Keywords Continence/Skin health/Older people's care

This article has been double-blind peer reviewed

In this article...

- The benefits of a person-centred approach to managing urinary incontinence in residential care
- Why residents' wellbeing improved with access to a wider range of products and tailored care
- How a cross-functional team approach can help ensure optimal personal hygiene care

Tailoring continence management to individual needs in residential care

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Key points

Person-centred continence care can result in improvements in skin health and wellbeing

Continence containment care can be enhanced by classroom and hands on training

Containment products should be selected according to the resident's needs, and personal hygiene support is important

A continence diary is a valuable tool to review the success of care

Care that is tailored to individuals can make it easier for carers to manage continence and leads to more-efficient care delivery

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Abstract This observational study investigated the benefits of adopting a person-centred approach to the management of urinary incontinence and associated hygiene care. A trial was carried out in 12 residential care homes in the Emilia Romagna region of Italy. Toileting, containment product selection, frequency and timing of changes, and personal hygiene routines were tailored to the needs of individual residents. Skin redness improved, there was less leakage and residents' wellbeing improved. Containment product changes were easier to carry out, fewer containment products were used, and product costs were reduced. The adoption of person-centred care initiatives was seen to benefit all stakeholders – namely, residents, caregivers and the administration of the residential care facility.

Citation Del Prato C et al (2022) Tailoring continence management to individual needs in residential care. *Nursing Times* [online]; 118: 4.

Urinary incontinence (UI) is a significant challenge for residential care facilities. In 2009, a systematic review of the prevalence rates of UI in nursing home residents found rates ranging from 43% to 77%, with a median of 58% (Offermans et al, 2009).

Incontinence-associated dermatitis (IAD) is a common consideration in patients with faecal and/or urinary incontinence and it has been suggested that it affects as many as 41% of adults in long-term care (Nix and Haugen, 2010). Frequent IAD is also a risk factor for the development of pressure ulcers (Beeckman et al, 2014) and older adults with UI have been shown to be 2.18 times more likely to experience psychological distress (de Vries et al, 2012). In addition, care staff can find it challenging to manage UI: one study reported that care workers' self-identity was significantly negatively affected by the stigma associated with this work (Ostaszkiewicz et al, 2016).

Person-centred care has been identified as a means of improving both the quality of care and quality of life for residents (Grabowski et al, 2014; Zimmerman et al, 2014), while also improving the quality of staff members' working life (Edvardsson et al, 2011). A person-centred approach to the management of UI in residential care facilities showed:

- An increase in:
  - The number of UI assessments performed;
  - The number of caring actions conducted;
  - Residents' quality of life;
- A subsequent demonstration of the ability to sustain a person-centred atmosphere, in spite of staffing and

organisational challenges (Alexiou et al, 2021).

In Edvardsson et al's (2011) study of job satisfaction among staff caring for older people, the practice of personalising care and the amount of organisational support each received had a statistically significant influence on job satisfaction.

QUICK FACT
323
Members of staff who received training as part of the observational study

Our study

The purpose of our study was to examine the impact of two interventions on the management of containment care, with a particular emphasis on skin health. The interventions were:

- A person-centred approach to containment care;
- A modern non-water-based hygiene technique using cleansers.

The changes were implemented by a community interest, non-profit, social cooperative in the care homes operating in Italy's Emilia-Romagna region.

An Italian social cooperative is a form of multistakeholder cooperative with its own legal status that brings together providers and beneficiaries of a social service as members to provide either a health service or a social and educational service. Various categories of stakeholder may become members, including paid employees, beneficiaries, volunteers, financial investors and public institutions.

The care home operator wanted to ensure delivery of a uniformly high quality of care across the group's residential care homes, while increasing the level of staff satisfaction and making best use of available resources. This study set out to measure the impact of a set of person-centred continence care initiatives. Training was carried out on:

- Assessing residents' individual needs;
- Tailoring care;
- Implementing the individual containment management plan and associated hygiene care routines.

Hygiene routines used during the changing of containment products have historically involved the use of soap and water, but several studies demonstrate that a 'washing without water' cleansing technique has resulted in improved skin outcomes. Soap- and alcohol-free products are used, mainly for frequent care of the perineal area during changes of absorbent aids, but they can also be used for cleansing the whole body. The technique improves the condition of the skin, contributing to maintaining skin pH and hydration; soap and water, in contrast, can dry out the skin.

The cleansers reduce soap residue and do not require rinsing (Sloane et al, 2004), and also eliminate the risk of cross-infection from wash basins and reusable washcloths (Massa, 2010). A recent systematic review found that washing without water performed better than washing with soap and water in terms of skin abnormalities and bathing completeness, defined as when all body parts were cleaned (Groven et al, 2017).

The social cooperative in which this trial was conducted had seen considerable variation in personal hygiene care practices across its residential homes, as well as within each home. The study started with staff training on the new routine and sought to establish whether a harmonised routine of washing without water would result in improved outcomes for residents, and provide benefits for residential home staff and in terms of administration.

Data collected included:

- The number of containment product changes;
- The hygiene routine used;
- Skin health;
- The caregivers' feedback on various elements of the hygiene and containment management routines.

A person-centred approach to UI care involves toileting measures as well as containment strategies (Wijk et al, 2018). Although appropriate toileting care was included in the care plan for each resident with UI, the variability of toileting measures made this aspect less susceptible to quantitative analysis than containment and hygiene care, so the impact of toileting changes was not measured in this study. In addition, residents were often not able to express their needs and the challenge of measuring their expressed needs prevented this from being included as an outcome measure of the study.

The average cost per resident per day for products used in the care routines was calculated at the end of the trial to evaluate the influence of a person-centred approach on this element of costs. The time taken to carry out the UI care routine and associated staff costs were not measured.

The trial

The project took the form of a longitudinal observational trial conducted with 485 residents in 12 residential care homes. All residents with UI were included in the trial. Ethical approval was not needed as the study was restricted to observing the effects of implementing accepted care practices. The study was approved by the residential care homes' management committee.

The trial started with 229.2 hours of training delivered to 323 staff, of whom 244 were professional caregivers and 79 were nurses. All nurses and professional carers had received the usual training on continence management and personal hygiene care included in standard requirements to be licensed in these roles in Italy. Additional training on the use of absorbent products was provided on a periodic basis by the containment product supplier's continence nurse specialists. Targeted training on person-centred continence care, covering the points highlighted in Box 1 and Box 2, was provided by the same team in March 2017, before the start of the trial.

Box 1. Selecting a containment product

- Establish the resident's level of incontinence, the timing of when toileting support is needed and the extent of assistance required
- Take into account the resident's body shape: certain products are designed specifically to suit the wearer's anatomy
- Evaluate skin status and mobility, and identify any medical conditions
- Select type of product to maximise ease of use for self-toileting or care efficiency
- Choose the appropriate absorbency level in relation to the number of successful toilet visits, the number and timing of urinary incontinence episodes, volume lost and the ideal number of changes per 24 hours
- When selecting the size of the pad, bigger is not always better: using a large-size pad on smaller residents does not improve absorbency. The right size hugs the body better, allowing urine to wick more evenly throughout the core, which prevents leakage and skin irritation, and promotes comfort
- To evaluate the choice of pad, keep a diary and update the choice of pad absorption with the desired pad-changing frequency
- Inspect skin once a day

An initial classroom-based training session was followed by training on the ward, with a joint evaluation of the existing hygiene and management for each resident's containment-care routine. Care routines were then optimised and an individual person-centred care protocol was established for each resident.

The trial lasted for an average of four to six weeks in each care home between July 2017 and October 2018.

The appropriate containment product was selected in line with the principles outlined in Box 1. The care plan was provided in the form of a card to which carers could refer; it summarised the tailored toileting, containment and hygiene care to make sure each member of staff adopted the same care approach that had been individually tailored for that resident.

During the study period, information was collected on:

- How the containment product was tailored to the resident's needs;
- The type of hygiene routine followed;
- The resident's skin health status, as detailed in Table 1.

Performance was regularly monitored and improvements implemented as needed. Increased coordination between the lead nursing and care staff led to improved product selection, as well as improved pad change and hygiene practices.

The results of the existing care routine were assessed before the start of the trial and the results for the optimised routine were collected at the end. The results comprised two elements:

- Management for containment care;
- A hygiene component.

Staff were asked to assess the benefits, for both the resident and the carer, of following the tested containment management approach and hygiene care routines, as set out in Table 2. A Likert scale ('strongly agree', 'agree', 'disagree', 'strongly disagree' or 'don't know') was used.

The average cost per resident per day for products used in the care routine – namely, the containment product, underpad and the hygiene products – was calculated at the end of the trial.

Results

The number of residents in each facility ranged from 20 to 65. Skin health was the outcome of principal interest.

Skin damage showed reductions: no resident had skin damage worse than redness at the start of the trial, at which point there was a median number of two patients with redness across the residential facilities. In five facilities, no resident had even the lowest degree of skin damage, and this was maintained during the course of the trial. An additional four residential care facilities were able to reduce skin redness from between two to five residents to zero by the end of the trial. Of the remaining three, two showed improvements, from 15 to 5 and from 7 to 3 residents, and only one had the same number of residents (three) with skin redness at the end of the trial as at the beginning. No facility showed an increase in number of residents with skin redness over the course of the trial. The median reduction in skin redness was 100%.

Table 3 shows, for each residential facility, the reduction in skin redness, number of underpads used, costs, and change in number of pads used per resident per 24-hour period. Variability in continence management practices means that in some residential facilities there is a lower pad use than is ideal, while in others it is greater than necessary. In our study, most residential facilities initially used a greater number of pads than necessary; as a result, that usage decreased. The greatest reduction was 38.7%; one residential care facility increased use, by 5.3%. The median reduction in incontinence pad use over the 12 residential care facilities was 24.6%.

The number of underpads used per resident per day also fell, with the greatest reduction being 76.7%. No residential care facility increased underpad usage, and the

Box 2. **Core principles of containment management and hygiene routines**

- Base care on each resident's individual care plan
- For good care and minimum disruption, have three main changes per 24 hours in a ward: morning, afternoon and evening
- Carry out intermediate checks/changes according to individual care plans and wetness indicators
- Make sure each resident receives correct and constant support for personal hygiene to promote their wellbeing and comfort
- Make carers aware of the needs connected with hygiene, skin care and skin protection
- Use correct hygiene procedures to avoid transferring infection
- Residents at high risk of skin problems and those with compromised with compromised skin barriers may need additional protection in the form of an extra protective skin film barrier to repel perspiration, stools and urine
- The lead nurse and carer should review the care plan for each resident weekly, with input from the physiotherapist and the resident's normal carer

Table 1. **Data collected on containment, hygiene management and skin health**

Variable	Outcome recorded
Containment management	
Number of containment product changes	Number per 24 hours
Product type used	Belted product; all in one; pad with fixation underwear
Absorbency	Medium; medium to heavy; heavy; heavy to very heavy
Size	Medium; large; extra large
Hygiene routine	
Underpad used?	Yes/no
Which hygiene routine was followed?	With/without water
Skin health	
Perineal skin health	1. Intact 2. Redness 3. Damaged 4. Damaged with wound care

Table 2. **Qualitative performance of products and routines assessed by carers**

Product/routine	Performance outcome measure
Continence care	
Incontinence products	
Resident	Less leakage; drier skin
Carer	Easier to handle during toileting; involves less heavy twisting and lifting in use
Continence care routine	
Resident	Improves residents' overall wellbeing
Carer	Less time needed; more care efficient
Personal hygiene care	
Cleansing and skincare products	
Resident	Less skin redness
Carer	Practical and easy to use products
Hygiene routine	
Carer	Less time needed; more care efficient

smallest reduction was 9.1%. The median reduction in underpad usage was 38.0%.

The costs of the containment and hygiene care products reduced by a median of 18.5% per facility; one residential care facility reduced costs by 40%, while another made no savings. In no residential care facility did the cost for these products increase.

A total of 96% of carers either agreed or strongly agreed that the containment products used in the trial resulted in less leakage, and 88% agreed or strongly agreed that they kept the skin drier. Almost all (99%) agreed or strongly agreed that the containment products were easier to handle during toileting and 93% agreed or strongly agreed that using the containment products resulted in less moving and handling of residents. In total, 97% either agreed or strongly agreed that the changed containment routine improved residents' overall wellbeing, 98% agreed or strongly agreed that less time was needed for containment management, and 94% agreed or strongly agreed that the new routine was more care efficient.

In terms of personal hygiene care, 89% felt that the hygiene products produced less skin redness, which aligned with the study's quantitative findings. Of the carers, 91% agreed or strongly agreed that the washing-without-water hygiene routine improved the overall wellbeing of the residents, 96% agreed or strongly agreed that less time was needed for personal hygiene care, and 94% agreed or strongly agreed that the hygiene routine was more care efficient.

Discussion

This trial demonstrated that adopting a person-centred continence management approach, combined with improved personal hygiene care, provided benefits for residential care facility residents, carers and the administration of the facility.

Using an incontinence pad that had been selected based on individual needs reduced the incidence of skin redness and urine leakage while allowing a reduction in the number of pad changes. Changing the types of incontinence pads used resulted in less moving and handling, thereby benefitting the carers as well as the residents. The carers also judged residents' overall wellbeing to be improved – both from the change in containment management and the change in the hygiene routine. This was in line with the trend towards beneficial effects of person-centred continence care on residents demonstrated by Wijk et al (2018).

Reduced underpad usage contributed to the reduction in budget spent on containment and hygiene products. It may have been thought that a broader choice of incontinence pads, some of which are more expensive than the traditional all-in-one products, and using a different hygiene product, would have resulted in higher product costs, but this did not happen.

The results showed considerable variability across different residential homes. A key learning from this study was the importance of cross-functional participation in the design and implementation of person-centred continence care, combined with a high level of training and leadership support plus ongoing performance monitoring. This concurs with the conclusions of Sjögren et al (2017) who identified leadership, interdisciplinary

Table 3. **Reduction in quantitative parameters**

Residential facility identification number	Reduction from starting value, %[a]			
	Skin redness[b]	Number of incontinence pads used per 24 hours	Number of underpads used per 24 hours	Cost
1	100	38.7	50.0	37.4
2	100	2.5	9.1	0.0
3	57.1	25.0	36.8	24.2
4	n/a[d]	36.5	68.6	25.8
5	n/a[d]	24.1	9.9	4.4
6	66.7	30.1	42.5	40.0
7	n/a[d]	25.6	76.7	34.6
8	100	-5.3	39.1	2.5
9	n/a[d]	26.5	61.6	30.3
10	n/a[d]	23.3	15.1	5.1
11	100	7.8	31.5	8.7
12	0	12.0	16.4	12.8
Median reduction	**100**	**24.6**	**38.0**	**18.5**

[a]A negative value denotes an increase in the value of the parameter during the course of the trial. [b]No resident had skin damage that was more severe than 'redness'. [c]Includes products used in hygiene routine: skin care wash, moisturiser and protection products, dry wash- and wet-wash gloves. [d]n/a = no resident had any degree of skin damage at the start of the trial.

Personalised continence care can not only help to empower residents in care homes and improve their wellbeing, but also benefit staff and result in financial savings

"Of the carers, 97% either agreed or strongly agreed that the changed containment routine improved the residents' overall wellbeing"

collaboration and continuing education as the factors shared by highly person-centred residential aged care units.

While the outcomes recorded in this trial provide evidence of improvements for the residents, the protocol did not include quality of life assessments by the residents themselves or – in the case of residents who were unable to communicate their experience – their relatives. The decision to focus on the experience of the carers was a practical one: the challenge of collecting data on quality of life from individuals with cognitive impairment is widely recognised and the use of proxy measures in such populations is well described (Hendriks et al, 2019).

Similarly, the costs of containment and hygiene products represent only a small proportion of the costs of providing containment and hygiene management, but the practicalities of conducting the trial in 12 working residential homes made it difficult to record the time carers spent on these tasks.

The carers' judgement that residents' wellbeing improved, and that both containment and hygiene management required less time to deliver and were more efficient, are positive indications. However, future trials could confirm this by including carers' time as a measured outcome.

Conclusion

Introducing person-centred continence care, combined with adopting a washing-without-water routine during the containment product change, resulted in several beneficial effects. Skin health improved, as did the residents' overall wellbeing, as judged by carers. The changes also resulted in benefits for the carers themselves, making the containment product change easier to carry out and resulting in less physical strain when moving and handling patients. It also reduced the time needed for the change and freed up staff to spend time on other aspects of care. These benefits were accompanied by savings in the cost of containment and hygiene products. Adopting person-centred care initiatives in UI management was seen to have benefits for all stakeholders – residents, carers and the administration of the residential facility.

Key success factors in the delivery of the improved care were the cross-functional inclusion in the design and implementation of the care routines, their being tailored to residents' initial and ongoing needs, high levels of initial and ongoing staff training, and performance monitoring. **NT**

● Conflicts of interest and funding: the trial was carried out in collaboration between Coopselios and Essity Hygiene and Health AB. Edward Hutt has received a consultancy fee from Essity Hygiene and Health AB to develop the manuscript. The remaining authors declare there are no conflicts of interest.

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ALAMY