

Sub-epidermal Moisture Peer Reviewed Publications

Type of Publication	Reference	Date	Journal / Conference
Peer Reviewed Publications - Sub-epidermal Moisture	"Bates-Jensen, B., et al. (2008). Subepidermal moisture differentiates erythema and stage I pressure ulcers in nursing home residents. <i>Wound Repair and Regeneration</i> , 16(2). pp.189-197."	2008	Wound Repair and Regeneration
Peer Reviewed Publications - Sub-epidermal Moisture	"Bates-Jensen, B., et al. (2009). Subepidermal Moisture Is Associated with Early Pressure Ulcer Damage in Nursing Home Residents With Dark Skin Tones. <i>Journal of Wound, Ostomy and Continence Nursing</i> , 36(3), pp.277-284."	2009	Journal of Wound, Ostomy and Continence Nursing
Peer Reviewed Publications - Sub-epidermal Moisture	"Padula, WV., et al. (2011). Improving the Quality of Pressure Ulcer Care with Prevention. <i>Medical Care</i> , 49 (4), pp.385-392."	2011	Medical Care
Peer Reviewed Publications - Sub-epidermal Moisture	"Guihan, M., et al. (2012). Assessing the feasibility of subepidermal moisture to predict erythema and stage 1 pressure ulcers in persons with spinal cord injury: A pilot study. <i>The Journal of Spinal Cord Medicine</i> , 35(1), pp.46-52."	2012	The Journal of Spinal Cord Medicine
Peer Reviewed Publications - Sub-epidermal Moisture	"Zhang, L., et al. (2014). A method for in vivo detection of abnormal sub-epidermal tissues based on dielectric properties. <i>Bio-Medical Materials and Engineering</i> , 24(1) pp. 3455-3462."	2014	Bio-Medical Materials and Engineering
Peer Reviewed Publications - Sub-epidermal Moisture	"Harrow, J., et al. (2014). Subepidermal moisture surrounding pressure ulcers in persons with a spinal cord injury: A pilot study. <i>The Journal of Spinal Cord Medicine</i> , 37(6), pp.719-728."	2014	The Journal of Spinal Cord Medicine
Peer Reviewed Publications - Sub-epidermal Moisture	"Swisher, S. L., et al. (2015). Impedance sensing device enables early detection of pressure ulcers in vivo. <i>Nature Communications</i> , 6(1)."	2015	Nature Communications
Peer Reviewed Publications - Sub-epidermal Moisture	"Bates-Jensen, B., et al. (2017). Subepidermal moisture detection of pressure induced tissue damage on the trunk: The pressure ulcer detection study outcomes. <i>Wound Repair and Regeneration</i> , 25(3), pp.502-511."	2017	Wound Repair and Regeneration
Peer Reviewed Publications - Sub-epidermal Moisture	"Oliveira, A. L., et al. (2017). Accuracy of ultrasound, thermography and subepidermal moisture in predicting pressure ulcers: a systematic review. <i>Journal of Wound Care</i> , 26(5), pp.199-215."	2017	Journal of Wound Care
Peer Reviewed Publications - Sub-epidermal Moisture	"Bates-Jensen, B., et al. (2018). Sub epidermal moisture detection of heel pressure injury: The pressure ulcer detection study outcomes. <i>International Wound Journal</i> . 15:297-309."	2018	International Wound Journal
Peer Reviewed Publications - Sub-epidermal Moisture	"Park, S., et al. (2018). The use of sub epidermal moisture measurement in predicting blanching erythema in jaundice patients. <i>Journal of Wound Care</i> (2):342-349."	2018	Journal of Wound Care
Peer Reviewed Publications - Sub-epidermal Moisture	"Kim, Chul-Gyu., et al. (2018). The relationship of sub epidermal moisture and early stage pressure injury by visual skin assessment. <i>Journal of Tissue Viability</i> . Vol 27 (3) p 130-134."	2018	Journal of Tissue Viability
Peer Reviewed Publications - Sub-epidermal Moisture	"Smith, G., (2019). Improved clinical outcomes in pressure ulcer prevention using the SEM Scanner. <i>Journal of Wound Care</i> . Vol 28 (5)."	2019	Journal of Wound Care

Sub-epidermal Moisture (part 2)

Type of Publication	Reference	Date	Journal / Conference
Peer Reviewed Publications - Sub-epidermal Moisture	"Van Damme, N., et al. (2019). Physiological processes of inflammation and oedema initiated by sustained mechanical loading in subcutaneous tissues: a scoping review. <i>Wound Repair and Regeneration</i> . Online. Nov 2 2019"	2019	Wound Repair and Regeneration
Peer Reviewed Publications - Sub-epidermal Moisture	"Okonkwo, H., et al. (2020). A blinded clinical study using a subepidermal moisture biocapacitance measurement device for early detection of pressure injuries. <i>Wound Repair and Reg</i> 2020;1-11. https://doi.org/10.1111/wrr.12790 "	2020	Wound Repair and Regeneration
Peer Reviewed Publications - Sub-epidermal Moisture	"Gefen, A., et al. (2020). The subepidermal moisture scanner: the technology explained. <i>Journal of Wound Care</i> . 1;29(Sup2c):S10-S16. doi: 10.12968/jowc.2020.29.Sup2c.S10"	2020	Journal of Wound Care

SEM Scanner

Peer Reviewed Publications

Type of Publication	Reference	Date	Journal / Conference
Peer Reviewed Publications - SEM Scanner	"Clendenin, M., et al. (2015). Inter-operator and inter-device agreement and reliability of the SEM Scanner. <i>Journal of Tissue Viability</i> , 24(1), pp.17-23."	2015	Journal of Tissue Viability
Peer Reviewed Publications - SEM Scanner	"Moore, Z., et al. (2016). Subepidermal moisture (SEM) and bioimpedance: a literature review of a novel method for early detection of pressure-induced tissue damage (pressure ulcers). <i>International Wound Journal</i> , 14(2), pp.331-337."	2016	International Wound Journal
Peer Reviewed Publications - SEM Scanner	"O'Brien, G., (2018). The relationship between nurses' assessment of early pressure ulcer damage and sub-epidermal moisture measurement: A prospective exploratory study. <i>Journal of Tissue Viability</i> . 27(4):232-237."	2018	Journal of Tissue Viability
Peer Reviewed Publications - SEM Scanner	"Gefen, A., (2018). The future of pressure ulcer prevention is already here: Early detecting and targeting inflammation to halt damage. <i>EWMA Journal</i> . Vol 19 (2)7-11."	2018	EWMA Journal
Peer Reviewed Publications - SEM Scanner	"Gefen, A., et al. (2018). An observational, Prospective Cohort Pilot Study to Compare the use of Sub-epidermal Moisture measurements Versus Ultrasound and Visual Skin Assessments for Early Detection of Pressure Injury. <i>OWM</i> : 64 (9):12-27."	2018	OWM
Peer Reviewed Publications - SEM Scanner	"Raizman, R., et al. (2018). Utility of a sensor-based technology to assist in the prevention of pressure ulcers. A clinical comparison. <i>International Wound Journal</i> . 15 (6) 1033-1044."	2018	International Wound Journal
Peer Reviewed Publications - SEM Scanner	"Gefen, A., (2018). The Sub-Epidermal Moisture Scanner: the principle of pressure injury prevention using novel early detection technology. <i>Wounds International</i> . Vol 9. No 3."	2018	Wounds International
Peer Reviewed Publications - Sub-epidermal Moisture	"Gefen, A., et al. (2019). Saving lives through pressure ulcer research: revisiting our decade-old perspective of aetiology. <i>Wounds International</i> Editorial. 10 (2) 8-9."	2019	Wounds International Editorial

Bibliography

SEM Scanner

Peer Reviewed Publications (part 2)

Type of Publication	Reference	Date	Journal / Conference
Peer Reviewed Publications - Sub-epidermal Moisture	"Gefen, A., (2019). How medical engineering has changed our understanding of chronic wounds and future prospects. <i>Medical Engineering and Physics</i> 72:13-18."	2019	Medical Engineering and Physics
Peer Reviewed Publications - Sub-epidermal Moisture	"Harvey, J., et al. (2019). Correlation of bioimpedance changes after compressive loading of murine tissues in vivo. <i>Physiology Measure</i> . 1088-1361."	2019	Physiology Measure
Peer Reviewed Publications - SEM Scanner	"Cohen, L., et al. (2019). Phantom testing of the sensitivity and precision of a sub-epidermal moisture scanner. <i>International Wounds Journal</i> . 16(4); 979-988."	2019	International Wounds Journal
Peer Reviewed Publications - SEM Scanner	"Ross, G., et al. (2019). Assessment of sub-epidermal moisture by direct measurement of tissue biocapcitanace. <i>Medical Engineering and Physics</i> . Vol:73:92-99."	2019	Medical Engineering and Physics
Peer Reviewed Publications - SEM Scanner	"Scafide, K.N., et al. (2020). Bedside Technologies to Enhance the Early Detection of Pressure Injuries- A Systematic Review. <i>Journal of Wound, Ostomy and Continence Nursing</i> . 00(0):1-9"	2020	Journal of Wound, Ostomy and Continence Nursing
Editorial	"Black, J., (2020). Seeing what lies beneath the surface. <i>Wounds International</i> . Vol 11 Issue 1"	2020	Wounds International
Peer Reviewed Publications - SEM Scanner	"Gershon, S., (2020). Using Subepidermal Moisture Level as an Indicator of Early pressure Damage to Local Skin and Tissue. <i>Advances in Skin and Wound Care</i> . 00:00-00. https://journals.lww.com/aswcjournal/Abstract/publishahead/Using_Subepidermal_Moisture_Level_as_an_Indicator.99929.aspx "	2020	Advances in Skin and Wound Care
Letter to the Editor	"Peko. L., et al. (2020). Sensitivity and laboratory performances of a second-generation sub-epidermal moisture measurement device. <i>Int Wound J</i> . doi:10.1111/iwj.13339"	2020	International Wound Journal
Peer Reviewed Publications - SEM Scanner	"Budri, A., et al. (2020). Impaired mobility and pressure ulcer development in older adults: excess movement and too little movement-two sides of the one coin?. <i>Journal of Clinical Nursing</i> . 00: 1– 18. https://doi.org/10.1111/jcn.15316 "	2020	Journal of Clinical Nursing
Peer Reviewed Publications - SEM Scanner	"Evans. P., et al. (2020). The impact of skin barrier cream on variation in sub-epidermal moisture readings. <i>Wounds UK</i> . Vol 16(2) 29-35"	2020	Wounds UK

Other Publications

Type of Publication	Reference	Date	Journal / Conference
Other Publications	"Moore, Z., et al. (2016). Advancing pressure ulcer prevention with SEM Scanner. <i>Wounds UK</i> , 12(1) pp. 70-73."	2016	Wounds UK
Other Publications	"Fletcher, J., et al. (2017). Early detection technology transforms care and releases productivity: an NHS case study. <i>Wounds UK</i> , 13(1) pp. 74-78."	2017	Wounds UK
Other Publications	"Fletcher, J., (2017). An overview of risk assessment tools. <i>Wounds UK</i> , 13(1) pp. 18-26."	2017	Wounds UK
Other Publications	"Fletcher, J., et al. (2018). SEM Scanner Made Easy. <i>Wounds UK</i> . p1-6."	2018	Wounds UK

Type of Publication	Reference	Date	Journal / Conference
Other Publications	"Moore, Z., et al. (2019). Risk assessment tools for the prevention of pressure ulcers. <i>Cochrane Database of Systematic Reviews</i> 2019, Issue 1. Art. No.: CD006471. DOI: 10.1002/14651858.CD006471.pub4"	2019	Cochrane Database of Systematic Reviews
Other Publications	"Kottner, J., et al. (2020). Pressure ulcer/injury classification today: an international perspective, <i>Journal of Tissue Viability</i> , https://doi.org/10.1016/j.jtv.2020.04.003 "	2020	Journal of Tissue Viability

Posters and Conference Presentations

Type of Publication	Reference	Date	Journal / Conference
Posters and Conference Presentations	"Gershon, S., et al. (2014). SEM Scanner Readings to Assess Pressure Induced Tissue Damage. Accepted and presented at Wounds UK 2014. Presented to Wounds UK 2014, Harrogate, North Yorkshire, UK, 10-12 November."	2014	Wounds UK 2014
Posters and Conference Presentations	"Rhodes, S. et al. (2014). Usability & Reliability of the SEM Scanner. Accepted and presented at EPUAP 2014. Presented to 17th EPUAP Annual Conference, Stockholm, Sweden 27-29 August."	2014	EPUAP 2014
Posters and Conference Presentations	"Bullough, L., (2015). "CHASING ZERO" Pressure Ulcer Prevention & Root Cause Analysis with the SEM Scanner. Accepted and presented at EWMA 2015. Presented to EWMA, London, UK, 13-15 May."	2015	EWMA 2015
Posters and Conference Presentations	"O'Brien, G., (2015). An Investigation of the accuracy of early pressure ulcer damage assessment using sub epidermal moisture measurement versus nurses' visual skin assessment. Accepted and presented at Wounds UK 2015. Presented to Wounds UK Conference, Harrogate, North Yorkshire, UK, 9-11 November."	2015	Wounds UK 2015
Posters and Conference Presentations	"O'Connor, T., et al. (2015). The Prevalence of Pressure Ulcers in the Acute Hospital Setting while investigating three methods of measuring prevalence. Accepted and presented at Wounds UK 2015. Presented at Wounds UK Conference, Harrogate, North Yorkshire, UK, 9-11 November."	2015	Wounds UK 2015
Posters and Conference Presentations	"Littlefield, S., et al. (2016). Results from a New Pressure Ulcer Prevention Bundle. Accepted and presented at Wounds UK 2016. Presented at EWMA Conference, Bremen, Germany, 11-13 May."	2016	EWMA 2016
Posters and Conference Presentations	"Budri A., et al. (2016). Pressure ulcer risk assessment: risk factors and risk screening in older persons – a validation study. Accepted and presented at EWMA 2016. Presented to EWMA, Bremen, Germany, 11-13 May."	2016	EWMA 2016
Posters and Conference Presentations	"O'Brien G., et al. (2016). The Relationship between Nurses' Assessment of Early Pressure Ulcer Damage and Sub-epidermal Moisture Measurement: A prospective explorative study. Accepted and presented at EWMA 2016. Presented to EWMA Conference, Bremen, Germany, 11-13 May."	2016	EWMA 2016
Posters and Conference Presentations	"Oliveira, A. L., et al. (2016). Accuracy of ultrasound, thermography, and subepidermal moisture in predicting pressure ulcers: a systematic review. Accepted and presented at Wounds UK 2016. Presented at Harrogate, North Yorkshire, UK, 14-16 November."	2016	Wounds UK 2016

Posters and Conference Presentations (part 2)

Type of Publication	Reference	Date	Journal / Conference
Posters and Conference Presentations	"Smith, G., (2016). Improved Patient Safety with the Use of the SEM Scanner (A pilot study). Accepted and presented at Wounds UK 2016, NPUAP 2018, SAWC 2018, WOCN 2018."	2016	Wounds UK 2016, NPUAP 2018, SAWC 2018, WOCN 2018
Posters and Conference Presentations	"Burns, M., (2017). Real world evidence of HAPU reduction using a novel early detection device measuring Sub-Epidermal Moisture (SEM). Accepted and presented at 19th EPUAP 2017 Annual Meeting, Belfast, Northern Ireland, 20 September."	2017	EPUAP 2017
Posters and Conference Presentations	"Burns, M., et al. (2017). Real world evidence evaluating a novel early-detection device for HAPU reduction. Accepted and presented at Wounds UK 2017, EWMA 2017, EPUAP 2017, NPUAP 2018, SAWC 2018, WOCN 2018."	2017	Wounds UK 2017, EWMA 2017, EPUAP 2017, NPUAP 2018, SAWC 2018, WOCN 2018
Posters and Conference Presentations	"Shorney, R., et al. (2017). Achieving zero: a holistic approach to tackle pressure ulcers. Accepted and presented at Patient Safety Congress 2017, Manchester, UK, 5 July."	2017	Patient Safety Congress 2017
Posters and Conference Presentations	"Okonkwo, H., et al. (2017). Evaluation of a novel device using capacitance of the detection of early pressure ulcers (PU), a multi-site longitudinal study. Accepted and presented at EPUAP 2017, Wounds UK 2017, NPUAP 2018, SAWC 2018, WOCN 2018."	2017	EPUAP 2017, Wounds UK 2017, NPUAP 2018, SAWC 2018, WOCN 2018
Posters and Conference Presentations	"Raizman, R., et al. (2017). Hand-held device to decrease hospital acquired pressure injuries: From theory to practice. Accepted and presented at EWMA 2017, SAWC 2017, NPUAP 2018, WOCN 2018."	2017	EWMA 2017, SAWC 2017, NPUAP 2018, WOCN 2018
Posters and Conference Presentations	"Zanin, A., et al. (2017). Budget Impact Model to augment the value of an innovative device for the early detection of pressure ulcers in Scotland. Accepted and presented at ISPOR 2017, EPUAP 2017, NPUAP 2018, SAWC 2018."	2017	ISPOR 2017, EPUAP 2017, NPUAP 2018, SAWC 2018
Posters and Conference Presentations	"Okonkwo, H., et al. (2018). Differentiating between Healthy Tissue and Early Stage Pressure Injuries: a Pilot Study of the Effectiveness of the SEM Scanner. Accepted and presented at NPUAP Annual Conference, Las Vegas, USA, SAWC 2018, WOCN 2018."	2018	NPUAP 2018, SAWC 2018, WOCN 2018
Posters and Conference Presentations	"Lawrance, R., et al. (2018). Pressure Ulcer Prevention Programme (PURP), Enabling Clinically Effective Management of Patients At Risk Of Pressure Ulcers (PU). Accepted and presented at EWMA 2018, Krakow, Poland, 9-11 May, Accepted and presented at EPUAP 2018, Rome, Italy."	2018	EWMA 2018, EPUAP 2018
Posters and Conference Presentations	"Lawrance, R., et al. (2018). Epidemiological Analysis of the NHS Safety Thermometer Pressure Ulcer (PU) Data. Accepted and presented at EPUAP 2018, Rome, Italy."	2018	EPUAP 2018
Posters and Conference Presentations	"Lawrance, R., et al. (2018). Evaluation of A Early Stage Pressure Ulcer Assessment Device [2018]. Accepted and presented at EPUAP 2018, Rome, Italy."	2018	EPUAP 2018
Posters and Conference Presentations	"Lawrance, R., et al. (2018). Integrating Early Detection of Pressure Ulcers (PU) into Universal prevention Pathways. Accepted and presented at Wounds UK 2018, Harrogate, UK."	2018	Wounds UK 2018
Posters and Conference Presentations	"Burns, M., et al. (2018). Novel Intervention* Designed to Reduce Incidence of Hospital Acquired Pressure Ulcers (HAPU's) Results in Improved QALYs and Cost Savings. Accepted and presented at Wounds UK, Harrogate, UK."	2018	Wounds UK 2018

Posters and Conference Presentations (part 3)

Type of Publication	Reference	Date	Journal / Conference
Posters and Conference Presentations	"Raizman, R., et al. (2018). Using Hand-held Device to Prevent Pressure Ulcers: Case Series. Accepted and presented at WOCN 2018, Philadelphia, USA."	2018	WOCN 2018
Posters and Conference Presentations	"Budri, A., et al. (2018). Pressure ulcer risk assessment: risk factors and risk screening in older persons. Accepted and presented at Wounds UK, Harrogate UK."	2018	Wounds UK 2018
Posters and Conference Presentations	"Raine, G., (2018). Prevention; Prevention; Prevention. Tackling the Number One Patient Safety Issue. Accepted and presented at Patient Safety Conference, Manchester, UK."	2018	Patient Safety Conference
Posters and Conference Presentations	"Evans, E., et al. (2018). The effect of barrier cream application on Sub-epidermal moisture (SEM) measurements. Accepted and presented at Wounds UK, Harrogate, UK."	2018	Wounds UK 2018
Posters and Conference Presentations	"O'Kieffe, S., (2019). Evaluation of Novel Subepidermal Moisture (SEM) Technology in Early Pressure Ulcer Detection Versus Conventional Techniques. Accepted and presented at Tissue Viability Society 2019 and EPUAP, Lyon, France."	2019	Tissue Viability Society 2019, EPUAP 2019
Posters and Conference Presentations	"Ore, N., et al. (2019). Striving for Perfect Care: preventing skin breakdown in the community setting in the UK. Accepted and presented at EPUAP, Lyon, France."	2019	EPUAP 2019
Posters and Conference Presentations	"Budri, A., (2019). Sub-epidermal moisture (SEM) measurement. Accepted and presented at EPUAP, Lyon, France."	2019	EPUAP 2019
Posters and Conference Presentations	"Lawrance, R., et al. (2019). Reducing pressure ulcer (PU) incidence through introduction of new technology. Accepted and presented at EPUAP, Lyon, France."	2019	EPUAP 2019
Posters and Conference Presentations	"Burns, M., (2019). Modelling pressure ulcer prevention and treatment pathways: large cost savings achievable with investment in new technology. Accepted and presented at EPUAP, Lyon, France."	2019	EPUAP 2019
Posters and Conference Presentations	"Creehan, S., (2019). Mapping the integration of novel technology within the Pressure Injury Prevention Care Pathway: An assessment of quality and efficiency. Accepted and presented at SAWC, Las Vegas, USA."	2019	SAWC 2019
Posters and Conference Presentations	"Burns, M., (2020). Pressure Injury Incidence in the Medium Risk Patient in Acute Care Settings in the US and UK. Accepted and presented at NPIAP, Houston, USA."	2020	NPIAP 2020
Posters and Conference Presentations	"Wood, Z., (2020). Reducing Pressure Injury (PI) Incidence through the Introduction of Technology. Accepted and presented at NPIAP, Houston, USA."	2020	NPIAP 2020

Health Economics

Type of Publication	Reference	Date	Journal / Conference
Health Economics	"Bennett, G., et al. (2004). The cost of pressure ulcers in the UK. Age and Ageing; 33: 230-235."	2004	Age and Aging
Health Economics	"Dealey, C., et al. (2012). The cost of pressure ulcers in the United Kingdom. Journal of Wound Care. Jun;21(6):261-2, 264, 266."	2012	Journal Wound Care

Bibliography

Health Economics (part 2)

Type of Publication	Reference	Date	Journal / Conference
Health Economics	"Guest, J., (2015). Health economic burden that wounds impose on the National Health Service in the UK. BMJ Open . 5:009283."	2015	BMJ Open
Health Economics	"Guest, J., et al. (2018). Cohort study evaluating pressure ulcer management in clinical practice in the UK following initial presentation in the community: costs and outcomes. BMJ Open 8: e021769."	2018	BMJ Open
Health Economics	"Padula, W., (2018). Value of hospital resources for effective pressure injury prevention: a cost-effectiveness analysis. British Journal of Medicine; 0:1-10."	2018	British Journal of Medicine
Health Economics	"Padula, W., (2019). The national cost of hospital-acquired pressure injuries in the United States. International Wound Journal. 16(3):634-640."	2019	International Wound Journal
Health Economics	"Gefen, A., et al. (2020). Modelling the cost-benefits arising from technology-aided early detection of pressure ulcers. Wounds International. Vol 11:1 pp12-17"	2020	Wounds International
Health Economics	"Padula, W., et al. (2020). The cost-effectiveness of sub-epidermal moisture scanning to access pressure injury in U.S. health systems. Journal of Patient Safety and Risk Management. 0(0) 1-9"	2020	Journal of Patient Safety and Risk Management

White Papers

Type of Publication	Reference	Date	Journal / Conference
White Papers	"Deloitte Consulting. (2014). Do Healthcare Systems Promote the Prevention of Pressure Ulcers?. [Online] Available at: Link. [Accessed 15 March 2018]. Deloitte Consulting, n.d. [Online]"	2014	
White Papers	"NHSi (2018) Revised Recommendations."	2018	

Regulatory Review Papers

Type of Publication	Reference	Date	Journal / Conference
Regulatory Review Papers	"Health Improvement Scotland and Scottish Health Technologies Group. (2016). Innovative Medical Technologies Group 007/2016. [Online]. [Accessed 15 March 2018]."	2016	
Regulatory Review Papers	"SEM Scanner for pressure ulcer prevention. Medtech innovation briefing [MIB182] Published date: May 2019"	2019	