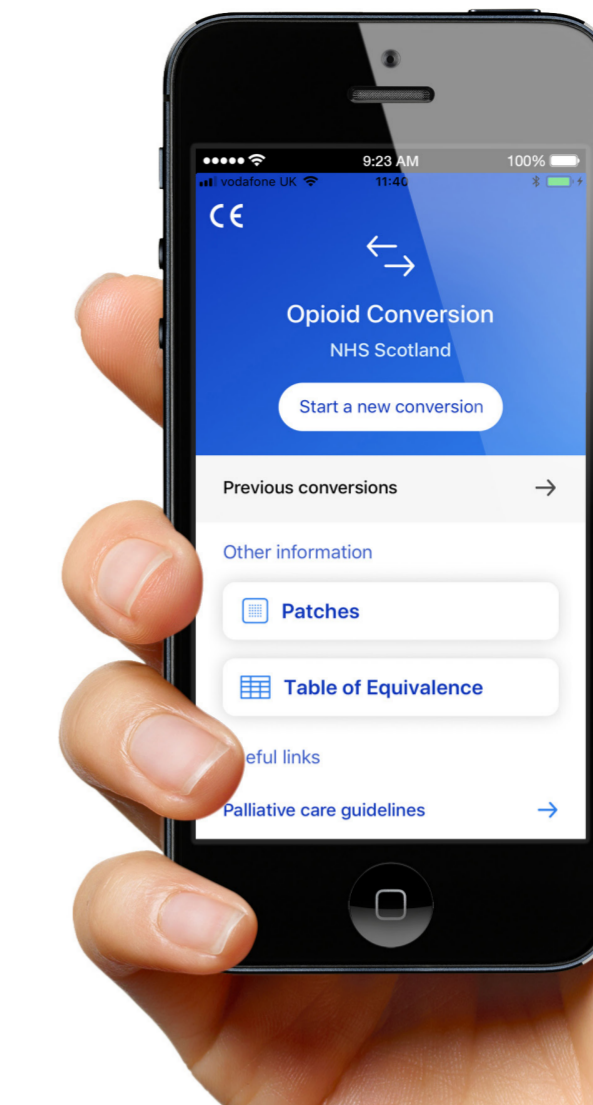


The Safer Prescription of Opioids Tool (SPOT) - Evaluation in Clinical Practice

The Safer Prescription of Opioids Tool (SPOT) enables clinicians to double-check opioids conversions safely, quickly, and conveniently at the patient's bedside, using a smartphone, tablet or computer.

SPOT is a clinical decision support (CDS) tool, aimed at reducing errors in conversion and improving the efficiency of the double-checking process.



Aim

The aim of the SPOT clinical utility study was to evaluate SPOT as a CDS platform in equianalgesic opioid dose conversion using clinical data across primary, secondary and tertiary care.

Methods

The study population included all male and female patients in primary, secondary and tertiary care settings undergoing equianalgesic opioid switch under the Palliative Care Department at a Scottish Health Board. We also included patients in primary care undergoing equianalgesic opioid rotation. The data collection period for the clinical study was 5 months.

Results

Almost all users (98%) found it beneficial to their clinical practice and for patient safety to have an easy way to double-check their calculations.

Confidence in prescribing opioids was significantly higher in the post-SPOT study group than in the pre-SPOT study group (Table 2) (One-tailed t-test, t-value = -1.94004. p= -0.027).

Opioid	As Index Opioid (n)	As Target Opioid (n)
Alfentanil	26	41
Buprenorphine	2	4
Codeine	16	3
Diamorphine	6	7
Dihydrocodeine	1	1
Hydromorphone	10	9
Fentanyl	0	29
Morphine	81	53
Oxycodone	68	63

Table 1. Opioids used during the study period, recorded as the starting (Index) and the resulting opioid (Target) of the equianalgesic switch.

Confidence Levels With Opioid Conversions
Proportion (%)

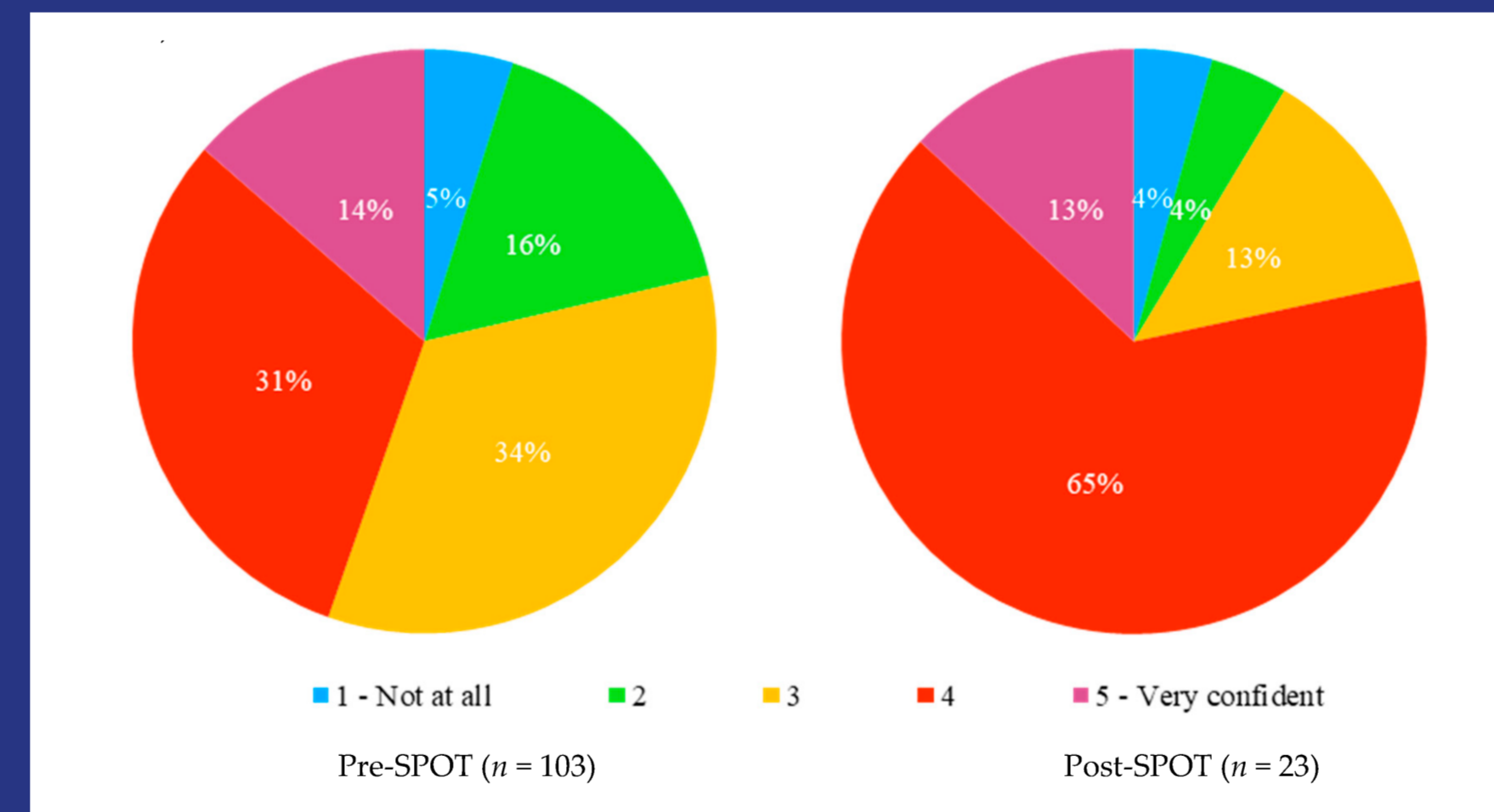


Table 2. Users' self-reported confidence with opioid conversions, before and after SPOT study.

Discussion

In contrast to tests of other equianalgesic opioid converter test protocols, our intention was to evaluate the clinical utility of a novel CDS, SPOT, using real-world patient conversion data from quantitative and qualitative aspects. The information gathered is intended to provide clarity on the real-world challenges of using technology for opioid conversions.

We found variable adherence to guidelines. For example, despite guidance to the contrary, not all of the respondents altered their choice of index opioid despite a reduced estimated glomerular filtration rate (eGFR).

Our initial survey identified low confidence and variable competence in performing equianalgesic opioid conversions.

Conclusion

This study evaluated the use of a novel CDS, SPOT in clinical practice in vivo, using contemporaneous clinical data. SPOT improved self-reported confidence when End Users performed equianalgesic opioid dose conversion in palliative and end of life care settings.

SPOT was found to appropriately improve End User confidence when prescribing opioids.

SPOT's role is as a support to the generalist making complex, high risk, clinical decisions.

The Safer Prescription of Opioids Tool (SPOT) - Evaluation in Clinical Practice



Acknowledgements

The authors acknowledge the support of Dr Debbie Baldie for her assistance with focus groups, Daniel Levin for his contribution to the statistical calculations, Mr Rodney Mountain co-director of the Academic Health Science Partnership in Tayside and Lesley Peebles, Co-Director of the Clinical Research Centre Tayside.



The authors gratefully acknowledge the support and contribution of all the study participants.

Funding: The authors disclose receipt of the following financial support for the research, authorship, and publication of this article: This work was supported by PATCH - Palliation and the Caring Hospital, The Tayside Oncology Fund, Scottish Enterprise, Strathmore Hospice - Lippen Care, the Digital Health and Care Institute, and Innovate UK.

Ethics: Ethical opinion was sought and waived for this study (EOSRES Ref: 2015PP01).

NHS Education for Scotland: For a contribution towards conference expenses.

Experts



1. R Flint NHS Lothian GP Specialty Trainee
2. D Buchanan Consultant in Palliative Medicine, Lead Clinician, Co-Lead: Macmillan Tayside Palliative and End of Life Care Managed Care Network, Co-Director: Master of Public Health (Palliative Care Research), The University of Dundee, Honorary Senior Clinical Lecturer, School of Medicine, The University of Dundee
3. A Caschieri Professor of Surgery at the Scuola Superiore Sant'Anna in Pisa and Chief Scientific Advisor to the Institute of Medical Science and Technology (IMSaT)
4. S Jamieson General Practitioner, OCH (Palliative Care Research), The University of Dundee, Honorary Senior Clinical Lecturer, School of Medicine, The University of Dundee
5. S Botros Lead Clinical Pharmacist, Surgery, Orthopaedics and Critical Care, NHS Tayside
6. J Forbes Senior Research Nurse and Project manager at the Clinical Research Centre
7. J George Director of Research and Development for NHS Tayside, Professor of Cardiovascular Medicine and Therapeutics, Hon. Consultant Physician & Clinical Pharmacologist

Contact

Name: Roger Flint
Email: rflint@nhs.net
Phone: 078 3434 2424
www.doctorflint.co.uk



BBC As featured on the BBC

For more information and to trial SPOT, visit www.doctorflint.co.uk