits continue to identify people who need support to maintain continence or to manage incontinence and who experience poor care quality within institutional settings.[1–13] This body of work published over the past two decades establishes that pervasive systemic inequalities exist in the continence care of older people and PLWD. Importantly, this provides insights into entrenched institutional cultures of care, identifying that the organisation and delivery of continence care within these settings is not designed to promote continence or prevent UI in older people and PLWD.

Older people and PLWD who are continent at admission to a hospital are at significant risk of developing new onset UI during a hospital admission. Between 7% and 36% of hospitalised older people develop new onset UI prior to discharge.[14–19] These older people were continent prior to admission and developed UI during their admission. This high rate can be compared to inpatient falls, which in the UK have been reported at 2.7% (n = 247,000)[20] and 5–6% for hospital-acquired pressure injuries,[21] which are significant metrics used to establish hospital-acquired injuries in the National Health Service,[22] and in turn their prevention, are established key indicators of care quality within UK hospitals. New onset UI also affects many people in long-term residential aged care homes. An analysis of data from 2719 medical records found 13% of people admitted to these homes in Switzerland developed UI within 12 months of being admitted, increasing to 24% by 24 months.[23]

The personal, social, organisational, economic, and environmental impacts of UI for older people and PLWD are significant.[6,7,15,24,25] People living in long-term residential aged care homes with UI have a lower quality of life,[26] an increased risk of falling,[27–29] developing functional decline,[30] incontinence-associated dermatitis (IAD),[31,32] and dying.[33] Acquiring UI in hospital increases the length of a person's hospital admission, i.e. 6.4 days compared to 4.4 for patients who remain continent,[34] and increases their care needs after

hospital admission due to functional decline,[19] placing them at a greater risk for discharge to a long-term residential aged care home.[35,36] Follow-up studies indicate that for some hospitalised older people, UI becomes an established condition.[16,17] Lakhan *et al.*,[17] found that hospitalised older patients with newly acquired UI did not return to their 'premorbid function' (p. 2007). In a prospective cohort study of 282 hospitalised older adults, Zisberg *et al.*,[19] reported the quality of continence care was a key factor directly related to increased functional decline following discharge.

At a system-level, the loss of continence in older people and PLWD in these institutional care settings has long-term economic and environmental impacts, increasing the need for care and the associated costs, while also increasing the aggregate need for single-use body worn disposable absorbent incontinence products (hereafter termed 'pads') for this population. In Organisation for Economic Co-operation and Development countries alone, adult pads are responsible for approximately 5% of municipal waste, contributing to global warming and climate change through incineration and landfill.[37] As such, the loss of continence in institutional care settings has adverse impacts on the long-term economic and environmental sustainability of health and social care systems.[38]

Aim

The aim of this article is to provide evidence about potential modifiable factors associated with the organisation and delivery of care that contribute to what we term 'iatrogenic UI'. While typically, the term 'iatrogenic' is used to refer to medical interventions that inadvertently cause harm and which have a cascading effect on patients' health and wellbeing (cascade iatrogenesis); in the context of iatrogenic UI, we extend the term 'iatrogenic' to encompass the immediate and cascading harms (including increased deterioration, dependency, institutionalisation, and death) caused by the organisation and delivery of routine continence care.

Methods

This discussion paper utilises an expert-led narrative synthesis approach,[39,40] which draws on the authors' expertise and contributions. This expertise encompasses the following topics: quality of continence care for frail older people; the management of incontinence in long-term residential aged care homes; a dignity-protective approach to continence care (JO); care ethics and sustainable continence care (TV); and the continence care of PLWD within the acute hospital setting (KF). An initial scoping exercise was undertaken to address the question about 'what is known about the potential modifiable factors associated with the organisation and delivery of care that contribute to UI for older people and PLWD in acute and long-term residential aged care homes?'. The authors are familiar with and have contributed to this literature, which established the initial articles to be included. In addition, two databases (PubMed, Google Scholar) were searched from database inception to December 2025 for additional citations that focused on, or contained an element relating to each of the following inclusion criteria: (a) people living with dementia, Alzheimer's disease, cognitive impairment; (b) acute and long-term care settings; (c) continence/incontinence; and (d) care practices related to continence/incontinence. We also used snowballing by examining reference lists to identify any studies the search may have missed and performed a targeted search looking for high quality studies utilising methodologies that might present a different perspective or challenge to our own contributions to the field. This process also included a quality check to remove poor quality articles or those outside the specific focus of this review.

Thematic synthesis was then carried out. The findings of the articles were summarised into a number of broad, descriptive themes that captured and described patterns across all the articles. Analytic themes were created to synthesise the findings across the studies to develop an initial broad thematic analysis. An iterative process was utilised to construct the themes, with the team coming together to discuss, interrogate, and critique the themes to ensure they accurately represent the field of research. These were then developed by the expert team into descriptive maps to contextualise the thematic findings, which were then synthesised into a conceptual framework to provide evidence about potential modifiable factors associated with the organisation and delivery of care across acute and community settings that contribute to UI. These five potentially modifiable factors that contribute to iatrogenic UI in institutional care settings are presented below.

Results

We identify five potentially modifiable factors that contribute to iatrogenic incontinence in institutional care settings. These are:

1. The default use of pads as standard care
2. Timetabled and routinised continence care
3. Limited screening and assessment of incontinence
4. Limited support to use the toilet
5. Under-resourcing for prevention strategies.

The default use of pads as standard care

The use of pads in hospitals and long-term residential aged care homes is high. A recent study of one UK hospital

identified almost two-thirds of hospitalised older people (over 75 years) were using pads, with over half of this use assessed as inappropriate.[41] In long-term residential aged care homes, 92% of residents use pads.[42] Several researchers identify an over-reliance on these products in these institutional care settings.[15,19,41,43–48] The consequences of indiscriminate, inappropriate and routine overuse of pads are significant as they are associated with new onset UI,[19] IAD,[49] urinary tract infections[46] and falls.[50]

In a large scale ethnographic observational study of the UK hospital setting, Featherstone *et al.*,[44] coined the term 'pad culture' to describe the default use of pads as standard care. In their study, the staff describe the routine use of pads in the care of PLWD and older people as a precautionary strategy, with the rationale to provide safeguards, ensure containment, and prevent 'accidents' or incontinent episodes. However, this 'just in case' strategy for pad use led to an unacknowledged culture within hospital wards where it was not just expected that these patients could use the pad in an emergency, but rather that they should remain in bed or at the bedside and use the pad as a matter of routine, regardless of their mobility and function. Research by Omli *et al.*,[46] and Ostaszkiewicz *et al.*[47] also reveals a discrepancy between the use of pads and the actual severity and frequency of UI, suggesting an indiscriminate approach to decision-making about their use.

Timetabled and routinised continence care

Recent research by Featherstone *et al.*,[44] and Northcott *et al.*,[25] identifies that the classification of a PLWD as incontinent, or as requiring continence care at the bedside during an unscheduled admission to hospital, is associated with the care environment, with cultures of care and continence care routines promoting pad use as standard care leading to iatrogenic UI. Their widespread and standard use transforms continence care, replacing individualised support that enables independence with timetabled continence care routines of 'pad checks', which 'involved checking for the smell of urine or faeces on the person, a physical examination using touch or using sight to check if a person's pad had been used', informing the need for pad changes, cleaning rounds, and personal care at the bedside. These continence care routines are reduced to tasks that can be carried out by care assistants in ritualistic order from bed-to-bed fitting into a wider organisational timetable of bedside care, with continence support deprioritised to a timetabled privilege, with older patients and PLWD required to ask for permission from the nurse or care assistant to leave the bedside and use the bathroom, even if continent or mobile.[51]

Similarly, a study using grounded theory to describe and explain the context that affects continence care in long-term residential aged care homes in Australia found continence care was characterised by a reliance on pads to contain, conceal, and control incontinence.[52] Continence care was timetabled over the 24 h period, with residents being checked regularly to see if their pads were wet or soiled and in need of changing. While multiple factors underpinned these routine practices, staff claimed these practices and pads protected residents' dignity.

Limited screening and assessment

The International Consultation on Incontinence recommends that the management of UI in frail older adults be individualised and informed by the person's goals of care, treatment preferences, and estimated remaining life expectancy, as well as the most likely clinical diagnosis.[53,54] Consistent with this understanding, quality continence care is characterised by screening and assessment to determine the correct diagnosis and the subsequent correct treatment, which could be surgical, pharmacological, conservative, or a combination of approaches. However, medical histories of hospitalised older people typically lack information about their bladder and bowel function and continence care needs.[47] Audits of continence care in the UK report low levels of continence assessment for older patients compared to younger patients,[10–13] with less than half being assessed to identify the underlying cause of their UI.[11] Only 32% of hospitals audited had a written policy about incontinence, 49% had a structured training programme, and 35% performed a regular audit.[13] Incontinence is also under-recognised and undertreated in long-term residential aged care homes. Harrison *et al.*[55] found only 54% of residents with UI from 815 long-term residential aged care homes in the USA had a continence care plan. At the same time, having a continence care plan was associated with higher resident health.

For PLWD, continence screening and assessment processes are lacking across all care settings according to a recent policy review in the UK.[24] The review identified widespread deficits in the recognition, assessment, and management of incontinence for PLWD. Added to this is a lack of evidence-based interventions to support staff to achieve individualised continence care for PLWD in practice.[56]

A lack of screening and assessment results in UI being underdiagnosed and undertreated. However, this situation could be addressed with the use of standardised screening and assessment tools that meet international best practice standards, and which are contextually appropriate for different institutional care settings.

Limited support to use the toilet

A timely response by healthcare professionals and care providers to patient requests for support with bladder or bowel control is particularly important. A study from the USA found the quicker staff were in responding to a long-term care resident's request for help with voiding, the more satisfied residents were with the organisation.[55] This finding should

be incorporated into quality systems and actioned by providers of long-term residential aged care homes.

Featherstone *et al.*,[44] and Northcott *et al.*,[25] found healthcare staff deprioritised continence care that enables older people and PLWD to use the toilet and maintain their independence. This was often in order to meet the wider organisational pressures and timetables of care. Moreover, unless a PLWD was able to clearly communicate verbally, healthcare staff were often unable to recognise their continence needs.[44] A scoping review on the unmet care needs of older patients[57] identified eight studies that found older patients' needs related to toileting were poorly met. Furthermore, using the MISSCARE Survey to measure patients' perceptions of unmet needs during hospitalisation, Kalisch *et al*. reported patients' requests for help to the bathroom (toilet) were missed 10.1–10.9% of the time.[58]

Within institutional care settings, the widespread availability and acceptance of pads creates a disincentive to assist patients to the toilet because this means this support can be delayed, and instead the person and their bladder and bowel care needs can be contained at the bedside, while other routines of bedside care perceived by ward teams as having more organisational value are prioritised.[25,44] This finding aligns with a large study by Thomas *et al.*,[48] who reported a reliance on the use of pads in UK stroke units, which operated as a disincentive for providing toileting assistance to patients with UI.

These cultures of care result in older people and PLWD having no choice but to use pads because they do not have timely access to the toilet. The lack of access to toilets for older people and PLWD in institutional care settings is systemic. Both the Mid Staffordshire Public Inquiry[4] in the UK and the recent Royal Commission into Aged Care Quality and Safety in Australia[9] took evidence from multiple witnesses who reported a lack of assistance for older people and PLWD to maintain bladder and bowel control. Witnesses to the Mid Staffordshire Public Inquiry[4] reported that older patients 'had to relieve themselves in their beds when they [were] offered no help to get to the bathroom. Some were left in excrement stained sheets and beds'.[4] Witnesses to a House of Lords, House of Commons Joint Committee stated that continence care for older people in hospitals lacked privacy, dignity, and respect and 'neglect of proper hygiene care or continence care resulting in individuals left lying in their own urine or excrement', with 'people not being allowed to use the toilet in private'.[3] The Australian Royal Commission into Aged Care Quality and Safety's Final Report[9] highlighted, 'terrible examples of substandard incontinence care'; 'some residential aged care providers unintentionally contribute to incontinence by adopting flawed approaches to its management'; 'staff members do not have the time needed to assist residents to go to the toilet in a timely manner'; and 'too often there is a routine use of incontinence pads to manage workload'. The Commissioners stated, 'not only does this risk adverse health outcomes, including creating or exacerbating incontinence, it impacts on older people's dignity, quality of life and wellbeing' (vol 1., p. 70).[9]

A recurrent theme within the UK Patients Association review of patient and families concerns about hospital care for older people and PLWD included reports of patients being told to 'wet the bed', delays in assisting people to go to the toilet, and delays in help for continence urgency, leading to falls when patients tried to get out of bed, distress, and incontinence.[8] A UK Department of Health and Social Care public survey identified support for continence and toileting, and a dissatisfaction with toilet facilities within hospitals, were key concerns.[1]

Under-resourcing for prevention strategies

Under-resourcing to support prevention strategies in long-term residential aged care homes is an established phenomenon.[59] Staff consistently cite understaffing as the main reason they are unable to provide aged care residents with toileting assistance at rates that match residents' needs,[52,60] i.e. to maintain or optimise residents' continence.

While there is evidence that a higher number of staff[60] and a higher ratio of Registered Nurse to residents[61] are significantly associated with better resident outcomes related to UI in long-term residential aged care homes,[62] there are no contemporary data to identify the staffing levels required to maintain or optimise residents' continence. What we do know; however, is that the practice of caring for a person who has physical or cognitive support needs in order to reach and use the toilet is complex care and requires time and skill. Indeed, the time to deliver this care ranges from 11 to 33 min, depending on the level of support a person requires.[48] This contrasts with the time required to check and change a person's pads, which is approximately 5.5 min.[63]

It is also noteworthy that an increase in the number of staff or the number of Registered Nurses alone will not necessarily result in improved continence care. Temkin-Greener *et al.*,[64] found better resident outcomes are significantly influenced by how staff in long-term residential aged care homes worked together. Stronger teamwork, consistent assignments, and staff cohesion are significantly associated with a lower odds of residents having UI (OR = 0.924; $P < 0.001$).

In hospitals, the impact of staffing levels is also equally complex and nuanced. While there is clear evidence of an association between nursing staffing and quality of care in hospitals,[65,66] there is a lack of evidence about the association between staffing and the quality of continence care specifically. Findings from the ethnographic research led by Featherstone *et al.*,[44] and the grounded theory research led by Ostaszkiewicz[52] indicated staff aspired to provide high quality continence care but feel constrained by organisation priorities. However, based on 180 days of ethnographic observational data that included a range of institutions, geographies and patient demographics (within six wards in three hospital sites across England and Wales),

Featherstone *et al.*,[44] also identified that an increase in the number of ward staff does not necessarily translate into care practices that prevent UI. Although the staffing, teams, technologies, expertise, and interventions to support PLWD varied across hospitals and across wards within the hospitals, the organisation and delivery of continence care, the prominence of 'pad' technologies, and the 'pad cultures' identified, remained relatively stable as embedded practices of everyday bedside care for PLWD.

Discussion

In this paper, we identified and described five factors that potentially contribute to iatrogenic UI in hospitals and long-term residential aged care homes, which we argue are deeply rooted but have thus far been invisible within established cultures and routines of care for older people and PLWD, and that we claim are underpinned by a social and physical environment that presumes incontinence, i.e. ageism. First described by Mitteness and Barker in 1995[67] in the context of incontinence in older people, ageism suggests why pads are used as default standard care; why continence care is timetabled and ritualised; why institutional care settings place little clinical significance on the condition in terms of screening, assessment and prevention; why older people and PLWD receive inadequate assistance to use the toilet; and why prevention strategies to support this patient population are under-resourced.

A diagnosis of incontinence can have severe physical, psychological, economic, and social consequences for older people, PLWD, and their care partners and families,[68] including the loss of independence and premature admission to long-term residential aged care settings.[35,36] Environments that presume incontinence in older people and PLWD limit the person's treatment opportunities. Despite the importance of rehabilitation to improve outcomes, being classified as incontinent can limit treatment opportunities for PLWD, with rehabilitation typically viewed as 'inappropriate'.[69] Thus, iatrogenic UI is a factor that contributes to deconditioning of older adults and PLWD, thereby further increasing care dependency. In contrast, incontinence experienced by other groups is seen as treatable, with effective conservative, pharmacological, non-pharmacological and surgical interventions available.

Ethnographic and grounded theory research indicates PLWD and older people who experience an episode of incontinence and who require intimate care often experience high levels of distress.[25,70,71] Similarly, restricting them from exercising their right to use the toilet is likely to trigger rejection of care behaviours, as is providing continence care that is interpreted as intrusive. If the intimate nature of the caregiving interaction is poorly managed, it can escalate into power struggles over order and cleanliness, resulting in conflict.[70] Poorly managed incontinence is one of several factors that could increase the risk of older people and PLWD experiencing abuse.[72]

Iatrogenic UI constitutes a threat to the dignity of PLWD and older people. However, this threat often goes unrecognised or is tolerated and accepted. Urinary urgency and the inability to communicate the need for support to go to the bathroom, exacerbates this distress. Incontinence leads to interactions that are far more personally invasive than if the person had been supported to the toilet (the undressing and exposure of the body and the cleaning of genitalia, clothing and bedding), invasiveness which routinely creates significant distress in the person, and which, in hospital occurs in the relatively public space, hidden only by a thin curtain or screen. If staff interpret the distress caused by such discomfort, exposure and intimate care as a feature of a person's dementia, this can lead to the person requiring further supervision such as one-to-one care, reinforcing their containment at the bedside and the further diminishing the person and their autonomy.[25]

We argue that the cultures of care that accept UI for older people and PLWD in hospitals and long-term residential aged care homes is part of a larger problem of the cultural acceptance of missed fundamental care for this population. Feo *et al.*,[73] defines fundamental nursing care as 'actions on the part of the nurse that respect and focus on a person's essential needs to ensure their physical and psychosocial wellbeing. These needs are met by developing a positive and trusting relationship with the person being cared for as well as their family/carers' (p. 2295).[73] Continence care is a core part of providing patients with physical fundamental care.[73] The provision of fundamental care in hospital wards is deprioritised over other routine timetabled bedside care,[74] even when we know that being able to access timely support to maintain one's sense of dignity and autonomy is an important personal and societal value.

The risk of iatrogenic UI can be reduced in long-term residential aged care homes with appropriate individualised care that focuses on interventions to improve the person's ability to reach and use the toilet. Specifically, two systematic reviews highlight the importance of creating a physical environment that optimises the person's continence and by implementing toileting assistance programmes in combination with functional mobility training in long-term residential aged care settings.[75,76]

Iatrogenic UI in this setting could also be minimised by improving processes for the identification and assessment of UI. This would in turn provide staff with information about when to use pads, how many and what type. It would also assist medical staff to better identify and treat potentially preventable medical causes. These screening and assessment processes could be augmented with the use of sensor devices designed to identify the volume of urine in a person's incontinence pad.[77]

To the best of our knowledge, there is only one randomised controlled trial of a conservative organisational intervention aiming to prevent or reduce rates of UI for older people and PLWD in hospital settings. This three-arm, parallel, open, exploratory, pragmatic, cluster randomised controlled trial conducted in hospitals in the UK found systematic voiding programmes were effective in reducing rates of UI post-stroke, particularly for patients with urge and stress UI.[48] The voiding programme consisted of bladder training and pelvic floor muscle training for patients who were cognitively able and prompted voiding for patients with cognitive impairments. Moreover, a process evaluation showed this intervention increased staff awareness of patients' continence care needs and outcomes.

It should be noted that individualised continence care that protects the dignity and independence of older people and PLWD in institutional settings takes time and resources. Investing both in adequate number of staff and their training in continence care and organising the routines of bedside care to support continence and toileting practices may prevent iatrogenic UI. These measures could; however, be cost-effective, since the prevention of iatrogenic UI would reduce the significant indirect costs that occur from deconditioning such as preventing further care dependency and institutionalisation. It would also reduce the environmental impacts of care, by reducing the need for single-use incontinence pads as the routine continence care practice for PLWD. The five factors contributing to iatrogenic UI identified and discussed in this paper are severely under-recognised, and continence care is not adequately understood as both fundamental and essential for improving the quality and humanity of care that older people and PLWD receive from our health and social care systems.

Conclusion

Safeguarding the continence of older people and PLWD is both a welfare issue and a human rights issue.[78] There is a significant gap between the policies and standards that promote the rights of older people and PLWD and the routine practices and cultures of care in terms of the delivery of quality care for older people and PLWD more broadly within hospitals and long-term residential aged care homes. Continence care and the prevention of incontinence in older people and PLWD should be a priority within health and care policies to support independence, to protect human rights, and to protect the environment from the excessive use and disposal of pads. Iatrogenic UI is by definition preventable. It is time to tackle the systemic inequalities in the continence care many older people and PLWD experience in institutional settings.

References

1 Department of Health and Social Care (UK). A new ambition for old age: next steps in implementing the National Health Service framework for older people – a report from Professor Ian Philp. London: DHSC; 2006.
2 National Collaborating Centre for Mental Health (UK). Dementia: a NICE-SCIE guideline on supporting people with dementia and their carers in health and social care. Leicester: British Psychological Society; 2007.
3 UK Parliament. House of Lords, House of Commons Joint Committee on Human Rights; 2006. Available at https://publications.parliament.uk/pa/jt200506/jtselect/jtrights/240/24002.htm
4 Mid Staffordshire NHS Foundation Trust Public Inquiry. Report of the Mid Staffordshire NHS Foundation Trust Public Inquiry: executive summary (HC 947). London: The Stationery Office; 2013. Available at https://www.gov.uk/government/publications/report-of-the-mid-staffordshire-nhs-foundation-trust-public-inquiry
5 Royal College of Psychiatrists. National audit of dementia care in general hospitals 2018–19: round four audit report. London: Royal College of Psychiatrists; 2019.
6 Alzheimer's Society. Counting the cost: caring for people with dementia on hospital wards. London: Alzheimer's Society; 2009. Available at https://www.alzheimers.org.uk/sites/default/files/2018-05/Counting_the_cost_report.pdf
7 Alzheimer's Europe. Improving continence care for people with dementia living at home. Luxembourg: Alzheimer's Europe; 2014. Available at https://www.essity.com/Images/Continence_care_guidelines_in_people_with_dementia_tcm339-116807.pdf
8 The Patients Association. Patients… not numbers, people… not statistics. London: The Patients Association; 2009. Available at https://www.patients-association.org.uk/
9 Royal Commission into Aged Care Quality and Safety. Final report: care, dignity and respect. Canberra: Commonwealth of Australia; 2021. Available at https://www.royalcommission.gov.au/aged-care
10 Harari D, Husk J, Lowe D, Wagg A. National audit of continence care: adherence to National Institute for Health and Clinical Excellence (NICE) Guidance in older versus younger adults with faecal incontinence. *Age Ageing* 2014; 43(6): 785–93. doi:10.1093/ageing/afu056
11 Harkins P, O'Brien H, McCartan D, Nasir N, Twomey B, Srikumar K, *et al.* A hospital-wide point prevalence of adult urinary incontinence and audit of continence care. *Age Ageing* 2021; 50(6): e13. doi:10.1093/ageing/afy222
12 Potter J, Peel P, Mian S, Lowe D, Irwin P, Pearson M, *et al.* National audit of continence care for older people: management of faecal incontinence. *Age Ageing* 2007; 36(3): 268–73. doi:10.1093/ageing/afm004
13 Wagg A, Potter J, Peel P, Irwin P, Lowe D, Pearson M. National audit of continence care for older people: management of urinary incontinence. *Age Ageing* 2008; 37(1): 39–44. doi:10.1093/ageing/afm163
14 Campbell J, Hubbard R, Ostaszkiewicz J, Green T, Coyer F, Mudge A. Incontinence during and following hospitalisation: a prospective study of prevalence, incidence and association with clinical outcomes. *Age Ageing* 2023; 52(9): afad181. doi:10.1093/ageing/afad181
15 Furlanetto K, Emond K. "Will I come home incontinent?" A retrospective file review: incidence of development of incontinence and correlation with length of stay in acute settings for people with dementia or cognitive impairment aged 65 years and over. *Collegian* 2016; 23: 79–86. doi:10.1016/j.colegn.2014.09.013
16 Hellman-Bronstein AT, Luukkaala TH, Ala-Nissilä SS, Kujala MA, Nuotio MS. Factors associated with urinary and double incontinence in a geriatric post-hip fracture assessment in older women. *Aging Clin Exp Res* 2022; 34(6): 1407–18. doi:10.1007/s40520-021-02046-z
17 Lakhan P, Jones M, Wilson A, Courtney M, Hirdes J, Gray LC. A prospective cohort study of geriatric syndromes among older medical patients admitted to acute care hospitals. *J Am Geriatr Soc* 2011; 59(11): 2001–8. doi:10.1111/j.1532-5415.2011.03663.x
18 Palmer MH, Baumgarten M, Langenberg P, Carson JL. Risk factors for hospital-acquired incontinence in elderly female hip fracture patients. *J Gerontol A Biol Sci Med Sci* 2002; 57(10): M672–7. doi:10.1093/gerona/57.10.M672

19 Zisberg A, Sinoff G, Gur-Yaish N, Admi H, Shadmi E. In-hospital use of continence aids and new-onset urinary incontinence in adults aged 70 and older. *J Am Geriatr Soc* 2011; 59(6): 1099–104. doi:10.1111/j.1532-5415.2011.03413.x

20 Healthcare Quality Improvement Partnership. National audit of inpatient falls: data from March 2022 facilities audit and clinical audit data from 1 January to 31 December 2021. London: HQIP; 2022. Available at https://www.data.gov.uk/dataset/320f3a10-f81b-410e-95b9-ed33bb702a62/national-audit-of-inpatient-falls-2022

21 Power M, Stewart K, Brotherton A. What is the NHS Safety Thermometer? *Clin Risk* 2012; 18(5): 163–9. doi:10.1258/cr.2012.012038

22 Office for Health Improvement and Disparities. Guidance: falls – applying All Our Health. London: OHID; 2022. Available at https://www.gov.uk/government/publications/falls-applying-all-our-health/falls-applying-all-our-health#introduction

23 Saxer S, Halfens RJG, de Bie RA, Dassen T. Prevalence and incidence of urinary incontinence of Swiss nursing home residents at admission and after six, 12 and 24 months. *J Clin Nurs* 2008; 17(18): 2490–6. doi:10.1111/j.1365-2702.2007.02055.x

24 National Institute for Health and Care Research. Continence, dementia, and care that preserves dignity. DEMENTIA; 2022. Available at https://evidence.nihr.ac.uk/themedreview/continence-dementia-and-care-that-preserves-dignity/

25 Northcott A, Boddington P, Featherstone K. Pad cultures: an ethnography of continence care and its consequences for people living with dementia during a hospital admission. *Dementia* 2022; 21(7): 2191–209. doi:10.1177/14713012221116490

26 Xu D, Kane RL. Effect of urinary incontinence on older nursing home residents' self-reported quality of life. *J Am Geriatr Soc* 2013; 61(9): 1473–81. doi:10.1111/jgs.12408

27 Damián J, Pastor-Barriuso R, Valderrama-Gama E, de Pedro-Cuesta J. Factors associated with falls among older adults living in institutions. *BMC Geriatr* 2013; 13: 6. doi:10.1186/1471-2318-13-6

28 Hasegawa J, Kuzuya M, Iguchi A. Urinary incontinence and behavioral symptoms are independent risk factors for recurrent and injurious falls, respectively, among residents in long-term care facilities. *Arch Gerontol Geriatr* 2010; 50(1): 77–81. doi:10.1016/j.archger.2009.02.001

29 Moon S, Chung HS, Kim YJ, Kim SJ, Kwon O, Lee YG, *et al.* The impact of urinary incontinence on falls: a systematic review and meta-analysis. *PLoS ONE* 2021; 16(5): e0251711. doi:10.1371/journal.pone.0251711

30 Jerez-Roig J, de Brito Macedo Ferreira LM, Torres de Araújo JR, Costa Lima K. Functional decline in nursing home residents: a prognostic study. *PLoS ONE* 2017; 12(5): e0177353. doi:10.1371/journal.pone.0177353

31 Bliss DZ, Mathiason MA, Gurvich O, Savik K, Eberly LE, Fisher J, *et al.* Incidence and predictors of incontinence-associated skin damage in nursing home residents with new onset incontinence. *J Wound Ostomy Continence Nurs* 2017; 44(2): 165–71. doi:10.1097/WON.0000000000000313

32 Van Damme N, Van den Bussche K, De Meyer D, Van Hecke A, Verhaeghe S, Beeckman D. Independent risk factors for the development of skin erosion due to incontinence (incontinence-associated dermatitis category 2) in nursing home residents: results from a multivariate binary regression analysis. *Int Wound J* 2017; 14(5): 801–10. doi:10.1111/iwj.12699

33 Damián J, Pastor-Barriuso R, García López FJ, de Pedro-Cuesta J. Urinary incontinence and mortality among older adults residing in care homes. *J Adv Nurs* 2017; 73(3): 688–99. doi:10.1111/jan.13170

34 Kayser SA, Koloms K, Murray A, Khawar W, Gray M. Incontinence and incontinence-associated dermatitis in acute care: a retrospective analysis of total cost of care and patient outcomes from the Premier Healthcare Database. *J Wound Ostomy Continence Nurs* 2021; 48: 545–52. doi:10.1097/WON.0000000000000818

35 Morrison A, Levy R. Fraction of nursing home admissions attributable to urinary incontinence. *Value Health* 2006; 9(4): 272–4. doi:10.1111/j.1524-4733.2006.00109.x

36 Samsi K, Orellana K, Cole L, Manthorpe J. Understanding factors influencing residential respite service use by carers of people living with dementia using Andersen's behavioural model of health services use: a qualitative study. *Aging Ment Health* 2023; 27(10): 1946–55. doi:10.1080/13607863.2023.2196254

37 Velasco Perez M, Sotelo Navarro PX, Vazquez Morillas A, Espinosa Valdemar RM, Hermoso Lopez Araiza JP. Waste management and environmental impact of absorbent hygiene products: a review. *Waste Manag Res* 2021; 39: 767–83. doi:10.1177/0734242X20954271

38 Vaittinen T, Koljonen K, Tella S, Asikainen E, Laatikainen K. Holistically sustainable continence care: a working definition, the case of single-used absorbent hygiene products (AHPs) and the need for ecosystems thinking. *Proc Inst Mech Eng H* 2024; 238: 667–81. doi:10.1177/09544119231188860

39 Greenhalgh T, Thorne S, Malterud K. Time to challenge the spurious hierarchy of systematic over narrative reviews? *Eur J Clin Invest* 2018; 48(6): e12931. doi:10.1111/eci.12931

40 Green BN, Johnson CD, Adams A. Writing narrative literature reviews for peer-reviewed journals: secrets of the trade. *J Chiropr Med* 2006; 5(3): 101–17. doi:10.1016/S0899-3467(07)60142-6

41 Condon M, Mannion E, Collins G, Ghafar MZAA, Ali B, Small M, *et al.* Prevalence and predictors of continence containment products and catheter use in an acute hospital: a cross-sectional study. *Geriatr Nurs* 2021; 42(2): 433–9. doi:10.1016/j.gerinurse.2021.02.008

42 Roe B, Flanagan L, Jack B, Barrett J, Chung A, Shaw C, *et al.* Systematic review of the management of incontinence and promotion of continence in older people in care homes: descriptive studies with urinary incontinence as primary focus. *J Adv Nurs* 2011; 67(2): 228–50. doi:10.1111/j.1365-2648.2010.05481.x

43 Dingwall L, McLafferty E. Do nurses promote urinary continence in hospitalized older people?: an exploratory study. *J Clin Nurs* 2006; 15(10): 1276–86. doi:10.1111/j.1365-2702.2006.01381.x

44 Featherstone K, Northcott A, Boddington P, Edwards D, Vougioukalou S, Bale S, *et al.* Understanding approaches to continence care for people living with dementia in acute hospital settings: an ethnographic study. *Health Soc Care Deliv Res* 2022; 10. doi:10.3310/quvv2680

45 Hälleberg Nyman M, Forsman H, Ostaszkiewicz J, Hommel A, Eldh AC. Urinary incontinence and its management in patients aged 65 and older in orthopaedic care – what nursing and rehabilitation staff know and do. *J Clin Nurs* 2017; 26(21–22): 3345–53. doi:10.1111/jocn.13686

46 Omli R, Skotnes LH, Romild U, Bakke A, Mykletun A, Kuhry E. Pad per day usage, urinary incontinence and urinary tract infections in nursing home residents. *Age Ageing* 2010; 39(5): 549–54. doi:10.1093/ageing/afq082

47 Ostaszkiewicz J, O'Connell B, Millar L. Incontinence: managed or mismanaged in hospital settings? *Int J Nurs Pract* 2008; 14(6): 495–502. doi:10.1111/j.1440-172X.2008.00725.x

48 Thomas LH, French B, Burton CR, Sutton C, Forshaw D, Dickinson H, *et al.* Evaluating a systematic voiding programme for patients with urinary incontinence after stroke in secondary care using soft systems analysis and Normalisation Process Theory: findings from the ICONS case study phase. *Int J Nurs Stud* 2014; 51(10): 1308–20. doi:10.1016/j.ijnurstu.2014.02.009

49 Berg RW, Milligan MC, Sarbaugh FC. Association of skin wetness and pH with diaper dermatitis. *Pediatr Dermatol* 1994; 11(1): 18–20. doi:10.1111/j.1525-1470.1994.tb00066.x

50 Orme S, Yates A, Fortes-Mayer G, Reynolds L, Vickerman J, Fordham S, *et al.* Establishing consensus on the appropriate selection of continence pads to achieve optimal care while reducing the risk of harm: part of a holistic approach for people with incontinence. *Nurs Resid Care* 2022; 24(3): 24–37. doi:10.12968/nrec.2021.0013

51 Mwale S, Northcott A, Featherstone K. Privileges, and permissions: theorising intersectionality and cultures of control in the care of people living with dementia in acute hospital settings. *Sociol Health Illn* 2025; 47(1): e13869. doi:10.1111/1467-9566.13869

52 Ostaszkiewicz J. Providing continence care in residential aged care facilities: a grounded theory study. PhD Thesis, Deakin University, Melbourne, Victoria, Australia; 2013.

53 Cardozo L, Rovner P, Wagg A, Wein A, Abrams P, editors. Incontinence: 7th International Consultation on Incontinence. Vol. 13. Paris: ICUD; 2023.

54 Wagg A, Bower W, Gibson W, Kirschner-Hermanns R, Hunter K, Kuchel GA, *et al*. Incontinence in frail older adults. In: Cardozo L, Rovner P, Wagg A, Wein A, Abrams P, editors. Incontinence: 7th International Consultation on Incontinence. Vol. 13. Paris: ICUD; 2023. pp 1463–1572.

55 Harrison T, Blozis S, Manning A, Dionne-Vahalik M, Mead S. Quality of care to nursing home residents with incontinence. *Geriatr Nurs* 40: 166–73. doi:10.1016/j.gerinurse.2018.09.009

56 Edwards D, Harden J, Jones A, Featherstone K. Understanding how to facilitate continence for people with dementia in acute hospital settings: a mixed methods systematic review and thematic synthesis. *Syst Rev* 2021; 10(1): 199. doi:10.1186/s13643-021-01743-0

57 Kalánková D, Stolt M, Scott PA, Papastavrou E, Suhonen R, On behalf of the RANCARE COST Action CA15208. Unmet care needs of older people: a scoping review. *Nurs Ethics* 2021; 28(2): 149–78. doi:10.1177/0969733020948112

58 Kalisch BJ, McLaughlin M, Dabney BW. Patient perceptions of missed nursing care. *Jt Comm J Qual Patient Saf* 2012; 38(4): 161–7. doi:10.1016/S1553-7250(12)38021-5

59 Organisation for Economic Co-operation and Development (OECD). Who cares? Attracting and retaining care workers for the elderly. Paris: OECD; 2020. Available at https://www.oecd.org/publications/who-cares-attracting-and-retaining-elderly-care-workers-92c0ef68-en.htm [cited 27 April 2022]

60 Henderson J, Willis E, Xiao L, Blackman I. Missed care in residential aged care in Australia: an exploratory study. *Collegian* 2017; 24(5): 411–6. doi:10.1016/j.colegn.2016.09.001

61 Harrington C, Choiniere J, Goldmann M, Jacobsen FF, Lloyd L, McGregor M, *et al.* Nursing home staffing standards and staffing levels in six countries. *J Nurs Scholarsh* 2012; 44(1): 88–98. doi:10.1111/j.1547-5069.2011.01430.x

62 Yoon JY, Lee JY, Bowers BJ, Zimmerman DR. The impact of organizational factors on the urinary incontinence care quality in long-term care hospitals: a longitudinal correlational study. *Int J Nurs Stud* 2012; 49(12): 1544–51. doi:10.1016/j.ijnurstu.2012.07.011

63 Schnelle JF, Keeler E, Hays RD, Simmons S, Ouslander JG, Siu AL. A cost and value analysis of two interventions with incontinent nursing home residents. *J Am Geriatr Soc* 1995; 43(10): 1112–7. doi:10.1111/j.1532-5415.1995.tb07010.x

64 Temkin-Greener H, Cai S, Zheng NT, Zhao H, Mukamel DB. Nursing home work environment and the risk of pressure ulcers and incontinence. *Health Serv Res* 2012; 47(3 Pt 1): 1179–200. doi:10.1111/j.1475-6773.2011.01353.x

65 Ball JE, Murrells T, Rafferty AM, Morrow E, Griffiths P. 'Care left undone' during nursing shifts: associations with workload and perceived quality of care. *BMJ Qual Saf* 2014; 23(2): 116–25. doi:10.1136/bmjqs-2012-001767

66 Griffiths P, Recio-Saucedo A, Dall'Ora C, Briggs J, Maruotti A, Meredith P, *et al.* The association between nurse staffing and omissions in nursing care: a systematic review. *J Adv Nurs* 2018; 74(7): 1474–87. doi:10.1111/jan.13564

67 Mitteness LS, Barker JC. Stigmatizing a "normal" condition: urinary incontinence in late life. *Med Anthropol Q* 1995; 9(2): 188–210. doi:10.1525/maq.1995.9.2.02a00050

68 Murphy C, De Laine C, Macaulay M, Hislop Lennie K, Fader M. Problems faced by people living at home with dementia and incontinence: causes, consequences and potential solutions. *Age Ageing* 2021; 50(3): 944–54. doi:10.1093/ageing/afaa262

69 Scerri A, Innes A, Scerri C. Healthcare professionals' perceived challenges and solutions when providing rehabilitation to persons living with dementia—a scoping review. *J Clin Nurs* 2023; 32(17–18): 5493–513. doi:10.1111/jocn.16635

70 Ostaszkiewicz J, O'Connell B, Dunning T. Ethical challenges associated with providing continence care in residential aged facilities: findings from a grounded theory study. *Aust N Z Continence J* 2014; 20(4): 179–86. doi:10.1071/CJ14016

71 Vaittinen T. Exposed to violence while caring: from caring self-protection to global health as conflict transformation. In: Vaittinen T, Confortini C, editors. Gender, global health and violence: feminist perspectives on peace and disease. London: Rowman & Littlefield International; 2019. pp. 227–50.

72 Ostaszkiewicz J. A conceptual model of the risk of elder abuse posed by incontinence and care dependence. *Int J Older People Nurs* 2018; 13: e12182. doi:10.1111/opn.12182

73 Feo R, Conroy T, Jangland E, Muntlin Athlin Å, Brovall M, Parr J, *et al.* Towards a standardised definition for fundamental care: a modified Delphi study. *J Clin Nurs* 2018; 27(11–12): 2285–99. doi:10.1111/jocn.14247.74

74 Grealish L, Ranse K, Todd J-A, Armit L, Billett S, Collier L, *et al.* Barriers and enablers to embedding fundamental nursing care for older patients—implications of a mixed methods study for nursing leadership. *J Adv Nurs* 2023; 79: 1162–73. doi:10.1111/jan.15194

75 Flanagan L, Roe B, Jack B, Barrett J, Chung A, Shaw C, Williams KS. Systematic review of care intervention studies for the management of incontinence and promotion of continence in older people in care homes with urinary incontinence as the primary focus (1966-2010). *Geriatr Gerontol Int* 2012; 12(4): 600–11. doi:10.1111/j.1447-0594.2012.00875.x

76 Allen LM, Nalley C, Devries AR, Fisher SR. Efficacy of behavioral interventions for urinary incontinence among women residing in nursing homes: a systematic review. *J Wound Ostomy Continence Nurs* 2023; 50(1): 57–65. doi:10.1097/WON.0000000000000933

77 Omotunde M, Wagg A. Technological solutions for urinary continence care delivery for older adults: a scoping review. *J Wound Ostomy Continence Nurs* 2023; 50(3): 227–34. doi:10.1097/WON.0000000000000965

78 Boddington P, Featherstone K. The canary in the coal mine: continence care for people with dementia in acute hospital wards as a crisis of dehumanization. *Bioethics* 2018; 32(4): 251–60. doi:10.1111/bioe.12446

Data availability. Data sharing is not applicable as no new data were generated or analysed during this study.

Conflicts of interest. None.

Declaration of funding. Tiina Vaittinen's work for this article was enabled by the project 'Emergent Un/Sustainabilities of Care: The Global Political Economy of the Adult Incontinence Pad' (2019–2024), funded by the Academy of Finland grant #321972 and Kone Foundation (www.padproject.online). Katie Featherstone was funded by the National Institute for Health and Care Research (NIHR) HSDR programme researcher led funding stream study 'Understanding how to facilitate continence for people living with dementia in acute hospital settings: raising awareness and improving care' (project number NIHR15/136/67). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

Author affiliations

[A]National Ageing Research Institute, Parkville, Vic, Australia.

[B]The University of Melbourne, Parkville, Vic, Australia.

[C]Federation University, Health and Innovation Transformation Centre, Ballarat, Vic, Australia.

[D]The Geller Institute of Ageing and Memory, The University of West London, St Mary's Road, Ealing, London, W5 5RF, UK.

[E]The GoodMess Ltd, Akaa, Finland.

[F]WHO Collaboration Center on Health in All Policies and Social Determinants of Health, Tampere University, Tampere, Finland.