

## Poster Nos. 159–173: Symptom Management

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### NON-INVASIVE TECHNOLOGY TO ASSESS HYDRATION STATUS IN ADVANCED CANCER TO EXPLORE RELATIONSHIPS BETWEEN FLUID-STATUS AND SYMPTOMS AT THE END-OF-LIFE: AN OBSERVATIONAL STUDY USING BIOELECTRICAL IMPEDANCE ANALYSIS

Amara Callistus Nwosu, Sarah Stanley, Alexandra McDougall, Catriona Mayland, Stephen Mason, John Ellershaw. *Lancaster Medical School, Lancaster University, Liverpool University Hospitals NHS Foundation Trust, Marie Curie Hospice Liverpool, Clatterbridge Cancer Centre, University of Sheffield, Palliative Care Unit, University of Liverpool, Sheffield Teaching Hospitals NHS Foundation Trust*

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**Background** The role of hydration in causing or alleviating suffering in advanced cancer is poorly understood. Bioelectrical impedance analysis (BIA) is an accurate validated method of assessing hydration status. Previous BIA research demonstrates significant relationships with hydration status, symptoms, and survival in advanced cancer. Further work is needed to study these associations in the dying.

**Aim** To evaluate hydration and its relationship with clinical symptoms in dying cancer people with cancer.

**Methodology** We conducted an observational study of people with advanced cancer in three centres (2 hospices and 1 hospital palliative care inpatient unit). We used an advance consent methodology to conduct hydration assessments in dying people with advanced cancer who were dying. We recorded hydration status (via BIA Impedance index: Height – H2/Resistance – R), symptoms, physical signs, and quality-of-life assessments.

**Results** 125 people participated (males n=74 (59.2%), females, n=51 (40.8%). We repeated assessments in 18 (14.4%) participants when they were dying. Hydration status (H2/R) of the dying was not significantly different compared to baseline (n=18, M= 49.55, SD= 16.00 vs. M= 50.96, SD= 12.13; t(17) = 0.636, p = 0.53). Backward linear regression showed that ‘more hydration’ (increased H2/R) was associated with oedema (Beta= 0.514, p<0.001) and more pain (Beta = 0.156, p=0.039). ‘Less hydration’ (lower H2/R) was associated with females (Beta = -0.371, p<0.001), more anxiety (Beta = -0.135, <0.001), more physical signs (dry mouth, dry axilla, sunken eyes – Beta = -0.204, p<0.001), and more breathlessness (Beta = -0.180, p<0.014).

**Conclusions** Hydration status was associated with physical signs and symptoms in advanced cancer. No significant difference in hydration status was noted in dying patients compared to baseline. Further studies can use this work to develop tools to improve personalised hydration assessment, management and communication with patients and caregivers.

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### ANTICIPATORY PRESCRIBING IN COMMUNITY END OF LIFE CARE: SYSTEMATIC REVIEW AND NARRATIVE SYNTHESIS OF THE EVIDENCE SINCE 2017

Ben Bowers, Bárbara Antunes, Simon Etkind, Sarah Hopkins, Isaac Winterburn, Isla Kuhn, Kristian Pollock, Stephen Barclay. *University of Cambridge, Queen’s Nursing Institute, London, University of Nottingham*

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**Background** The anticipatory prescribing of injectable medications is recommended practice in controlling distressing symptoms in the last days of life. A 2017 systematic review found practice and guidance was based on inadequate evidence. Since then, the evidence base has changed significantly, warranting a new review.

**Aim** To review the evidence published since 2017 concerning anticipatory prescribing of injectable medications for adults at the end of life in the community.

#### Methods

**Systematic review and narrative synthesis** Nine literature databases were searched from May 2017 to March 2022, alongside reference, citation and two journal hand searches. Gough’s Weight of Evidence framework was used to appraise the robustness and relevance of studies. PROSPERO registration 42016052108.

**Results** Twenty-eight papers were included in the synthesis. Evidence published in the last five years shows that the standardised prescribing of four medications for anticipated symptoms is commonplace in the UK; evidence of practices in other countries is limited. There is inadequate data on how often medications are administered in the community. The prescribing of anticipatory medications appears to be a significant event for patients and signifies the imminence of death. Prescriptions are accepted by family caregivers despite inadequate explanations, and they generally appreciate having access to medications. Robust evidence of the clinical and cost-effectiveness of anticipatory prescribing remains absent.

**Conclusion** The evidence underpinning anticipatory prescribing practice and policy remains based primarily on healthcare professionals’ perceptions that the intervention offers reassurance and provides effective, timely symptom relief in the community. There is still inadequate evidence about likely symptom profiles and which anticipatory medications and dose ranges are needed. The views and experiences of patients and their family caregivers towards anticipatory prescribing need further investigation. Urgent research is necessary to investigate the clinical effectiveness, cost-effectiveness, safety and acceptability of different anticipatory prescribing practices.

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### CONTINUOUS SUBCUTANEOUS INFUSION (CSCI) SAFETY INCIDENTS IN PALLIATIVE CARE: A MIXED METHODS ANALYSIS OF NATIONAL DATA

<sup>1</sup>Amy Brown, <sup>2,3</sup>Sarah Yardley, <sup>4,5</sup>Ben Bowers, <sup>2</sup>Sally-Anne Francis, <sup>6</sup>Lucy Bemand-Qureshi, <sup>1</sup>Stuart Hellard, <sup>7</sup>Antony Chuter, <sup>1</sup>Andrew Carson-Stevens. <sup>1</sup>Division of Population Medicine, School of Medicine, Cardiff University; <sup>2</sup>Marie Curie Palliative Care Research Department, University College London; <sup>3</sup>Central and North West London NHS Foundation Trust; <sup>4</sup>Primary Care Unit, Department of Public Health and Primary Care, University of Cambridge; <sup>5</sup>Queen’s Nursing Institute, Division of Population Medicine, School of Medicine, Cardiff University; <sup>6</sup>Barking, Havering And Redbridge University Hospitals NHS Trust; <sup>7</sup>Patient and Public Involvement Collaborator, Haywards Heath

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**Background** In the UK, 20% of reported serious palliative care incidents relate to medication, a quarter of which involve continuous subcutaneous infusions (CSCIs). Multistep processes for prescription and use of CSCIs are risk-prone activities. Incident analysis provides opportunities to learn how to best improve patient safety.

**Aims** (1) characterise and analyse CSCI incidents in a national database to identify structural and human factor issues; (2)

provide recommendations for learning and targets for system improvement.

**Methods** Systemic identification and analysis of CSCI incidents reported to the National Reporting and Learning System (NRLS) in England and Wales from 2016 to 2021. A cross-sectional quantitative descriptive analysis was undertaken using the Patient Safety (PISA) classification system, alongside an interpretive qualitative thematic analysis.

**Results** 1317 CSCI incidents in palliative care were identified from a purposively selected sample of 7506 incidents involving palliative care medication, stratified by reported level of harm; 49 (4%) of incidents were confirmed to result in severe harm or death, 206 (16%) in moderate harm, 1050 (79%) in low/no harm using the standardised NHS harm outcomes framework. The commonest primary incidents were administration of the wrong dose (n=248, 19%) and issues in medication timeliness (n=233, 18%). Recurring explanatory themes included inadequate continuity of care between locations and providers, lack of access to clinical expertise and barriers to following established protocols. Many reports contained multiple points of potential system failure but potential psychological harms were still commonly overlooked. Ease of timely access to medication and CSCI equipment, in addition to access to clinical expertise, are priorities for improvement.

**Conclusion** This detailed analysis of CSCI incidents highlights the need for system improvements to facilitate better communication and care continuity, especially when patients transition between care settings. Healthcare professionals need support to contribute high-quality descriptions of incidents to pinpoint precise system changes for improvement.

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#### PALLIATIVE SYMPTOM MANAGEMENT IN MALIGNANT PHEOCHROMOCYTOMA: SAFE USE OF FENTANYL AND REVIEW OF MEDICATIONS USED

Elaine Cunningham, Ashling Kennedy, Sophie Gregg, O'Halloran Domhnaill J, Aoife Lowney. *Marymount University Hospice and Hospital, Cork University Hospital*

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**Background** Pheochromocytoma is a tumour arising from adrenomedullary chromaffin cells. Five-year survival with malignant pheochromocytoma is less than 50%. Difficulty arises when prescribing for patients, given the potential to precipitate catecholamine crisis, a life-threatening emergency.

**Case Presentation** A 60 year-old female presented with abdominal fullness and discomfort. Imaging revealed a left adrenal mass with extensive hepatic metastatic disease. Liver biopsy confirmed pheochromocytoma. The patient presented with a hypertensive crisis necessitating admission to the intensive care unit and alpha blockade. Contrast administration and morphine administration were identified as potential triggers. The palliative medicine team were consulted to aid managing her symptoms.

**Management and Outcomes** The patient experienced upper and lower abdominal pain described as 'dragging' and 'sharp' in nature. It was thought to be nociceptive pain. The Endocrine Society Clinical Practice guideline for management of pheochromocytoma, recommends avoidance of morphine and codeine. Subcutaneous fentanyl was tolerated with good effect, and a continuous subcutaneous infusion was commenced while her pain was unstable to allow for rapid titration. She was

transitioned to a fentanyl patch and her pain was reported to be 0/10. She was subsequently discharged and is undergoing chemotherapy.

**Discussion/Learning Points** While morphine administration is contraindicated in pheochromocytoma, there is evidence in the literature to support the safe use of fentanyl, as is supported in this case. Tricyclic antidepressants, dopamine antagonists such as metoclopramide and prochlorperazine, corticosteroids, serotonin reuptake inhibitors and monoamine oxidase inhibitors are thought to precipitate a crisis. The authors have not found evidence to preclude the avoidance of cyclizine or ondansetron.

**Conclusion** Symptom control in patients with pheochromocytoma remains challenging. There is a lack of published research to support the safe prescribing of medications for these patients.

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#### THE HANDHELD FAN IN CLINICAL PRACTICE; A SURVEY OF CLINICIANS' EXPERIENCE OF IMPLEMENTATION AND BARRIERS TO USE

Gamze Keser, Ann Hutchinson, Daisy Janssen, Miriam J Johnson, Flavia Swan. *Wolfson Palliative Care Research Centre, Hull York Medical School, UK; Faculty of Health, Medicine and Life Sciences, Maastricht University, Netherlands*

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**Background** Studies consistently report patient benefit from fan use for relief of chronic breathlessness, but little is known about clinician implementation of the fan.

**Methods** Online, short, cross-sectional surveys of clinicians working with breathless patients to assess fan use and barriers to implementation. Two versions (English and Dutch) were sent out and publicised via professional groups and social media.

**Results** 271/302 [90%] of UK based respondents practiced in the UK and 117/125 [94%] of Dutch respondents practiced in the Netherlands. Overall, 301/484 [62.2%] respondents (11% male; 89% women; 87% >5 years' experience) used a fan 'some' or 'a lot of the time'; more common in the UK (256/302 [84.8%] vs 45/182 [24.7%]). More UK-based respondents were physiotherapists (UK 75/262 [28.6%] vs Dutch 5/125 [4.0%]), but equal proportions of nurses and doctors. Palliative care was equally represented, but respiratory clinicians were more common in the UK group (153/261 [58.6%] vs 36/124 [29%]), and elderly care in the Dutch group (22/124 [17.7%] vs 1/261 [0.4%]). The two most common barriers to fan-use were poor availability (52/231 [22.5%] and lack of funds to buy fans ([45/231 [19.5%]); one-third asking the patient to buy one for themselves. In the Dutch group only, lack of belief of effectiveness and a preference for other interventions (inhalers or oxygen) also acted as barriers.

**Conclusion** Most UK-based respondents recommended fan use to patients, whereas a minority of Dutch respondents did. Barriers to fan use include lack of availability and funds to buy fans, and in the Dutch group lack of belief in effectiveness. In order to improve patient access to fans we recommend that a budget be made available to clinicians to buy them. The proportion of physiotherapist respondents in the Dutch group was notably smaller; professionals likely to recommend a non-pharmacological intervention. Physiotherapists may be important in driving implementation in the UK.