

编号: YY006-20190930001

标题: Cost-effectiveness of novel imaging tests to select patients for carotid endarterectomy

简介: Objective

We estimated the cost-effectiveness of novel imaging tests to select patients for carotid endarterectomy (CEA) in patients with significant carotid stenosis using a computer model and explored the minimum prognostic performance that a new confirmatory test must have in order to be cost-effective versus the guideline-based strategy.

Methods

The guidelines recommend initial duplex ultrasonography (DUS) followed by a confirmatory test if DUS shows 30–69% stenosis; a positive CT-angiography (CTA) is an indication for CEA. In an alternative strategy, we replaced CTA with CE-DUS, and in another strategy we replaced it by a hypothetical imaging test and estimated the minimum prognostic performance that the test must have in order to be cost-effective versus the guideline-based strategy. We assessed the potential cost-effectiveness in four age- and sex-specific subpopulations.

Results

For 60-year-old men, a perfect confirmatory test (100% sensitivity and specificity) improves health (0.066 quality-adjusted life years) and reduces costs (€110/\$146) versus the guideline-based strategy. Potential health gain is smaller for 80-year-old men, while no health gain is expected for women. Assuming 100% sensitivity, a test must have a specificity of at least 66% for 60-year-old men and 87% for 80-year-old men to be cost-effective. Similarly, assuming 100% specificity, a test must have a sensitivity of at least 58% for 60-year-old men and 66% for 80-year-old men.

Conclusions

Information from new imaging technologies may improve stroke risk prediction and thereby improve decisions about which patients should undergo CEA. However, their cost-effectiveness strongly depends on the current test strategy and choice of patient subpopulation.

全文链接: http://pan.ckcest.cn/rcservice//doc?doc_id=43751

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标题: Projecting future supply and demand for physical therapists in Japan using system dynamics

简介: Objectives

Japan is the oldest country in the world, and its demand for medical care is expected to increase. Although a clear vision regarding the supply and demand for physical therapy services is necessary, there has been no research that forecasts the supply and demand for physical therapists in Japan. Consensus has not been reached on whether the supply of physical therapists is sufficient. This study projects this supply and demand to provide medical policymakers with basic data.

Methods

A system dynamics model was created to predict the number of physical therapists working in hospitals and clinics in Japan from 2014 to 2040. The future demand for physical therapy was estimated using the rehabilitation service utilization data from Open National Database, a publicly available nationwide health claims database. Sufficiency rates (supply/demand) were calculated, and sensitivity analysis was conducted on supply-related parameters.

Results

The number of physical therapists was projected to be 1.74 and 2.54 times greater in 2025 and 2040, respectively, than in 2014. The sufficiency rates were 1.72, 2.39, and 3.30 in 2015, 2025, and 2040, respectively. The sensitivity analysis revealed that attrition rates had the greatest effects on sufficiency.

Conclusions

Although the current supply appears to be needed, considering the expected increase and uncertainty in medical needs. However, there is a possibility of a future oversupply, especially after 2025, when the rate of increase in demand will lessen. Further studies are required to evaluate the distribution of physical therapists among regions and specialties.

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标题: Understanding psychological determinants to promote the adoption of general practitioner by Chinese elderly

简介: Objective

The aim of this study is to investigate the psychological determinants on elderly' acceptance of general practitioners.

Methods

This study extends the Unified Theory of Acceptance and Use of Technology (UTAUT) model by considering the aspect of trust, perceived utility, and satisfaction, and compares it with other psychological determinants. A questionnaire survey was conducted in seven cities in central China from November 2017 to March 2018, Changsha, Nanjing, Wuhan, Nanchang, Guangzhou, Zhengzhou and Hefei, and 646 valid samples (>= 60 years old) were collected.

Results

All the structures met the requirements and the discriminant validity of the data was acceptable. Eleven hypotheses were supported at the significance level of 0.05. Performance expectancy, effort expectancy, social influence, and facilitating conditions were considered positive determinants of behavioral intention; trust was considered as a positive determinant of behavioral intention and adoption behavior; behavioral intention was considered as positive determinant of adoption behavior; adoption behavior was considered positive determinants of both satisfaction and perceived utility; perceived utility was positive determinant of satisfaction, and satisfaction positive influence behavioral intention.

Conclusions

It is necessary to integrate trust, satisfaction, and perceived utility into the extended UTAUT model, which would have good explanatory power on elderly's behavioral intention for adopting general practitioners. These understandings can prompt policymakers to better understand the psychological perception and behavioral intention of elderly.

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标题: Planning and positioning mHealth interventions in developing countries

简介: Objective

The objective of this paper is to develop a framework for the planning and positioning of mHealth interventions in developing countries.

Method

The description of the framework uses an illustrative case from Enugu State, Nigeria. Planning and positioning for this case involved a number of interventions including workshops, training sessions, and other attempts to socialise mHealth tools and canvass for local and regional support.

Results

The planning and positioning differentiates between interventions at two levels. First, we differentiate between interventions targeting traits and states, the latter being situation-specific. Second, we differentiate between individual and social interventions, the latter being resilient to personnel change. This creates a simple 2×2 matrix to lay out the portfolio of interventions in an mHealth project.

Conclusion

The framework offers support to governments, decision makers, and developers as they design an assemblage of mHealth interventions. This added clarity means the framework also helps to analyse 'as is' structures and behaviours. The framework further provides support for reflecting on projects, as interdependent goals in different quadrants can be assessed against specific interventions.

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标题: Smartphone as an intervention to intention-behavior of patient care

简介: Purpose

Smartphone intervention can be critical for healthcare professionals who often experience human life at risk. This study attempts to assist healthcare professionals to better understand the intervention role of smartphones in intention-behavior of patient care.

Research design/methodology

Exploratory in nature, this study uses various literatures and articles published in journals and magazines as well as primary data collected using a qualitative approach. Purpose

sampling made it possible to conduct in-depth interviews with healthcare professionals, namely, doctors, nurses, and ward boys from hospitals and clinics of the Punjab region of India. The study uses a data saturation method to realize the adequacy of the sample size, and a grounded theory approach to analyze the interviews.

Findings

This study found a gap between intentions and behavior in patient care among healthcare professionals. A smartphone intervenes in the intention-behavior relationship of patient care in three modes, namely propinquity, applications, and communication. The smartphone propinquity pertains to the physical proximity of the healthcare professionals to the smartphone; the applications refer to those installed in the smartphone; and communication indicates calling and e-communications made using the smartphone.

Practical implications

This study will assist hospital management, governments, and other organizations in drafting a suitable policy for the use of smartphones by healthcare professionals. The manufacturers and software developers of smartphones can deliver devices and software that meet the needs of healthcare professionals for patient care. This study will help healthcare professionals to better understand the usage and effects of smartphones with respect to patients, and to decrease the gap between intention and behavior to improve patient care.

Originality

This study is unique in that there have been no comprehensive studies of smartphone intervention with respect to its influences on intention-behavior in patient care.

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