

The cost-effective use of BagBath: a new concept in patient hygiene

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Abstract

The future of nursing promises dynamic change and continual challenges, with exciting healthcare reform in progress and technologies as yet undreamed of on the nursing horizon. The modern nurse must offer high-quality patient care and should be constantly striving for cost-effective methods of providing that care. In this product focus, the prevalent practice of 'bed bathing' is considered along with cost-effectiveness of the practice and infection control potential when compared with the new concept of BagBath (Westholme Ltd). BagBath is a quick-drying one-step bed bath product offered as an alternative to the bowl of water, soap and flannel.

Cutaneous cleansers are an important adjunct to the regimen of those with compromised skin, or those who use topical therapies (Kuehl et al, 2003). Cleansers emulsify dirt, oil and microorganisms on the skin surface so that they can be easily removed during cleansing. However, there is a complex interaction between the cleanser, the moisture-skin barrier and the skin's pH level. Cleansing with water and soap or a liquid cleanser will affect the moisture-skin barrier by reducing natural skin oils. Soap brings about the greatest changes to the barrier and increases skin pH (Kuehl et al, 2003). Some cleansers are gentle, causing less disruption to the barrier, with minimal change to skin pH. A cleanser that is a combination of surfactant classes, moisturizers and has an acidic pH will minimize disruption to the skin barrier (Kuehl et al, 2003).

Environmental surface cleanliness of objects such as bowls and the potential for contamination during handwashing from residual organic soil, bacterial and staphylococcal load were examined by Griffith et al (2003). They identified that tap handles were likely to be more contaminated than paper-towel dispenser exits. However, the latter are likely to be the final surface touched during the handwashing process and these were found to be 20% above microbiologic benchmark values.

Good hygiene is indispensable for our comfort, health and wellbeing (Tabbner, 1981).

However, patients' knowledge about the importance of hygiene influences their motivation and individual practice (Chilman and Thomas, 1981). Anxiety caused by misunderstandings or lack of knowledge can discourage a patient from accepting a nurse's offer of hygiene care and patients turn to nurses more than any other group to humanize the system for them (Pearson, 1988).

Nurses clearly have a responsibility to help people 'get better' through various treatments but they can also help people 'feel better' through sincere caring and comforting, and use of nursing expertise and education (Kitson, 1988). If patients are to benefit from new innovations, such as BagBath, recommendations must come from nurses and healthcare professionals who accept their advantages over traditional measures and will educate patients accordingly.

Sociocultural variables including cultural beliefs, age, personal values and familial practices influence hygiene care, and patients from diverse backgrounds follow different self-care practices (Holland and Hogg, 2001). Within any culture there are always many variations, contradictions and contrasts. Even useful insights can be applied crudely and insensitively and can become a barrier rather than an aid (Henley and Schott, 1999). In our multicultural society, we all use a routine of washing and keeping clean that keeps us comfortable (Giger and Davidhizar, 1999).

People who feel dirty and possibly polluted may become very distressed if they cannot keep clean, especially if they are bed-bound and are unable to wash themselves (Henley and Schott, 1999). Being dependent on others for washing, bathing and using the lavatory is humiliating for some people and it is important to protect patients' self-esteem and dignity as far as possible by trying to cater for their individual habits and preferences (Holland and Hogg, 2001). Most religions and cultures contain ideas about purity and pollutants. Running water is generally believed to be the most effective cleansing

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Byers et al (1995) reviewed the effects of cleansing regimens on the perineal skin of 10 older female residents of an extended care facility. Results indicated that soap and water were the least efficacious regimen unless used with a moisture barrier. The no-rinse cleanser was better than soap and water in terms of skin effects and cost savings. The findings suggest that a no-rinse cleanser in conjunction with a moisture barrier is more skin-preserving and cost-effective in incontinence care than soap and water.

Similar conclusions were reached by Lewis-Byers and Thayer (2002) who compared the effect of two skin care protocols on skin condition, pain and caregiver time. They identified a saving of 79 minutes/patient/day with a reduction in pain when skin integrity is maintained. The study concluded that the use of soap, water and a moisturizer may be less effective and

more time-consuming than using a no-rinse cleanser, such as BagBath, and a durable barrier product. Although BagBath's manufacturers do not claim it to be a cost-effective method of continence care, such evidence encourages healthcare professionals to reconsider the merits of the traditional use of soap and water in terms of skin care and cost-effectiveness.

Planning for skin care can be based on one or more of the following goals:

- Maintaining skin integrity and control of body odours
- Ensuring the patient is relaxed and comfortable
- Helping the patient to participate in hygiene care. (The absence of bowls of water, soap and different washcloths, as well as the ease of use of BagBath, will enable more clients to participate actively in their hygiene care.)

Table 3. Cost-effectiveness and efficacy of BagBath compared with bed bathing

BagBath	Traditional bed bath
<i>Increased skin health</i>	<i>Decreased skin health</i>
Cleansing agent is free of soap and alcohol and does not require rinsing which reduces skin dryness due to poor rinsing of soap residue	Soap residue is difficult to wash out during bed bath and can lead to subsequent skin dryness
Soft cloth reduces friction on skin	Face towels can be rough on skin and can increase chances of skin tears
Dries without towelling: reduced friction on skin Emollient in every cloth conditions skin surface	Careful towelling/drying is necessary to dry skin and results in increased friction on skin if not done gently
Single-use disposable cloths prevent cross-infection between different parts of body	Soaps, washcloths and bowls can be potential site of bacterial growth
Studies reveal the synthesis of collagen in dermal repair is enhanced in a moist environment (Cuzzell and Stotts, 1990). It is documented that well-hydrated skin is less prone to impairment and heals faster than dry skin (Cuzzell and Stotts, 1990)	
<i>Decreased cost</i>	<i>Increased cost</i>
Eliminates the need for bathing equipment and materials including soap, water, lotion, powder and towels	Cleaning of bowls, towels Replacement soap, lotions, powder
Eliminates associated cleaning costs of bowls, etc.	Time needed to prepare, wash, rinse, dry and tidy up is long
Reduced bathing time reduces labour costs	Additional time may be required as a result of spillage on floor, or need to change sheets as a result of accidental spillage Potential for infection as a result of cross-contamination and cross-infection Potential for ulcers which can result in increased cost of treatment for the ulcers both in hospital and in the community or home Extended stay in hospital associated with above

Age, nutritional and hydration imbalances and impaired tissue synthesis result in thinner and less elastic skin and loss of subcutaneous tissue resulting in impaired/delayed healing... In such instances, it is important that soap residue is not left on the skin and adequate emollient is applied to form a protective barrier and help maintain fluid within the skin.

increased protection to minimize the risk of injury. BagBath will be suitable as the wash-cloth and towel drying are not necessary.

Vascular insufficiency and impaired blood supply to tissues can cause tissue ischaemia, skin breakdown and high risk of infection (Thibodeau and Patton, 2002). BagBath can offer an alternative to using rough wash cloths and towel drying the skin. The emollient impregnated with each disposable tissue will provide additional moisturizing protection.

Age, nutritional and hydration imbalances and impaired tissue synthesis result in thinner and less elastic skin and loss of subcutaneous tissue resulting in impaired/delayed healing (Potter and Perry, 1995). In such instances, it is important that soap residue is not left on the skin and adequate emollient is applied to form a protective barrier and help maintain fluid within the skin. The no-soap, no-rinse process of BagBath with its added emollient will be suitable for clients in this category.

In older people, the epithelium thins and elastic collagen fibres shrink, making the skin fragile and subject to bruising and breaking (Thibodeau and Patton, 2002). Daily bathing, inadequate fluid and nutrition, and the use of some soap products may cause the skin to become too dry. Dry skin is characteristically flaky and has a rough texture on exposed areas such as hands, arms, legs or face. If the epider-

mal layer is allowed to crack, it may lead to an infection. Interventions include bathing less frequently and rinsing the body of all soap because residue left on skin can cause irritation and breakdown (Potter and Perry, 1995). The condition of a seriously ill, older adult or inactive client must be considered so that bathing is adequate and not too exhausting. Priorities must be based on patients' activity tolerance and hygiene preferences (Potter and Perry, 1995).

Walsh and Foord (1989) suggest that some nurses are almost afraid of using soap to wash patients. They claim that it is not uncommon to see the cloth lightly soaped and then rinsed in water, so that the little bit of soap is washed away, and then the cloth is squeezed almost dry before the nurse attempts to wash the patient. A study by Sheppard and Brenner (2000) concluded that the BagBath offers an exciting, alternative, evidence-based option to meet the skin care needs of the elderly population. The versatility of BagBath is most noteworthy when considering the advantages it can offer in terms of ease of use which empowers patients to take a more active role in their hygiene care, and in its no-soap, no-rinse, no-drying process which can care for the skin as well as reduce the labour and time involved.

Incontinence is another situation where skin integrity may be at risk with cleansing regimens of soap and water without a moisture barrier.

Table 2. Steps for complete or partial BagBath

1. Explain procedure and ask client how much of the bed bath he/she wishes to complete
2. Prepare necessary equipment/supplies: pack of BagBath; bath blanket; clean gown; linen hamper/laundry bag; disposable gloves
3. Throughout the following steps cover areas not being washed by one or two bath blankets to ensure patient privacy and dignity, while maintaining warmth and preventing unnecessary exposure
4. Using premoistened cloth wash face, no drying necessary. Dispose of cloth
5. Using new cloth from pack clean right side of chest and abdomen, arm and axilla and dispose of cloth
6. Repeat for the other side, dispose of cloth
7. Wash patient's leg and foot. Dispose of cloth
8. Move to other side of bed and repeat for other leg and foot. Dispose of cloth
9. Assist client to assume prone or side lying position. Cleanse back from neck to buttocks. Dispose of cloth
10. Assist client to assume supine or side lying position. Exposing genitalia, cleanse using fresh cloth and dispose
11. Assist client in dressing, as necessary

either by emotion or the body's need to lose heat (Weston, 1991). Given the emotional stress associated with illness and injury and admission to hospital, together with the hospital environment, it is essential that sweat with its waste matter is not allowed to accumulate

(Lumley et al, 1995). The BagBath is a simple method of achieving this removal.

Additionally, certain conditions place patients at risk of impaired skin integrity (Thibodeau and Patton, 2002). These include those with reduced sensation where skin needs

...the sweat glands are controlled by the nervous system and are stimulated to secrete either by emotion or the body's need to lose heat...Given the emotional stress associated with illness and injury and admission to hospital, together with the hospital environment, it is essential that sweat with its waste matter is not allowed to accumulate... The BagBath is a simple method of achieving this removal.

Table 1. Steps for complete or partial bedbath

1. Explain procedure and ask client how much of the bed bath he/she wishes to complete
2. Prepare necessary equipment/supplies: two bath towels; two washcloths; washbasin; soap and soap dish; bath blanket; clean gown; hygienic aids such as skin lotion, deodorant or powder; linen hamper/laundry bag; disposable gloves; bed linen
3. Throughout the following steps cover areas not being washed by one or two bath blankets to ensure patient privacy and dignity, while maintaining warmth and preventing unnecessary exposure
4. Ask if client uses soap on face, wash client's face, dry thoroughly
5. Bathe arm with soap and water. Wash axilla. Rinse and dry thoroughly. Apply deodorant/talcum powder, if client uses it
6. Check temperature of water and change if necessary
7. Wash chest, rinse and dry. Ensure chest is covered between wash, rinse and drying period. Take special care to wash, rinse and dry skin folds under female client's breasts
8. Bathe abdomen, rinse and dry. Ensure abdomen is covered between wash, rinse and drying period. Take special care to wash, rinse and dry abdominal folds thoroughly
9. Dress patient, taking care that gown is not soiled during remainder of bath
10. Place bath basin on towel on bed and secure its position next to foot being washed. Allow foot to be soaked while washing patient's leg (if patient is unable to hold leg, do not immerse, wash with washcloth). Rinse and dry well
11. Cleanse foot, rinse and dry well. If skin is dry, apply lotion. Secretions and moisture may be present between toes and lotion helps to retain moisture and soften skin
12. Move to other side of bed and repeat for other leg and foot
13. Change water as drop in water temperature during bathing can cause chilling. Clean water reduces microorganism transmission
14. Assist client to assume prone or side lying position. Wash, rinse and dry back from neck to buttocks. Pay special attention to folds of buttocks and anus which may contain faecal secretions that harbour microorganisms
15. Change water and washcloth to prevent transfer of microorganisms from anal area to genitalia. Wear new gloves
16. Assist client to assume supine or side lying position. Exposing genitalia, wash, rinse and dry perineum. Give special attention to skin folds, which are site for accumulation of secretions or moisture
17. Dispose of gloves
18. Apply additional body lotion or cream as desired to prevent dry, chapped skin
19. Assist client in dressing, as necessary
20. Ensure no spillages have occurred and change bed linen if necessary. Remove soiled linen and place in linen bag
21. Clean and replace bathing equipment. Soaps and bowls and washcloths will be ideal sites for bacteria to grow and should be cleaned and dried thoroughly before replacing

Adapted from Potter and Perry (1995)

As the population ages, the occurrence of skin tears becomes a common concern for those providing care. Skin tears in elderly people are a common alteration of ageing skin integrity. They are generally small and occur more frequently on the upper extremities with most skin tears occurring during patient care in the patient's bedroom...

agent and so some patients may find the idea of being washed from a bowl of water in which washcloths are repeatedly dipped extremely distasteful (Cole, 1994).

Certain illnesses, surgical procedures and devices such as casts and traction may exhaust, incapacitate, or decrease the dexterity of clients who may need to have assistance with hygiene care. Healthcare professionals carry out many hygiene measures each day. These are never routine and involve an ongoing assessment of the skin and the patient's self-care ability (Potter and Perry, 1995). During such care, the physical condition of skin, such as turgor and colour, areas of potential breakdown and tissue perfusion are noted. To foster a feeling of wellbeing and because of the intimate contact with the client during the hygiene care, it is essential to preserve as much of the client's independence and privacy as possible (Wright, 1994). The ease of use of BagBath and the absence of bowls, towels, soaps and creams may assist with promotion of independence and increase patients' self-care ability.

BagBath is a system that has been invented by nurses and is prepackaged and disposable and held in a lightweight bag (Figure 1). BagBath is both convenient and cost-effective and is a system that eliminates the need for basins and soap and water, and reduces the time required for bathing patients. Each bag of BagBath contains eight rayon/polyester cloths, premoistened with an evaporating, no-rinse cleanser and soothing emollients. This means that a patient can be cleansed and provided with skin care at the same time and the potential for cross-infection is eliminated.

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Figure 1. BagBath is prepackaged and disposable.

and Kopac, 1998). Skin tears are painful and increase the cost of caring for residents in long-term care facilities. In a study by Birch and Coggins (2003), the no-rinse, one-step bed bath and the effects on the occurrence of skin tears in a long-term care setting were considered. Birch and Coggins reviewed the effect of the bathing change on nursing practice, patient care outcomes and cost of patient care when the new bath procedure was used. They found that the number of skin tears decreased from 13 in the first month to one in the fourth month, affecting caregivers' time and cost. The observed reduction in the occurrence of skin tears was estimated to result in an annual decrease in cost of \$2446 (<£2000).

Within the context of culture and in situations when washing with running water is not possible, BagBath has the advantage of purity as the premoistened and sealed cloths will be used for one area of the body and then discarded. A further additional advantage is that while the cleansing will remove all impurities that water and soap are believed to remove (Kuehl et al, 2003), its very process will provide a speedy but consistent alternative without the associated and time-consuming rituals associated with bed baths (soaping, rinsing, drying and moisturizing). BagBath can provide a clean, efficient, easy alternative with minimal potential for cultural conflict.

CARE OF THE SKIN

The skin is a dynamic organ and protects, secretes, excretes and regulates temperature. The three layers of the skin are the epidermis, dermis and subcutaneous tissue. The epidermis is covered with minute pores through which sweat is excreted from the sweat glands in the dermis (Thibodeau and Patton, 2002).

As the first line of defence against microbes that might otherwise invade the body's internal environment, the skin is a common site of infection from viruses, bacteria, fungi or larger parasites. Perspiration and oil can also harbour microorganism growth (Potter and Perry, 1995). It is necessary therefore to remove excess body secretions but not at the cost of drying the skin. Thus, the utmost care must be taken of the skin if it is to function efficiently.

In sickness it is important that the proper working of the skin structures is ensured. In addition, the sweat glands are controlled by the nervous system and are stimulated to secrete

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KEY POINTS

- BagBath meets all the purposes of bathing — cleansing the skin removes perspiration, bacteria and dead skin cells and minimizes skin irritation and potential of infection.
- The ease of use of BagBath and the absence of bowls, towels, soaps and creams may assist with promotion of independence and increase patients' self-care ability.
- BagBath is both convenient and cost-effective and is a system that eliminates the need for basins and soap and water, and reduces the time required for bathing patients.
- Each bag of BagBath contains eight rayon/polyester cloths, premoistened with an evaporating, no-rinse cleanser and soothing emollients.

Walsh and Foord (1992) criticize the 'ritual of bed baths drummed into student nurses'. They suggest that a good starting point would be to consider whether the patient needs or wants a bed bath. They also suggest that the amount of soap and water used varies according to the carer's fear of using too much soap and/or water, resulting in the patient becoming a 'passive recipient' in his/her wash.

Table 1 lists an amended step-by-step representation of the bed bath process based on a more comprehensive representation in Potter and Perry (1995). Table 2 lists the steps involved in the BagBath process. The difference required in materials and time is obvious and this suggests that the BagBath is simpler, quicker, has reduced potential for cross-infection and is the least expensive method of washing a patient.

Walsh and Foord (1989) demonstrated how much routine nursing practice was not conducted on the basis of sound research but because it had always been done that way. They challenge nurses to shake off the comfortable complacency of routine and ritual and to take a fresh look at nursing practice (Walsh and Foord, 1995). For all this, the way that nurses bathe patients has remained essentially unchanged for the past 150 years and daily bathing is based more on cultural norms than on clinical requirements (Skewes, 1997).

Wright (1994) conducted a trial and showed that BagBath was effective, popular and less time-consuming than bed baths. Additionally, she calculated that there were labour cost savings and indirect savings from prevention of skin impairments. It is time to review the process of bed bathing and its associated rituals and to consider other less ritualistic modern innovations. Whether it is time to plan a change depends on the healthcare professionals who use BagBath and decide on its merit and educate patients about the myths of bed baths using soap and water. The cost-effectiveness and reduced labour involved per patient, together with added skin care and reduced incidences of skin tears and ulcers from dry skin being torn, may also encourage institutions to consider changing to the one-stop, no-soap, no-rinse, no-drying BagBath process. Table 3 offers a cost comparison between BagBath and bed bathing.

CONCLUSION

Planned change is the deliberate application of knowledge and skills to bring about

change. Many factors influence a system's response to change, including the perceived value of the change, the needs, experiences, culture, values and coping abilities of the system within a given environment. As communication of a new idea is the start of any process of change, in order to consider the value of BagBath, each healthcare professional will need to evaluate actively the advantages and disadvantages of the two processes for themselves and their patients. **BJN**

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