

by first screening titles and abstracts and then by reading full-text versions. The data extracted from the studies included setting, intervention, patient group, type of telemedicine, clinical effect, patient perception, and implementation challenges. The value of each study was also assessed with respect to effectiveness.

Results. A total of 510 articles were selected for data extraction and assessment. The database provides results from 22 different specialties and can be searched using the criteria of medical specialty, country, technology, clinical effect, patient experience, and economic effect. The database serves as an information platform for clinical departments who wish to implement telemedicine services. It has great potential for supporting digital transformation during COVID-19 by providing accessible evidence-based information on patient groups and relevant technologies and their effects. More than 95 percent of the studies in the database that compared telemedicine with a control group showed either statistically significant improvements in clinical outcomes with telemedicine or no statistically significant difference between the two groups.

Conclusions. The TELEMED database provides an easily accessible overview of existing evidence-based telemedicine services. The database is freely available and is expected to be continuously improved and broadened over time.

PP77 Safety, Effectiveness, And Cost Effectiveness Of Telemedicine In Neurological Diseases

Beatriz León-Salas (beatriz.leonsalas@sescs.es),
Renata Linertová, Yadira González-Hernández,
Diego Infante-Ventura, Aythami de Armas-Castellano,
Aránzazu Hernández-Yumar, Javier García-García,
Miguel García-Hernández, Ana Toledo-Chávarri,
Montserrat Carmona-Rodríguez and
María del Mar Trujillo-Martín

Introduction. Telemedicine has been introduced in health services, but uncertainties about the real value of this strategy in the management of neurological diseases remain.

Methods. A systematic review was undertaken of available scientific literature on the safety, effectiveness, and cost effectiveness of telemedicine combined with in-person visits, compared with usual care, for the treatment and follow-up assessment of patients with neurological diseases. The overall effect size for each neurological disease was estimated using meta-analysis. An economic analysis was performed from the societal and Spanish healthcare system perspectives.

Results. Two economic studies were included for cost effectiveness and 25 randomized controlled trials ($n=8,976$ patients) were included for the effectiveness and safety assessment (11 on cerebrovascular diseases, four on Parkinson's disease, three on multiple sclerosis, two on epilepsy, and one each on brain damage, dementia, spina bifida, migraine, and cerebral palsy). The types of telemedicine

evaluated included: virtual visits (11 studies); telerehabilitation (seven studies); telephone calls (three studies); smartphone apps (two studies); and online software for computers (two studies). Subgroup analysis by type of telemedicine indicated no discernible effect for telemedicine combined with in-person visits on most of the outcomes analyzed for the various neurological diseases. Given the heterogeneity of diseases, types of telemedicine, and the results observed, a cost-minimization analysis was conducted. Combining telemedicine with in-person visits would cost EUR 2.55 per patient from the perspective of the healthcare system, but it would result in cost savings (EUR 27.34 per patient) from the societal perspective.

Conclusions. The safety and effectiveness of combining in-person visits with telemedicine was similar to that of usual care, but it could be a cost-saving strategy in Spain from a societal perspective.

PP78 Effectiveness And Safety Of The FreeStyle Libre® Glucose Monitoring System For T1DM In Childhood And Adolescence

Himar González-Pacheco (himar.gonzalezpacheco@sescs.es), Yolanda Ramallo-Fariña,
Amado Rivero-Santana, Yolanda Álvarez-Pérez,
Lilisbeth Perestelo-Pérez, Pedro Serrano-Aguilar and
Ana Toledo-Chávarri

Introduction. FreeStyle Libre System (FSL) is a minimally invasive technology, which provides frequent information about interstitial glucose levels, which allows adjustment of insulin dose and a reduction in the number of fingersticks. This study aims to evaluate the effectiveness and safety of FSL in childhood and adolescence.

Methods. Prospective case series in 27 Spanish hospitals. Patients aged 4-17 years with type 1 diabetes mellitus (T1DM) were included. Follow-up was done at 3, 6 and 12 months after starting to use the FSL. Outcome measures were HbA1c levels, acute complications of DM (severe hypoglycemia, ketoacidosis), DM knowledge, health-related quality of life, satisfaction and adverse effects. Biochemical glycemic outcomes (e.g., glycemic variability, time in therapeutic range) were available from 3 to 12 months. Mixed regression models with repeated time measurements were implemented.

Results. The mean age of patients was 12.6 years, with 56.4 percent had HbA1c values above 7.5 percent at baseline. This subgroup significantly improved their HbA1c levels at 3, 6 and 12 months (-0.46%, -0.44% and -0.35%, respectively). Patients with controlled HbA1c levels significantly worsened at 12 months (0.29%). There was a significant reduction in severe hypoglycemic episodes, but only in the multiple imputation analysis. In patients controlled at baseline, there were significant reductions between 3 and 12 months in the percentage of time under 55mg/dl (-0.64%), above 250mg/dl (-1.8%) and glycemic variability (-2.6%). In uncontrolled patients, there was a significant reduction in time above 250mg/dl (-5.8%) between 3 and 12 months follow-up. There was no significant improvement in knowledge about disease, although general self-perceived health