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Abstracts

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a good performance over 35 hours of uninterrupted operation, which pointed out the stability of this device. In addition, the device was tested in a porcine model showing good mechanical performance and adequate arterial blood gas throughout all test periods. When compared with commercial ventilators, MiniVent exhibited a similar performance of ventilation.

Conclusions: MiniVent could be a reliable solution to overcome the shortage of commercial ventilators in emergencies, such as the recent COVID-19 pandemic. This device presents a production cost of under 1000€ and does not need specialized technical assistance so it might be a viable solution even in lower-income countries.

Mobile technologies to support healthcare provider to healthcare provider communication and management of care

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Keywords: mHealth; systematic review; telehealth; telemedicine

Objective: Mobile technologies can potentially expand the use of telemedicine to facilitate communication between providers. We aimed to assess the effects of mobile technologies versus usual care for supporting communication and consultations between healthcare providers on performance, acceptability and satisfaction, healthcare use, patient health outcomes, acceptability and satisfaction, costs, and technical difficulties.

Methods: We followed the Cochrane and EPOC methodological procedures. We searched for randomised trials at CENTRAL, MEDLINE and four other databases from January 2000 to July 2019. We searched clinical trials registries, references of relevant systematic reviews and contacted topic experts.

Results: We found 19 relevant studies (more than 5766 people) who needed health care. Sixteen studies were from high-income countries. When primary healthcare workers use mobile technologies to consult with hospital specialists, they may increase the likelihood of retinopathy screening for people with diabetes, or receiving an ultrasound if referred with symptoms, and may reduce referrals or a visit to the clinic for people with a skin condition or referred for clinic follow-up for different health problems. When emergency doctors use mobile technologies to consult with hospital specialists, patients are probably managed slightly more quickly.

Conclusions: Interventions may reduce the time between presentation and management of the health condition when primary care providers or emergency physicians use them to consult with specialists, and may increase the likelihood of receiving a clinical examination among participants with diabetes and those who required an ultrasound. There was little evidence of effects on participants' health status and well-being, satisfaction, or costs.

Non-linearity in 3rd graders handwriting copy task: a pilot study

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Keywords: Fractal dimension; approximated entropy; variability; children

Objective: The complex organization of handwriting variability, or fractal dynamics, theoretically represents the adaptive capacity of the locomotor hand/arm system to be precisely controlled. Fractal dynamics are sensitive to various individual constraints and task constraints. The temporal organization of these sequences of movements has a complex fractal-like structure characterized by self-similarity over multiple time scales. The purpose of this study was to investigate: 1) variability's structure of a handwriting copy task (c1) and its repetition after a 5-minute of copy (c2); 2) variability between the 5 first lines of c1.

Methods: 28 children aged 7-8 years (16 female, 12 male) performed a 5-minute copy from the Concise Evaluation Scale for Children's Handwriting (BHK) on a digitizing table and repeated the first five lines. Movements were recorded using an x-y digitizing tablet with an inking pen and MovAlyzeR[®]. Nonlinear dynamic parameter approximate entropy (ApEn) was used to assess pattern of the regularity of respective kinematic time series, and we used the detrended fluctuation analysis (DFA) method to characterize the fractal dynamics of handwriting.

Results: We found significant differences using t-tests in the regularity between c1 and c2 of global handwriting in the horizontal component and in the vertical component. Between lines differences were found in both components in lines #2, #4 and #5.

Conclusions: Five minutes of handwriting does not appear to affect fractal dynamics. The variability between lines appears to be more sensitive to ApEn. Nonlinear methods are an important tool to quantify changes in task graphomotor behavior.

Mobile applications for quick adverse drug reaction report: a scoping review

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Keywords: Adverse drug reactions; mobile apps; pharmacovigilance; Portugal; spontaneous notification; underreporting

Objective: This study aims to identify existing mobile applications for adverse drug reaction (ADR) reporting. Hence, the subsequent questions were made through the process: What are the