guideline for Costa Rica. This inclusive and innovative method involved a peer review process using tools such as AGREE II, Lenzler's Red Flags and the Institute of Medicine (IOM) criteria. This gave international credibility and up-to-date best practices to the first line professionals in health centres across the Kingdom, in relation to breast cancer diagnosis, screening and treatment. It was also designed to be readily accessible to the community in the format of patient pathways and algorithms.

Results We established the first interactive patient-centered, multidisciplinary approach to guideline development for breast cancer treatment, screening and diagnosis in Bahrain. This locally flavoured, evidenced based guideline not only used sharing of resources but was developed with little direct cost. Over 18 months the multidisciplinary team supported the development of 35 clinical scenarios relevant to the gamut of supporters along with treatment algorithms. Having an inclusive process and clear methodology meant that the multidisciplinary team championed the process and results, reducing some of the challenges. Whilst the guidelines provide an underpinning for future policy making and management of breast cancer in Bahrain the innovation is the identification of eight clinical scenarios in which shared decision making is recommended, thus empowering the end-user.

Conclusions This hands-on initiative at grass roots level addressed pertinent issues related across a multidisciplinary team, when supporting a patient through their treatment pathway is key. Singing all from the same 'hymn sheet' is vital to better support and optimise and improve health outcomes. Reducing the confusion of what evidence based best practice is, whilst producing a locally flavoured document, showed that NGOs can be used as a resource in relation to Public Private Partnerships (PPP). This international peer reviewed guideline for Bahrain will ensure that there will be a joint clinician and patient focus, whilst recognising that the keys to success, adoption, implementation and sustainability lies with the government itself. Moving forward, the NGO is supporting the development of three of the eight shared decision-making aids the backing of international publishers of evidence-based clinical references (EBSCO).

Oral Presentations

13 BETTER EVIDENCE FOR BETTER HEALTHCARE FOR ALL CREATURES GREAT AND SMALL

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Objectives The evidence base for the commonly asked questions by veterinary clinicians or animal owners is poor. The research produced by academia and the pharmaceutical industry is often wasted as it can't be applied to practice.

VetPartners, one of the fastest growing corporates in the UK, has established a clinical board structure to deliver their clinical excellence strategy. This structure must encompass the challenge of wide geographical distribution and clinical diversity across the network of practices as well as the differences between small animal, equine and production animal settings.

It is vital that we deliver high quality evidence-based healthcare to our patients, as a large group of connected healthcare providers we are potentially better placed to do this than independent small practices.

Method A process has been established to ensure common clinical uncertainties are identified from the clinical teams within the business through several routes. Groups of employees with skills, expertise, experience and interest in certain clinical areas have been formed. These groups supported by 3 strategic species-based clinical boards prioritise the uncertainties and develop evidence-based decision-making resources e.g. guidance, protocols, checklists. Where evidence is lacking, the opinion and experience of the clinical workforce are gathered using evidence-based techniques and the ability to undertake our own research is being established. As well as clinically relevant quality improvement cycles we intend to measure the effect of the activities of the vetPartners clinical board on outcomes for our patients, business and clinicians.

Results The challenges to date will be discussed including communication, IT, training, a lack of evidence and how to prioritise the activities in busy clinical and business environments. The benefits of providing this structure is already clear as this group wide activity provides a common purpose for members of staff, improves morale and provides individuals with new opportunities for clinical leadership and developing their EBM skills.

Conclusions The principles behind the EBM manifesto to provide better evidence for better healthcare apply to all clinical settings whatever the species involved. Sharing experiences across the professions provides new opportunities to learn from each other and apply new methods of undertaking evidence-based practice to benefit our patients

14 UNDERSTANDING PATIENTS' PERSPECTIVES OF SPIRITUALITY TO INFORM CARE AT THE END OF LIFE: A QUALITATIVE SYSTEMATIC REVIEW

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Objectives Caring for a patient's spiritual needs is well recognised as an important facet of patient care, particularly in the provision of end of life care. Understanding patient perceptions of their spiritual needs when approaching the end of life is essential to support the delivery of patient-centred care. The aim of this study was to conduct a systematic review of qualitative literature on spirituality and spiritual care needs at the end of life from the patients' perspective to inform the development of a National Clinical Effectiveness Committee (NCEC) national clinical guideline for care of the dying adult in the Republic of Ireland.

Method A systematic search of five databases (including Medline and Applied Social Science Index and Abstracts) was conducted from inception until January 2019 using a comprehensive search strategy. Studies were included where they were primary qualitative studies exploring spirituality (defined as a search for meaning and purpose, which may or may not include reference to the divine) in patients with a life expectancy of 12 months or less in any setting. Two

reviewers independently screened titles using Covidence software, extracted data in standardised forms, and conducted methodological quality appraisal (using the Critical Appraisal Skills Programme checklist). A thematic synthesis of included studies was conducted, using line by line coding, developing descriptive and analytical themes using NVivo 12 software. The GRADE-CERQual (Confidence in the Evidence from Reviews of Qualitative research) approach was used to summarise the certainty of the evidence.

Results Forty-seven papers, describing 42 unique datasets, incorporating data from 710 patients were included. The study recruited from a mix of inpatient, outpatient, hospice and community settings across 12 different countries with 49% of studies conducted in the US. Preliminary findings demonstrate spirituality was expressed both through religious practices, and through relationships or connectedness with family, friends, nature and with a sense of self. Spirituality has on-going importance to those at the end of life as a means of finding hope, meaning and certainty, living remaining life well and adjusting to dying. Considering the broad sense of spirituality expressed by participants, practice improvements may include healthcare providers acknowledging and supporting patients' desires for creating meaning, purpose and connectedness through listening, connecting, and engaging in discussions about these needs. Greater access to chaplains for participants who expressed spirituality through religion may also be of benefit.

Conclusions Qualitative research is increasingly used in the development of evidence-based health care and clinical guidelines. Such methodologies provide deeper insights into patient experiences of healthcare services and ill-health and support the provision of healthcare that is more patient-centred. The findings from this systematic review highlight the importance of spirituality for patients at the end of life as means of finding hope, meaning and certainty, living remaining life well and adjusting to dying. These findings will be used to inform the development of a national clinical guideline for care of the dying adult in the Republic of Ireland.

PROSPERO: The protocol for this systematic review was registered on PROSPERO, CRD42019122062

15 DESIGN, METHODS, AND REPORTING OF STUDIES EVALUATING IMPACT OF CARDIOVASCULAR CLINICAL PREDICTION RULES: A SYSTEMATIC REVIEW

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Objectives Clinical prediction rules (CPRs) are tools that help clinicians address diagnostic or prognostic uncertainties using symptoms, signs, and test results of a patient. Developing a CPR involves three steps: derivation, validation, and impact study. Poor design, methods, or reporting in these steps can lead to research waste. No study has evaluated whether impact studies are conducted with appropriate design, methods, and reporting. Therefore, we conducted a systematic review to summarize design, methods, and reporting of impact studies of cardiovascular CPRs. We also compared quality of methods and reporting of appropriately designed impact studies with that of control studies evaluating other types of non-pharmacologic intervention.

Method We reviewed studies evaluating the impact of cardiovascular CPRs included in the International Register of CPRs. We identified impact studies by conducting forward citation searches of these CPRs. For some cardiovascular CPRs never published in a journal, we searched electronic databases to identify their impact studies. We categorized the design of impact studies as ideal (randomized experiment), alternative (non-randomized experiment excluding uncontrolled before-after study), and inappropriate (all other study designs). For impact studies with appropriate study design, we assessed their methods using the Cochrane risk of bias and ROBINS-I tools. We assessed their report using the CONSORT statement, relevant extensions to the CONSORT statement, and TREND statement. For each impact study with appropriate design, we identified a contemporaneous control study with matching design published in the same journal and compared their methods and reporting.

Results We screened a total of 42769 references, 40644 from forward citation searches of 194 CPRs and 2125 from electronic database searches of 4 CPRs. Of 110 of impact studies of cardiovascular CPRs found, 59.1% used inappropriate designs (40 uncontrolled before-after studies, 7 cohort studies, and 18 non-comparative studies), 9.1% used alternative designs (2 non-randomized trials, 4 interrupted time series studies, and 4 repeated measures studies), and 31.8% used ideal designs (12 cluster randomized trials and 23 randomized controlled trials). Overall risk of bias was substantial in 80% (31 of 45) of impact studies. Mean proportion of domains from reporting guidelines that impact studies adhered to was only 44.1% (9.3 of 21). There was no clear difference between impact and matched control studies in the proportion of studies with substantial risk of bias and the mean proportion of reporting domains studies did not comply with.

Conclusions We conducted the first systematic review that evaluated design, methods, and reporting of impact studies. We found the vast majority of impact studies either used study designs inappropriate for assessing the effect of using CPRs, applied methods carrying substantial risk of bias, or did not comply with reporting guidelines. All stakeholders of CPR development should take concerted actions to increase the value of research.

16 ADDING CAPACITY: GETTING EBP INTO THE CURRICULUM FOR ALL HEALTH PROFESSIONALS IN IRELAND

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Objectives Evidence Based Practice (EBP) is a cornerstone of delivering clinically effective care. An EBP capacity-building project commenced in Ireland in 2016, to build capability and leadership for EBP, with the ultimate goal of improving patient outcomes. A key part of this project was the development of a competency framework for education in evidence-based practice, to ensure responsiveness of education standards and curricula of healthcare professionals in this area.