Incontinence-Associated Dermatitis: Moving prevention forward

Best Practice Update 2026

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Global IAD Expert Panel 2026

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Foreword

In 2015, an international panel of experts published 'IAD: Moving prevention forward,' a landmark document that summarised best practice principles and provided actionable guidance for clinicians worldwide. This publication catalysed significant changes in clinical practice by introducing standardised definitions and terminology that reshaped how healthcare professionals (HCPs) understand and manage incontinence-associated dermatitis (IAD). The document was well received globally, became highly cited and informed practice change across multiple healthcare systems. For example, in six clinical settings in Australia, implementation of the 2015 recommendations resulted in significant and sustained improvements in patient outcomes (Barakat-Johnson et al., 2024a; Barakat-Johnson et al., 2024b). Similar impacts have been reported anecdotally in other high-income countries.

At the time of publication, there were major scientific challenges in IAD care, centred on unclear definitions and difficulties in differential diagnosis. Since then, substantial progress has been made. The term IAD is now used more consistently worldwide, with reduced reliance on the imprecise concept of 'moisture' reflecting improved conceptual clarity and alignment in clinical practice.

Despite these achievements, misclassification of IAD as pressure ulcer/injury remains a persistent and clinically significant problem, with important implications for appropriate care and treatment. IAD prevention and effective management is key to preventing deeper tissue damage. Over the past decade, a growing body of evidence has further deepened understanding of IAD, increased recognition of its prevalence and impact, and strengthened effective prevention and management strategies.

Importantly, feedback from HCPs across diverse clinical settings and geographical regions has provided valuable real-world insights, reinforcing the necessity of updating the 2015 publication. In response, an international expert meeting was convened in October 2025 to address emerging unmet needs and develop a 2026 update to the original Best Practice Statement (BPS) publication. Additional experts were included to ensure broader global representation and a more inclusive perspective.

The aim of the 2026 update is to synthesise the latest evidence and translate it into practical, clinically relevant guidance to support frontline clinicians, inform quality improvement initiatives and research, and improve patient outcomes. The document reflects both the substantial progress achieved since 2015 and the ongoing need for innovation and refinement in IAD care.

This update seeks to equip HCPs with a clear and comprehensive understanding of the current IAD landscape and its implications for patients and caregivers. It also highlights persistent barriers that prevent optimal IAD management in everyday practice. The overarching objective is to share evidence-based best practices that support identification of at-risk populations, implementation of effective prevention strategies, accurate IAD categorisation and appropriate management approaches. Finally, this publication aims to provide targeted education for HCPs, healthcare staff, policymakers, patients and caregivers to improve outcomes and enhance quality of care.

Professor Dr. Dimitri Beeckman (Chair)
Professor Dr. Michelle Barakat-Johnson (Co-Chair)

Understanding IAD

IAD is a type of moisture-associated skin damage (MASD) where skin damage results from prolonged contact with urine and/or faeces, affecting perineal, perianal and adjacent areas (Kottner and Dissemond, 2025)

It is important to differentiate between IAD and moisture-associated skin damage (MASD), with IAD recognised as a specific subtype within the broader MASD framework. MASD is an umbrella term describing skin damage resulting from prolonged exposure to moisture from body fluids such as urine, faeces, wound exudate and other sources (Dissemond et al., 2021). Exposure to these fluids alters the skin's physiological environment, including changes in skin pH—most notably alkaline shifts associated with liquid faeces, urine, sweat and wound exudate—and increases contact with chemical and biological irritants. Overall, these interacting factors compromise skin integrity and precipitate local inflammation (Dissemond et al., 2021). Saliva and perspiration have been implicated in moisture-related skin damage, although they are not consistently categorised within existing MASD subtypes.

MASD subtypes are classified according to the primary source of moisture exposure **[Figure 1]**, as described in the Best Practice Statement publication 'Understanding types of moisture-associated skin damage' (Fletcher et al., 2025). Patients affected by severe MASD often experience significant pain, reduced quality of life (QoL), and an increased risk of infection, hospitalisation and overall greater care burden (Woo et al., 2017). IAD affects the perineal, perianal and adjacent skin areas following prolonged exposure to urine and/or faeces (Kottner & Dissemond, 2025).

Many terms relating to moisture damage are imprecise or outdated and have contributed to inconsistent diagnosis and reporting.

BEST PRACTICE STATEMENT

HCPs should use consistent terminologies for all subtypes of moisture-associated skin damage (MASD) to ensure accurate diagnosis, documentation and monitoring of treatment outcomes.

BEST PRACTICE STATEMENT

Classification systems and treatment pathways should be simple and clinically practical. They should include clearly defined treatment bundles that can be readily implemented across diverse care settings.

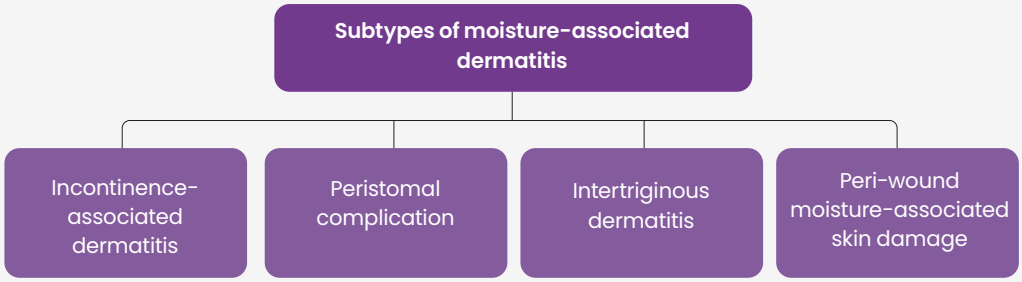


Figure 1. The classification of moisture-associated dermatitis (MASD).

BEST PRACTICE STATEMENT

HCPs should consistently recognise, document and manage IAD affecting the perineal, perianal and adjacent skin to reduce patient discomfort and improve clinical outcomes.

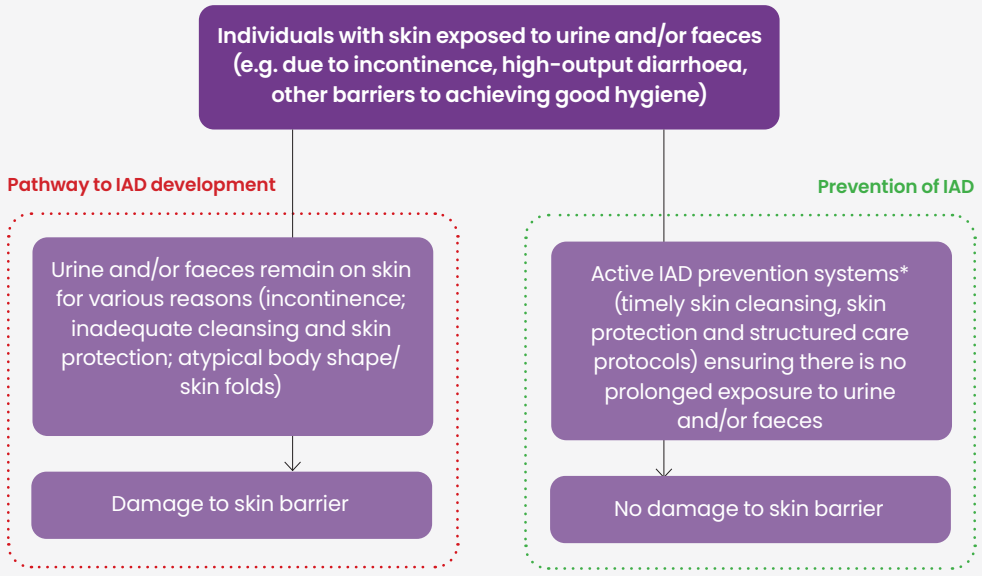
BEST PRACTICE STATEMENT

Standardised terminology should replace historically varied terms (e.g. perineal dermatitis, diaper rash, moisture lesions; see Box 1 and Figure 1) to support reliable identification, monitoring and treatment planning.

Box 1. Terms that have been used for IAD.

- Diaper/napkin/nappy dermatitis
- Diaper/napkin/nappy rash
- Irritant dermatitis
- Moisture lesions
- Perineal dermatitis
- Perineal rash
- MASD.

HCPs should recognise that IAD can develop even in individuals who are continent [Figure 2]. Assessment should consider anatomical features, skin folds and factors affecting hygiene or protection, including reduced physical or cognitive function, to guide targeted prevention and effective management. Recognising this distinction is critical for HCPs to ensure accurate assessment, implement appropriate preventive measures and deliver effective management [Figure 2]. For patients with reduced physical or cognitive function, lack of access to appropriate incontinence



IAD risk assessment must extend beyond continence status alone because IAD occurs due to skin exposure to urine and/or faeces and not just from incontinence.

*Including continence education programmes, when possible and appropriate.

Figure 2. Development and prevention of IAD, irrespective of continence status.

BEST PRACTICE STATEMENT

Effective IAD assessment and management should address prolonged skin exposure and barriers to effective hygiene or protection even in individuals who are continent.

Understanding IAD (Continued)

Aetiology

Faecal and/or urine exposure and loss of skin barrier function

The primary barrier function of the skin resides in its outermost layer, the stratum corneum (Menon et al., 2012; Wang et al., 2022). Depending on anatomical location and reflecting the specific functional requirements of each body region, the stratum corneum consists of approximately 10–20 layers of flattened, terminally differentiated cells known as corneocytes (Menon et al., 2012). These cells originate from keratinocytes in the epidermis and undergo continuous turnover to maintain barrier integrity. As superficial corneocytes are shed through normal desquamation, new corneocytes are generated in deeper layers, ensuring ongoing renewal of the skin barrier.

Corneocytes are embedded within an extracellular lipid matrix arranged in a structure commonly described as a 'bricks-and-mortar' model, in which corneocytes form the bricks and the surrounding lipids act as the mortar **[Figure 3]**. In addition, corneocytes are interconnected by specialised protein structures known as corneodesmosomes, which provide mechanical cohesion and structural stability to the stratum corneum. The skin's outer layer is constantly renewing itself, shedding old cells and producing new ones, which keeps it strong and protects the body from damage and infection. These components regulate transepidermal water movement, allowing sufficient hydration for normal skin function, while preventing excessive moisture accumulation and subsequent barrier impairment.

Corneocytes contain a complex mixture of proteins, sugars and other hygroscopic substances collectively referred to as the natural moisturising factor (NMF). NMF plays a critical role in maintaining hydration of the stratum corneum, thereby preserving skin flexibility and its effective barrier function (Li et al., 2023). The surface of healthy skin is mildly acidic, with a pH typically ranging from 4 to 6, forming the so-called acid mantle. This acidic environment is essential for maintaining skin barrier integrity and regulating the skin microbiome (Li et al., 2023; Brooks et al., 2025). In addition, an acidic pH promotes optimal cohesion between corneocytes, further supporting stratum corneum structure and barrier function (Choi & Kang, 2024).

BEST PRACTICE STATEMENT

HCPs should recognise that IAD results from damage to the skin's barrier. Prevention and management strategies should focus on protecting the skin from overhydration and pH changes to maintain barrier integrity and reduce local inflammation.

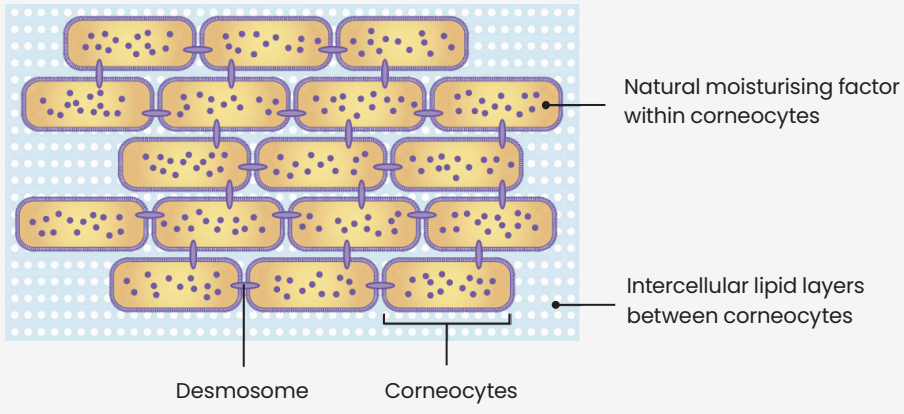


Figure 3. Brick-and-mortar model of the stratum corneum and its role in skin barrier function. Corneocytes form the structural 'bricks' embedded within an intercellular lipid matrix 'mortar' (Voegeli, 2012). Disruption of this structure due to overhydration of the skin results in breakdown of skin barrier function.

BEST PRACTICE STATEMENT

HCPs should recognise that IAD can be exacerbated by repeated washing with soapy solutions and vigorous drying. Prevention and management strategies should focus on protecting the skin from overhydration and pH changes to maintain barrier integrity and reduce local inflammation.

With exposure to urine and/or faeces, water is drawn into and retained within corneocytes, causing them to swell and resulting in overhydration of the stratum corneum. This excessive hydration causes disruption of the organised stratum corneum structure, leading to visible skin changes such as maceration (Voegeli, 2019; Kottner & Dissemond, 2025). Overhydration compromises barrier integrity, allowing irritants to penetrate more readily into the skin and exacerbating local inflammation. In addition, overhydrated skin is more susceptible to mechanical damage, increasing vulnerability to friction and shear forces from contact with clothing, incontinence products, or bed linen (Kottner & Dissemond, 2025).

Exposure to urine and/or faeces also increases the skin's normally acidic surface pH. This occurs in part because skin microorganisms convert urea—present in urine as a by-product of protein metabolism—into ammonia, which is alkaline. Elevated skin pH disrupts the acid mantle, promotes microbial growth and increases the risk of secondary skin infection (Brooks et al., 2025).

Faeces contain lipolytic (lipid-digesting) and proteolytic (protein-digesting) enzymes that can directly damage the stratum corneum. Clinical evidence indicates that liquid faeces is more damaging than formed faeces, as it typically contains higher concentrations of active digestive enzymes (Beeckman, 2017). These enzymes can further act on urea to generate ammonia, amplifying alkalinisation in the presence of urinary incontinence. As enzymatic activity increases at higher pH levels, alkaline conditions further accelerate skin barrier degradation. This interaction helps explain why mixed incontinence, involving combined exposure to urine and faeces, is often more irritating and damaging to the skin than exposure to either alone (Jiang et al., 2023; Deprez et al., 2024). Individuals with faecal incontinence, with or without concomitant urinary incontinence, are at significantly higher risk of developing IAD than those with urinary incontinence alone **[Figure 4]**. Clinical evidence shows that liquid or loose faeces is associated with a substantially increased likelihood of IAD compared with formed faeces, with reported odds ratios ranging from approximately 2.5 to 5 in observational cohorts, highlighting faecal consistency as a key risk modifier (Jiang et al., 2023; Deprez et al., 2024).

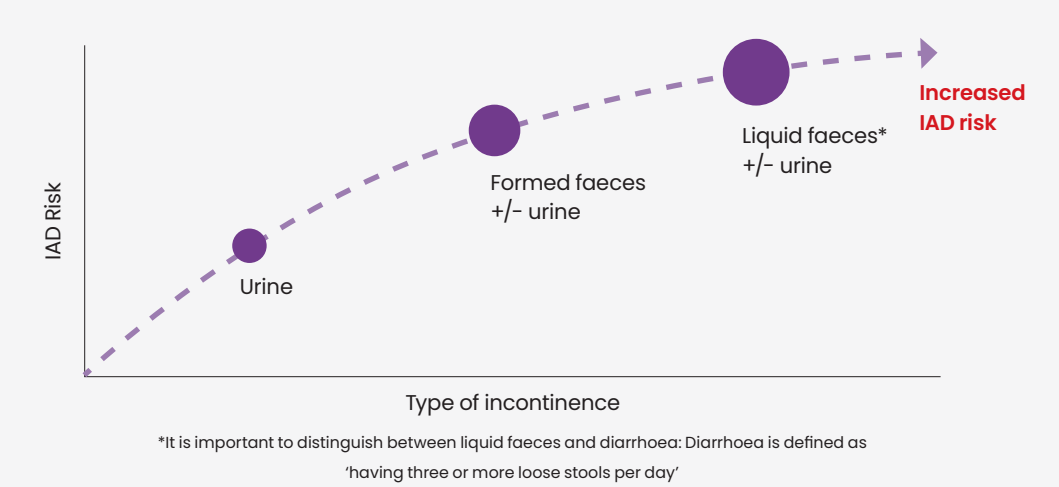
BEST PRACTICE STATEMENT

HCPs must prioritise risk assessment and prevention strategies for individuals exposed to faeces.

Although the primary aetiological drivers of IAD are skin overhydration and elevation of skin surface pH, emerging evidence indicates that IAD development is multifactorial, involving a cascade of interacting biological and environmental factors (Rodríguez-Palma et al., 2021). Further research is needed to clarify the relative contribution and interaction of these factors in the development of IAD.

Understanding IAD (Continued)

Figure 4. Faecal exposure acts as a direct chemical irritant to the skin, with loose or liquid faeces markedly increasing the risk and severity of IAD (Beeckman et al., 2015).



Prevalence and incidence

There is considerable variability in reported prevalence and incidence of IAD, reflecting differences in care settings, underlying rates of incontinence, patient case mix and the absence of universally applied diagnostic criteria. This variability limits comparability of epidemiological data and challenges accurate estimation of disease burden and evaluation of prevention strategies.

Where data are collected using appropriate methodology and reported accurately, IAD is consistently shown to be a significant and prevalent clinical problem. However, in many countries, the true number of individuals affected by IAD remains unknown. This is due, in part, to ongoing challenges in recognising IAD and accurately distinguishing it from category 1 and 2 pressure ulcers/injuries, leading to under-recognition and misclassification (see page 19 for a QR code to access information on differential diagnosis of IAD).

The absence of an internationally validated and consistently applied method for IAD data collection has historically contributed to wide variation in reported prevalence and incidence estimates (Van den Bussche et al., 2018a). A recent review of global studies involving older adults with faecal incontinence identified considerable heterogeneity in reported IAD prevalence, ranging from 1.44% to 65.40% across long-term care and hospital settings (Sparling et al., 2025). This variability reflects differences in study design, population characteristics and case identification methods. Nevertheless, several recent studies have reported both prevalence and incidence of IAD across diverse clinical settings, collectively indicating that IAD represents a substantial and potentially widespread global health problem. See **Table 1** for IAD prevalence and incidence. Prevalence refers to the proportion of individuals with a condition at a specific point or period, while incidence refers to the number of new cases that develop over a defined time period. Misusing these terms or using them interchangeably can undermine the validity, interpretation and comparability of research and clinical data.

BEST PRACTICE STATEMENT

Prevalence and incidence are distinct epidemiological concepts and must be clearly defined, correctly applied and consistently reported. HCPs and researchers should use the terms 'prevalence' and 'incidence' correctly and consistently.

Table 1. IAD prevalence and incidence.	
Prevalence (i.e. proportion of patients with IAD at a defined point in time)	• 4.3% in 8,365 inpatients in Welsh hospitals (Clark et al., 2017) • 11.5% in 191 residents in 3 long-term care homes in Ireland (Wall et al., 2024) • 21% in 108 residents in 3 Belgian nursing homes (Van den Bussche et al., 2018b)
Incidence (i.e. proportion of patients who develop IAD over time)	• 6.7% in 799 patients in 6 public hospitals in Australia (Cunich et al., 2025)

The wide variation in reported prevalence and incidence of IAD reflects multiple interacting factors, including differences in care settings, underlying rates of incontinence, patient case mix and the absence of universally applied diagnostic criteria for IAD. These inconsistencies limit the comparability of epidemiological data and hinder accurate estimation of disease burden. To generate clinically meaningful and actionable data, epidemiological studies of IAD must contextualise prevalence and incidence estimates by reporting them in relation to the proportion of the population that is incontinent or otherwise at risk of prolonged exposure to urine and/or faeces. Such standardised reporting is essential to support valid comparisons across settings, inform resource allocation and guide targeted prevention strategies in clinical practice.

Impact

IAD places a substantial burden on individuals receiving care, caregivers, HCPs and healthcare systems worldwide (Kikas et al., 2024; Cunich et al., 2025). IAD is associated with pain, discomfort, impaired dignity, increased care complexity and, in some cases, may progress to chronic, non-healing wounds that are susceptible to infection, further exacerbating patient distress and clinical risk (Barakat-Johnson et al., 2024a). However, accurately quantifying the burden attributable specifically to IAD remains challenging, as its impacts are closely interrelated with those of incontinence itself and are difficult to disentangle in both clinical practice and health-economic analyses (Campbell et al., 2017; Van den Bussche et al., 2018a). **Table 2** summarises the multidimensional impact of IAD on individuals, caregivers, HCPs and healthcare systems.

Individuals describe the experience of IAD as debilitating, stigmatising and often under-recognised by HCPs, with substantial negative effects on QoL and psychological wellbeing (Barakat-Johnson et al., 2024a). The patient quotes below (courtesy of Michelle Barakat-Johnson) emphasise the impact on patients:

"Living with incontinence was already difficult, but the skin damage made everything worse. The pain, the constant care and the loss of dignity were overwhelming."
"It wasn't just the incontinence—the skin pain and irritation made daily life much harder."

For patients, both incontinence and the resulting skin damage negatively affect QoL. This highlights a significant gap in patient-perspective research focused specifically on IAD. Emerging evidence suggests that person-centred approaches to continence and skin care are associated with improved outcomes in IAD (Qiao & Banharak, 2023). Consequently, acknowledging patient experience and prioritising proactive, preventive IAD management are essential components of high-quality, person-centred care.

Understanding IAD (Continued)

Table 2. Impact of IAD on patients, caregivers, HCPs and healthcare systems.

Persons suffering from IAD	**Physical deterioration:** skin breakdown; pain; discomfort; leakage; malodour; loss of hygiene; increased susceptibility to secondary complications (e.g. delayed healing, infections and other dermatological concerns, and wounds such as pressure ulcers/injuries); sleep disruption; reduced rehabilitation potential **Reduced QoL:** loss of dignity; reduced mobility, independence and life activities (e.g. ability to self-care; isolation, especially in younger people with life-limiting conditions); fear of malodour, anxiety about IAD and incontinence complications
Caregivers	Increased care burden and associated burn-out; impact of the need to manage incontinence for a loved one (e.g. the need to proactively protect the skin requires attending to intimate needs of the individual consistently and thoroughly), increased financial costs associated with washing of clothes and linen
HCPs and healthcare systems*	Increased nursing time and resource utilisation (e.g. cleansing, barrier products, dressings); inefficient or inappropriate use of skin care and continence products resulting in wasted resources; increased acute care costs, including prolonged hospital stays, readmissions and higher staffing demands; additional care and logistical costs across care settings (e.g. acute care, long-term care and community services); increased workload to maintain patient privacy and dignity; heightened administrative burden associated with care quality monitoring and reporting **Wider environmental/societal impact:** adverse implications for environmental sustainability due to increased use of single-use products and increased laundry demands; risk of accidental falls; potential contribution to antimicrobial resistance (AMR) through increased infection risk and antimicrobial use in individuals with IAD

*Care settings vary widely across regions in their structure, purpose and care delivery models, resulting in differences in patient populations, resources and continence care practices. These contextual differences must be considered when interpreting data and implementing or benchmarking IAD prevention and management strategies.

Scan the QR code to review a summary of differences in global care settings

IAD contribution to pressure ulcer/injury development

Incontinence is a well-established risk factor for pressure ulcer/injury development and, in some populations, has been shown to approximately double the risk of pressure ulcer/injury (Gray & Giuliano, 2018; Elli et al., 2022). IAD and pressure ulcers/injuries share several underlying risk factors and frequently co-occur in individuals with poor general health, limited mobility and high levels of care dependency (Elli et al., 2022). Once IAD is present, the risk of subsequent pressure ulcer/injury development increases, alongside a heightened risk of secondary infection and morbidity (Kayser et al., 2021). Evidence indicates a dose–response relationship, with the likelihood of pressure ulcer/injury development increasing as IAD severity worsens (Demarre et al., 2015).

IAD and pressure ulcers/injuries arise from distinct pathophysiological mechanisms but may coexist in the same individual, particularly in populations with high care dependency **[Figure 5]**. IAD is primarily a 'top-down' injury, in which damage originates at the skin surface due to prolonged

BEST PRACTICE STATEMENT

HCPs must recognise that individuals at risk of skin injury from pressure and shear are also at increased risk of skin damage related to moisture, friction and chemical irritants, and vice versa. Risk assessment and prevention strategies should therefore address these risks concurrently through an integrated approach to skin care and pressure ulcer/injury prevention.

exposure to moisture, chemical irritants and friction, leading to progressive impairment of the epidermal barrier. In contrast, pressure ulcers/injuries are predominantly 'bottom-up' injuries, initiated by sustained mechanical loading, shear and ischaemia within deeper soft tissues, with tissue damage developing beneath intact skin and extending outwards towards the surface.

Despite these differing aetiologies, both conditions share common risk factors, including immobility, compromised skin integrity, incontinence and poor overall health, which increase the likelihood of their co-occurrence. The presence of IAD may increase vulnerability to pressure-related tissue damage by weakening the skin barrier. At-risk individuals require careful assessment, to enable accurate diagnosis and integrated prevention strategies in clinical practice.

Recognising that not all superficial skin injury is caused by pressure, and that alternative aetiologies may be responsible, has been fundamental to improving differentiation between IAD and pressure ulcers/injuries (Gefen, 2019; Kottner & Dissemond, 2025). This conceptual shift has underpinned the development of structured frameworks to support accurate clinical classification. Superficial skin changes, including those observed in early-stage pressure ulcers/injuries, are now understood to be influenced by frictional forces acting at the skin's surface, rather than pressure alone.

Beyond mechanical loading, alterations in the skin's microclimate—particularly increased moisture resulting from trapped perspiration or exposure to urine and/or faeces—further increase susceptibility to superficial skin damage. Pressure ulcer/injury development is a multifactorial process involving several interacting pathophysiological mechanisms, including localised tissue ischaemia, direct cell deformation, reperfusion injury and impaired lymphatic drainage.

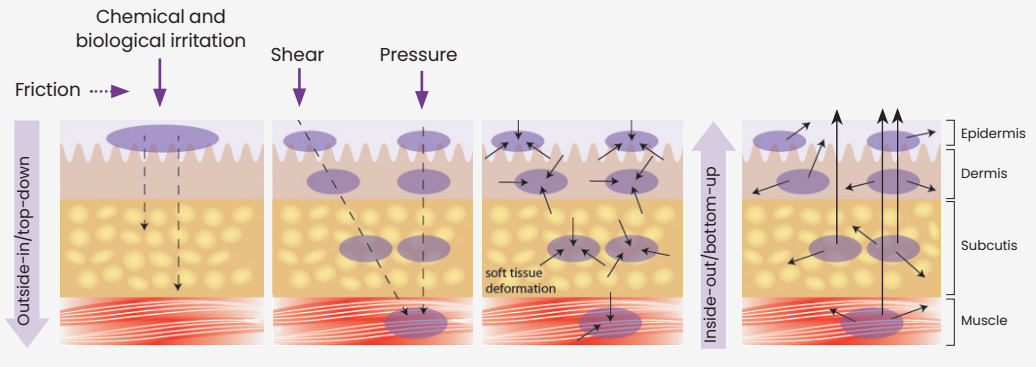


Figure 5. Top-down and bottom-up mechanisms in IAD and pressure ulcer/injury development (Beeckman et al., 2015).

Understanding IAD (Continued)

Wet skin is more susceptible to the effects of friction, an effect that is exacerbated by the chemical constituents of urine. Experimental and computational modelling studies have demonstrated that increased friction at the skin–support surface interface reduces tissue tolerance to pressure and shear stresses, leading to significant deformation within deeper soft tissues (Shaked & Gefen, 2013; Gefen, 2014; Gefen, 2021). This deformation contributes to the development of pressure ulcers/injuries through mechanically induced tissue damage. In addition to mechanical factors, inflammatory responses associated with skin barrier disruption may further reduce tissue resilience and increase vulnerability to pressure-related injury.

IAD-related skin damage and pressure ulcers/injuries may occur in the same anatomical location or in close proximity. This overlap, combined with shared risk factors and interacting mechanical and microclimate influences, presents a significant challenge for accurate assessment and classification. Careful evaluation of aetiology, tissue characteristics, exposure history and contributing forces is therefore essential to support correct diagnosis and appropriate prevention and management strategies.

BEST PRACTICE STATEMENT

It is important for HCPs to remember that incontinence is a recognised risk factor for pressure ulcer/injury development; however, IAD may occur independently of pressure ulcer/injury-related risk factors and pressure ulcers/injuries may likewise develop in the absence of IAD.

Although further research is needed, preventing IAD should be considered an essential component of comprehensive pressure ulcer/injury prevention programmes. HCPs should implement interventions that reduce friction, shear and prolonged exposure to urine and/or faeces, as evidence suggests that effective IAD prevention can lower the risk of superficial pressure ulcer/injury development, even when other risk factors are absent. Prevention strategies for IAD and pressure ulcers/injuries are intrinsically linked and cannot be separated in practice.

Preventing IAD

IAD is preventable in many cases. Evidence from a large multicentre study involving almost 2,000 patients across six acute care settings in Australia demonstrated that timely implementation of evidence-based interventions was associated with an approximately 36% reduction in hospital-acquired IAD, alongside a meaningful reduction in IAD severity (Barakat-Johnson et al., 2024b). These findings highlight the potential for substantial improvement in IAD outcomes when structured, evidence-based care approaches are consistently implemented in partnership with patients and caregivers.

Older adults are particularly vulnerable to skin damage due to age-related physiological changes, comorbidities and increased care dependency. Given the distinct pathophysiology of IAD compared with pressure ulcers/injuries, dedicated attention is required to ensure the use of appropriate assessment tools and tailored prevention and management strategies (Banharak et al., 2021). Despite this, barriers to effective IAD prevention persist across care settings, including the absence of structured prevention and care protocols and limited education of HCPs regarding IAD risk factors and evidence-based interventions (Amin et al., 2024; Barakat-Johnson et al., 2024b).

BEST PRACTICE STATEMENT

IAD must be prevented through proactive, systematic and organisation-wide prevention strategies, rather than managed primarily through reactive treatment. Structured, evidence-based skin care protocols should be implemented according to the 'Cleanse, Protect, Restore' framework.

Identifying risk

A recent systematic review identified several key risk factors for the development of IAD, including frequent loose faeces, reduced mobility, friction related to movement or positioning, advanced age and female sex (Deprez et al., 2024). These factors do not act in isolation but interact synergistically, substantially increasing the overall risk of IAD and the need for comprehensive, multifactorial risk assessment and prevention strategies (Deprez et al., 2024).

HCPs should recognise that the risk of IAD is increased by a combination of patient-related, clinical and care-related factors (see page 39 for 'Recommendations for special populations'). Key risk factors include:

Incontinence-related factors

- Type of incontinence, with highest risk associated with:
  - Faecal incontinence (particularly loose or liquid faeces)
  - Double incontinence (combined faecal and urinary incontinence)
  - Urinary incontinence
- Frequency and duration of incontinence episodes, especially repeated faecal soiling
- Prolonged skin contact with urine and/or faeces, including delayed cleansing.

Skin and physiological vulnerability

- Compromised skin integrity (e.g. age-related skin changes, chronic steroid use, diabetes, dehydration)
- Reduced skin resilience due to chronic inflammation or oedema
- Elevated body temperature (pyrexia) and excessive perspiration
- Poor nutritional status, including protein-energy malnutrition and micronutrient deficiencies

- Necessary use of liquid feeds and antimicrobial agents that promote liquid faeces
- Female gender (due to anatomical differences, skin occlusion and higher rates of incontinence)
- Advanced age (due to reduced skin barrier function and higher rates of incontinence).

Mobility, cognition and functional status

- Immobility or reduced mobility, limiting repositioning and self-care
- Friction and shear related to movement, transfers or repositioning
- Diminished cognitive awareness (e.g. delirium, dementia), reducing the ability to recognise or respond to incontinence episodes
- Inability to perform personal hygiene independently
- Pain, which may limit movement, hygiene, or tolerance of skin care interventions.

Anatomical factors

- Body size and shape, including obesity or deep skin folds, that impede effective cleansing, drying and skin inspection
- Anatomical features that promote moisture trapping or occlusion.

Care-related and treatment factors

- Use of occlusive containment products, particularly when poorly fitted or used without appropriate skin protection
- Application of low-durability or water-soluble skin protectants
- Critical illness, including haemodynamic instability, multisystem failure, or high-dependency care
- Medication that influences faeces consistency, skin integrity or immune response **[Table 3].** Liquid feeds and antibiotics are two major contributors to liquid faeces
- High care dependency, staffing constraints, or delayed access to appropriate continence and skin care resources.

These factors frequently coexist and interact, resulting in cumulative and synergistic increases in IAD risk. Effective prevention therefore requires comprehensive risk assessment, early identification of vulnerable individuals and timely implementation of integrated continence and skin care strategies.

Table 3. Medication classes associated with an increased risk of IAD (Sparling et al., 2025).

	Proposed mechanism	Class of medication
INCREASING IAD RISK	Altered neuromuscular and/or cognitive function	Sedatives, hypnotics
	Compromised skin barrier	Long-term corticosteroids, calcineurin inhibitors
	Faecal incontinence	Liquid feeds, laxatives, lipase inhibitors, antibiotics, antifungals, antivirals, antacids containing magnesium, cholinesterase inhibitors, dopaminergic agents, antidepressants, antipsychotics, cancer chemotherapy, thyroid replacement therapy, nitrates, calcium channel blockers, beta-adrenergic antagonists, proton pump inhibitors, metformin, acarbose, certain prostaglandins (latanoprost), opioids, phosphodiesterase type 5 inhibitors (sildenafil), digoxin, lactulose
	Urinary incontinence	Alpha-adrenergic antagonists, antipsychotics, benzodiazepines, antidepressants, hormone replacement therapy, diuretics

Recent evidence identifies specific classes of medications that increase the risk of IAD **[Table 3]**. HCPs should routinely consider medication profiles, polypharmacy and associated comorbidities when assessing IAD risk, in order to implement timely and targeted preventive interventions.

Poor or inappropriate management of incontinence can significantly contribute to the development of IAD (Jiang et al., 2023; Atlı & Kaplan Serin, 2024; Deprez et al., 2024; Wang et al., 2024). Key contributing factors include:

- Prolonged skin exposure to urine and/or faeces, resulting from infrequent changing of incontinence products, delayed or inadequate cleansing, or inappropriate product selection (e.g. use of pads with tapes or adhesives that increase occlusion and friction)
  - For example, sanitary pads provide suboptimal fluid management compared with incontinence pads, as they are designed to absorb menstrual blood, which differs from urine in viscosity and volume. During peri- and post-menopause, some women may experience incontinence and use sanitary pads, often due to lower cost or perceived stigma associated with purchasing incontinence products. This practice may contribute to skin damage and ultimately increase the long-term costs associated with managing preventable complications
- Poorly designed or inappropriate absorbent or containment devices, which may exacerbate skin overhydration by retaining moisture against the skin surface, particularly products with impermeable plastic backings
- Excessive or inappropriate use of thick, occlusive skin protectant products, which can impair the fluid uptake capacity of absorbent products and promote overhydration of the stratum corneum
- Frequent cleansing with water and soap, which can compromise skin barrier function by disrupting corneocytes, removing protective lipids, increasing skin dryness and increasing susceptibility to friction-related injury
- While daily chlorhexidine gluconate bathing may reduce healthcare-associated infections in selected hospital populations (Huang et al., 2016), chlorhexidine gluconate should be used cautiously in individuals at risk of IAD, as frequent antiseptic cleansing may compromise skin barrier function and may contribute to AMR (Kampf, 2016)
- Aggressive cleansing techniques, such as the use of regular washcloths or vigorous rubbing, which increase frictional forces and may cause mechanical abrasion of already vulnerable skin.

Prevention of IAD in patients with incontinence

Figure 6 outlines key steps for skin protection and incontinence management, while **Box 2** provides practical recommendations for bathing and cleansing routines for individuals with incontinence. HCPs should implement evidence-based prevention protocols **[Figure 7]** consistently and avoid

BEST PRACTICE STATEMENT

The presence of urinary and/or faecal incontinence should automatically trigger implementation of an evidence-based IAD prevention protocol, even in the absence of additional risk factors, with the aim of minimising skin exposure to urine and faeces and maintaining skin integrity.

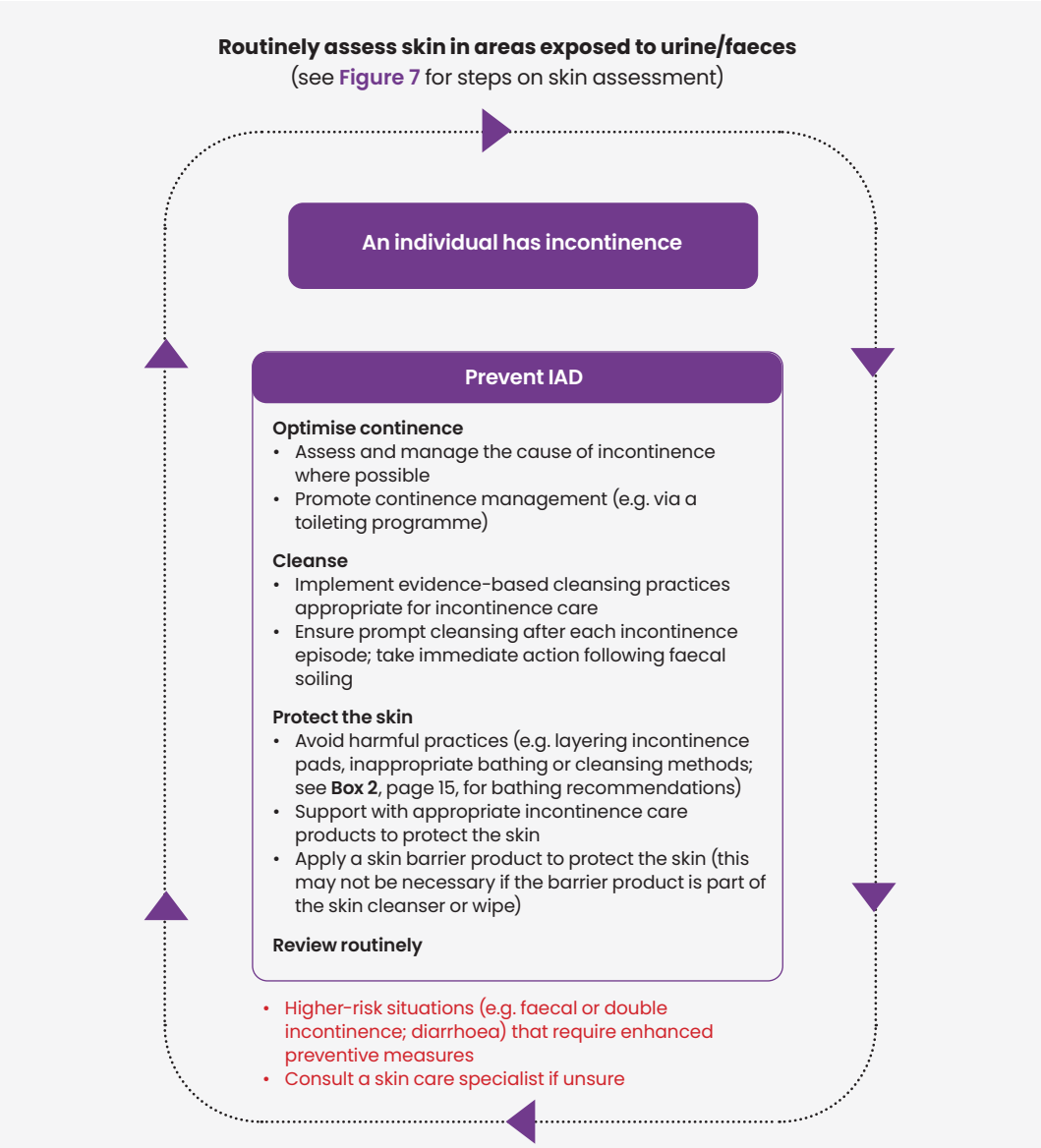
Box 2. Bathing recommendations for skin protection and IAD prevention.

If not bathing or showering:
Cleanse the skin in the perianal, perineal and adjacent areas using a gentle, pH-balanced, non-perfumed rinse-off or leave-on cleanser applied with a disposable washcloth, or use an appropriate incontinence wipe. Do not use flannels or reusable face cloths, as these may increase friction and microbial transfer.

If bathing or showering:
Use a gentle, non-perfumed body wash only. Do not add other products (e.g. salts, antiseptics, or bubble baths). Ensure the area is thoroughly rinsed to remove cleanser residue and carefully dried, paying particular attention to skin folds. Pat dry gently without rubbing.

Preventing IAD (Continued)

Figure 6. Skin protection and incontinence management in people with or at risk of IAD.



BEST PRACTICE STATEMENT

Routine IAD prevention should prioritise gentle cleansing and barrier protection.

practices known to increase skin damage risk, such as layering multiple incontinence pads (Beele et al., 2018). All healthcare settings must have access to clear, standardised and ready-to-use protocols for the prevention and management of IAD.

Skin assessment for prevention

Figure 7 outlines the steps in skin assessment when an individual may be prone to exposure to urine and/or faeces or IAD, or presents with symptoms similar to IAD.

It is important to recognise that the nature of IAD may create specific barriers to timely skin inspection and patient assessment. Concerns related to privacy, dignity and embarrassment may limit patient willingness to permit examination of affected areas. Pain and discomfort associated with IAD may reduce tolerance for positioning or prolonged assessment, further complicating clinical evaluation. HCPs should anticipate these challenges and adopt sensitive, respectful and patient-centred approaches to assessment.

BEST PRACTICE STATEMENT

All HCPs should possess an understanding of skin assessment principles, pathophysiology of incontinence and the multifactorial contributors to IAD development.

BEST PRACTICE STATEMENT

HCPs should be competent in applying preventive measures and evidence-based treatment strategies to deliver effective, targeted and timely care.

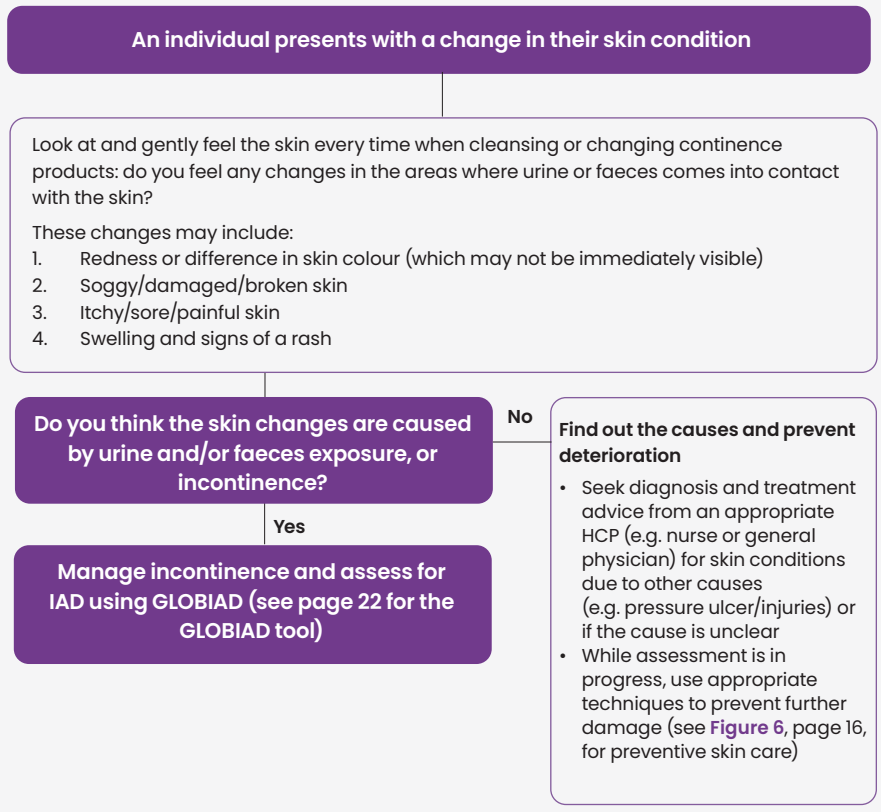


Figure 7. Structured skin assessment and escalation pathway for individuals at risk of urine and/or faeces exposure, IAD or IAD-like skin changes.

Preventing IAD (Continued)

BEST PRACTICE STATEMENT
Organisations must apply robust governance principles to the prevention and management of IAD, including consideration of IAD care as a formal quality indicator.

BEST PRACTICE STATEMENT
Evidence-based products specifically designed for IAD prevention and management should be embedded within standardised IAD care pathways across healthcare settings.

BEST PRACTICE STATEMENT
Long-term cost-effectiveness and sustainability should be core objectives of IAD-focused quality improvement plans (QIPs).

HCPs must receive setting-specific education and training in skin assessment, differential diagnosis and accurate classification of IAD; the training for all care staff and HCPs should, at least, include early identification of skin changes. Only HCPs who are appropriately trained and deemed competent should perform these assessments, with clear roles, responsibilities, and accountability defined by the organisation in accordance with established competency frameworks, quality standards and local procedures.

Recognising and classifying IAD

Accurate identification of IAD and differentiation from pressure ulcers/injuries (category 1 or 2) and other skin conditions remains clinically challenging. To ensure appropriate treatment for the individual, differential diagnosis is crucial.

Differential diagnosis of IAD

IAD may present with features that overlap with pressure-related skin damage and with other conditions, including contact dermatitis (e.g. related to textiles or skin care products), infection-related lesions (e.g. herpes simplex), or other moisture-related conditions such as intertrigo. These diagnostic challenges contribute to under-recognition and misclassification in routine practice.

In healthcare systems where pressure ulcers/injuries are used as quality-of-care indicators and their management is not reimbursable, misdiagnosis of IAD as a pressure ulcer/injury may have clinical, organisational and financial consequences. Accurate assessment and diagnosis of IAD are therefore essential to ensure that individuals receive appropriate and timely treatment, clinical documentation is correct and quality reporting and reimbursement processes are accurate and defensible.

Assessment of IAD is based primarily on clinical observation and visual inspection. At present, no validated bedside or point-of-care technologies are available to support the assessment or diagnosis of IAD, emphasising the importance of clinical expertise, systematic assessment and ongoing reassessment (refer to **Box 3** for an update on ongoing innovations in this field).

Assessment may be further complicated by the fact that IAD and pressure ulcers/injuries can coexist in the same anatomical area. In such cases, clear differentiation may not be immediately possible and may only become apparent after implementation of an appropriate management protocol and observation of the skin's response to treatment over time (e.g. 3–5 days). Careful ongoing reassessment is therefore critical to support accurate diagnosis and optimal management.

Scan the QR code to access a differential diagnosis chart comparing IAD with pressure ulcers/injuries, along with images of additional dermatological conditions that may present similarly to IAD.

Box 3. Advances in assessing skin barrier function.

Transepidermal water loss (TEWL) is the amount of water that naturally escapes from the skin into the air (Fluhr et al., 2006). Measurement of TEWL shows how well the skin is acting as a barrier. Higher water loss means the skin is damaged or not functioning properly. In general, increased TEWL values indicate impairment of the epidermal barrier. However, TEWL measurement is technically demanding, highly sensitive to environmental conditions and currently impractical for routine clinical use outside research settings. Interpretation of results requires specialist expertise and there is insufficient evidence to demonstrate that TEWL or related biophysical skin measurements offer clear advantages over standard clinical assessment for the diagnosis or management of IAD at this time.

BEST PRACTICE STATEMENT

When the aetiology of erythema is uncertain, a standardised, evidence-based bundle addressing both IAD and pressure ulcer/injury prevention should be implemented without delay. This bundle should include strategies to reduce moisture exposure, friction and pressure, alongside appropriate skin protection and repositioning strategies.

BEST PRACTICE STATEMENT

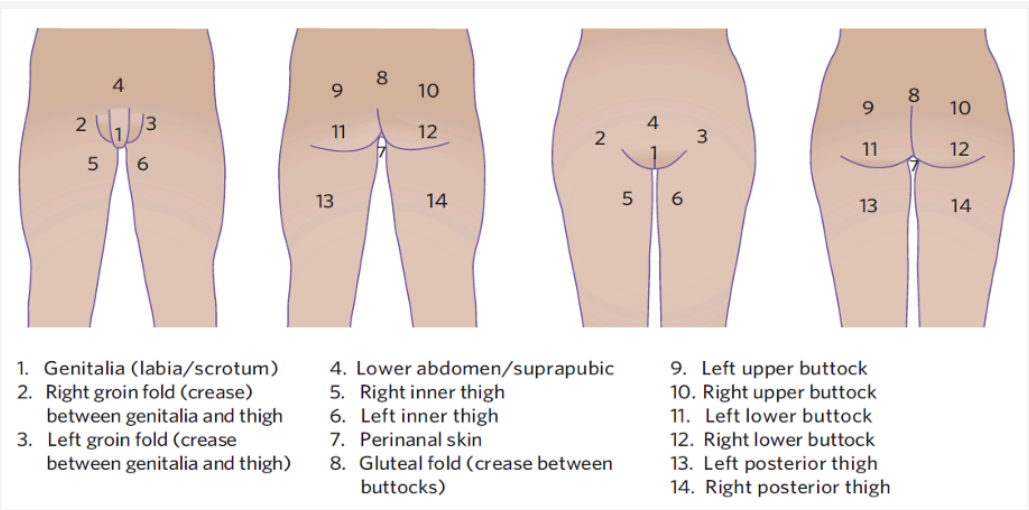
Throughout IAD management, the skin should be reassessed at defined intervals and the individual's clinical response to intervention should be used to inform differentiation, refinement of the care plan and escalation, if deterioration occurs.

BEST PRACTICE STATEMENT

HCPs should be aware that reduction of moisture exposure is not possible by applying products that contain moisture components and are designed to increase hydration.

Recognising and classifying IAD (Continued)

Figure 8. Areas of skin that may be affected by IAD (Beeckman et al., 2015).



IAD may also develop at an abdominal stoma site; however, discussion of this presentation is outside the scope of this publication.

IAD distribution

The distribution of affected skin in IAD is variable and may extend well beyond the perineum (the area between the anus and the vulva or scrotum) depending on the extent of skin contact with urine and/or faeces. In urinary incontinence, IAD tends to affect the folds of the labia majora in women or the scrotum in men, and groin folds. It can also extend over the lower abdomen and the anterior and medial thighs (e.g. a saturated absorbent pad in contact with a wider area of skin can increase the affected area). IAD associated with faecal incontinence originates in the perianal area. It often involves the gluteal fold and buttocks and can extend upwards over the sacrococcygeal area and back and downwards over the posterior thighs **[Figure 8]**.

Depending on the extent of contact with urine and/or faeces, IAD may affect large areas of skin, not just the skin of the perineum. It is important to consider the effects of gravity and the positions the patient favours, ensuring to assess skin that may not be in direct contact with the source of urine and/or faeces (e.g. urine may trickle down towards the thigh and leg regions).

IAD symptoms

Clinical presentation of IAD varies according to skin tone and severity. In individuals with light skin tones, early IAD typically presents as erythema, ranging from pale pink to bright red. In individuals with dark skin tones, colour changes may be more subtle and can present as areas that appear darker or lighter than surrounding skin, or with purple, deep red or yellowish hues, rather than overt 'redness'. These variations can make early recognition challenging and require careful assessment.

Affected areas usually have poorly demarcated borders and may present as patchy lesions or more diffuse changes over larger skin surfaces. Inflammation often results in the affected skin feeling warmer, firmer, or oedematous compared with adjacent unaffected tissue, even when the epidermis remains intact. As IAD progresses, a range of secondary skin changes may be observed, including vesicles or bullae, papules or pustules, and varying degrees of epidermal breakdown. In more severe cases, partial or complete erosion of the epidermis may occur, exposing a moist, weeping dermis.

Figure 9 illustrates examples of IAD across a spectrum of severity (see page 22 for classification guidance). Patients may experience pain, burning, stinging, itching or tingling, and pain may be present even in the absence of visible skin loss. Beyond local skin symptoms, IAD can impose a

A. IAD-induced erythema (category 1 IAD)

B. Erythema with skin breakdown (category 2 IAD). Potential secondary infection present.

Figure 9. IAD with varying degrees of severity (images courtesy of Jacqui Fletcher, Patricia Idensohn and Elizabeth Edwards).

BEST PRACTICE STATEMENT

HCPs should follow standardised, evidence-based IAD protocols with dedicated documentation fields in health records. All relevant findings, clinical details and, where appropriate, images must be recorded accurately, with clear criteria for escalation, referral and review. This structured approach supports consistent care, informed decisions and robust quality assurance.

substantial burden on individuals, contributing to loss of independence, disruption of daily activities and sleep, increased care needs, and reduced QoL. The severity of this impact typically increases with the frequency, duration and volume of urinary and/or faecal exposure.

IAD classification and monitoring

Comprehensive assessment of the skin and any wounds is essential in individuals presenting with IAD. To support standardised assessment and severity classification, the Ghent Global IAD Tool (GLOBIAD) for use in adults was developed in 2018 through an international Delphi consensus process (Beeckman et al., 2018). GLOBIAD enables identification of individuals at risk and classifies IAD into two main categories: persistent erythema (category 1) and skin loss (category 2). Each category is further subdivided according to the presence or absence of clinical signs suggestive of infection. Validation and cultural adaptation studies have demonstrated good diagnostic performance, with an inter-category sensitivity of 90% and specificity of 84%, supporting the tool's reliability for IAD classification (Wojastyk et al., 2024).

GLOBIAD is designed for point-in-time severity classification and does not capture changes in disease progression over time. To address this limitation, an extension of the tool—GLOBIAD-M, where 'M' denotes monitoring—was subsequently developed (Van den Bussche et al., 2018a). GLOBIAD-M supports ongoing assessment of IAD progression through serial visual evaluation, including the use of clinical photographs. Studies have shown strong inter-rater agreement and reliability for GLOBIAD-M when used by trained assessors, supporting its use for longitudinal monitoring and evaluation of treatment response (Van den Bussche et al., 2018a; Wojastyket al., 2024) .

Table 4 (parts a and b) illustrates the GLOBIAD classification system for IAD and a representative snapshot of the GLOBIAD-M monitoring dashboard used for longitudinal assessment.

Recent studies have demonstrated the applicability and effectiveness of GLOBIAD-based classification and monitoring across a range of healthcare settings, including acute hospital care and primary healthcare services. Collectively, the GLOBIAD tools support identification of individuals at risk of IAD, standardised categorisation of established IAD and objective monitoring of healing over time in both clinical practice and research contexts. Reliable and consistent use of these tools facilitates informed clinical decision-making, including timely escalation or modification of care when expected improvement is not observed (e.g. escalation in accordance with local clinical pathways when deterioration or lack of improvement is identified through GLOBIAD-M monitoring).

However, use of GLOBIAD and GLOBIAD-M may be challenging for generalist HCPs or care staff without specialised training. There is therefore a need for simplified, user-friendly versions or implementation supports that enable wider adoption by frontline staff across diverse care settings, while maintaining diagnostic accuracy and consistency. Overall, it is important to use standardised tools for IAD classification and reporting.

Limitations of the GLOBIAD tools

The initial validation studies of both GLOBIAD and GLOBIAD-M were conducted with relatively small sample sizes (Beeckman et al., 2018; Van den Bussche et al., 2018a). These foundational studies provide a strong basis for further research, including confirmation of validity through large-scale, international clinical studies. While the tools show clear potential to support clinical decision-making in the management of IAD, additional validation across diverse patient populations—including individuals with dark skin tones—will further strengthen their applicability and inclusivity (Wojastyk et al., 2024).

Table 4 (part a). Categories of IAD based on the GLOBIAD tool.

Category	Description	
At risk	Intact skin with no visible erythema or damage. Patient has incontinence risk factors but skin barrier remains uncompromised	
Category 1A	Visible erythema present with intact skin surface. Early inflammatory response without barrier breach or tissue loss	  Visible erythema present with intact skin surface. Early inflammatory response without barrier breach or tissue loss (Images courtesy of Jacqui Fletcher and Kris Bernaerts)
Category 1B	Persistent redness with clinical signs of infection	 (Image courtesy of Kris Bernaerts)
Category 2A	Skin loss without clinical signs of infection	  Patches of denudement present over buttocks with surrounding erythema and maceration (Images courtesy of Kris Bernaerts)
Category 2B	Skin loss with clinical signs of infection	  (Images courtesy of Dimitri Beeckman and Kris Bernaerts)

It is also important to note that the original validation relied on patient photographs combined with visual assessment of erythema and tissue loss. Future research could build on this work by incorporating additional clinical indicators of infection, such as skin temperature, oedema, pain and pruritus.

Recognising and classifying IAD (Continued)

Table 4 continued (part b). A snapshot of the GLOBIAD-M monitoring dashboard used for longitudinal assessment. Scan the QR code to access and download a PDF of the GLOBIAD-M tool.

GLOBIAD

Ghent Global IAD Categorisation Tool

DAILY IAD MONITORING

GENERAL DATA

Date

Patient ID

Nurse initials

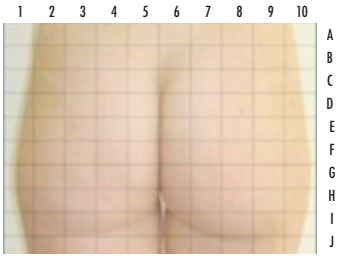
IAD CATEGORISATION

Categorisation of IAD according to GLOBIAD

- ☐ 1A Persistent redness without clinical signs of infection
- ☐ 1B Persistent redness with clinical signs of infection
- ☐ 2A Skin loss without clinical signs of infection
- ☐ 2B Skin loss with clinical signs of infection

PERSISTENT REDNESS

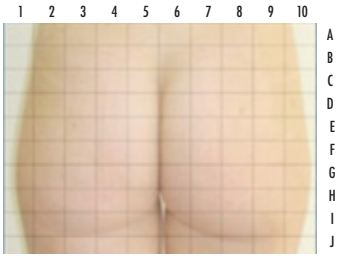
Indicate the squares where you observe persistent redness



☐ % redness

SKIN LOSS

Indicate the squares where you observe skin loss



☐ % skin loss

OEDEMA AND MACERATION

- ☐ Oedema is present, skin feels tense or swollen at palpation
- ☐ Macerated skin

SIGNS OF INFECTION

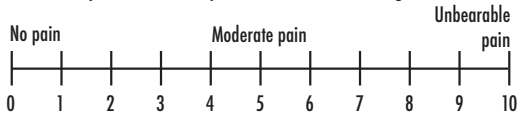
- ☐ Satellite lesions (pustules surrounding the lesion, suggesting a *Candida albicans* fungal infection
- ☐ White scaling of the surrounding skin (suggesting a fungal infection)
- ☐ Changes in colour in the wound bed (such as green, yellow, brown, greyish)
- ☐ Purulent exudate (pus)
- ☐ Excessive exudate level

PATIENT EXPERIENCE

IAD related

- ☐ Itching
- ☐ Tingling
- ☐ Burning
- ☐ Pain

Intensity of IAD-related pain via Numerical Rating Scale



☐ Self-report is not possible

BEST PRACTICE STATEMENT
All HCPs must have access to an evidence-informed protocol for the prevention, assessment and management of IAD.

BEST PRACTICE STATEMENT
Healthcare records should include dedicated fields for skin assessment, diagnostic reasoning, IAD classification and the progression of IAD-related lesions. All assessment findings—including clinical descriptions and, where appropriate, wound photographs—must be accurately and consistently documented using standardised terminology.

BEST PRACTICE STATEMENT
When IAD is identified, clear escalation and review criteria must be defined and applied to ensure continuity of care and timely, evidence-informed clinical decision-making.

Integrating digital wound and skin assessment technologies within GLOBIAD-based categorisation and monitoring represents a promising next step. Such integration has the potential to enhance clinical efficiency, support earlier intervention and ultimately improve patient outcomes.

The World Health Organization's International Classification of Diseases (ICD-11) includes a standardised diagnostic code for IAD (EK02.22). However, ICD-11 has not yet been adopted universally across all countries and healthcare systems. Clinicians should check with their organisation to determine which coding framework is in use and apply the corresponding descriptors when classifying IAD. Regardless of the coding system in use, diagnostic codes are intended for reporting and administrative purposes only and do not replace clinical classification or judgement. Accurate and consistent use of appropriate clinical terminology in documentation is essential to ensure correct coding, reliable data capture and meaningful reporting.

IAD reporting

Accurate and consistent documentation of clinical assessments and interventions is fundamental to continuity of care and to establish epidemiological indicators of care burden and effectiveness. The use of standardised terminology and coding enables meaningful benchmarking across clinical settings and organisations worldwide, strengthening transparency, accountability and the effectiveness of quality improvement initiatives.

Healthcare organisations should adopt standardised data collection approaches to reduce documentation burden and minimise variability in the reporting of IAD. Consistent and structured data capture is essential to enable benchmarking of IAD prevalence, incidence, severity and the quality of prevention and management interventions.

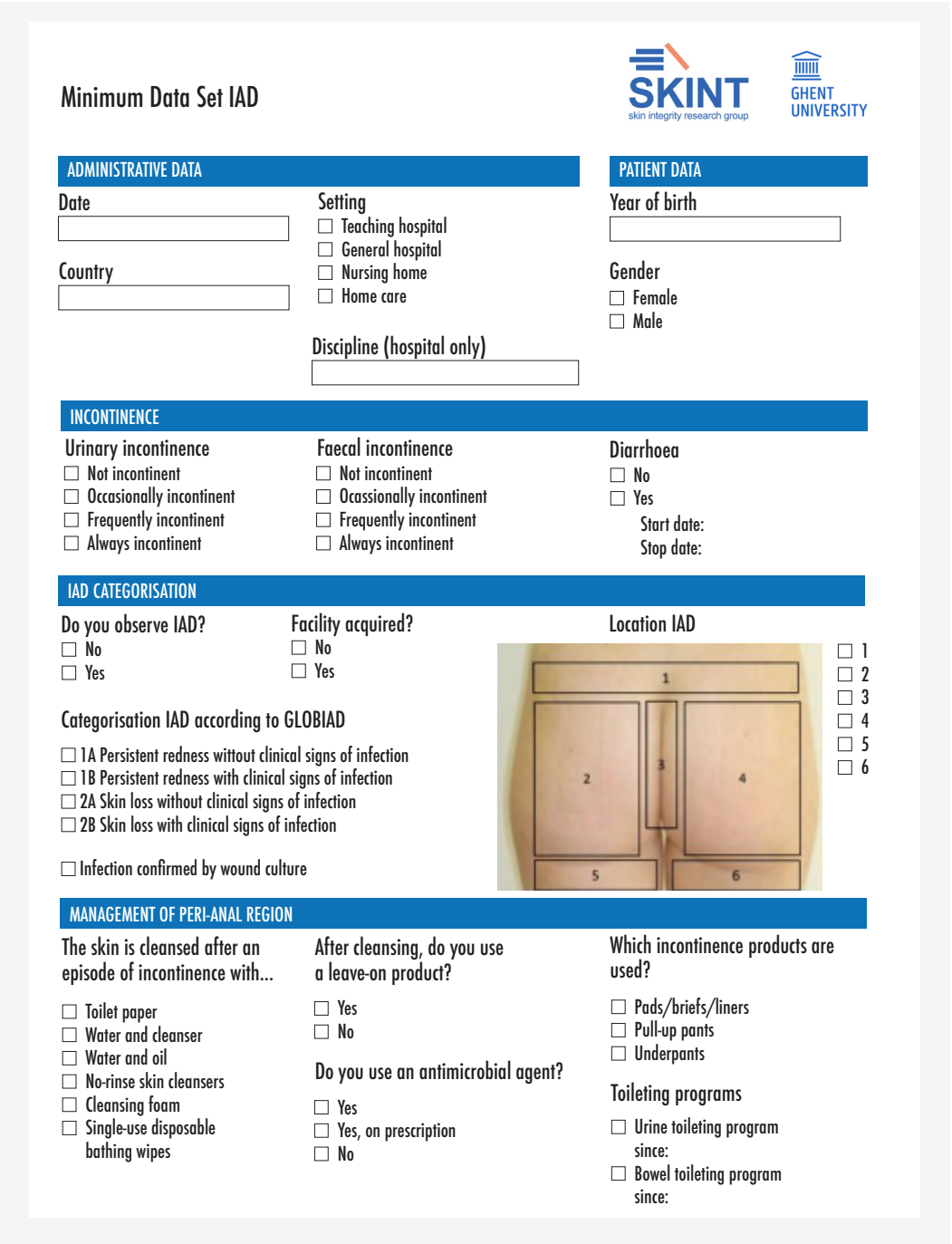
The Minimum Data Set for IAD (MDS-IAD) is a validated data collection instrument developed to support standardised documentation of IAD prevalence, severity and management practices. Originally developed and psychometrically tested in nursing home populations (Van den Bussche et al., 2018b), the MDS-IAD provides a robust foundation for epidemiological monitoring and quality improvement activities.

While the MDS-IAD has been recommended for evaluation in other healthcare settings, including hospitals, formal validation in acute care populations has not yet been published. Nevertheless,

Recognising and classifying IAD (Continued)

BEST PRACTICE STATEMENT

HCPs should adopt structured and standardised documentation frameworks, such as the Minimum Data Set for IAD (MDS-IAD; see Figure 10).



Minimum Data Set IAD

SKINT skin integrity research group

GHENT UNIVERSITY

ADMINISTRATIVE DATA

Date

Country

Setting
- ☐ Teaching hospital
- ☐ General hospital
- ☐ Nursing home
- ☐ Home care

Discipline (hospital only)

PATIENT DATA

Year of birth

Gender
- ☐ Female
- ☐ Male

INCONTINENCE

Urinary incontinence
- ☐ Not incontinent
- ☐ Occasionally incontinent
- ☐ Frequently incontinent
- ☐ Always incontinent

Faecal incontinence
- ☐ Not incontinent
- ☐ Occasionally incontinent
- ☐ Frequently incontinent
- ☐ Always incontinent

Diarrhoea
- ☐ No
- ☐ Yes

Start date:
Stop date:

IAD CATEGORISATION

Do you observe IAD?
- ☐ No
- ☐ Yes

Facility acquired?
- ☐ No
- ☐ Yes

Location IAD

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6

Categorisation IAD according to GLOBIAD
- ☐ 1A Persistent redness without clinical signs of infection
- ☐ 1B Persistent redness with clinical signs of infection
- ☐ 2A Skin loss without clinical signs of infection
- ☐ 2B Skin loss with clinical signs of infection

☐ Infection confirmed by wound culture

MANAGEMENT OF PERI-ANAL REGION

The skin is cleansed after an episode of incontinence with...
- ☐ Toilet paper
- ☐ Water and cleanser
- ☐ Water and oil
- ☐ No-rinse skin cleansers
- ☐ Cleansing foam
- ☐ Single-use disposable bathing wipes

After cleansing, do you use a leave-on product?
- ☐ Yes
- ☐ No

Do you use an antimicrobial agent?
- ☐ Yes
- ☐ Yes, on prescription
- ☐ No

Which incontinence products are used?
- ☐ Pads/briefs/liners
- ☐ Pull-up pants
- ☐ Underpants

Toileting programs
- ☐ Urine toileting program since:
- ☐ Bowel toileting program since:

Figure 10. The Minimum Data Set for IAD (MDS-IAD). Scan the QR code to access and download a PDF of the MDS-IAD tool (Van den Bussche et al., 2018b).

implementation of standardised IAD data collection frameworks such as the MDS-IAD in hospital settings has the potential to support benchmarking, enhance data comparability across settings and drive continuous quality improvement in IAD care.

IAD photography

Clear and consistent photographs can play an invaluable role in improving patient assessment and monitoring (Queen & Harding, 2020). When appropriately integrated into clinical practice, clinical photographs of IAD can support treatment planning, guide clinical decision-making and assist in the evaluation and review of care, as well as in clinical research. It is therefore essential that HCPs are familiar with practical techniques for capturing high-quality IAD images.

Box 4 presents recommendations applicable across global clinical settings for the recording of IAD photographs.

Box 4. Practical tips for photographing IAD (Estocado, 2019).

- Develop a local guideline within the facility that defines the timing, purpose and method of wound and skin photograph documentation. Use photographs as a complement, not a substitute, for clinical assessment. Emphasise that photographic documentation should support—but never replace—comprehensive clinical assessment and clinical judgement
- Establish a system that complies with local data protection and information security requirements to ensure patient confidentiality
- Define responsibilities and training requirements. Specify which HCPs are authorised to take clinical photographs and ensure they receive appropriate training in clinical photography and data protection. Additional precautions and compliance with local regulations are required when imaging paediatric patients
- Ensure patient consent, privacy and dignity are respected:
  - Standardise procedures for obtaining and documenting patient consent for photography across the entire patient journey. Patient authorisation must be obtained before using clinical images for any research purposes, in addition to their use in routine clinical care (diagnosis, documentation and monitoring)
  - Include clear guidance on privacy, dignity and safeguarding, with appropriate protective measures in place
- Standardise image quality parameters
- Use a facility-owned digital camera or smartphone; avoid the use of personal devices for clinical photography
- Photograph the wound consistently with the patient in the same position to support comparison over time
- Remove any distractions or obstructions from the wound site and surrounding area prior to photography
- Ensure consistent lighting, focus, distance and camera angle to optimise image clarity and comparability over time
- Where an appropriate measurement scale is visible in the image, consider calculating wound length and width directly from the photograph; if not, measure the wound directly
- Include patient and image identifiers (without compromising privacy). Use non-identifiable reference codes, date/time stamps and anatomical location labels to ensure accurate tracking and longitudinal comparison
- Establish clear storage, access and retention policies. Define where images are stored, who can access them, how long they are retained and when they are securely deleted, in line with legal and organisational requirements
- Where possible, integrate wound photographs with other IAD assessment findings (e.g. skin warmth, erythema, pain, pruritus)
- Ensure photographs are systematically recorded and stored to support monitoring of healing progression over time.

IAD management

Two key interventions are essential for the effective management of IAD **[Figure 11]**:

1. *Manage exposure to urine and/or faeces*:
- Address incontinence by identifying and treating reversible causes (e.g. liquid feeds, antibiotics, urinary tract infection, constipation, effects of medication such as diuretics) to reduce—and where possible eliminate—skin contact with urine and/or faeces (see **Figure 7**, page 17, for recommended steps in incontinence management)
- Refer to a continence specialist
- Where the patient is not incontinent, identify and address other causes of skin exposure to urine and/or faeces (e.g. inadequate perineal cleansing due to limited mobility or inability to access the affected area).

2. *Implement a structured skin care regimen*:
- Apply a structured skin care regimen to protect skin exposed to urine and/or faeces and to support restoration and maintenance of effective skin barrier function.

BEST PRACTICE STATEMENT

All patients who are incontinent or exposed to urine and/or faeces should receive timely, evidence-based IAD prevention. Early, consistent strategies help minimise skin injury, reduce harm and improve outcomes.

Figure 11. Management of IAD based on GLOBIAD categories.

Reduce exposure to urine and faeces

Management of incontinence requires a comprehensive patient assessment to identify the underlying aetiology and to inform an individualised plan of care. Treatment of reversible causes should, where possible, begin with non-invasive behavioural interventions, such as nutritional and fluid management strategies and appropriate toileting techniques (Jiang et al., 2023; Atlı & Kaplan Serin, 2024; Deprez et al., 2024; Wang et al., 2024).

In general, absorbent incontinence management products (e.g. adult briefs) should be used judiciously, as they may retain moisture against the skin. Where feasible, their use should be limited to ambulant patients or to periods when the patient is sitting out of bed. Absorbent products with better fluid-handling properties may be considered as an adjunct to a structured skin care regimen, as they may help reduce occlusion and overhydration of the stratum corneum.

In acute care settings, patients with IAD may require temporary diversion of urine and/or faeces away from the skin to facilitate effective skin protection and healing. For urinary incontinence, the use of an indwelling urinary catheter may be necessary in selected cases; however, this should be regarded as a last resort due to the associated risk of healthcare-associated infection. Management of liquid faeces may be achieved using a faecal management system (FMS). When a FMS is unavailable, a faecal pouch—similar to those used for faecal ostomies—may be considered. It is important to consider the risk of skin damage associated with faecal bags. The use of large-bore urinary catheters as rectal tubes is not recommended due to the risk of anal and rectal injury.

Box 5 outlines recommendations to share with patients who have developed IAD in the absence of incontinence.

Box 5. Recommendations to share with patients who have developed IAD due to prolonged exposure to urine and/or faeces.

1. Gently cleanse the skin after each episode using pH-balanced, no-rinse wipes or mild cleansers
2. Check between skin folds to remove any faecal or urinary residue
3. Use mirror(s) to check the skin after each wash
4. Use toilet aids to ensure cleaning of hard-to-reach areas post-voiding.

BEST PRACTICE STATEMENT

Patients should be promptly reassessed if measurable improvement to skin condition and pain levels is not evident after 1-2 days, with full resolution within 1-2 weeks. Selecting an alternative type of skin barrier should also be considered.

IAD management (Continued)

BEST PRACTICE STATEMENT

Structured skin care regimens that include gentle cleansing and the consistent use of appropriate skin protectants should be implemented as standard care.

Implement a structured skin care regimen

A structured skin care regimen comprises two core interventions:

- Cleanse and dry the skin (CLEANSE): Remove urine and/or faeces—the primary sources of skin irritation leading to IAD. Cleansing should be performed gently and followed by thorough drying prior to the application of any skin protectant, as part of routine care
- Protect the skin (PROTECT): Apply appropriate skin protectants to minimise ongoing exposure to urine and/or faeces and to reduce friction-related skin damage.

In cases where the epidermis is intact (not compromised), patients may benefit from a RESTORE step to support repair and maintenance of the skin barrier using a medical device* leave-on skin care product or an appropriate medical device (*in the EU region; see **Box 6-7** for further details).

Product selection

Products used for the prevention and management of IAD are available in a wide range of formulations. Ingredient composition varies substantially and the terminology used to describe product properties is often inconsistent or unclear.

Box 6 outlines the key characteristics of an ideal product for the prevention and management of IAD. Additional considerations relevant to product selection within the EU are presented in **Box 7**.

Box 6. General characteristics of an ideal product for the prevention and management of IAD.

An ideal product for IAD prevention and management should:

- Be clinically evaluated and shown to prevent and/or treat IAD, where evidence is available (e.g. use breathable, superabsorbent products specifically designed for incontinence; avoid the use of sanitary pads)
- Be compatible with normal skin physiology, including having a pH close to that of healthy skin (note: barrier films have no pH; pH is only relevant for creams, ointments and pastes)
- Have a low irritant and sensitisation potential and be hypoallergenic; must not contain components that are potential endocrine disruptors
- Not cause stinging, burning or discomfort on application. Sometimes, in the case of a painful IAD lesion, patients may experience pain upon application. This is not necessarily related to the product but to the condition of the skin and the patient
- Be transparent or easily removable to allow regular skin inspection without colouring the skin surface or causing unnecessary friction or trauma
- Allow for easy, gentle removal and cleansing, considering caregiver time, patient comfort and skin integrity (ideally, the product should require no removal; but if required, a product allowing gentle removal is preferred)
- Not exacerbate skin damage or compromise the skin barrier
- Not interfere with the absorbency or function of incontinence management products
- Be compatible with other products commonly used in care, such as adhesive dressings, tapes or medical devices
- Be acceptable to patients, HCPs and caregivers, including factors such as texture, odour and ease of use
- Support a simple and streamlined skin care regimen, minimising the number of products, number of applications, resources and time required to apply
- Enable a healing environment in cases of GLOBIAD category 2A where the epidermis is damaged
- Be cost-effective, considering product use, staff time and prevention of complications
- Be easy to order through local supply chains
- Be environmentally responsible where possible, contributing to sustainability goals and net-zero healthcare targets
- Have clear instructions for use and be supported by education or training materials to promote correct and consistent application
- Be suitable for use across diverse patient populations and skin tones, including those with fragile skin.

Box 7. Considerations when selecting products in the EU (Beeckman et al., 2015).

Products that carry a CE mark fulfil the essential requirements of the EU Medical Device Regulation 2017/745 and are subject to clinical evaluation, vigilance and post-market surveillance procedures. These products are designed and manufactured by companies holding an ISO 13485 certificate. Manufacturers are subjected to regular audits by notified bodies as well as by national Ministries of Health (e.g. MHRA or their locally designated control bodies). Increasingly, ISO 13485 is being required, or is at least beneficial, in supporting regulations around the world.

Since 11 July 2013, cosmetic products sold in the EU are subject to the EU Cosmetics Regulation No.1223/2009. This requires registration in a database and outlines safety requirements for cosmetic products. However, these are focused primarily on toxicology requirements of the product ingredients; it does not pose requirements for design, manufacture, quality control, usability or clinical efficacy. Cosmetic product manufacturers are not subjected to audits by notified bodies or designated control bodies and they do not require ISO certification.

Outside of the EU, products are approved by relevant government institutions and it is important to be aware of national or local registration procedures for effective product selection.

CLEANSE

Traditionally, standard soap, water and a regular washcloth have been used to cleanse the skin following episodes of incontinence in order to remove urine, faeces and other soilage. However, conventional soaps are typically alkaline and have been shown to disrupt the skin's natural pH balance, damage corneocytes and impair skin barrier function. This effect may be exacerbated by the use of regular washcloths, the rough texture of which can cause friction-related skin damage. In addition, exposure to water alone has been shown to impair skin barrier integrity, as evidenced by increased TEWL, a sensitive indicator of barrier function (Green et al., 2022).

Infection prevention and control issues have been associated with the use of shared wash basins (Martin et al., 2017). Variability in water temperature may also result in patient discomfort, while the handling and transport of bowls of water introduces additional risks related to manual handling and slips.

In contrast, modern skin cleansers are formulated with surfactants that reduce surface tension, enabling effective removal of soilage and debris (e.g. oils and desquamated skin cells) with minimal mechanical force on the skin **[Table 5]**. Several categories of surfactants exist based on chemical structure and many cleansers contain combinations of surfactants to balance cleansing efficacy and skin tolerability. Non-ionic (uncharged) surfactants are generally preferred for use in skin cleansers due to their superior tolerability and lower irritant potential. Manufacturers should be able to provide transparent information regarding the surfactant composition of their products.

Recent Cochrane systematic reviews evaluating interventions for the prevention and management of IAD damage support the use of pH-balanced, no-rinse or leave-on cleansing products as part of structured skin care regimens, highlighting benefits in skin outcomes and patient comfort compared with traditional soap-and-water approaches (Beeckman et al., 2016; Graham et al., 2025).

Skin cleansers used for incontinence care are commonly referred to as perineal skin cleansers. There are a range of formulations, including liquid solutions and lotions. Liquid cleansers may be supplied in spray bottles or pre-impregnated into disposable cloths. Some cleansers are packaged in containers that dispense the product as a foam; foam formulations are preferred by some clinicians as they are easy to apply and do not drip or run across the skin.

IAD management (Continued)

Table 5. Surfactant categories for cleansing (Beeckman et al., 2015).

Surfactant type	Example
Recommended	
Non-ionic: • Uncharged • Mild surfactants	• Polysorbates • Decyl glucoside • Cocoglucoside • Polyoxyethylene alkyl ethers • Glyceryl stearates • Poloxamer 188 • Laureth-23
Amphoteric: • Positively- and negatively-charged • Generally less irritating than anionic surfactants	• Coconut-derived (e.g. cocamidopropyl betaine, cocobetaine, cocamidopropyl hydroxysultaine, cocoglucoside) • Directly esterified fatty isethionate • Stearic acid • Lauryl glucoside
To be avoided	
Anionic: • Negatively-charged • High pH	• Sodium lauryl sulfate (SLS) • Sodium laureth sulfate (SLES) • Sodium lauroyl sarcosinate • Ammonium lauryl sulfate

BEST PRACTICE STATEMENT

Skin cleansing should be performed using a pH-balanced cleanser (approximately pH 5, consistent with healthy skin) that contains mild surfactants. Cleansers should be free from alcohol and fragrance to minimise the risk of irritation and sensitisation.

BEST PRACTICE STATEMENT

Cleansing should be carried out using a soft, disposable, non-woven cloth and faecal matter should be removed gently without rubbing or applying excessive pressure to avoid friction-related skin damage.

BEST PRACTICE STATEMENT

Following cleansing, the skin should be carefully and thoroughly dried before the application of any skin protectant.

Cleansing products may contain skin-conditioning ingredients intended to support skin protection and/or moisturisation. Most incontinence skin cleansers are formulated for use at full strength and should not be diluted.

Cleansing itself may disrupt skin barrier function and so a balance has to be found between removing irritants due to incontinence and preventing or minimising irritation through cleansing. Many skin cleansers are 'no-rinse', so can remain on the skin after application and are quick-drying, eliminating friction caused by manual drying.

Use of no-rinse cleansers has been shown to save staff time and improve efficiency (Glass et al., 2021). Continence care wipes are made of smooth material to reduce friction damage. These have been found to enhance adherence to protocols, reduce burden of care and improve staff satisfaction (Beeckman et al., 2015).

Box 8 lists the principles of skin cleansing in the prevention and management of IAD.

Box 8. Principles of CLEANSE in the prevention and management of IAD (adapted from Beeckman et al., 2015).

- Cleanse the skin at least once daily and promptly after each episode of faecal incontinence, ideally within minutes of soiling (e.g. by using a call system); in the case of patients with urinary incontinence, cleanse at every continence product change
- Use a gentle cleansing technique with minimal friction; avoid rubbing or scrubbing the skin
- Avoid standard alkaline soaps and excessive cleansing, as both can disrupt the skin barrier and increase the risk of skin damage
- Select a gentle, no-rinse liquid cleanser or pre-moistened wipe specifically designed and indicated for incontinence care, with a pH close to that of healthy skin (approximately pH 5)
- Use a soft, disposable, non-woven cloth to minimise friction and reduce the risk of skin trauma while drying
- Gently and thoroughly dry the skin after cleansing before applying any skin protectant.

BEST PRACTICE STATEMENT

In patients who are incontinent, the skin should be cleansed at least once daily and as soon as possible—ideally within 10 to 15 minutes—following each episode of faecal incontinence. In patients with urinary incontinence, cleansing should be performed at every continence product change.

Effective cleansing to remove irritants is essential for maintaining skin integrity. Where no-rinse skin cleansers are unavailable, gentle soap and water may be used. If a gentle soap is not available, cleansing with plain water is preferable to no cleansing. However, these approaches represent a minimum standard of care. Wherever possible, no-rinse cleansers specifically designed for incontinence care should be used, as they are better suited to preserving skin barrier function.

PROTECT

Following cleansing, the skin should be protected to reduce the risk of IAD. Skin protectants are used in both the prevention and treatment of IAD to form a barrier between the stratum corneum and sources of moisture or irritation.

In addition to shielding the skin from urine and faeces, the application of a skin protectant when IAD is present should support resolution of skin damage and promote recovery of the skin barrier. Skin protectants—also referred to as moisture barriers—offer varying levels of protection depending on their ingredients and overall formulation [Table 6].

Skin protectants are available in a range of formulations, including creams, ointments, pastes, lotions and films (updated from Beeckman et al., 2015):

- **Creams** are emulsions of oils or lipid-based substances and water, and their composition can vary widely. To function effectively as skin protectants, creams must contain one or more recognised barrier ingredients (e.g. petrolatum, zinc oxide, dimethicone), either alone or in combination. Depending on national regulatory requirements, these may be listed as 'active' ingredients on product labels
- **Ointments** are semi-solid preparations, commonly formulated with a petrolatum base. They are more occlusive and greasier than creams and provide a durable moisture barrier

IAD management (Continued)

Table 6. Characteristics of the main types of skin protectant ingredients (Beeckman et al., 2015).

Product performance depends on the overall formulation, usage (e.g. amount applied) and how the product is applied, not just the principal ingredient.

	Principal skin protectant ingredient	Description	Notes
Recommended for routine use	Dimethicone (for routine IAD prevention)	Silicone-based polymer; may be combined with acrylate terpolymer	• Non-occlusive, does not affect absorbency of incontinent products when used sparingly • Resists wash-off (3-4 cleansings) when used in combination with acrylate terpolymers • Opaque or becomes transparent after application
	Acrylate terpolymers	Often in spray form; also available in wands/wipes	• Protect against moisture and friction • Require intact epidermis to adhere • Should contain plasticiser ingredients (to prevent cracking) and conform to the flexibility of the skin; should not contain solvent(s) that cause stinging or burning sensations
	Cyanoacrylate tetrapolymer (for severe IAD)	Polymer forms a transparent elastomeric film on the skin	• Does not require removal • Adheres to wet weeping skin up to partial thickness lesions • Durable in harsh environments; provides breathable protection and resists wash-off • Transparent, allows skin inspection without colouring the skin In high-risk settings (e.g. intensive care), it should be considered as a preventative product and not necessarily as a 'rescue product'. Application frequency is often twice per week in harsh environments (this frequency can be increased, depending on severity)
Recommended for selective use	Zinc oxide (not recommended for routine care)	White powder mixed with a carrier to form an opaque cream, ointment or paste	• Can be difficult and uncomfortable to remove (i.e. thick, viscous pastes) • Mixes with faecal matter, requires removing • Opaque, needs to be removed for skin inspection
	Petrolatum-based (petroleum jelly; white, soft paraffin)	• Derived from petroleum processing • Common base for ointments	• Forms an occlusive layer, increasing skin hydration • Affects fluid uptake of absorbent incontinence products • Transparent when applied thinly

- Application consistency is often more important than the product type used
- All products should be used according to manufacturer's instructions.

- **Pastes** consist of ointments combined with absorbent materials (e.g. carboxymethylcellulose). This increases viscosity and adhesion to moist or denuded skin, but pastes may be more difficult to remove and can cause discomfort during cleansing
- **Lotions** are liquid preparations containing a suspension of inert and/or active ingredients. Their lower viscosity allows for easier spreading, but they may provide less durable barrier protection
- **Films** are liquid formulations containing a polymer (e.g. acrylate terpolymer-based) dissolved in a solvent. After application, the solvent evaporates, leaving a transparent protective coating on the skin. These products are typically not labelled as containing active ingredients.

Box 9 lists the principles of skin protectant use in the prevention and management of IAD.

Box 9. Principles of skin protectant use in the prevention and management of IAD.

- Apply skin protectants at a frequency appropriate to their duration of action and always in accordance with the manufacturer's instructions
- Ensure that the selected skin protectant is compatible with other skin care products in use, particularly cleansers and any leave-on products, to avoid reduced effectiveness or adverse interactions
- Apply skin protectants to all areas of skin that are exposed, or likely to be exposed, to urine and/or faeces to ensure comprehensive protection
- The clinical performance of skin protectant products is determined by the overall formulation, including the interaction between active and inactive ingredients, rather than by the principal barrier ingredient alone.

BEST PRACTICE STATEMENT

HCPs should recognise that appropriate selection and consistent application of skin protectants are essential to achieve effective prevention and management of IAD.

Barrier products that provide durable, breathable protection, resist wash-off during repeated cleansing and allow ongoing skin inspection are preferred. Film-forming barrier products (e.g. acrylate-based formulations containing cyanoacrylate tetrapolymer) meet these criteria and may help maintain skin integrity by reducing prolonged moisture exposure, minimising irritation from urine and faeces and supporting early identification of skin changes that require timely clinical intervention.

RESTORE

Patients may benefit from an additional step aimed at supporting and maintaining the integrity of the skin barrier. This is achieved through the use of topical leave-on skin care products, commonly referred to as moisturisers. These products can only be applied on intact skin, and are intended to improve skin hydration, reduce dryness and enhance barrier function, particularly in skin that has been compromised by repeated exposure to urine and/or faeces.

Product formulations include lipophilic substances or oils (emollients) that soften the skin, reduce TEWL and improve skin flexibility. Some products are formulated with physiological lipids similar to those found in healthy stratum corneum (e.g. ceramides, cholesterol, fatty acids) and are designed to help restore the disrupted lipid matrix and support barrier repair.

Humectants, which attract and retain water within the stratum corneum, may be used to improve skin hydration. Commonly used humectants include glycerine and urea. When used appropriately, these ingredients can enhance skin hydration and resilience; however, their effectiveness depends on the overall formulation and the presence of an intact or partially intact skin barrier.

IAD management (Continued)

The presence of intact or partially intact skin barrier is an important clinical consideration. In cases of epidermal loss (GLOBIAD 2A IAD), the focus should be on restoring the epidermis (to achieve epithelialisation) by leave-on skin care products that adhere to wet, weeping skin while withstanding irritants. Leave-on skin care products should be selected carefully to ensure compatibility with incontinence management products, should be used only on intact skin, and as part of a structured skin care regimen rather than a standalone intervention. Products containing potential endocrine disruptors should be avoided. Preparations that leave behind a damp barrier promote IAD recurrence. Provision of suitable products should be supported by organisational systems that promote optimal patient outcomes, long-term cost-effectiveness and alignment with sustainability goals. In addition, organisations should deliver ongoing, practical education and training for HCPs to support knowledge retention and ensure consistent and effective product use in clinical practice.

BEST PRACTICE STATEMENT

HCPs and caregivers should review the ingredient profile of any product applied to the skin to ensure it is appropriate for use in patients with incontinence and does not contain substances to which the patient is known or suspected to be sensitive or allergic.

Some earlier recommendations for IAD have promoted a standardised approach that included the routine use of moisturisers for both prevention and treatment (Barakat-Johnson et al., 2024b). However, it is important to recognise that moisturisers vary widely in composition and function. Many formulations contain combinations of emollients and humectants and not all are designed to support restoration of the skin barrier. In particular, products with a high humectant content may be inappropriate for use on skin that is already overhydrated or where maceration is present, as humectants attract and retain water within the stratum corneum and may exacerbate moisture-related skin damage. Product selection should therefore be guided by the clinical condition of the skin and the functional properties of the formulation rather than by product category alone.

Combining products

A skin care regimen may involve the use of separate products to address the functions of CLEANSE and PROTECT. Some skin protectants incorporate moisturising components and, similarly, moisturising ingredients may be included within liquid skin cleansers. Preference should be given to barrier products that provide long-lasting, breathable protection, resist wash-off during repeated cleansing and allow ongoing assessment of the skin. Film-forming barriers (such as acrylate-based formulations containing cyanoacrylate tetrapolymer) meet these requirements and can help maintain skin integrity by reducing moisture exposure, minimising irritation from urine and faeces and enabling early detection of changes that need prompt clinical attention.

Combined continence care wipes (often referred to as 3-in-1 products) that are designed to CLEANSE, PROTECT and RESTORE may offer practical advantages in certain care settings. By reducing the number of products and steps required, these products can simplify care delivery, reduce clinician or caregiver time, and may support more consistent use. Improved simplicity and ease of use may, in turn, enhance adherence to recommended preventive practices, particularly in busy clinical environments or long-term care settings. However, many of these 3-in-1 products, such as

BEST PRACTICE STATEMENT

The use of a skin care product, or a combination of products, that provides both protective and restorative skin barrier functions is recommended as part of a structured prevention regimen.

wipes, may have ingredients less resilient to wash-off, requiring frequent application. In case of high IAD risk or skin damage, these products may have severe limitations in their 'PROTECT' and 'RESTORE' components.

Care bundles for IAD prevention

Outcomes from two recent studies demonstrated that the implementation of evidence-based interventions for the prevention and management of IAD in acute care settings can lead to significant improvements in patient outcomes alongside measurable cost savings (Barakat-Johnson et al., 2024b; Cunich et al., 2025). Termed the 'Novel Implementation of Best Available Evidence into Practice for IAD (IMBED),' the intervention was delivered as a structured care bundle comprising the following elements:

- Continence screening and assessment using GLOBIAD
- Application of barrier cream cloths
- Use of appropriate incontinence management aids
- Avoidance of bed protectors (e.g. draw sheets, washable pads or multiple under-layers).

BEST PRACTICE STATEMENT

Healthcare organisations should ensure that all staff have access to appropriate, fit-for-purpose products for the prevention and management of IAD.

The study findings indicate that implementation of this care bundle was cost-neutral overall and associated with a reduction in IAD prevalence. These outcomes were achieved through a decrease in the mean cost of products used per incontinence care episode and a reduction in length of hospital stay, supporting the value of bundled, evidence-based approaches to IAD care (Cunich et al., 2025).

Complications of IAD

Managing GLOBIAD category 2 IAD lesions with dressings

In patients with GLOBIAD category 2 IAD, skin damage may present as weeping erosions and/or areas of partial skin denudement. In these cases, the use of dressings that support moist wound healing may be appropriate to protect exposed tissue, manage exudate and promote epithelial repair. It is important to avoid dressings with strong adhesives, to reduce the risk of medical adhesive-related skin damage (MARSI).

Breathable foam dressings or other advanced wound dressings may be considered, provided they are compatible with continence management products and do not exacerbate moisture retention or friction. Dressings should be selected with careful consideration of their absorbency, breathability and ability to remain in place without causing additional skin trauma. Cyanoacrylate tetrapolymer elastomeric barrier films are indicated to cover partial-thickness lesions and might be a more practical and suitable option in cases of GLOBIAD category 2 IAD, as they enable an environment for healing of epithelial cells.

Successful application and maintenance of dressings can be challenging in the context of IAD due to complex skin contours (e.g. folds and creases), frequent cleansing and ongoing exposure to urine and/or faeces. As a result, dressings are generally best suited to flat or minimally contoured anatomical areas, such as the buttocks or sacral region, where secure placement and effectiveness are more likely to be achieved.

BEST PRACTICE STATEMENT

In patients with severe IAD, frequent reassessment of both the skin condition and the overall continence management strategy is essential.

IAD management (Continued)

Managing category 2 B (infected) IAD lesions

Patients with IAD are at increased risk of developing secondary skin infections, with *Candida* species representing one of the most common pathogens associated with IAD (Kottner & Dissemond, 2025). In a large study of 5,342 patients in acute care settings in the United States, approximately 15% of patients with IAD were also diagnosed with a fungal rash (Gray & Giuliano, 2018). Similarly, a cross-sectional study involving 376 inpatients in Australian hospitals reported that around 32% of patients with IAD had a rash suggestive of a fungal infection (Campbell et al., 2016).

Early identification of fungal infection can be challenging, particularly in the initial stages. Clinical features suggestive of a fungal infection may include white scaling, purulent exudate and satellite papules or pustules (Kottner & Dissemond, 2025).

Classically, candidal infection presents as a bright red rash extending from a central area, with satellite lesions at the periphery spreading into adjacent unaffected skin (Beeckman et al., 2011). In individuals with dark skin tones or in cases of long-standing infection, the central area may appear hyperpigmented rather than erythematous (Gray et al., 2012). Fungal infection may also present as non-specific confluent papules, making clinical diagnosis more difficult. In such cases, microbiological sampling may be required to support diagnosis and guide appropriate treatment (Campbell et al., 2016).

Management of cutaneous candidiasis typically involves topical antifungal therapy, administered as a cream or powder (Kottner & Dissemond, 2025). After resolution of the candidiasis, an appropriate skin protectant should be considered (e.g. an acrylate terpolymer barrier film or cyanoacrylate tetrapolymer) to minimise ongoing moisture exposure and support skin barrier recovery. Where feasible, microbiological samples should be obtained prior to initiation of antifungal therapy. Medical review is recommended to exclude alternative dermatological conditions and to ensure timely escalation of care, particularly in cases that do not respond to standard treatment.

Assessment of infection relies on clinical judgement. Observation of clinical signs and symptoms of spreading, systemic or fungal infection requires the use of appropriate microbiological culture sampling or swabbing techniques to target prescribing of antibiotic or antifungal treatment (International Wound Infection Institute, 2022). Incorrect sampling may result in inaccurate diagnosis and contribute to unnecessary or inappropriate use of antimicrobial therapy, contributing to AMR.

BEST PRACTICE STATEMENT

In the context of increasing AMR, antimicrobial products should be used judiciously. There is no evidence to support the routine or prophylactic use of topical antimicrobial products for the prevention or management of IAD.

Recommendations for pain management

Patients with IAD should receive regular assessment and management of pain and discomfort. Effective symptom management can reduce erythema, pain and pruritus, improving patient comfort and QoL. Pain associated with IAD remains under-recognised and undertreated (Babino & Argenziano, 2023), despite its potential to worsen skin damage through scratching and increase the risk of secondary infection. Timely and appropriate pain management is therefore an essential component of comprehensive IAD care. The first-line pain relief strategy is regular repositioning to offload pressure. Cyanoacrylate tetrapolymer barrier films are known to reduce the pain associated with IAD care, as the polymer coating covers the exposed nerve endings while repelling irritants. For the management of anal itch related to incontinence, an acrylate terpolymer-based silicone cream is recommended.

Recommendations for specific patient groups

There is a clear need to ensure that HCPs understand the specific risks and care requirements of special patient populations in relation to IAD. The following precautions and targeted interventions should be considered for selected patient groups:

- Older adults and frail individuals: This group is at increased risk of IAD due to age-related skin changes (e.g. thinning of the epidermis), reduced mobility and polypharmacy. Use gentle cleansing techniques, avoid friction and perform more frequent skin inspections to enable early detection of skin changes
- Critically ill patients and individuals in intensive care settings: Higher rates of diarrhoea, haemodynamic instability and the use of liquid feeds, vasopressors and antibiotics are common in this population and may increase IAD risk. Skin should be monitored more frequently (i.e. every 2-3 hours when changing the patient's position) and FMS may be considered in selected cases as part of a comprehensive continence and skin protection strategy. In Finland, most adult patients in intensive care receive a urinary catheter, which may help prevent IAD (Baxter et al., 2024)
- Individuals with dark skin tones: Erythema may be less visible, making early identification of IAD more challenging. Staff should be trained to assess alternative indicators of skin damage, such as increased warmth, induration, tenderness or patient-reported pain. Access to visual assessment resources that reflect diverse skin tones can support more accurate and equitable assessment
- Obese individuals or those with skin folds: Increased moisture and friction within skin folds elevate the risk of IAD and secondary infections. Particular attention should be given to thorough but gentle cleansing and careful drying of skin folds. In individuals with recurrent intertrigo, antifungal strategies may be considered based on clinical assessment
- Individuals with neurological impairment and/or limited mobility: Reduced sensory perception and limited ability to reposition increase vulnerability to both IAD and pressure ulcer/injury. Regular repositioning is essential and IAD prevention measures should be integrated into existing pressure ulcer/injury prevention protocols. Education of carers and family members is particularly important in these cases
- In patients with IAD and mobility issues: Due to friction and shear during transfers and changes in position, dressings may be required to protect fragile body areas or wounds that come into contact with surfaces while a person is sitting or lying down (e.g. on wheelchair cushions or beds). Acrylate terpolymer and elastomeric barrier film products can help protect the skin from friction and may be appropriate for use in these patients
- Individuals receiving palliative or end-of-life care: Care should prioritise comfort, dignity and symptom relief. Gentle cleansing, non-irritating products that allow gaseous exchange, and measures to minimise odour, moisture and distress should be used, with interventions tailored to the individual's goals of care.

IAD guidelines and education

Assessment of existing guidelines and HCP education highlights that IAD remains inadequately recognised and poorly prioritised in clinical practice worldwide.

Existing IAD guidelines contain notable methodological limitations, often lacking rigour and practical application (Chen et al., 2023). In a systematic review of international guidelines and consensus publications on IAD, Chen et al (2023) found significant variability in international guideline quality and recommendations on IAD management, with only National Institute for Health and Care Excellence (NICE) guidelines achieving high methodological rigour scores (Chen et al., 2023).

The global healthcare workforce has a knowledge gap in understanding and managing IAD. A recent study of 412 respondents indicated that only approximately 16% of HCPs achieved a score of 70% or above in correctly classifying IAD severity (Barakat-Johnson et al., 2022b).

Recommendations

There is a need to develop rigorous IAD guidelines and education programmes for HCPs, patients and caregivers.

A recently developed, validated knowledge-assessment tool, Know-IAD, can be used to identify knowledge gaps among HCPs (Barakat-Johnson et al., 2022a). Know-IAD assesses HCPs' understanding of IAD aetiology, risk, diagnosis, classification, prevention and management.

To successfully implement quality improvement programmes for managing IAD, another validated tool has been developed to assess HCPs' attitudes towards IAD prevention, entitled 'attitude towards the prevention of IAD instrument' [APrIAD; (Van Damme et al., 2019)].

These validated knowledge assessment instruments can support the design of interventions and educational programmes to improve clinical practice.

Table 7 summarises the messaging that must be included and emphasised in all HCP and patient education programmes.

Table 7. The recommended messaging for IAD educational programmes.	
For HCPs	• Remember that effective IAD management begins with prevention, and that educating patients and caregivers is a core responsibility of the care provider • Always preserve patient dignity, comfort and privacy during skin assessment, cleansing and treatment • Use standardised, patient-centred protocols for the prevention, assessment and management of IAD • Routinely assess pain, discomfort and pruritus, and manage these symptoms proactively; focus on rehabilitation to promote recovery and reduce the need for liquid feed and antibiotics • Select IAD management products with the explicit aim of improving patients' comfort, function and QoL • Actively support patients in addressing stigma and embarrassment associated with IAD, as these can negatively affect engagement with care.
For patients	• Engage actively with IAD prevention and treatment strategies to support early intervention and recovery • Learn to recognise early signs and symptoms of IAD and report changes promptly • Know who to contact and how to escalate care concerns if symptoms worsen or do not improve • Be aware of the risks of dehydration and avoid reducing fluid intake in an attempt to manage incontinence.
For caregivers	• Maintain open communication with the individual and support the management of pain, discomfort and skin symptoms • Advocate for the individual if they feel stigma, shame or embarrassment, as these factors may lead to disengagement from care and delayed treatment.

Artificial intelligence tools in IAD management

Artificial intelligence (AI) has emerged as a promising approach to address many challenges encountered in healthcare, particularly for patients living with complex and multifactorial conditions such as non-healing wounds (Rippon et al., 2024). Evidence indicates that AI can support multiple aspects of wound care, including diagnosis, treatment planning, HCP education and improvements in workflow efficiency (Nair et al., 2025). However, AI should not replace the clinical judgement of an HCP with expertise in skin care.

Within the complex context of IAD management, AI-driven approaches to assessment, decision-making support and treatment optimisation have the potential to enhance patient outcomes and support more consistent, evidence-based care. **Table 8** summarises examples of AI-enabled tools that may contribute to achieving these aims (Barakat-Johnson et al., 2022c; Griffa et al., 2024; Reason et al., 2024; Albuqami et al., 2026; Almasi et al., 2026; Pinnekamp et al., 2026).

Table 8. The potential of AI-driven decision-making in the prevention and management of IAD.

Area of intervention	Potential AI-enabled tools and applications
Assessment and early detection	• AI-based risk stratification models integrating patient data (e.g. faeces frequency, mobility, continence status, comorbidities, medication use) to identify patients at high risk of IAD • Image analysis tools to support early detection and differentiation of IAD from pressure ulcers/injuries, including improved assessment in dark skin tones • Smart incontinence products and wearable sensors that detect moisture events and alert staff in real time, enabling earlier intervention and proactive toileting
Documentation and monitoring	• Natural language processing (NLP) to standardise documentation, extract key clinical information and auto-populate IAD-related records • AI-supported wound and skin imaging to quantify erythema, erosion, exudate and healing progression over time • Electronic health record (EHR)-integrated decision prompts to support routine skin assessment, reassessment and documentation consistency
Prevention and treatment decision support	• Clinical decision-support systems that recommend personalised IAD prevention and management bundles based on patient risk profiles • Predictive analytics to identify patients likely to require escalation of care (e.g. dressings, specialist referral) • AI-assisted pattern recognition to support early identification of secondary infections (e.g. fungal infection) and guide appropriate diagnostic and treatment pathways
Education, research, quality improvement and implementation	• AI-enabled simulation and training modules for IAD assessment, classification and management scenarios • Dashboards providing real-time feedback on individual, team and organisational performance (e.g. prevalence rates, protocol adherence, outcomes) • AI-based health economic and cost-modelling tools to estimate the clinical and financial impact of IAD prevention bundles and support business cases for implementation
Supported self-care and shared care models	• Remote consultations and digital triage to support continuity of care across settings • Personalised education and decision-support tools for patients, families and caregivers • Automated prompts and reminders to reinforce preventive behaviours and appropriate skin care practices

Conclusions

This 2026 update represents a critical opportunity to consolidate and advance evidence-based global best practices for IAD, with the explicit aim of improving patient outcomes through more standardised, high-quality models of care. Recent advances in IAD research—including robust studies on risk factors, the validation of prevention and management care bundles and emerging research incorporating patient perspectives—have substantially strengthened the evidence base and contributed to a more comprehensive, person-centred understanding of IAD.

Despite these advances, significant gaps persist. Challenges remain in achieving diagnostic accuracy and developing effective education strategies. Many HCPs remain insufficiently informed about the comparative effectiveness and safety of IAD-related products, including cleansers, skin barrier protectants and absorbent continence systems. As a result, clinical practice in many settings continues to rely heavily on historical approaches and cost-driven product selection rather than on current evidence. In developing and low-income countries, patients often face limited access to high-quality care due to insufficient investment in healthcare services, education and evidence-based products.

Addressing these gaps requires a concerted global effort to move beyond entrenched practices and to actively implement evidence-based recommendations. This is essential to improving consistency of care, enhancing patient safety and comfort, and ensuring that IAD prevention and management are aligned with contemporary standards of quality, effectiveness and sustainability.

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Appendix A: Glossary of terms

3-in-1	Used to describe skin care products that combine cleansing with a skin protectant and moisturising function
Bullae	A type of fluid-filled blisters, >5mm in size
Dimethicone	A silicone-based substance that forms a protectant barrier when applied to skin
Denudement	Loss of epidermis resulting in wounds, often due to MASD
Emollient	A substance that softens and smoothes the skin, usually via occlusion and by filling in the crevices between corneocytes
Erythema	Inflamed skin; may appear as redness, or, in individuals with dark skin tones, as a change in skin colour
Humectant	A molecule used in skin care products that attracts and retains water to promote hydration
Incidence	Indicates the proportion of the population studied that develops a given medical condition over a specified time period (e.g. over a month or a year)
Incontinence-associated dermatitis (IAD)	A type of moisture-associated skin damage (MASD) where skin damage results from prolonged contact with urine and/or faeces, affecting perineal and adjacent areas
Intertrigo	'Sweat rash' that occurs due to trapped moisture, heat and friction between skin folds
Lipophilic	Literally meaning 'fat-loving chemicals'; they are more or less insoluble in water and soluble in lipids or oils
Maceration	Wrinkled, soggy and/or soft peri-wound skin occurring due to exposure to moisture. Macerated peri-wound skin usually presents as white/pale and is at increased risk of breakdown. In dark skin tones maceration can appear as shiny, grey, purple or darker discolouration
Medical adhesive-related skin injury	Skin damage caused by the use of products containing a medical adhesive
Moisture-associated skin damage (MASD)	An umbrella term encompassing four distinct subtypes of skin damage caused by prolonged moisture exposure (see page 4 for details)
Moisturiser	Leave-on skin care products that soften, smooth and hydrate the skin
No-rinse	A cleansing product that does not need to be rinsed off skin after use; usually has the advantage of being quick drying. Avoids friction that occurs when drying the skin with a towel
Natural language processing (NLP) tools in AI	AI tools capable of assessing and interpreting human language-based information
Papules	Papules are small, solid skin 'bumps' measuring less than 1–5mm
Prevalence	Refers to the total number of individuals in a population who have a medical condition at a specific point in time
Pruritis	Itching
Pustules	Pustules are small skin 'bumps', measuring less than 1–5mm, that contain pus
Siloxane	A term for silicone-based products, such as dimethicone, used as barriers in skin care
Surfactant	A molecule that reduces surface tension and aids cleansing
Transepidermal water loss (TEWL)	The rate at which water is lost through skin; used as a measure of skin barrier function. High TEWL is indicative of impaired barrier function
Vesicles	A type of fluid-filled blister, <5mm in size

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