

EUROPEAN JOURNAL OF PUBLIC HEALTH

Volume 32 Supplement 3

SUPPLEMENT

15TH EUROPEAN PUBLIC HEALTH CONFERENCE

Strengthening health systems: improving population health and being prepared for
the unexpected

Berlin, Germany

9–12 November 2022

ABSTRACT SUPPLEMENT

Guest editors: Reinhard Busse, Verena Vogt, Dineke Zeegers Paget

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significantly influenced by age (Coef. - 0.158, CI [- 0.266 - - 0.050]), DBS (Coef. - 1.047, CI [- 1.401 - - 0.687]) and NPRS (Coef. 1.825, CI [1.333 - 2.318]). Δ AF was significantly influenced by age (Coef. - 0.171, CI [- 0.300 - - 0.042]), DBS (Coef. - 1.150, CI [- 1.580 - - 0.721]) and NPRS (Coef. 2.504, CI [1.928 - 3.080]).

Conclusions:

Older patients obtain a higher functional outcome (Δ BS, Δ TS) but lower improvement in range of motion (Δ PF, Δ AF). Patients with higher NPRS at admission obtain an overall better outcome. Higher DBS is associated to lower articular outcomes (Δ PF, Δ AF).

Key messages:

- A better outcome can be achieved if rehabilitation is started immediately after knee replacement.
- Pain and age are not factors that impede effective rehabilitation.

Abstract citation ID: ckac131.300

Categorical principal component analysis to characterize patients at Intensive Care Unit admission

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Background:

Healthcare-associated infections (HAIs) are the most frequent complications in healthcare settings, with a major impact on adverse outcomes. Here, we aimed to identify the relationships between patients' characteristics admitted to Intensive Care Units (ICUs).

Methods:

We used data of patients included in the "Italian Nosocomial Infections Surveillance in Intensive Care Units" (SPIN-UTI) project, who stayed in ICU for more than 2 days. Using Categorical principal component analysis (CATPCA) two components of risk were assessed. Values of variance accounted for (VAF) >0.3 were accepted as the significant effect of a variable on each component. A Cronbach's alpha >0.7 was accepted as a measure of the internal consistency of the model.

Results:

A total of 22402 admissions (62% female) were included. The average age was 65.7 years (SD = 16.6). Our model explains 35.3% of the total variability, with a Cronbach's alpha value of 0.847. The visual examination of component loading plot allows to evaluate the correlation between the quantified variables and each of the two components. In particular, the first component is explained by the presence of intubation (VAF=0.826), central venous catheter (VAF=0.749), and urinary catheter (VAF=0.727), patient's origin (VAF=0.584), antibiotic treatment (VAF=0.479), non-surgical treatment for acute coronary disease (VAF=0.375), type of admission (VAF=0.509), surgical intervention (VAF=0.419). In the second component, the variables with the greatest contribution were the SAPS II (VAF=0.660), age (VAF=0.583), type of admission (VAF=0.531), surgical intervention (VAF=0.522). Thus, the first component would represent the exposure to invasive devices and medical procedures, and the second component the severity of patients.

Conclusions:

Our results proposed the usefulness of CATPCA to identify factors involved in the development of adverse outcomes, highlighting the role of exposure to invasive devices and severity of patients.

Key messages:

- There are several relationships between patients clinical and personal characteristics.
- CATPCA represents a useful approach for the analytical exploitation of healthcare data.

Abstract citation ID: ckac131.301

Clinical practice variability: a systematic review of shock wave therapy for spasticity

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Background:

The purpose of this study was to collect and analyse the available scientific evidence on the clinical practice variability and effectiveness of shock wave therapy as a treatment for spasticity.

Methods:

The systematic search was performed in the following databases: PubMed, PEDro, Cochrane, Embase, and the Virtual Health Library. All publications from November 2009 to November 2019 were selected that included a sample of patients with spasticity and prior suspension of botulinum toxin, to whom shock wave therapy was applied. The methodological quality of the articles was evaluated using the Jadad scale and the pyramid of quality of scientific evidence.

Results:

25 studies involving 866 participants with spasticity were selected. The results obtained suggest that shock wave therapy appears to be effective in reducing spasticity levels irrespective of the age of the participants, the type of injury, and the tool used to measure the effect.

Conclusions:

shock wave therapy reports evidence of improvement in motor function, motor impairment, pain, and functional independence, applied independently of botulinum toxin. However, due to the heterogeneity of the protocols, there is no optimum protocol for its application, and it would be appropriate to gain more high-quality scientific evidence through primary studies.

Key messages:

- Shock wave therapy reports evidence of improvement in motor function, motor impairment, pain, and functional independence, applied independently of botulinum toxin.
- Due to the heterogeneity of the protocols, there is no optimum protocol for its application, and it would be appropriate to gain more high-quality scientific evidence through primary studies.

Abstract citation ID: ckac131.302

Emergency Department: Analysis of Patient Flow and Length of Stay Variations

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Background:

Crowding in Emergency Departments (ED) is a severe public health issue. Length of stay (LOS) is not a direct measure of crowding, but it is an essential indicator for monitoring emergency care quality. LOS in ED can be associated with delays in treatment, decreased patient satisfaction and adverse outcomes. The aim of this study is to analyze ED LOS in the Teaching Hospital of Siena for further strategies.

Methods:

A retrospective observational study was conducted between January 1, 2019, and December 31, 2021. To manage admissions and discharges, all patients' data admitted to ED of the University Hospital of Siena were accessed by Aurora, the IT system. In addition, a descriptive analysis was performed, collecting the following variables: sex, age, arrival mode, ED visit reasons, triage code, discharge mode, hospital admission area and LOS (cut-off > 8 hours). The analysis was carried out using STATA 17; variables were analyzed with ANOVA test.

Results:

Our sample consisted of 152,393 patients (F49.47% M50.53%), and the average age was 50.51 (SD ± 26.07). During the years total ED visits decreased: 65,426 (2019); 40,318 (2020); 46,649 (2021), and there was a significant increase ($p < 0.001$) of patients with LOS > 8 hours: 13.96% (2019); 21.51% (2020); 23.10% (2021). In the years 2019, 2020 and 2021, admissions of patients with LOS > 8 hours were respectively: 25.92%; 43.95% and 37.09%, with the following percentage in medical areas: 69.96% in 2019; 70.51% in 2020; 64.55% in 2021. A progressive increase of admissions in COVID area resulted since 2020 (2.23%-2020; 6.07%-2021).

Conclusions:

The spread of COVID-19 and the containment measures, such as lockdown, caused a significant decrease in ED access. The increase LOS > 8h could be primarily due to the time needed to perform laboratory investigations for the search for SARS-CoV-2 but also to the overflow of SARS-CoV-2-infected patients rapidly saturating the ED boxes and hospital bed capacity, with the need sometimes to dedicate other medical areas to manage COVID patients.

Key messages:

- ED-LOS is a proxy indicator to monitor emergency care quality.
- Further investigations should be performed to analyze the leading causes of ED LOS increase during the pandemic period.

Abstract citation ID: ckac131.303**What kind of patient benefits the most from an intensive physiotherapy after total hip replacement?**

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Background:

Hip replacement is a common orthopaedic surgery procedure that produces great improvement in the quality of life. Despite this, a globally standardized post-operative physiotherapy protocol still does not exist. The aim of this study is to identify the factors that influence the motor and functional outcome after early, intensive, hospitalized treatment.

Methods:

A retrospective study was conducted in 2019 on 509 patients admitted to an Italian private clinic specialized in post-surgery rehabilitation, which applies an original bio-psycho-social-environmental protocol and individual rehabilitation plans. Data regarding each patient were collected from medical records: age, haemoglobin, Body Mass Index (BMI),

Cumulative Illness Rating Scale (CIRS), Tinetti scale (TS) and Barthel scale (BS) at admission and discharge. The outcome was measured as the difference (Δ) between the values at discharge and admission of BS (Δ BS) and TS (Δ TS). We performed a univariate linear regression using STATA, to determine which factors influence the outcome. A $p < 0.05$ was considered statistically significant.

Results:

Our sample (57.4% female) was 70.1 ± 10.4 years old. Δ BS was significantly influenced by motor performance at admission (BS: Coef. - 0.708, CI 95% [- 0.743 - - 0.673]; TS: Coef. - 1.697, CI 95% [- 1.849 - - 1.544]), global health conditions (CIRS Severity index: Coef. 4.925, CI 95% [1.037 - 8.814]) and age (Coef. 0.312, CI 95% [0.221 - 0.403]). Δ TS was significantly influenced by the same factors, BS: Coef. - 0.167, CI 95% [- 0.184 - - 0.149]; TS: Coef. - 0.667, CI 95% [- 0.703 - - 0.631]; CIRS Severity index: Coef. 1.254, CI 95% [0.012 - 2.511]; age: Coef. 0.090, CI 95% [0.061 - 0.120]. BMI and haemoglobin did not influence the studied outcomes.

Conclusions:

Patients with worse health conditions, advanced age and lower motor performance at admission obtain a higher outcome.

Key messages:

- A broader knowledge of rehabilitation influencing factors would provide higher outcomes.
- The diffusion of individual rehabilitation plans would allow the achievement of better results.

Abstract citation ID: ckac131.304**Perspectives of clinicians and patients on community-based maintenance care for adults with obesity**

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Background:

Tertiary metabolic health services are in high demand as people with severe obesity increase. Once predetermined health goals have been achieved patients must transition to community-based care to urgently free up capacity in tertiary services. Maintenance of successful outcomes achieved via tertiary services is therefore important to limit rates of relapse back to these services.

Methods:

This qualitative project explored community-based care needs to help individuals living with obesity maintain health gains. An interview schedule guided one-on-one interviews with patients and staff from metabolic clinics in Sydney, Australia.

Results:

We interviewed 22 patients and 13 clinicians. A lack of appropriate and consistent clinical support in the community was identified by patients and clinicians. Most clinicians agreed primary care was key to successful maintenance care. Lack of primary care understanding of appropriate management and support for patients with obesity, lack of bariatric equipment and limited funding for allied health were all seen barriers to appropriate support beyond their clinics. Patients were highly reluctant to transition from tertiary clinics and reluctant to engage with community-based care due to experience of limited clinical/social support and bariatric equipment, demeaning clinical interactions, lack of care coordination and being stigmatised. Support groups outside of the clinic were also identified important in mitigating social isolation and stigma. Both patients and clinicians felt support groups have potential to provide important supplementary help to individuals with obesity outside tertiary settings.

Conclusions:

Currently, individuals aiming to maintain their weight are likely to struggle in the context of existing community care