two segments: before and after the exposure period (April 2019). We will investigate effect modification by the following prespecified factors: Covid-19 reporting, proportion of reports from traditional (print) versus other media types (online).

Results We will present raw counts of reports with 'in mice' in the headline and/or lede as an indication of the trends present in news reporting of scientific findings in mice over the course of six years. Results of the interrupted time series analysis will be presented as the ratio of the odds of reporting 'in mice' in the headline and/or lede before compared with after April 2019, with a value greater than 1.0 indicating greater odds of reporting 'in mice' before compared with after April 2019 and a value below 1.0 indicating lower odds of reporting 'in mice'.

Conclusions This study will provide information on the association of a corrective social media intervention and subsequent accuracy of health and biomedical media reporting. Improved accuracy of media reporting will ensure users of health research can make better and fully informed healthcare decisions.

| 175 | AN ETHICAL ANALYSIS OF EVIDENCE-BASED MEDICINE |

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Evidence-based medicine is a clinical decision-making framework which makes claims about what physicians ought to do. Though heralded as the cutting edge of medical science, evidence-based medicine is a value-laden normative theory which implicitly depends on substantive views regarding what is morally good or right. In this paper, I provide an ethical analysis of evidence-based medicine. I consider its normative underpinnings in three ethical theories: utilitarianism, Kantian deontology, and virtue ethics. In the face of uncertainty, evidence-based medicine endorses expected utility theory using the best available evidence in order to avoid doing more harm than good. In accordance with the Kantian respect for individuals as ends in themselves, evidence-based medicine calls for integrating the values and preferences of the patient. De-emphasizing intuition, clinical expertise, and pathophysiologic rationale emphasizes the need for the intellectual virtues of curiosity, critical thinking, and courage. Evidence-based medicine is a successful clinical practice that can be morally justified by all three major ethical theories. Although its focus on maximizing good health outcomes and integrating respect for individual patients has been emphasized, the role of the intellectual virtues in evidence-based medicine remains highly under-explored.

Objectives In this paper, I provide an ethical analysis of evidence-based medicine.

Method I consider its normative underpinnings in three ethical theories: utilitarianism, Kantian deontology, and virtue ethics.

Results In the face of uncertainty, evidence-based medicine endorses expected utility theory using the best available evidence in order to avoid doing more harm than good. In accordance with the Kantian respect for individuals as ends in themselves, evidence-based medicine calls for integrating the values and preferences of the patient. De-emphasizing intuition, clinical expertise, and pathophysiologic rationale

emphasizes the need for the intellectual virtues of curiosity, critical thinking, and courage.

Conclusions Evidence-based medicine is a successful clinical practice that can be morally justified by all three major ethical theories. Although its focus on maximizing good health outcomes and integrating respect for individual patients has been emphasized, the role of the intellectual virtues in evidence-based medicine remains highly under-explored.

Poster abstracts

| 176 | METHODOLOGICAL QUALITY OF SYSTEMATIC REVIEWS ON TREATMENTS FOR OSTEOPOROSIS: A CROSS-SECTIONAL STUDY |

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Objectives Osteoporosis is a common musculoskeletal disease. Systematic reviews (SRs) provide the best evidence of effective treatment strategies for clinical practice. However, the validity of the evidence is prone to be undermined by methodological flaws. This cross-sectional study appraised the methodological quality of a representative sample of SRs on osteoporotic treatments.

Method The Cochrane Database of Systematic Reviews, EMBASE, MEDLINE, and PsycINFO were searched for SRs that included at least one meta-analysis on osteoporotic treatments which were published between 2008 and 2019. The methodological quality of the included SRs was evaluated using the validated AMSTAR (A MeaSurement Tool to Assess systematic Reviews) 2 instrument. Associations between bibliographical characteristics and methodological quality were explored using regression analyses.

Results A total of 101 SRs were included and appraised. One (1.0%) SR was of high quality, 3 (3.0%) were of moderate quality, 11 (10.9%) were of low quality, and 86 (85.1%) were of critically low quality. Specifically, 99 (98.0%) SRs did not explain the selection of study designs, 85 (84.2%) did not provide a list of excluded studies and justify the reasons for exclusion, 85 (84.2%) did not report on funding sources among included studies, and 72 (71.3%) did not state explicitly their review methods in an *a priori* manner and justify any significant deviations from their protocol. Multivariable ordinal regression analysis illustrated that being published after 2017 *[adjusted odds ratio (AOR): 5.48; confidence interval (CI): 1.12 – 26.89]* was associated with higher methodological quality. SRs focusing on pharmacological interventions *[AOR: 0.24; CI: 0.06 – 0.96]* were associated with lower methodological quality.

Conclusions The methodological quality of SRs on osteoporotic treatments is disappointing. Future SRs in this area should pay attention to explaining the selection of study designs, providing a list for the excluded studies and justifying such exclusions, reporting on the sources of funding among included studies, pre-specifying methodology and justifying any deviations from the protocol.