Mobile Health (Mhealth) in Neurological Practice: the Development of an App for the Management of the Epileptic Patient

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INTRODUCTION

The use of mobile devices by health care professionals (HCPs) has transformed many aspects of clinical practice, leading to rapid growth in the development of dedicated medical software applications (apps). Mobile devices and apps combine both computing and communication features in a single device, significantly increasing access to point-of-care tools, which has been shown to support better clinical decision making and improved patient outcomes. In epilepsy prescription errors are a common and potentially hazardous problem. MHealth can be effective in providing a quick and easy guide for drug prescription and administration.

OBJECTIVE

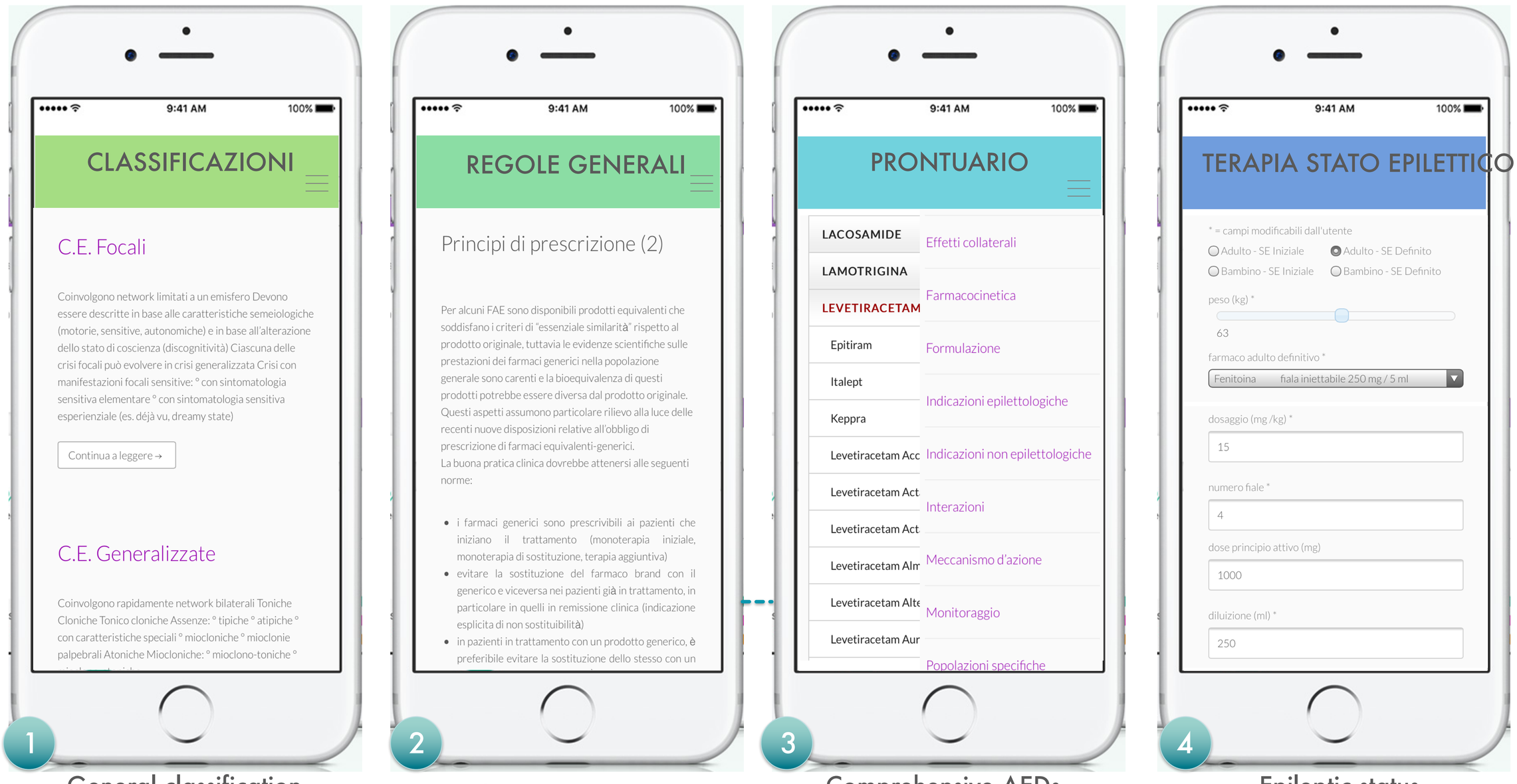
We describe the development of a mobile phone app that offers complete drug reference informations and directly assists Healthcare Professionals in antiepileptic drugs (AEDs) prescription.

METHODS

Essential contents of published clinical guidelines and individual comprehensive drug information (obtained from antiepileptic drugs monographs, pamphlets and Drug Regulatory Authorities) were selected and matched with current clinical practice. For drugs with parenteral formulations algorithms were designed to assists in converting the prescription to correct doses and rates of administration. These data were edited in a suitable relational database, compatible with app development platforms.

RESULTS

A mobile application was implemented with a four-component hierarchical structure:



CONCLUSIONS

Appropriate tools are critical to the effective implementation of essential drugs policies. This mobile app is designed to give practical, concise information that allows the prescriber to easily and rapidly find the specific answer to any question that may arise in the process of initiating and monitoring a medication for the treatment of epilepsy.