Right for Hygiene
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Summary Report - Sustainability Panel Discussion:

THE SKIN HEALTH AND HYGIENE BENEFITS OF ABSORBENT HYGIENE PRODUCTS AND WIPES

July 2008

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From left to Right: Front: Diana Heelis, Carlo Gelmetti, Mandy Fader, Colin Michie and Bo Runeman.
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Foreword

This report summarises proceedings and the consensus viewpoint emanating from a panel of leading medical professionals who met collectively in Brussels during July 2008 to review the health, hygiene, safety and sustainability attributes of disposable absorbent hygiene products.

The panel was comprised of eminent dermatologists, paediatricians and incontinence health professionals from Germany, The UK, Italy and Sweden. They discussed their own experience in medical practice and reviewed relevant scientific literature and research reports in order to reach consensus on the benefits and safety profile of absorbent hygiene products.

Industry is aware of occasional, but in its view, unwarranted criticisms reported in the news media and elsewhere about the utility and societal benefits of absorbent hygiene products such as baby diapers, adult incontinence articles, feminine hygiene pads and wet wipes. This panel discussion enabled industry to hear the views of independent and eminent experts from the medical professions on these subjects as evidenced from their own clinical and research experience. The panel meeting was hosted by EDANA, the voice of the nonwovens and related industries in Europe, under its Right for Hygiene Programme. (See Appendix One for the full list of participants.)

Panel Participants:

Prof. Dr. Peter Elsner,
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1) Setting the Context

The health benefits of disposable baby diapers and wipes

Over the past 50 years absorbent hygiene products such as baby diapers, incontinence products, feminine protection pads and personal care wipes have all become essential features of modern day life.

Through innovation and improved technology their design, composition and performance have improved dramatically from their early forms. In fact these products are so pervasive and so much part of every day life that they are now taken for granted by millions of people throughout the world. As their use has grown so too have there been dramatic improvements in skin health; particularly in the incidence of diaper dermatitis.

On occasion however absorbent hygiene products have erroneously been linked to health problems and their safety has been questioned. For the industry, any suggestion that its products could have a detrimental impact on health or hygiene is taken very seriously indeed, not least because the health and hygiene profile of these products is fundamental to both their purpose and their acceptability within society. The industry is unconditionally committed to maintaining the highest standards in its product stewardship. It invests heavily in assuring the safety of its products and in researching the linkages between the use of absorbent hygiene products and skin health and general hygiene.

EDANA member companies are confident that their products provide skin health and hygiene benefits. The industry association wanted however to hear the views of independent medical professionals to gain their insights into these topics. Five individuals, recognised globally for their specialist expertise in dermatology, paediatrics and nursing care in five member states came together moderated by an external consultant to:

- Present their views on the current body of knowledge about the relationship between skin health and hygiene and the use of modern day absorbent hygiene products and personal wet wipes;
- Provide insights into this subject drawn from their own research and/or clinical experience;
- Discuss ideas for additional research that could be carried out to extend the current body of knowledge about skin health, hygiene and the use of absorbent hygiene products and wet wipes;
- Comment generally on the overall impact of absorbent hygiene products and wet wipes on the quality of life of both their users and the carers of their users in today's society.

What follows is a summary of the discussion which covered the full range of externally worn absorbent hygiene products and personal care wipes.

EDANA is delighted that five such highly respected individuals in their fields share our belief in the importance of documenting the facts about the relationship between the use of absorbent hygiene products and skin health and hygiene.

We are reassured by their overall endorsement of the benefits of absorbent hygiene products for skin health and hygiene and grateful for their useful suggestions for additional research, product improvements and new product design considerations.

2 Skin Health, Hygiene and Baby and Infant Diapering

One of the most widely known skin conditions for babies and infants in the past has been diaper dermatitis. This is an irritant contact dermatitis in which a combination of factors can compromise the skin. Increased wetness, the mixing of faeces and urine and a higher skin pH can result in activation of faecal enzymes and the presence of Candida albicans can lead to severe diaper rash episodes.

Based on their own clinical experience and the published scientific research (see Appendix Two), the panel of experts agreed that the incidence of diaper dermatitis in babies and infants has decreased substantially over the past 20 years. They noted also that over that period of time knowledge within the medical profession about the causes of diaper dermatitis and how to treat it has significantly improved as well.

The primary reason for the dramatic reduction in the incidence of serious cases of diaper dermatitis which require medical intervention has been the widespread use of modern disposable diapers which offer superior absorbency and containment and therefore increased skin dryness.

Professor Carlo Gelmetti, Department of Clinical Dermatology, University of Milan, Italy.

'Things have changed a lot since the 1980s when more than 20 percent of the babies I treated presented with diaper dermatitis and some of those cases were very severe. At that time, the use of old style cloth diapers and the overuse of steroid based treatment creams worsened the problem.'

Panel members confirmed that in the countries where they practice, they now see very few cases of severe diaper dermatitis.

Dr Colin Michie, Senior Consultant Lecturer in Paediatrics, Ealing NHS Trust, UK.

'Severe diaper dermatitis is so unusual to see these days; when it does present paediatricians can find themselves considering in their initial assessment whether it could potentially be an indicator of lack of care.'

Panellists summarised the main factors which contribute to the few cases of diaper dermatitis that present for treatment today as:

- The use of low quality diapers – particularly in poorer communities where cheaper diapering products are often imported and sold at local retail outlets;
- Exuberant cleansing can irritate skin and impair its barrier properties;
- The use of cloth diapers which are less effective in absorbing and retaining liquid;
- Poor hygiene practices and/or in the worst case scenario, neglect in cleaning the diapered skin area during diaper changes;
- An indicator of other illnesses such as a gastrointestinal infection;
- Inappropriate or poor fit of the diapers being used.

An infrequent type of dermatitis occurring on one or both hip areas has been reported. The very limited literature[1] published on this form of dermatitis suggested that it could have been caused either by allergens in the anti-leak components of older diapers components, or because the reduced size and tighter pant-like fit of diapers designed for toddlers caused rubbing. Panellists confirmed that this type of dermatitis is very rare.

1 Di Landro A, Greco V, Valsecchi R. 'Lucky Luke' contact dermatitis from diapers with negative patch tests. Contact Dermatitis. 2002 Jan;46(1):48-9.

Belhadjali H, Giordano-Labadie F, Rance F, Bazex J. "Lucky Luke" contact dermatitis from diapers: a new allergen? Contact Dermatitis. 2001 Apr;44(4):248.

Roul S, Ducombs G, Leaute-Labreze C, Taïeb A. 'Lucky Luke' contact dermatitis due to rubber components of diapers. Contact Dermatitis. 1998 Jun;38(6):363-4.

It was noted that the few cases of diaper dermatitis that do present for treatment these days can normally be treated quickly and effectively by:

- Improving the quality of the diapers used;
- Regular diaper changes;
- Gently drying the skin after each diaper change;
- Using an emollient and/or barrier cream;
- Varying the size and shape of diapers used.

Panel members stressed the need for effective communication to convey the importance of the use of highly absorbent diapers in preventing diaper dermatitis.

Professor Dr Peter Elsner, Clinic for Dermatology and Dermatological Allergies, Friedrich-Shiller University, Jena, Germany.

'The epidemiologic data confirms that cases of diaper dermatitis are now very rare. Some parts of the German population are very environmentally minded however and use cloth diapers. In this category of population cases of diaper dermatitis are more frequent. When the parents insist on continuing to use reusable diapers their children can really suffer. It is really important that we communicate to them the risks to the skin health of their child. '

While diaper dermatitis has been the dominant skin health issue associated with wearing diapers, panel members identified other health and hygiene benefits in using highly absorbent and leak protective diapers:

- Faecal containment in day-care settings is maximised and the potential for the transmission of enteric disease is reduced as a consequence;
- In infants with certain skin conditions such as eczema, the skin condition of diapered skin can be better than non-diapered skin; this has prompted consideration of the desirability of the development of a full body "diaper" for infants suffering such conditions;
- A reduction in the number of cases of urinary tract infections that are presenting, although to the panel's knowledge there is no evidential data to link this directly to the use of certain types of diapering systems.

Given the clear skin health and hygiene benefits of using highly absorbent and leak protective diapers, panel members were asked whether guidance existed in their countries on the standards for product use in institutional or care centre settings. It was noted that in the United States for example, national health and safety performance standards exist which provide guidelines for out-of-home child care programs.

This standard stipulates that for hygiene reasons, only disposable diapers with absorbent gelling material or carboxymethyl cellulose should be used in those programs.

Panel members were unaware of any equivalent guidelines in Europe, but could see value in them.

It was also noted that in hospital settings, while there is no specific guidance on the use of disposables rather than reusables, in practice due to the difficulty of arranging the laundering of reusable diapers on the ward, disposables have become the de-facto standard.

3) Skin Health, Hygiene and Incontinence Products

There are different types of incontinence such as stress, urge and mixed urinary incontinence as well as faecal incontinence. The condition affects people of all ages including young children and teenagers. In women it is often associated with the after-effects of child birth and with men it is most often associated with prostatic problems. People with neurological disorders and older people, particularly those with mobility and cognitive impairment, are vulnerable to continence problems.

The range and extent of incontinence problems and the variety of products that exist to address them makes it difficult to generalise about the condition itself and the associated skin health considerations that arise from the products used to manage the condition.

Much of the scientific research and literature on skin health and diapers has related to baby diapers. The panel confirmed that its application to adults using absorbent hygiene products for incontinence related problems is both relevant and equally important.

The factors causing skin health problems in the incontinence pad area are the same for adults with incontinence as for babies and infants. Panel members observed however that skin health issues for adults were often different in their manifestation.

There are a number of reasons for this:

- Elderly skin is more fragile and vulnerable to injury being thinner, less stretchable and less

resilient; as a result it has poorer healing properties;
- Urinary incontinence is not always accompanied by faecal incontinence so the mixing of faecal matter and enzymes with urine in adults is not common place as it is with babies.

As a result the incidence of pressure sores and moisture-associated lesions is greater and the incidence of traditional (infant-type) diaper dermatitis is less.

For heavy incontinence sufferers in nursing care, it is difficult to delineate clearly between skin health issues caused by their incontinence or by other aspects of their infirmity. Skin problems can result for example, from pressure sores or from moisture lesions, but it is not always possible to isolate the cause.

Generally speaking in institutional care the incidence of skin health problems for patients is influenced by:

- the quality of the care that patients receive;
- mobility;
- the quality of the incontinence products used;
- their medical, physiological and mental condition.

Panel members generally agreed that for incontinence sufferers, skin health may be compromised by occlusion and increased wetness. Products that are highly absorbent and that reduce the effects of occlusion by the use of "breathable" materials are likely to reduce skin over-hydration and will have consequent skin health benefits.

Dr Mandy Fader, Continence Technology and Skin Health Group, University of Southampton, UK.

"It is challenging to collect good evidence on the relationship between incontinence products usage and the incidence of dermatitis in adults requiring nursing or residential care. This is because poor skin condition is often linked to pressure sore formation, which in turn is often linked to quality of care considerations other than the type of product used to manage the individual's incontinence."

Value for money is a prime consideration in institutional purchasing decisions which means that less superior products are often to be found in nursing and residential care homes. For public procurement agencies to review their purchasing policies for absorbent hygiene products, they will need to be convinced of the links between the use of highly absorbent breathable products and a reduction in skin-related health problems. If this data does not already exist, it will need to be generated.

Dr Mandy Fader, Continence Technology and Skin Health Group, University of Southampton, UK.

"What would be very beneficial would be evidence-based guidelines for practitioners on the performance of different incontinence products such as their absorbency, leakage and odour control, and also effects on quality of life. This would help shape purchasing policies to reflect what is most beneficial for the user."

The panel noted that the product usage by men and women is different and that the needs of men could be better addressed. Comparative evaluation of key product designs of absorbent products for light incontinence sufferers has been undertaken and has been recently published[2]. It has shown that for preventing leakage, for preference and for overall acceptability, disposable insert pads are better than disposable menstrual pads, which are better than washable pants with an integral pad, which in turn are better than washable insert pads.

Men suffering from medium to heavy incontinence show a preference for diaper designs over pads primarily because they perform better but also because they are less like menstrual pads and are not therefore associated with feminine hygiene requirements.

In the light incontinence category there is no strong evidence that either disposables or washables are better for skin health. Panel members mentioned however that they were aware of the incidence of allergic reaction to nickel developing from detergents and softeners in residues left in clothes and the advice that is sometimes given therefore to rinse washables twice. It was noted that recently published literature[2-3] has confirmed the compatibility of the use of softeners with healthy skin.

2 Absorbent products for urinary/faecal incontinence: a comparative evaluation of key product designs. M Fader, A Cottenden, K Getliffe, H Gage,S Clarke-O'Neill, K Jamieson, N Green, P Williams, R Brooks and J Malone-Lee, June 2008.

3 Piérard GE, Arrese JE, Dowlati A, Daskaleros PA, Rodriguez C. Effects of softened and unsoftened fabrics on infant skin. Int J Dermatol. 1994 Feb;33(2):138-41.

Piérard GE, Arrese JE, Rodríguez C, Daskaleros PA. Effects of softened and unsoftened fabrics on sensitive skin. Contact Dermatitis. 1994 May;30(5):286-91.

Hermanns JF, Goffin V, Arrese JE, Rodriguez C, Piérard GE. Beneficial effects of softened fabrics on atopic skin. Dermatology. 2001;202(2):167-70.

4 Skin Health, Hygiene and External Feminine Care Products

All panel members agreed that skin health is not affected by the use of external feminine care products. The panel noted that:

- Thorough and systematic tests have been performed in various parts of the world and under a very diverse range of conditions of the use of external feminine care products and have shown no adverse skin effects;
- Early hypotheses that modern sanitary pads with superabsorbents could cause excessive skin dryness which in turn might cause low humidity dermatitis have not been proven;
- External feminine care product usage has traditionally been limited to the days around the menstruation period itself which means that their usage differs from the daily use of diapers for babies and incontinence sufferers.

Panel members were less aware of alternative reusable products to disposal menstrual pads than they were for baby diapers and adult incontinence products.
They were also unaware of any mainstream discussion in their countries about the relative advantages and disadvantages of the various products available for external use during menstruation.

It was noted that this is not the case for the use of menstrual products worn internally, where debate has often taken place about the use of tampons and where alternative products do exist. This was not discussed in detail as internal menstrual protection products were beyond the scope of this round table discussion.

Panel members were invited to comment on the increasing trend for women to use panty liners as a protection measure between menstrual periods.
The panel noted the research results which show that breathable panty liners with acidic cores result in skin temperature, pH and microflora levels that are very close to those of non-users.

They therefore concluded that there is no cause for concern in this regard.

It was also noted that even with non-breathable panty liners where temperature, pH levels and microflora levels were shown to be higher, microbial densities are still low; as a result the risk of infection is considered to be low.

5 Skin Health, Hygiene and Wet Wipes

Wet wipes are used for baby hygiene, facial cleansing, and intimate personal hygiene (feminine wipes and moist toilet tissue) as well as household, industrial, medical and institutional cleaning. Their use has become much more widespread in recent years so panellists were asked to comment on whether their increased use has led to specific skin health concerns.

Panel members stated that the wipes available on the market today are of good quality and do not provoke skin irritation; they concurred with research results published in the scientific literature that current products have a skin mildness comparable to that of water and a cleansing material such as cotton wool.

It was noted that in Germany in the early days of the introduction of moist toilet tissue, there had been some cases of contact dermatitis and allergy which appeared to be associated with the use of a specific preservative. In response the manufacturers immediately adjusted the formulation of the product and to the Panel's knowledge no problems have been detected since then. An important learning point from this experience was that absorption rate of skin in the perianal and periurethral regions of the body is significantly higher than in other parts of the body such as the forearm. Therefore, the concentration of chemicals in products used in those parts of the body may need to be lower. Panel members stated that the total quantity of chemicals in the lotion in wipes is very low so exposure does not present a problem.
It was noted however that:

- It is important that the exact composition of the wipe is known and clearly labelled so that allergic reactions can be prevented and/or treated effectively;
- Panellists felt unable to comment at this point of time on whether there are any impacts of longer term use of these products on the skin as they are relatively new compared with baby diapers, incontinence and sanitary protection products. [4]

4 Monitoring of product safety in use and labelling of ingredients in lotions are required by law by the EU General Product Safety Directive and the Cosmetic Directive (currently being recast into a Regulation), with which EDANA member companies comply.

Professor Jan Faergemann, Department of Dermatology, Sahlgrenska University Hospital, Sweden.

"Modern day wipes are very good quality and they offer real benefits in terms of convenience. The material is pliable and soft so it feels more comfortable on the skin; it is important to remember too that ingredients are added to the wipe which can moisturise and/or provide other skin benefits".

When asked whether wipes were safe for use with subgroups such as premature babies or for people with conditions such as haemorrhoids, the panel indicated there were no reasons to believe that wet wipes could not be used safely in these circumstances. It was noted by panel members however that as far as premature babies are concerned, it is generally recommended that they are not bathed in their premature state to avoid the risk of unnecessary distress to the infant. On this subject reference was made to study results which have recently been submitted for publication by researchers at The Skin Sciences Institute, Cincinnati Children's Hospital Medical Centre concerning the use of a brand of baby wipes on a premature population. The results show the wipes were well tolerated and indicated some beneficial skin effects.

Professor Dr Peter Elsner, Clinic for Dermatology and Dermatological Allergies, Friedrickh-Shiller University, Jena, Germany.

"In Germany there is a network of dermatologists which pools patch test data. I can confirm that no trends of irritation and/or allergy have been observed with the increasing use of wet wipes and absorbent hygiene products in general."

The panel discussed the general topic of hygiene within institutions and care centres and increasing concerns about the presence of Clostridium difficile (C. diff) and methicillin resistant Staphylococcus aureus (MRSA) and their impact on the incidence of vascular access-related septicaemia.

All panel members expressed interest in data on the relative merits of various cleaning regimes, including disinfectant wet wipes, on the presence of microorganisms such as C.diff and MRSA. If there is evidence that wet wipes offer superior performance in eliminating such bacteria, this would be a very important piece of evidential data which should be promoted widely throughout Europe's public health systems.
It was noted that any wipes designed to kill these organisms would have to be carefully formulated to avoid the development of resistance of the organisms to preservatives for example.

It was also suggested that the use of disinfectant wipes in public institutions could reduce the amount of time spent on cleaning and washing cleaning materials and leave staff with more time to spend on their caring responsibilities.

Dr Colin Michie, Senior Consultant Lecturer in Paediatrics, Ealing NHS Trust, UK.
"Concerns about contamination of patients with bacteria which cause septicaemia are very high indeed in the UK health service and amongst the public in general. Any tool, including disinfectant wipes, that can be employed to keep hospitals and other institutions clean of such bacteria would be welcomed by health managers."

The panel discussed whether new forms of wipes could be developed which would assist in the treatment of the various forms of atopic dermatitis. The concept of 'probiotic' wipes, for example based on physiological lipids was discussed. Manufacturers were encouraged to explore these options further in their research and development activities.

6 Product Safety Considerations

The panel received information about the approach the absorbent hygiene products industry takes to assuring the safety of its products. It was explained that the composition of each material or ingredient is reviewed and where appropriate tested for allergy and irritation prior to incorporation in a finished product. Clinical in use studies are conducted to ensure that the design of the product is safe. This is a very thorough process and can take up to a year from the initial development of a product to its introduction to the market.

In addition absorbent hygiene product manufacturers in Europe are working collaboratively to develop Exposure Based Risk Assessments (EBRA) for absorbent hygiene products. The first of those was undertaken on baby diapers as a voluntary initiative and was presented at the 2006 International Conference on Environmental Epidemiology and Exposure.

EDANA member companies also have systems in place to receive communications from consumers, investigate and take actions in response to consumer complaints, answer any questions that arise from external stakeholders and to recall products from the market in the event of a serious product quality or safety issue.

Commenting on these product safety arrangements panel members made the following points:

- Simple chemicals are probably the easiest to assess, natural substances are more complex to evaluate because they are more variable. Contrary to popular perception, it can in fact be safer to use man-made chemicals rather than natural substances;
- Transparency in product safety protocols is critical to ensure their credibility; third party review of the procedures will help to ensure consumer confidence; this has been done in Germany and has been a successful initiative that could be implemented elsewhere;
- Manufacturers of absorbent hygiene products face difficult challenges in responding to emerging product safety and health concerns when, as is often the case, the state of science is still evolving. The use of parabens as preservatives was cited as an example; there is still public concern about this ingredient despite reassurance from regulatory authorities;
- The forthcoming ban on the use of animals in testing components for cosmetic products could see a compromise in the safety of consumers because there are still some end-points where no adequate in-vitro tests have yet been established.

In response, panel members were informed that:

- Because of the more unstable nature of natural substances, the testing criteria used by manufacturers for natural ingredients are much more stringent;
- Although there is no independent authority that has responsibility for assessing the safety of absorbent hygiene products EDANA member companies comply with the requirements of the General Product Safety Directive and the Cosmetic Directive which stipulate the measures manufacturers must take to assure product safety;
- From a manufacturer's perspective, it is the responsibility of the supplier of an ingredient to analyse the individual components of their products and to assure the safety of all the ingredients;
- Where less data exist, industry relies on the expert opinion of organisations such as the Scientific Committee on Consumer Products. Sometimes, a perceived safety issue with an ingredient may justify a decision not to use it, even if the scientific data suggests there is no safety concern. This is because consumer confidence in the products is paramount to their ongoing acceptability.

Panel members discussed the importance of providing the general public with balanced, factual and easily understood information on subjects relating to their own health and hygiene and the relative merits of various treatment or product options.

Professor Dr Peter Elsner, Clinic for Dermatology and Dermatological Allergies, Friedrich-Shiller University, Jena, Germany.

"Consumers need consistent communication on safety and what manufacturers do to ensure safety."

Often it is in the common interest of industry and healthcare professionals to have a coordinated approach to communicating on subjects like this. The example of the UK's Toxic Shock Syndrome Information Service was cited as a model of an effective communications programme to provide people with medically based information about the syndrome and to be proactive in ensuring that inaccurate and/or unreliable information is challenged and corrected.

In this regard panel members welcomed EDANA's Right for Hygiene Programme[5] which is designed to proactively promote the benefits of absorbent hygiene products and wipes.

The Panel expressed a consensus view that absorbent hygiene products are safe. As far as incontinence products are concerned, it was pointed out that absorbent hygiene products are considered to be safer than invasive methods such as catheters for example for alleviating incontinence.

5 "The Right for Hygiene Programme was launched in 2007 by EDANA. The programme comprises a range of communications activities and materials designed both to extend the industry's knowledge and to increase stakeholder understanding of the benefits of absorbent hygiene product and personal care wipes.

7 General Quality of Life Considerations for Absorbent Hygiene Product and Wipes

The quality of life concept represents those attributes which generate an overall sense of well-being based on ability to function within society, comfort, health considerations, self esteem and convenience.

Panel members all agreed that "quality of life" is becoming an increasingly important parameter. In medical interventions it is becoming necessary not just to demonstrate that the intervention improves the patient's health problem, it is also important to demonstrate that in doing so it also improves their capacity to engage successfully in life. So for example for dermatologists it is important not only to be able to demonstrate that a particular intervention will help to reduce a child's allergic reaction, but that in doing so it will also improve his or her performance at school.

There was consensus that absorbent hygiene products do improve the quality of life of both the users and their carers.

Professor Jan Faergemann, Department of Dermatology, Sahlgrenska University Hospital, Sweden.

"There are two obvious characteristics for product users in this regard; leakage control and odour prevention. The superabsorbent material used in disposable baby and adult diapers creates these two characteristics by absorbing the urine into the core of the diaper and by keeping it there. Further product innovations in these two areas will have a commensurate impact on quality of life for both users and carers."

Convenience and time saving is another important quality of life consideration for carers.

Dr Mandy Fader, Continence Technology and Skin Health Group, University of Southampton, UK.

"Wipes for example, may not only be cost effective, their use in institutions and in peoples homes may reduce the time that is needed to clean with soap and water leaving time for other important caring activities."

Discretion and self esteem are important quality of life considerations for menstruating women and for people suffering from light incontinence who need to be able to go about daily life with as little interference as possible. These considerations are linked closely to leakage and odour control, but also to product design. Quality of life is enhanced by products that are discrete and comfortable as well as effective; ongoing improvements in this area, which recognise the different requirements for men and women, are therefore important.

Dr Mandy Fader, Continence Technology and Skin Health Group, University of Southampton, UK.

"For example, while menstrual pads are not necessarily as effective as incontinence pads designed specifically for the condition, women will often opt to use them because they are less expensive and their purchase does not indicate an incontinence problem. As far as men are concerned the best products for leakage control will cover the scrotum, but given the sensitivity of scrotal skin, such products are not always perceived to be as comfortable to wear as other alternatives."

It was agreed that good quality of life data will be essential to be able to demonstrate the need for the purchase and use of good quality products. Panel members discussed some of the complexities in attempting to measure more scientifically the quality of life parameters that relate to absorbent hygiene products, namely:

- there is an inbuilt bias when evaluating quality of life for young babies and infants because the information is interpreted through the views of the parents;
- relief from pain caused by diaper dermatitis might be one criteria as models do exist to evaluate pain; they are limited however;
- while it is possible to assess whether or not a child is distressed, quantifying what that means in quality of life terms is difficult;
- extremely diverse coping patterns make the evaluation of quality of life a very difficult exercise;
- doing studies that involve severely incontinent adults often involves individuals with other very limiting conditions as well; this makes their participation fraught with difficulties both in term of physical examinations and in seeking their views on the more qualitative aspects.

Dr Fader informed fellow panel members that noting the above, some work is currently being undertaken with adults to determine how leakage and odour affect incontinent people's' lives and a trial comparing catheters and pads as two different options for managing urinary incontinence is being planned. Infection is at the centre of this comparison. The quality of life of the carer is an additional dimension which is also being studied.

8 Areas for Future Work

Throughout the discussion panel members were invited to propose areas where additional work could be beneficial under three general categories:

- scientific studies to further gain/obtain knowledge about the linkages between skin health and hygiene and absorbent products and wet wipes;
- product developments or improvements that could help to extend skin health and quality of life benefits;
- initiatives the industry could take collectively and/or in partnership with others to increase understanding and awareness of the importance of good skin health and quality of life.

Some of these have been alluded to in the earlier text, but they are summarised below for ease of reference:

Scientific Studies

- The development of a measure of skin health for adult incontinence sufferers that makes it possible to quantify the impact that one product has over another on quality of life; one option could be to use estimations of skin microflora. Whatever tool is developed it will need to be able to be used in the field as it is not always possible when studying incontinent adults to operate in a controlled environment;
- A study of the impact of highly absorbent hygiene products on the incidence of urinary tract infections;
- A review of all existing literature to determine what evidence currently exists about incontinence product usage and skin health considerations;
- Evidence of the relative performance of different types of products on skin health needs to be generated to assist institutional buyers in making their purchasing decisions;
- Studies into the impact on skin health when there is combined use of various products, for instance creams and diapers, and their interaction;
- Collection of evidence of the role disinfectant wipes can play in eradicating bacteria or other types of infections in public health institutions;
- Studies of the longer term impact on skin health of regular use of wipes in the perianal and periurethral areas of the body.

Product Developments

- Odour control will be a key area of product improvement, in particular for incontinence products; the interaction between breathability and odour control will be important in this regard;
- Currently incontinence products are based very much on the design of baby diapers. A more adult appealing design would be a definite improvement for incontinence products. In this respect reusable products have an advantage due to their manufacture from textiles. In general patients would appreciate more elegant designs;
- More focus on the particular product needs of incontinent men;
- Wetness indicators so that it is easy for carers to see when a product needs changing. It was noted that these indicators do already exist in some product categories, but when researching consumer opinion about their acceptability for more general applications, parents reacted negatively to the concept preferring to rely on their own habits and practices to decide when a change is required;
- Research into the development of a new form of 'probiotic' wipe, based potentially on physiological lipids, which could assist in the treatment of the various forms of atopic dermatitis;
- Continued focus on reducing the environmental impact of the products.

Industry Wide Collaborative Initiatives

- The development of a guideline on incontinence skin health. This could be a joint initiative of industry and a medical society which would provide guidance to carers and nursing staff on best practice in the use of absorbent products and wet wipes in managing skin care for incontinent people;
- A similar guideline could be developed for the infant and baby care industry;
- Joint initiatives of industry and healthcare professionals to communicate to users the importance of good skin health and hygiene and the role absorbent hygiene products can play in promoting it;
- Independent and expert review of the industry's product safety and quality assurance processes.

9 Summary

The panel's discussion extended over a number of topics related to absorbent hygiene products and wet wipes, their role in supporting healthy skin and good hygiene, their safety and their broader role in improving people's quality of life.

Panel members provided constructive and perceptive insights into these topics which can be summarized as follows:

- The widespread use of modern disposable baby diapers has led to a substantial reduction in the incidence of diaper dermatitis;
- The health of skin in the diapered area of babies where modern absorbent hygiene products are used is good;
- There is no evidence of skin health problems related to the use of external feminine care products;
- In the context of tightening public budgets, demonstrating quality of life benefits, including improved skin health benefits, will be essential if institutional buyers are to change their buying preferences away from the lower quality products;
- Today's personal care wipes are safe and convenient and are appropriate for use with children of all ages and with adults with compromised skin or medical problems such as haemorrhoids;
- Disinfectant wipes could have a very important role in improving hygiene standards and reducing the bacterial presence in public health institutions;
- Guidelines on best practice in good skin health care could be beneficial for care givers of infants and adult incontinence products;
- It is the common task of industry and healthcare professionals to continue to communicate to users the benefits of good skin health and good hygiene.

Industry is very grateful to all of the panel members for their participation and reassured by their conclusions. The output of this roundtable discussion will be invaluable in helping the industry to communicate the benefits of absorbent hygiene products. It provides very useful input to the thinking of individual member companies about future scientific research and product development as well as suggesting some industry-wide initiatives that could be undertaken.

Appendix One: Panel Participants

External Independent Experts

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Chair
Hygiene Absorbent Products Committee
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Mr Pierre Conrath
Sustainability and Public Affairs Manager
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Ms Sarah Portway
External Consultant and Panel Facilitator
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Appendix Two: Scientific Literature provided to Panel Members as Background Reading

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