intervention of physical exercise (Vivifrail) for the prevention of the cognitive and functional deterioration in hospitalized patients aged 70 years or older and to estimate costs and the budgetary impact for the Spanish National Health Service.

Methods. A systematic review of available scientific literature (including experimental and observational designs) on the safety and effectiveness of Vivifrail was performed. A costing study and budgetary impact analysis of the incorporation of Vivifrail as a therapeutic alternative to standard care with a time horizon of 5 years was performed.

Results. One randomized controlled trial (RCT) (n = 370) showed positive effects of Vivifrail compared to usual care in functional capacity (mean difference (MD) = 2.20, 95% confidence interval (CI) 1.78 to 2.62), cognitive state (MD = 1.80, 95% CI 1.24 to 2.36), and quality of life (MD = 13.20, 95% CI 12.70 to 13.70). Regarding other variables, the Vivifrail increased the grip strength of the dominant hand (MD = 2.30; 95% CI = 1.79 to 2.81), verbal fluency (MD = 2.15; 95% CI = 1.56 to 2.74), performance of double tasks (MD = 0.10; 95% CI = 0.07 to 0.13), executive function (MD = −31.07; 95% CI = −49.23 to −12.91) and emotional state (MD = −2.00; 95% CI = −2.50 to −1.50).

The total cost of implementing Vivifrail in a 1,000-bed general hospital would be EUR18,000 per year (adjusted to 2020 currency), with approximately 150 patients older than 75 years benefited. This represents a cost of EUR120 per patient.

Conclusions. The Vivifrail could improve functional and cognitive capacity, although available evidence on the Vivifrail is very scarce. More well designed and executed RCT and cost-effectiveness study confirming or refuting the promising findings are needed for a new assessment.

PP234 Analysis Of Discussions On Twitter On The Topic Of COVID-19 Tests: Exploring A Natural Language Processing Approach

Savitri Pandey (spandey@companieshouse.gov.uk), Christopher Marshall, Maria Pokora, Anne Oyewole and Dawn Craig

Introduction. Various strategies to suppress the Coronavirus have been adopted by governments across the world; one such strategy is diagnostic testing. The anxiety of testing on individuals is difficult to quantify. This analysis explores the use of soft intelligence from Twitter (USA, UK & India) in helping better understand this issue.

Methods. A total of 650,000 tweets were collected between September and October 2020, using Twitter API using hashtags such as '#oxymeter', '#oximeter', '#antibodytest', '#infraredthermometer', '#swabtest', '#rapidtest', and '#antigen'. We applied natural language processing (TextBlob) to assign sentiment and categorize the tweets by emotions and attitude. WordCloud was then used to identify the single topmost 500 words in the whole tweet dataset.

Results. Global analysis and pre-processing of the tweets indicate that 21 percent, seven percent and four percent of tweets originated from the USA, UK, and India respectively. The tweets from #antibody, #rapid, #antigen, and #swabtest were positive sentiments, whereas #oxymeter, #infraredthermometer were mostly neutral. The underlying emotions of the tweets were approximately 2.5 times more positive than negative. The most used words in the tweets included 'hope' 'insurance', 'symptoms', 'love', 'painful', 'cough', 'fast test', 'wife', and 'kids'.

Conclusions. The finding suggests that it may be reasonable to infer that people are generally concerned about their personal and social wellbeing, wanting to keep themselves safe and perceive testing to deliver some component of that feeling of safety. There are several limitations to this study such as it was restricted to only three countries, and includes only English language tweets with a limited number of hashtags.

PP254 Double-Counting In Evidence Synthesis Including Routinely Collected Data: Methodological and Practical Considerations

Humaira Hussein (hh270@leicester.ac.uk), Clareece Nevill, Anna Meffen, Sylwia Bujkiewicz, Nuala Sheehan, Alex Sutton, Keith Abrams and Laura Gray

Introduction. The use of real-world data, as an alternative to randomized controlled trials, is becoming increasingly common in the evaluation of new health technologies. With this rise in real-world literature, such data will also enter evidence synthesis models. While it can be beneficial to utilize data from all available sources, this can introduce the problem of double-counting of participants.

Methods. Using a number of case-studies, we discuss and illustrate various issues around double-counting. These include synthesis of studies using the same database or the same subset of participants, overlapping use of intervention arms across studies and the use of registry data from the participants overlapping with those in randomized controlled trials. The implications in research are considered along with common methods used currently to overcome these issues.

Results. Double-counting of participants in evidence synthesis can artificially inflate precision, potentially leading to inappropriate conclusions. Common methods currently used to help mitigate the impact of double-counting includes stratifying analysis to different timelines, using the most comprehensive study in the evidence synthesis model or using the study that has the largest sample size. However, in all of these cases, sensitivity analyses would need to be considered to ensure robust results.

Conclusions. Currently, there are no published guidelines on how to address the issue of double-counting. With the increased use of real-world data in evidence synthesis, double-counting has the potential to become a significant issue. Therefore, it is of significant importance that methodologies and guidelines are developed to address this.

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