



The time to invest in patient safety and pressure ulcer prevention is now!

Patient safety has always been a critical issue within healthcare settings when discussing budget. The **cost due to patient harm and its consequences are quite significant**: reports from the OECD estimate that 15% of hospital expenditure and activities can be attributed to treating safety failures.¹ Pressure ulcers and wound medication error are among the common adverse events affecting the health systems.

Though highly preventable, pressure ulcers and wound medication error remain an ongoing problem in numerous healthcare settings. It is important to collect and look at data such as bed days lost due to pressure ulcers² and similar index to recognise prevention as an investment for building a trusted and effective healthcare setting, not as a burdening cost.

Studies affirmed that the **costs of pressure ulcer prevention are dwarfed by the cost of failure**. Despite the considerable lack of data on potential savings, a recent study identifies pressure ulcers as an important example of preventable harm in acute and long-term care settings. Although the cost of prevention and treatment differed significantly depending on costing methods, findings reveal that the costs to treat severe pressure ulcers are substantially higher than the cost of prevention.³

It is worth taking into consideration that adverse events, like pressure ulcers, not only impose substantial financial burden but also a significant **impact on society, by undermining public trust** in the healthcare system. According to a Eurobarometer survey published in 2014, over half (53%) of all EU citizens think it is likely patients could be harmed by hospital care in their country, a three percentage point increase since the previous EU-wide survey run in 2009.⁴

The ongoing economic crisis has put a **great deal of pressure on national healthcare budgets**. Since 2009, several European countries hard hit by the crisis, have cut their health spending by reducing budgets and resources for staffing. Doing so, they have put patient safety at risk. Although the

¹ OECD, *The Economics of Patient Safety: Strengthening a value-based approach to reducing patient harm at national level*, June 2017.

² For example, in England the annual total of bed days lost due to pressure ulcers is around 1200, significantly higher than other adverse events like central line infections, sepsis and venous thromboembolism. Data based on the 2015-2016 NHS England references costs www.gov.uk/government/publications/nhs-reference-costs-2015-to-2016

³ Demarré et al, *The cost of prevention and treatment of pressure ulcers: A systematic review*, 2015 [http://www.journalofnursingstudies.com/article/S0020-7489\(15\)00200-X/fulltext](http://www.journalofnursingstudies.com/article/S0020-7489(15)00200-X/fulltext)

⁴ Eurobarometer, *Special Eurobarometer on Patient Safety and Quality Care*, 411/2014.



annual average growth rate per capita health expenditure varies across States, the EU-wide average rate is quite worrying: from 3.1% in 2009 to 0.7% in 2015.⁵

Although the crisis led to a slowdown in health spending growth, the **healthcare costs are rising fast in advanced economies**: according to the OECD analysis, health spending in Europe will become unaffordable by 2050 if policy makers would not reform the current systems by setting clear spending targets, investing more in health promotion and prevention. In European countries, public health cost is set to increase from around 6% of GDP today to almost 9% of GDP in 2030 without reforms to contain them.⁶ The rising cost of healthcare is not only related to the technological advances but also to the demographic changes. Public health spending generally increases with the age of a person: notably from the ages of 55 and greater for men and 60 and greater for women, coinciding naturally with higher morbidity at older age. Population aging is a powerful and demographic force: in 2050 the population aged 65 or greater will represent 16% of the population.⁷

In this fragile and partially unsustainable economic framework, preventing adverse events and unnecessary expenses in healthcare settings is crucial to keep the system sustainable. Given that the costs of pressure ulcers prevention are proven lower than the cost of failure, EWMA and EPUAP strongly advocate for the prevention of pressure ulcers as a key goal in healthcare and patient safety strategy.

The European Commission has recognised **the importance of prevention** of diseases and infections **in reducing cost and promoting efficiency**. The Lithuanian Commissioner for Health and Food Safety, Vytenis Andriukaitis, has put security and prevention at the forefront of the EU Health programme, stressing the European Commission's commitment in supporting Member States in improving quality and safety. Under his lead in the last months, the Commission has taken important steps by boosting EU actions on health and prevention: namely EU initiatives on vaccines, against tuberculosis, HIV/AIDS and, last but not least, against antimicrobial resistance, by promoting prevention as a milestone for a successful national strategy.

However, when policy makers discuss patient safety and cost-effectiveness, little attention is given to pressure ulcers and their prevention. Following the recent adoption of the EU Action Plan on antimicrobial resistance, it is very important that the Commission gains momentum and build something more concrete on patient safety, especially recognising severe pressure ulcer as a big threat for well-being and a significant burden for health budgets. In this vein, the cooperation between the European

⁵ OECD, *Fiscal Sustainability of Health Systems and Bridging Health and Finance Perspectives*, September 24, 2015.

⁶ *Ibid.*

⁷ WHO and the US National Institutes of Health, *Global Health and Aging*, NIH Publication no. 11-7737, October 2011 http://www.who.int/ageing/publications/global_health.pdf



Commission and OECD on quality of healthcare could be further strengthened to produce in-depth assessments and new generation of EU-wide health statistics on the cost-savings and cost-effectiveness of prevention of adverse events such as pressure ulcers.

This article is published in September 2017 by the European Pressure Ulcer Advocacy Panel (EPUAP) and the European Wound Management Association (EWMA). The publication is part of the activities of the “Joint EPUAP & EWMA PU prevention & patient safety advocacy project”.

Read more about EPUAP at www.epuap.org, about EWMA at www.ewma.org





Patient safety across Europe: the perspective of pressure ulcers

Ensuring patient safety in healthcare is a challenge for EU countries that must regain the trust of their people when it comes to healthcare management. More than a quarter of EU citizens have experienced an adverse event while receiving healthcare and over half think it is likely patients could be harmed by hospital care in their own country.¹

The cost and the importance of preventing errors and adverse events are crucial elements in healthcare that should never be undervalued. A recent report released by the European Commission on the cost of unsafe care and cost effectiveness of patient safety programmes estimates that about 4-17 % of patients experience adverse events, whereby 44-50 % of these events are preventable.

Pressure ulcers, also known as pressure injury, decubitus ulcers and bed sores, are very widespread adverse events in the hospital, especially among the most vulnerable patients,² i.e. children, elderly and those hospitalized in intensive care units.³ Recent studies consider pressure ulcers as the greatest burden exerted by unnecessary patient harm: in England this burden is estimated over 13 thousand of Disability Adjusted Life Years (DALYs), which measures the total number of years lost due to specific diseases or harm.⁴

It is important to stress that those injuries not only represent major challenges for the quality of life of citizens, but also a great burden in the healthcare budget. Although there are no consolidated data at EU level, the costs associated with the management of injury due to pressure ulcers are considered to be very significant in many countries; for example in the UK the total treatment cost of the related treatment amounts to GBP 1.4 to 2.1 billion or 4% of health expenditures.⁵

The Recommendation on Patient Safety adopted by the Council in 2009 have successfully raised awareness about patient safety and its challenges, yet its implementation at national level is considered incomplete.⁶ The European Commission assessed that several shortcomings are still in place: most Member States are still seriously challenged by patient safety issues, particularly

¹ Eurobarometer, *Special Eurobarometer on Patient Safety and Quality Care*, 411/2014.

² OECD, *The Economics of Patient Safety: Strengthening a value-based approach to reducing patient harm at national level*, March 2017.

³ Rocha JA, Miranda MJ, Andrade MJ. *Abordagem terapêutica das úlceras de pressão: intervenções baseadas na evidência*. Acta med port. 2006 [Cited 2012 Feb 15] 19(1):19-28.

⁴ OECD, *op. cit.* p.13.

⁵ European Commission, *The costs of unsafe care and the cost effectiveness of patient safety programmes in healthcare systems in the EU Member*, report drafted by Gesundheit Österreich Forschungs- und Planungs GmbH and SOGETI, February 2016.

⁶ European Union, *Council Recommendation of 9 June 2009 on patient safety, including the prevention and control of healthcare associated infections* (2009/C 151/01).



healthcare associated infections, medication errors and pressure ulcers.⁷ Although these patient safety issues and adverse events may differ between healthcare settings, their drivers are considered to be the same across European countries: lack of communication and information, lack of skills or knowledge, inadequate organisational culture and misaligned incentives.⁸

Another issue which causes constant concern is that patient safety culture and blame-free environment have not improved yet in Europe. The empowerment of patients through effective reporting system and engagement in shaping national strategy are considered to be partial. Insufficient action had been taken by Member States to empower patients in terms of involving their representative organisations in policy making and informing patients on risks and safety provisions.⁹

Likewise, education and training of healthcare workers remain challenging. Although several EU countries claimed they encouraged continual education training on safety measures in healthcare, in most of the cases they have not provided any evidence about the actual delivery of such initiatives and programmes.¹⁰ In most of Member States, a fundamental system-level initiative such as patient safety education and training still differ depending on the profession (e.g. nurses, physicians, physiotherapists, occupational therapists, dieticians and pharmacists) and in 15 European countries it is not even mandatory.¹¹ Hence, it is very important for organisations as EWMA and EPUAP to keep on promoting the role of education in the prevention and treatment of adverse events like pressure ulcers, especially throughout important tool such as the International Pressure Ulcer Guidelines (to be renewed in 2019).¹²

Overall, the abovementioned deficiencies show that the Council Recommendations remains only partially applied across the EU and consequently an assessment of the state of play is still needed. Although it is commonly acknowledged that the Council Recommendation should remain an important guidance to monitor the progress made in patient safety and quality of care, the last implementation report was published only in 2014. The monitoring of the general patient safety provisions must keep going: a new implementation report from the Commission would represent a great tool to track down the path walked so far as well as a necessary starting point to eventually update the Council Recommendation.

⁷ European Commission, *Second Report to the Council on the implementation of Council Recommendation 2009/C 151/01 on patient safety, including the prevention and control of healthcare associated infections* COM(2014) 371.

⁸ OECD, *op. cit.* p.9.

⁹ European Commission, COM (2014) 371.

¹⁰ *Ibid.*

¹¹ European Commission, *Key findings and recommendations on education and training in patient safety by the Patient Safety and Quality of Care Working Group*, April 2014, p. 12.

¹² The NPUAP, EPUAP, PPIA International Pressure Ulcer Guidelines, released in 2014, provide based recommendations for the prevention and treatment of pressure ulcers addressed to healthcare professionals. For more information: <http://www.epuap.org/epuap-guidelines/#downloadtheepuapguidelines>.

The guidelines will be renewed in 2019 and the guidelines development group will have the first meeting in Belfast during EPUAP 2017.



The new implementation report should assess the development made by each country, in order to identify a list of best practices, national and local policy for quality of care evaluation (patient safety goals etc.). There are many success stories and lessons learned at national level to be discovered and showcased cross border.

Additionally, the assessment should effectively evaluate the impact of austerity measures. The current economic crisis has without doubt placed great pressure on national healthcare budgets, also slowing down the implementation of national patient safety strategies. As flagged by the European Parliament's report on "Safer healthcare in Europe: improving patient safety and fighting antimicrobial resistance", since the crisis has started many EU countries instead of properly addressing efficiency issues, have radically reduced budgets and resources for staffing.¹³

There are no clear or consolidated figures to assess the damage resulting from austerity measures and dangerous short-term savings in the healthcare system across the EU. Any future implementation report on the Council Recommendation must fill this data gap. European policymakers need to acknowledge the consequences of poor financing and identify which adverse events are more likely to happen in certain conditions.

This article is published in May 2017 by the European Pressure Ulcer Advocacy Panel (EPUAP) and the European Wound Management Association (EWMA). The publication is part of the activities of the "Joint EPUAP & EWMA PU prevention & patient safety advocacy project".

Read more about EPUAP at www.epuap.org, about EWMA at www.ewma.org



¹³ European Parliament, *Report on Safer healthcare in Europe: improving patient safety and fighting antimicrobial resistance* (2014/2207(INI)).



Diabetic Control & Pressure Ulcers: fighting fatal complications and improving quality of life

Diabetes is an important battlefield for better health for EU citizens. According to the latest WHO statistics, about 422 million people worldwide have diabetes, a number almost as high as all the EU-27 population put together and a figure likely to more than double in the next 20 years.¹ Looking closely at the EU population, in 2010 approximately 9% of the adult population (20-79 years) was diabetic, with the absolute around 33 million in 2010, which will rise to 38 million by 2030.²

With the growing diabetes incidence, healthcare professionals and planners are encouraged to pay further attention to the major complications of this disorder. **Diabetes can lead to debilitating and acute complications with a serious impact on people health**, including cardiovascular diseases and stroke, kidney failure, amputations and blindness. The complexity of this chronic illness requires continuous medical care with multifactorial risk-reduction strategies beyond glycaemic control. Patient self-management education and continuous training for health workers are critical to preventing fatal complications.³

A number of studies have demonstrated that due to diabetic complications, people with diabetes have **hospital admission rates between 2 and 6 times higher** than people without diabetes.⁴ Over 50% of people with diabetes suffer from at least one complication that, most of the time, requires hospitalisation, which reflects in targeted patient safety practices since certain harms may occur in the delivery of care to diabetic patients. Adverse events and errors in diabetes care can cause significant morbidity and, too often, disability and even death.

In order to avoid adverse events and their dramatic outcomes, healthcare workforce needs to identify key and common complications in diabetic care. **Poor circulation and infection are among the most common complications that effect diabetic patients.** These conditions demand treatments for providing a holistic medical approach whilst ensuring patient safety.

Pressure ulcers are the origin of one of the most acute condition of diabetic patients: diabetic foot injuries. Diabetic complications eventually affect every part of the body, but they frequently involve the feet. Diabetes can impair blood circulation and injuries healing by narrowing the arteries that carry blood to the legs, which leads to peripheral neuropathy, a major cause of mechanical stress. A

¹ The World Health Organisation, *Fact sheet on Diabetes*, updated November 2017. Available at: <http://www.who.int/mediacentre/factsheets/fs312/en/>

² The European Commission, *DG Health and Food Safety Fact sheet on Diabetes*. Available at: https://ec.europa.eu/health/major_chronic_diseases/diseases/diabetes_en#fragment3

³ American Diabetes Association, *Standards of Medical Care in Diabetes*, January 2017 Volume 40. Available at: http://care.diabetesjournals.org/content/diacare/suppl/2016/12/15/40.Supplement_1.DC1/DC_40_S1_final.pdf

⁴ Jean Comino E, Fort Harris M and Others, *Impact of diabetes on hospital admission and length of stay among a general population aged 45 years or more: a record linkage study*, BMC Health Serv Res. 2015; 15: 12. Published online 22 January 2015. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4310177/>



non-healing wound or pressure ulcers on the foot can develop into a deep sore that quickly becomes profoundly infected. **This makes diabetic foot injuries one of the most serious and costly complications of diabetes.**

Throughout their study recommendations and practice-oriented guidance, **EWMA and EPUAP have strongly reminded that prevention and prompt treatment of foot injuries** are vital for the safety of diabetic patients and for avoiding possible subsequent limb amputation. Evidence shows that more than half of all foot ulcers will become infected, requiring hospitalization, and 20% of lower extremity infections will result in amputation.⁵

As the diabetes pandemic progresses globally, so does the problem of foot ulcers. Achieving control of diabetes not only relies on blood glucose levels and proper nutrition, but also on proper footwear, adequate blood supply to extremities and pressure ulcer prevention. To avoid amputation becoming an inevitable outcome for many patients, a paradigm shift is urgently needed. Adequate training for health workforce, patient education, early assessment, and aggressive treatment by a multidisciplinary team represent the best approach to reduce complication and to ensure limb preservation.⁶

Due to the high morbidity and mortality rates associated with diabetic wounds and infections, **wounds and pressure ulcers must be treated holistically** in order to identify underlying issues and reduce risk factors that are causing wounds in the first place.⁷ A holistic approach means in practice: (1) optimal diabetes control; (2) effective local wound care; (3) infection control; (4) pressure relieving strategies; and (5) restoring pulsatile blood flow.⁸

Unfortunately, treatment and patient safety measures are often not so methodical and quite varied across hospital settings. In Europe, **diabetic foot care has been described as fragmented and unsystematic**, and largely depends on which practitioner the patient happens to be seeing and which resources are available locally.⁹

To tackle the challenge of jeopardization, many stakeholders have called on the European Commission to present an EU strategy on diabetes to gather more evidence on prevention and management of its complications on which base treatment strategies and to promote the development of common clinical guidance.

⁵ Armstrong DG, Boulton AJM, Sicco AB, *Diabetic Foot Ulcers and Their Recurrence*, The New England Journal of Medicine, 376;24, 15 June 2017

⁶ Driver VR, Fabbi M, Lavery LA, Gibbons G, *The costs of diabetic foot: The economic case for the limb salvage team*, Boston, Mass; and Georgetown, Tex, 2010.

⁷ Diabetic patients with leg and foot ulcers have a lower 5-year survival (43%) than nondiabetic ulcerated subjects (56%) and general population controls (68%). Source: Chammas N, Hill R, and Edmonds M, *Increased Mortality in Diabetic Foot Ulcer Patients: The Significance of Ulcer Type*, Published online in April 2016. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4860228/>

⁸ Wounds International, *op. cit.*

⁹ The International Diabetes Federation, *Clinical Practice Recommendations on the Diabetic Foot*, 2017



In this frame, in 2016, through a Written Declaration voted in May 2016, the European Parliament called upon the Commission and Council to prioritise diabetes as a major European health, social and economic concern and to develop an **EU strategy for diabetes prevention, diagnosis and control**.¹⁰ The Declaration, signed by over 400 Members of the European Parliament, aimed to encourage Member States to establish national diabetes plans and to develop uniform diabetes management programmes based on best practices and evidence-based treatment guidelines.

In order to ensure better wound and pressure ulcer prevention and care across Europe, such a programme should pay particular attention to diabetic foot as one of the most dangerous and common complications in diabetic patients. **Any EU strategy should include recommendations on national guidance on the understanding of prevention, comprehensive management and treatment of the diabetic foot**, currently lacking amongst healthcare providers. Below three key recommendations to keep in mind while developing national guidance on diabetes management are outlined:

- In diabetic foot control, achieving safe diabetic care requires active attention at all level, starting from **promoting healthy and active life**: numerous studies have shown that blood glucose levels are improved by increasing physical activity, which has a direct impact on the blood circulation, wound healing and pressure ulcers prevention.¹¹ Exercise has been shown to improve blood glucose control, reduce cardiovascular risk factors as well as decline in mobility among overweight patients with diabetes.¹²
- In addition, any future national guidance on diabetes should **deal with this chronic disease holistically**, this means that any effective and modern diabetes care should be done in a setting in which teamwork is ensured, well trained doctors, dieticians, physiotherapist and other non-medical health workers must work together, more cohesively, in the care of diabetic patients. In this frame, nursing ratios should be higher when patients with diabetes are hospitalized to guarantee that any complication or adverse event are prevented or promptly treated.
- Last but not least, a **no blame reporting system** is likely to encourage paradigm change, providing less thinking about who is to blame and more about how to prevent adverse events and errors caused by the system in which health care professionals work.

In 2015, in Europe, there were over 266 000 deaths due to diabetes.¹³ It is time for the EU and its Member States to prioritise diabetes and its complications in the health strategy as a major disease representing a significant burden across the EU. With the lifetime incidence of foot ulcers occurring in up to 25% of patients,¹⁴ we need to pay far more attention to the diabetic foot and its

¹⁰ European Parliament, *Written Declaration on diabetes*, Reference N. 0008/2016. Signed by 405 Members of the European Parliament and adopted on 02 May 2016.

¹¹ The International Diabetes Federation, *op. cit.*

¹² American Diabetes Association, *Standards of Medical Care in Diabetes*, January 2017 Volume 40.

¹³ European Parliament, *op. cit.*

¹⁴ Armstrong DG, Boulton AJM, Sicco AB, *op. cit.*



consequences. Keeping diabetic patients on their feet, walking and mobile is fundamental in preventing the regression of health condition and in guaranteeing a long-term quality of life.

This article is published in December 2017 by the European Pressure Ulcer Advocacy Panel (EPUAP) and the European Wound Management Association (EWMA). The publication is part of the activities of the “Joint EPUAP & EWMA PU prevention & patient safety advocacy project”.

Read more about EPUAP at www.epuap.org, about EWMA at www.ewma.org

Zena Moore¹

Professor of Nursing and
Head of the School of
Nursing & Midwifery,
Royal College of
Surgeons in Ireland

Jose Verdu Soriano¹

Senior Lecturer and
researcher at the Faculty of
Health Sciences. University
of Alicante, Spain

Andrea Pokorna²

Associate Professor,
Department of Nursing,
Faculty of Medicine,
Masaryk University, Brno

Lisette Schoonhoven²

Professor of Nursing,
Faculty of Health Sciences,
University of Southampton

Hubert Vuagnat²

Head of Division of the
Department of Rehabilitation
and Palliative Care.
University Hospitals
of Geneva

¹ Chair of the Joint
EPUAP & EWMA Pressure
Ulcer Prevention & Patient
Safety Advocacy Project

² Member of the Joint
EPUAP & EWMA Pressure
Ulcer Prevention & Patient
Safety Advocacy Project

Correspondence:
ewma@ewma.org

Conflicts of interest:
None



Since 2016, The European Pressure Ulcer Advisory Panel (EPUAP) and EWMA have collaborated on a joint European advocacy project. The overall aim is to establish a joint EPUAP - EWMA engagement in the Pressure Ulcer (PU) prevention and patient safety agendas at the European level as well as at the national level in selected European countries.

Looking at the patient safety agenda from a wound care perspective, the topic of PU prevention has always been central due to the fact that most PU's are preventable if the patient is managed correctly by health care staff.

This is the fourth article published by the joint EPUAP-EWMA initiative regarding European perspectives on PU prevention. All four articles are available for free download at www.ewma.org where further information about the joint initiative also can be found.

EWMA & EPUAP added-value to OECD efforts



Since its inception in 1948, OECD has provided a forum where member countries can compare and exchange policy experiences, identify good practices and promote recommendations.

In this framework, in January 2017, Health Ministers asked OECD to help them reorienting health systems to become more patient-centred, shifting the focus towards the needs of individuals, and changing the way health systems are structured and how their performance is measured in the future.¹

In the past ten years, the work of OECD has provided a valuable contribution in fostering patient safety policies and studies throughout data collection and data measurement (i.e. OECD indicators). The core of OECD's work on patient safety is defined by the Health Care Quality Indicators (HCQI), which are underpinned by a continuous programme of research and development to improve their international comparability. As for the other OECD indicators, the research on the HCQI on patient safety data is carried out to improve international comparisons and eco-

nomical analyses of health systems. The results of the research are included in the annual publication "Health at a Glance" which reports the most recent comparable data on the health status of populations and health system performance in OECD countries.²

Initiated in 2001, the Health Care Quality Indicators project aims at measuring and comparing the quality of health service provision in different countries. The HCQI collects comparable data on two types of patient safety events: 'sentinel events' that should never occur (e.g. failure to remove surgical foreign bodies) and 'adverse events' which cannot be fully avoided given the high-risk nature of some procedures (e.g. post-operative sepsis, infections, post-operative wound dehiscence). From 2016, OECD Patient Safety Indicators and their uses have been monitored

through the reports on their implementation and, more recently, through the OECD report on the Economics of Patient Safety.³

OECD is not alone in this effort: financially supported by the European Commission, the organisation can count on 250 committees, working groups and expert groups, including representatives of the 35 OECD member countries, civil society and associations working in related fields. Towards the years, the health expert groups have developed a set of quality indicators at the health systems level, which allows to assess the impact of particular factors on the quality of health services.

EPUAP and EWMA contribute to the ongoing activities of the Health Care Quality Indicators Expert Group, bringing attention to their important inputs on wound care and pressure ulcer prevention. For example, the EPUAP and EWMA commitment and expertise have been instrumental in building support for a consistent measurement methodology and definitions, training surveyors for direct patient observation and comparing results against organizational, national and/or international data sets.

In this regard, both EWMA and EPUAP are now working with the OECD to explore approaches to international calculation and reporting on pressure ulcer indicators in acute and long-term care settings, to help underpin the monitoring of national pressure ulcer prevention programmes. In particular, the EPUAP and EWMA are currently involved in the discussion on the progress in scoping of alternative measurement systems for assessing patient safety in long-term care including data collection.

In the frame of their collaboration with OECD, the two organizations strongly advocate for a consistent methodology on data measurement by suggesting tackling the dichotomy between prevalence and incidence data, which yield two very different data. Incidence measures the probability of occurrence of a given medical condition in a population within a specified period of time, while prevalence is the proportion of cases in the population at a given time rather than rate of occurrence of new cases. The initial focus of international measurement efforts by the OECD is focussed on establishing prevalence measurement by key care settings.

EPUAP and EWMA can give further contribution to OECD activities and expert groups. Among the initiatives open to collaboration, it is worth mentioning the EPUAP campaign “Stop Pressure Ulcers” aiming at boosting educational activities on prevention and treatment of pressure ulcers, and organising awareness campaigns and

events on how to share information about pressure ulcers. In line with this, the Declaration of Rio was launched in 2012 speaking out against people developing pressure ulcers. As part of the OECD HCQI work on international measurement methodology, the organisation is in a good position to reach out to the European community and inform them more about pressure ulcers.

This possible collaboration could boost the ties between the organisation, civil society and patients. OECD can benefit from the combined efforts, skills and knowledge of both EWMA and EPUAP to raise the awareness of pressure ulcer prevention and management at the European level, as well as at the national level of several European countries.

REFERENCES

1. OECD Health Ministerial Meeting, Ministerial Statement: The Next Generation of Health Reforms, 17 January 2017. Available at: <http://www.oecd.org/health/ministerial/ministerial-statement-2017.pdf>
 2. OECD, Health at a Glance 2017, 10 November 2017. Available at: <http://www.oecd.org/health/health-systems/health-at-a-glance-19991312.htm>
 3. OECD, Health Care Quality Indicators Project and Patient Safety. Available at: <http://www.oecd.org/els/health-systems/hcqi-patient-safety.htm>
-



The joint Pressure Ulcer Prevention and Patient Safety Advocacy Project of the European Pressure Ulcer Advisory Panel (EPUAP) and EWMA has now entered its third and final year.

The project is continuing with some activities from the previous years, including the publishing of joint statements and articles of which the most recent is included below this box, as well as the collaboration with the OECD Health Care Quality Outcomes project.

Further, the project, during this year, will engage in the elaboration of generic patient case studies to exemplify the patient and health economic value of preventing pressure ulcers from occurring. Case studies will be the way to highlight the problem also from patients' and lay carers' perspective and their quality of life.

In terms of the earlier described engagement (see EWMA Journal 2017 Vol.18 No.2) with representatives of the EU Commission and members of the European Parliament, this activity has recently led to an official Parliamentary Question directed to the EU Commission by MEP Karin Kadenbach. The question and response is available at: <http://www.europarl.europa.eu/sides/get-Doc.do?type=WQ&reference=E-2018-002930&language=EN>. Based on the response, EPUAP and EWMA during the next months will consider how to contribute to the EU best practice portal referred to in the response.

The article below, as well as earlier articles and updates about the project, are available at the EWMA.org and the EPUAP.org websites.

The role of pressure ulcer prevention in the fight against antimicrobial resistance

Every year over 25,000 patients die in the EU alone as a result of infections caused by antibiotic resistant bacteria.

Globally the number of deaths due to antimicrobial resistance (AMR) was estimated to be 700,000¹ in 2014 and that number has been calculated to rise to at least 10 million by 2050. The continuing emergence of AMR has become a recurring topic in the international health agenda as the increasingly serious threat to cross-border public health is recognised. From WHO to OECD, international bodies are constantly monitoring, reporting and formulating strategies to contain AMR.

AMR is defined by WHO as the ability of microorganisms to survive antimicrobial treatments; consequently, prophylactic and therapeutic regimens are ineffective in controlling infections caused by resistant bacteria, fungi, parasites and viruses.² The situation has deteriorated dramatically in the past decade with AMR reaching levels of 80% in some countries.³

Zena Moore¹
Professor of Nursing and Head of the School of Nursing & Midwifery, Royal College of Surgeons in Ireland

Jose Verdu Soriano¹
Senior Lecturer and researcher at the Faculty of Health Sciences, University of Alicante, Spain

Andrea Pokorna²
Associate Professor, Department of Nursing, Faculty of Medicine, Masaryk University, Brno

Lisette Schoonhoven²
Professor of Nursing, Faculty of Health Sciences, University of Southampton

Hubert Vuagnat²
Head of Division of the Department of Rehabilitation and Palliative Care, University Hospitals of Geneva

¹ Chair of the Joint EPUAP & EWMA Pressure Ulcer Prevention & Patient Safety Advocacy Project

² Member of the Joint EPUAP & EWMA Pressure Ulcer Prevention & Patient Safety Advocacy Project

Correspondence:
ewma@ewma.org

Conflicts of interest:
None

How has this happened? Whereas greater investment and skill in reporting of AMR may be one reason, an important consideration is that AMR is a natural and inevitable process which is aggravated by the inappropriate use of antimicrobial agents. Healthcare authorities have been aware of the consequences of overuse of antibiotics in animal and human health, yet relatively few actions have been implemented to slow the process down.⁴

The good news is that the EU has made a significant step forward to gain a global lead in the fight against AMR. In June 2017 the Commission adopted the ambitious EU One Health Action Plan against AMR (as requested by the Member States in the Council Conclusions of 17 June 2016). The key objectives of the new plan are founded on three pillars: (1) making the EU a best practice region; (2) boosting research, development and innovation; (3) shaping the global agenda. The most urgent actions (under the first pillar) are reducing inappropriate use of antimicrobials, better prescribing practices, respecting the recommended dosages and fostering infection prevention.

Wound care and pressure ulcer prevention can play a key role in addressing AMR: better wound care and early detection of pressure ulcers can prevent affected tissue infection, allowing faster resolution by uninterrupted healing and avoiding the need for antimicrobial interventions.

Pressure ulcers, also known as bedsores, decubitus ulcers and pressure injuries, are wounds involving the skin and often the tissue that lies underneath. Pressure ulcers may become infected, affecting people's quality of life and require antimicrobial therapies when systemic symptoms occur. It is important to identify the patients at risk to act promptly, avoid complications and ultimately reduce the use of antibiotics. People at risk of developing pressure ulcers include those with spinal cord injuries, those who are immobile, or have limited mobility, such as elderly people, and people who are ill, as well as children and neonatal patients in intensive care units.

Once pressure ulcers become infected, antibiotics, or antiseptics are used to treat the micro-organisms causing the infection and prevent an infection from getting worse, or spreading. This helps the ulcer to heal. A range of treatments with antimicrobial properties are widely used in the treatment of pressure ulcers.⁵ However, antibiotics are often misused when infections do not occur. It is highly important to foster prudent use of antimicrobial agents in human medicine, such as in the care of pressure ulcers.

Pressure ulcers are one of the most frequent types of complex wounds and are a commonly occurring condition

in healthcare settings. On average, 20% of persons will suffer from pressure ulcers in our hospitals. Both EPUAP and EWMA have (jointly and separately) been working to place prevention of pressure ulcers as a major health care and patient safety issue. As most of health stakeholders, the two organisations believe that AMR is one of the most serious global public health threats of this century, and they strongly advocate acknowledgement of the importance of the prevention of pressure ulcers and their complications (e.g. infections) as part of the solution.

Awareness of the seriousness of the situation and urgent actions are required globally, at EU and national level. Following the recent adoption of the EU Action Plan on AMR and the vote at the European Parliament plenary on September 2018, it is very important that EU institutions and countries gain momentum and build something more concrete on infection prevention and patient safety, especially recognising severe pressure ulcers as a big threat for citizens well-being and their prevention as part of the AMR strategy.

The European Health Forum in Gastein in October 2018 is representing a valuable opportunity to tackle Europe's health challenges head on and a chance to talk about pressure ulcer prevention and appropriate wound care as key assets in the fight against antiseptic and antibiotic misuse.

REFERENCES

- 1 European Commission, AMR: a major European and Global challenge, Factsheet 2017. Available at: https://ec.europa.eu/health/amr/sites/amr/files/amr_factsheet_en.pdf
 - 2 The World Health Organisation, Key Facts on Antimicrobial Resistance, last update February 2018. Available at: <http://www.who.int/en/news-room/fact-sheets/detail/antimicrobial-resistance>
 - 3 The Parliament Magazine, Antibiotic resistance: A silent tsunami, 7 July 2017. Available at: <https://www.theparliamentmagazine.eu/articles/news/antibiotic-resistance-silent-tsunami>
 - 4 *ibid.*
 - 5 J. Norman, Z. Moore, J. Tanner, J. Christie, S. Goto, Antibiotics and antiseptics for pressure ulcers, 4 April 2016, Cochrane Wounds Group. Available at: <http://cochranelibrary-wiley.com/doi/10.1002/14651858.CD011586.pub2/full>
-



Pressure ulcer monitoring: a process of evidence-based practice, data sharing and joint efforts

Over the last few years, increasing attention has been directed toward the issues of healthcare evaluation and many factors have been identified as central to improving its quality. Using data to measure performance is an essential element. Whether the aim is to improve outcomes (for instance, reducing mortality among patients hospitalised), establish safety indicators, or improve a process of care, **data collection and interpretation are central to assessing the quality of healthcare.**

Data help determine where opportunities for improvement exist and enables documentation of the impact that system change interventions have made on the outcomes or processes of care for a clinical condition. Measuring performance is critical to learning how your care delivery compares with best practice. Digital technologies, tools, and equipment allow healthcare settings to quickly collect information about patients, their conditions and health outcomes. **Data need to be collected and measured to give a clear understanding of what methods are best to implement** personalised patient care as well as to assess and prevent unsafe care.

Monitoring recurring adverse events, such as pressure ulcers, is crucial to foster quality of care to make informed decisions to prevent patient harm, and ultimately to reduce costs in terms of patient morbidity and monetary costs. Pressure ulcers, also known as pressure injury, decubitus ulcers and bed sores, are very widespread adverse events in all care settings including acute care, community care and nursing homes. Once a patient develops a pressure ulcer (PU) the cost of their care increases dramatically, with the most significant cost occurring during any period of hospital admission, irrespective of whether the admission is for care of the pressure ulcer, or for any other reason. Therefore, an accurate monitoring and data analysis of the occurrence of pressure ulcers in patients has become of utmost importance.

In Europe there is **no uniform methodology** for collecting the necessary data that would sufficiently help monitor patients with this condition. Most of the PU assessment methods are based on the local know-how of the individual departments, or managers and healthcare providers, or they are performed within isolated local prospective and retrospective studies.

There are two types of measures, incidence and prevalence rates of occurrence:

- **Incidence** describes the percentage of people developing a new ulcer while in a facility or on a clinical unit. **Cumulative incidence (CI)** and **incidence density or rate (IR)** are different approaches to calculating incidence, based on the nature of follow-up time. Incidence density reflects variation in the lengths of time that at-risk individuals are observed and is calculated by dividing the number of new cases of a disease by the total of the lengths of time that each individual in the population was at risk, expressed as person-time (e.g., person-days). Cumulative incidence is the proportion of a population at risk that will develop an outcome in



a given period of time. It therefore provides a measure of risk, and it is an intuitive way to think about possible health outcomes.

- **Prevalence** describes the percentage of people having a pressure ulcer while on a clinical unit, for example. It may reflect a single point in time, such as on the first day of each month. This is known as *point prevalence*. However, it can also reflect a prolonged period of time, such as an entire hospital stay. This is known as *period prevalence*. Both types of prevalence rates (point and period) include pressure ulcers present on admission as well as new ulcers that developed while in a facility or on a clinical unit.

Because of the lack of national standards and agreement on how to measure and collect data, the **sharing and comparing of incidence, or prevalence data on pressure ulcers** (nationwide or at the EU level) is **simply not feasible**. In clinical settings without any systematic and validated PU registration system, estimating the incidence and prevalence of pressure ulcers will mostly prove an academic and time-consuming exercise, and will lead to imprecise estimations.¹ Nonetheless, PU occurrence is considered an indicator of healthcare quality and monitoring is important for assessing the costs of providing healthcare connected to PU and their consequences (e.g. prolonged hospitalization, increased costs of treatment, influence on the patient's quality of life, etc.).

Data collection and evaluation of PU and other adverse events must be designed to identify the extent of the problem in order to develop common guidance for timely preventive and corrective actions, e.g. assessing PU risk each time a new patient is admitted, reassessing risk daily, or when there is a significant change in the patient's condition, and making sure each care plan is tailored to meet the individual patient's pressure ulcer risk needs, and to disseminate outcomes and process measurement information to unit staff and key stakeholders.

A comprehensive information model for understanding the epidemiology of patient safety incidents, including PU/PI adverse events, is the Conceptual Framework for the International Classification for Patient Safety (ICPS). It aims to define, harmonise and group patient safety concepts into an internationally agreed classification in a way that is conducive to learning and improving the domain of patient safety across systems.

In line with this, it is critical to work together at a local, national and European level to better collect and analyse data on pressure ulcer occurrence and their associated complications. PU incidence monitoring and reporting procedures are the linchpin for making a real change in PU prevention. An integrated, comprehensive coordination and data exchange between the EU member states, OECD, health authorities, healthcare settings, healthcare professionals and competent stakeholders is vital to establish a standardised methodology across Europe. Such a scheme will ultimately lead to the establishment of national benchmarks for pressure ulcer prevalence and incidence, ultimately improving the quality of care for all patients and bringing health to a new level of efficiency.

¹ Collier M, *Pressure ulcer incidence: The development and benefits of 10 year's-experience with an electronic monitoring tool (PUNT) in a UK Hospital Trust*. EWMA J 2015; 15(2): 15–20.



For more insights, please read:

Pokorná A, Öien R F, Forssell H, Lindholm C, *International Cooperation in Pressure Ulcers Prevalence, Prevention and Treatment is Challenged by the Lack of National Registries*. Available at:

http://www.csmn.eu/en/czech-slovak-neurology-article/international-cooperation-in-pres-sure-ulcers-prevalence-prevention-and-treatment-is-chal-lenged-by-the-lack-of-59440?message=add&id_topic=59440&confirm_rules=1

Moore Z, Johanssen E, van Etten M A, *Review of PU prevalence and incidence across Scandinavia, Iceland and Ireland (Part 1)*. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/24159658>

This article is published in December 2018 by the European Pressure Ulcer Advocacy Panel (EPUAP) and the European Wound Management Association (EWMA). The publication is part of the activities of the “Joint EPUAP & EWMA PU prevention & patient safety advocacy project”.

Read more about EPUAP at www.epuap.org, about EWMA at www.ewma.org





The joint Pressure Ulcer Prevention and Patient Safety Advocacy Project of the European Pressure Ulcer Advisory Panel (EPUAP) and EWMA is now in its third and final year.

The project is continuing some activities from the previous years, including the publishing of joint statements and articles, of which the most recent is included below this box, and a collaboration with the OECD Health Care Quality Outcomes project.

The project team is currently working on the finalisation of a generic patient case study to exemplify the patient and health economic value of preventing pressure ulcers from occurring. Case studies are a recognised way of highlighting complex problems from patients' and lay carers' perspectives. In terms of following up on the earlier organised activities with members of the European Parliament and the European Commission, EPUAP and EWMA are working to organise a roundtable session at the European Parliament during late autumn 2019.

During the EWMA 2019 conference, the joint project will host the following session. More details are available at ewma2019.org.

Thursday 6 June, 8.30 – 9.30: The joint EPUAP-EWMA Pressure Ulcer Prevention and Patient Safety Advocacy Project Session

The article below, as well as earlier articles and updates about the project, are available from the EWMA.org and EPUAP.org websites.

Zena Moore¹
Professor of Nursing and
Head of the School of
Nursing & Midwifery,
Royal College of
Surgeons in Ireland

Jose Verdu Soriano¹
Senior Lecturer and
researcher at the Faculty of
Health Sciences. University
of Alicante, Spain

Andrea Pokorna²
Professor,
Department of Nursing,
Faculty of Medicine,
Masaryk University, Brno

Lisette Schoonhoven²
Professor of Nursing,
Faculty of Health Sciences,
University of Southampton

Hubert Vuagnat²
Head of Division of the
Department of Rehabilita-
tion and Palliative Care.
University Hospitals
of Geneva

¹ Chair of the Joint
EPUAP & EWMA Pressure
Ulcer Prevention & Patient
Safety Advocacy Project

² Member of the Joint
EPUAP & EWMA Pressure
Ulcer Prevention & Patient
Safety Advocacy Project

Disability in Europe: The invisible burden of pressure ulcers

Over a billion people, about 15% of the world's population, have some form of disability, with 80 million of these people living in Europe.¹ People with disabilities have the potential to make an enormous contribution to our society, culture and economy. However, they often face barriers that prevent them from participating in society and commonly do not receive adequate care. At an international level, through the EU institutions' actions and the Convention on the Rights of People with Disabilities (CRPD), EU member states committed to cooperating to ensure the rights of

EU citizens with disabilities. These include the right to participation in society on an equal basis, as well as the rights to good quality of life and health. Despite this commitment, there are still many unaddressed challenges to meet the health needs of people with disability.

Depending on the group and setting, people with disabilities encounter greater risks of comorbidities, age-related and secondary conditions, compared to their counterparts without disability. ►

Correspondence:
ewma@ewma.org

Conflicts of interest:
None

As a result, they have a higher rate of premature death. Furthermore, these people are particularly vulnerable to the deficiencies in healthcare delivery, yet these deficiencies can be addressed to avoid morbidity and premature mortality.

Secondary conditions commonly occur in addition to (and related to) the primary health condition, thus, they are predictable and often preventable. In the case of people with disabilities, these conditions include urinary tract infections, osteoporosis, avoidable pain, and pressure ulcers. Pressure ulcers, also known as bed sores, pressure sores, or decubitus ulcers are wounds caused by constant pressure on the skin and underlying tissues, arising because the person sits or lies in one position for too long, not being able to change the position actively. They usually develop on body parts such as the elbow, heel, hip, shoulder, back, and back of the head. People with disabilities who are bedridden, or use a wheelchair, have a high risk of developing this secondary condition which can lead to further disability, decreases in mobility, loss of independence, increased isolation, the need for surgical interventions, and even fatal infections.

The risks factors for pressure ulcers in people with disabilities are multiple: reduced mobility or paralysis, injury completeness, moisture from bowel or bladder incontinence, loss of feeling, muscle atrophy and being underweight. A constant monitoring of those at risk is essential to enable prompt action and to avoid leaving symptoms unnoticed (when the person has sensory issues, they may not feel the intense pressure being placed on an area of the body).

People with Spinal cord injuries (SCI) often develop pressure ulcers, and in this population, pressure ulcers are a serious complication, which often lead to regular hospitalisations, multiple surgeries, and other devastating complications. Although preventable in most situations, pressure ulcers may disrupt rehabilitation, prevent people with SCI from working, or participating in society, and therefore interfere with their community reintegration. Data from the United States revealed that people with SCI are among the highest risk population for developing pressure ulcers; the incidence in SCI population is up to 66%.² Furthermore, the lifetime risk of developing a pressure ulcer among those with SCI is up to 90%.³

Acting to improve quality of care of those in need is not only possible, but also necessary. For those who use a wheelchair, or are bedridden, preventing secondary conditions, or comorbidities is a life-long commitment which requires understanding, cooperation and initiative. Col-

laboration within healthcare team is essential to develop a prevention plan that includes effective strategies and all possible actions – from position changes to use of special cushions and mattresses, ensuring adequate nutrition and hydration, and daily skin care. Also, pressure ulcer care requires constant monitoring, thus rehabilitation nurses should use a consistent framework with accurate quantification to assess, document, and monitor changes in the individual and the pressure ulcer over time.

EPUAP and EWMA are at the forefront of raising the awareness at EU level about pressure ulcers, wound care and patient safety. The commitment and expertise of these groups have been instrumental in building support for a consistent epidemiology measurement and methodology in Europe. Looking at the challenges of disabilities and health outcomes, EPUAP and EWMA believe that the EU has a role to play in guiding and supporting its' member states to increase awareness of the needs of people with disability and include related secondary conditions as a component of national health policies and programmes. It is also essential to promote strategies to ensure that people with disabilities are knowledgeable about their own health conditions and risks. Informal carers should also be educated.

Building on the current European Disability Strategy 2010-2020, a follow-up strategy shall look into creating synergies amongst member states on better health services for people with disabilities and the prevention of costly secondary conditions. In this sense, the Academic Network of Disability Experts (ANED), supported by the European Commission and the EU countries, might be instrumental in providing new analysis and information on national disability policies and the impact of secondary conditions, such as pressure ulcers.

Join EWMA and EPUAP campaign on pressure ulcers' prevention and help to spread our message *#Europe4PU-prevention*. ■

REFERENCES

1. World Health Organization, Disability and Health: key facts, available at: <https://www.who.int/news-room/fact-sheets/detail/disability-and-health>
 2. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3831318/>
 3. Kruger E A, Pires M, Ngann Y, Sterling M & Rubayi S, Comprehensive management of pressure ulcers in spinal cord injury: current concepts and future trends, *J Spinal Cord Med* 2013, 36, 572-85.
-