

Original article

Cost-effectiveness of synchronous vs. asynchronous telepsychiatry in prison inmates with depression ^{☆,☆☆}



Camilo Barrera-Valencia^{a,*}, Alexis Vladimir Benito-Devia^b, Consuelo Vélez-Álvarez^c, Mario Figueroa-Barrera^d, Sandra Milena Franco-Idárraga^c

^a Grupo Telesalud, Facultad de Ciencias para la Salud, Universidad de Caldas, Manizales, Colombia

^b Comité de Estudios Médicos CREIMED SAS, Medellín, Colombia

^c Departamento de Salud Pública, Grupo de Investigación, Promoción de Salud y Prevención de la Enfermedad, Universidad de Caldas, Manizales, Colombia

^d Departamento de Salud Mental, Facultad de Ciencias para la Salud, Universidad de Caldas, Manizales, Colombia

ARTICLE INFO

Article history:

Received 26 August 2015

Accepted 15 April 2016

Available online 2 June 2017

Keywords:

Telepsychiatry

Synchronous

Asynchronous

Prisons

Cost-effectiveness

ABSTRACT

Introduction: Telepsychiatry is defined as the use of information and communication technology (ICT) in providing remote psychiatric services. Telepsychiatry is applied using two types of communication: synchronous (real time) and asynchronous (store and forward).

Objective: To determine the cost-effectiveness of a synchronous and an asynchronous telepsychiatric model in prison inmate patients with symptoms of depression.

Methods: A cost-effectiveness study was performed on a population consisting of 157 patients from the Establecimiento Penitenciario y Carcelario de Mediana Seguridad de Manizales, Colombia. The sample was determined by applying Zung self-administered surveys for depression (1965) and the Hamilton Depression Rating Scale (HDRS), the latter being the tool used for the comparison.

Results: Initial Hamilton score, arrival time, duration of system downtime, and clinical effectiveness variables had normal distributions ($p > 0.05$). There were significant differences ($p < 0.001$) between care costs for the different models, showing that the mean cost of the asynchronous model is less than synchronous model, and making the asynchronous model more cost-effective.

Conclusions: The asynchronous model is the most cost-effective model of telepsychiatry care for patients with depression admitted to a detention centre, according to the results of clinical effectiveness, cost measurement, and patient satisfaction.

© 2016 Asociación Colombiana de Psiquiatría. Published by Elsevier España, S.L.U. All rights reserved.

[☆] This article is registered within COLCIENCIAS summons 604-2012, with the research project entitled "Effectiveness of a synchronous vs asynchronous telepsychiatry model on the mental health of prison inmates".

^{☆☆} Please cite this article as: Barrera-Valencia C, Benito-Devia AV, Vélez-Álvarez C, Figueroa-Barrera M, Franco-Idárraga SM. Costo-efectividad de telepsiquiatría sincrónica frente a asincrónica para personas con depresión privadas de la libertad. Rev Colomb Psiquiat. 2017;46:65-73.

* Corresponding author.

E-mail addresses: camilobarrera32@gmail.com, consuelo.velez@ucaldas.edu.co (C. Barrera-Valencia).

<http://dx.doi.org/10.1016/j.rcpeng.2017.05.005>

2530-3120/© 2016 Asociación Colombiana de Psiquiatría. Published by Elsevier España, S.L.U. All rights reserved.

Costo-efectividad de telepsiquiatría sincrónica frente a asincrónica para personas con depresión privadas de la libertad

R E S U M E N

Palabras clave:

Telepsiquiatría
Sincrónico
Asincrónico
Prisiones
Costo-efectividad

Introducción: La telepsiquiatría se define como la utilización de las tecnologías de la información y la comunicación (TIC) en la prestación de servicios de psiquiatría a distancia. La aplicación de la telepsiquiatría está dada por dos tipos diferentes de comunicación: sincrónico (tiempo real) y asincrónico (tiempo diferido).

Objetivo: Determinar la costo-efectividad de un modelo de telepsiquiatría sincrónico frente a otro asincrónico en pacientes con síntomas de depresión internados en un centro de privación de libertad.

Métodos: Se realizó un estudio de costo-efectividad. Constituyeron la población 157 pacientes del Establecimiento Penitenciario y Carcelario de Mediana Seguridad de Manizales, Colombia. La muestra se determinó con la encuesta autoaplicable Zung para la depresión (1965) y la escala de valoración de Hamilton para la evaluación de la depresión (*Hamilton depression rating scale* [HDRS]), instrumento con que se realizó la comparación.

Resultados: Las variables Hamilton inicial, tiempo de llegada, duración de caídas del sistema y efectividad clínica presentaron distribución normal con $p > 0,05$; entre los diferentes modelos hubo diferencias significativas ($p < 0,001$) en los costos de atención, y se evidenció que, en promedio, el costo del modelo asincrónico es menor que el del sincrónico; en promedio, la modalidad asincrónica es más costo-efectiva.

Conclusiones: El modelo de atención más costo-efectivo en telepsiquiatría para pacientes con trastorno depresivo internados en un centro de privación de libertad es el asincrónico según los resultados de efectividad clínica, medición de costos y satisfacción del paciente.

© 2016 Asociación Colombiana de Psiquiatría. Publicado por Elsevier España, S.L.U. Todos los derechos reservados.

Introduction

The World Health Organisation (WHO) estimates that in 2020, mental illness will affect 15% of the global population.¹ At present, depression represents 4.3% of the world's disease burden, making it one of the main causes of disability worldwide.² This has led to a search for innovative solutions to tackle mental health problems that go beyond any operational capacity of the current health services. According to the WHO, the future of medicine lies in transforming the exercise through communication and getting ahead of the looming crisis in patient care.³ Telepsychiatry is a clear example of this and constitutes an important tool for solving problems related to accessing health services in remote areas and/or areas that have a limited offering.⁴ In general terms, telepsychiatry is defined as the use of information and communication technologies (ICT) in the provision of remote psychiatry services.⁵ Telepsychiatry is applied using two different types of communication (synchronous and asynchronous), which are studied in this research.

In the synchronous or real-time modality, the patient and psychiatrist interact within the same temporal framework through live broadcasting systems, including telephone, chat and videoconferencing.⁶ The latter is the most widely used technology⁷ and the one with which most telepsychiatry sessions have been undertaken.⁸ The psychiatrist interviews the

patient in real-time and issues a diagnosis and treatment on completing the consultation. It is worth mentioning that, due to regulatory provisions regarding telemedicine in Colombia, the patient must be accompanied by a general practitioner from start to finish, who attends to the patient if necessary and is responsible for completing and delivering the medical prescription to the patient.⁹ The second form of communication is the asynchronous or delayed-time modality, also known as store-and-forward. The aim of this technique is to obtain a psychiatrist's second opinion on the diagnosis and management of the patient. A general practitioner gathers and sends all the information (data, audio or video) to the psychiatrist, who responds within 8-24 h (as previously agreed between the parties – there is no standard time frame); the general practitioner then delivers the respective treatment and management plan to the patient.¹⁰

In Colombia, the application of telepsychiatry forms part of Law 1419 of 2010, which also establishes the guidelines for implementing telehealth. It is likewise provided for in Agreement 029, regulating the use of telemedicine to facilitate timely access to services within the Mandatory Health Plan, and Resolution 2003 of 2014, which sets forth the technical procedures for its implementation. This resolution specifies the privacy and security conditions for patient data through the standard of medical histories and records; thus: "The remitting providers shall adopt the necessary safety measures during the transfer and storage

Download English Version:

<https://daneshyari.com/en/article/8926955>

Download Persian Version:

<https://daneshyari.com/article/8926955>

[Daneshyari.com](https://daneshyari.com)