

What is true goal for e-health? Beyond auditing, punishing tool...

Ataru IGARASHI, PhD.

Dept. of Health Economics and Outcomes Research, Graduate
School of Pharmaceutical Sciences, The University of Tokyo

atarui1@mac.com

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What is need to be distinguished

- "Concrete" evidences are ready for relationship between poor adherence rate and poor efficacy
- Insufficient evidences are available if some interventions can upgrade the adherence rates themselves

Strategies for improving adherence to antiepileptic drug treatment in patients with epilepsy.

Al-Aqeel S¹, Al-Sabban J.

Author information

Update in

Strategies for improving adherence to antiepileptic drug treatment in people with epilepsy. [Cochrane Database Syst Rev. 2017]

Abstract

BACKGROUND: Poor adherence to antiepileptic medications is associated with increased mortality and morbidity. In this review we focus on interventions designed to assist patients with adherence to antiepileptic medications.

OBJECTIVES: To determine the effectiveness of interventions aimed at improving adherence to antiepileptic medications in adults and children with epilepsy.

SEARCH STRATEGY: We searched the Epilepsy Group's Specialised Register (24 June 2010), the Cochrane Central Register of Controlled Trials (CENTRAL) (The Cochrane Library 2010, Issue 2) and electronic databases: MEDLINE (OVID) (1950 to June 2010); EMBASE (OVID) (1990 to 2010 Week 24); CINAHL (1982 to June 2010) and PsycINFO (22 June 2010), and the reference lists of relevant articles.

SELECTION CRITERIA: Randomised or quasi-randomised controlled trials of adherence-enhancing interventions aimed at patients with clinical diagnosis of epilepsy (as defined in individual studies), of any age and of either gender, treated with antiepileptic drugs in a primary care, outpatient or other community setting.

DATA COLLECTION AND ANALYSIS: We screened titles and abstracts for eligibility. Two review authors independently extracted data and assessed each study according to the Cochrane criteria. The studies differed widely according to intervention and measures of adherence, therefore combining data was not appropriate.

MAIN RESULTS: Six trials met our inclusion criteria: five targeted adult epileptic patients with a combined patient number of 222 and one targeted parents of children with epilepsy (n = 51). Follow-up time was generally short: from one to six months. Two main types of intervention were examined: educational and behavioural modification. Each study compared treatment with no intervention 'usual care'. None compared one intervention with another. Due to heterogeneity between studies in terms of interventions and the methods used to measure adherence, we did not pool the results. Education and counselling of patients with epilepsy have shown mixed success. Behavioural interventions such as the use of intensive reminders and 'implementation intention' interventions provided more positive effects on adherence.

AUTHORS' CONCLUSIONS: Intensive reminders and 'implementation intention' interventions appear promising in enhancing adherence to antiepileptic medications, however we need more reliable evidence on their efficacy from carefully designed randomised controlled trials before a firm conclusion can be reached.

(Review) Review

Information and communication technology based prompting for treatment compliance for people with serious mental illness

Kain Kuoppa¹, Marina Vilkko², Heidi M Hiltunen³, Lasse M Kosunen⁴, Kari Wirvick-Selk⁵, Cleve E Adams⁶

¹Department of Nursing Science, University of Turku, Turku, Finland; ²Department of Nursing Science, University of Turku and Turku University Hospital, Turku, Finland; ³Cochrane Schizophrenia Group, The University of Nottingham, Nottingham, UK

Contact address: Kain Kuoppa, Department of Nursing Science, University of Turku, Lemminkäisenkatu 1, Turku, 20014, Finland, kainkuoppa@utu.fi.

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ABSTRACT

Background

Non-compliance is a significant problem among people with serious mental disorders, presenting a challenge for mental health professionals. Strategies such as telephone calls, visits, and a postal referral letter to patients are currently used to encourage patient attendance at clinics and/or compliance with medication. More recently, the use of information and communication technology (ICT)-based prompting methods have increased. Methods include mobile text messaging (SMS – short message service), email or use of any other electronic device with the stated purpose of managing compliance.

Objective

To investigate the effects of ICT-based prompting to support treatment compliance in people with serious mental illness compared with standard care.

Search methods

We searched the Cochrane Schizophrenia Group's Trials Register (31st May 2011 and 09th July 2012) which is based on regular searches of CINAHL, BIOSIS, AMED, EMBASE, PubMed, MEDLINE, PsycINFO, and registers of clinical trials. Also, we requested references of all identified studies for further trials and contacted authors of trials for additional information.

Selection criteria

Randomised controlled trials involving adults with serious mental illness, comparing any ICT-based prompt or combination of prompts by automatic or semi-automatic system compared with standard care.

Data collection and analysis

Review authors reliably assessed trial quality and extracted data. We calculated risk ratio (RR) with 95% confidence intervals (CI) using a fixed-effect model. For continuous outcomes, we estimated the mean difference (MD) between groups, again with 95% confidence

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Information and communication technology based prompting for treatment compliance for people with serious mental illness (Review) | Copyright © 2014 The Cochrane Collaboration. Published by John Wiley & Sons, Ltd.

Main results

The search identified 35 references, with 23 studies, but we could only include two studies with a total of 358 participants. The studies had a moderate risk of bias, and therefore risk overestimating any positive effects of ICT-based prompting. Both included studies compared semi-automated ICT-based prompting interventions with standard care/groups in mental health outpatient care. The interventions were SMS-messaging and an electronic assistant device. One included study reported our primary outcome, compliance.

There was one very clear evidence that ICT-based prompts increase improvement in compliance (using medication within three months n = 520, RR 1.11 CI 0.96 to 1.28, moderate quality evidence). There was some low quality evidence that ICT-based prompts have small effects for: mental state (average change in specific symptoms scores within three months n = 251, MD -0.38 CI -0.53 to -0.07), severity of illness within three months n = 251, MD -0.10 CI -0.13 to -0.07 and six months n = 251, MD -0.10 CI -0.13 to -0.07; average change in depressive scores within six months n = 251, RR 0.90 CI 0.28 to 0.28, global symptoms within three months n = 251, MD -0.10 CI -0.38 to -0.07, negative symptoms within three months n = 251, MD -0.10 CI -0.38 to 0.18 and six months n = 251, MD -0.20 CI -0.58 to 0.82, low quality evidence). Level of insight improved more among people receiving ICT-based prompt compared with those in the control group at six months (n = 251, MD -0.10 CI -0.13 to -0.07). ICT-based prompts also increased quality of life (average change in quality of life within six months n = 251, RR 0.96 CI 0.19 to 0.81, moderate quality evidence).

Based on the existing data, there is no evidence that either intervention is less acceptable than the other (n = 347, 3 RCTs, RR 1.46 CI 0.70 to 3.05, low quality evidence). Included studies did not report outcomes of service utilisation, behaviour, costs or adverse events.

Authors' conclusions

The evidence base on the effects of ICT-based prompts is still inconclusive. Data to clarify ICT-based prompting effects are awaited from an ongoing trial, but further well-conducted trials considering the different ICT-based prompts are warranted.

Compliance, Adherence, Concordance

Word	definition
Compliance	The extent to which the patient's behaviour MATCH es the prescriber's recommendations
Adherence	The extent to which a person's behaviour, taking medication, following a diet, and/or executing lifestyle changes, CORRESPONDS with agreed recommendations from a health care provider
Concordance	The process, which entertains patients' views on medication-taking, and acknowledges that patients' views have to be respected even if they make choices, which appear to be in conflict with the clinician's views

Chakrabarti S. What's in a name? Compliance, adherence and concordance in chronic psychiatric disorders. World J Psychiatry. 2014; 4 (2): 30-6.

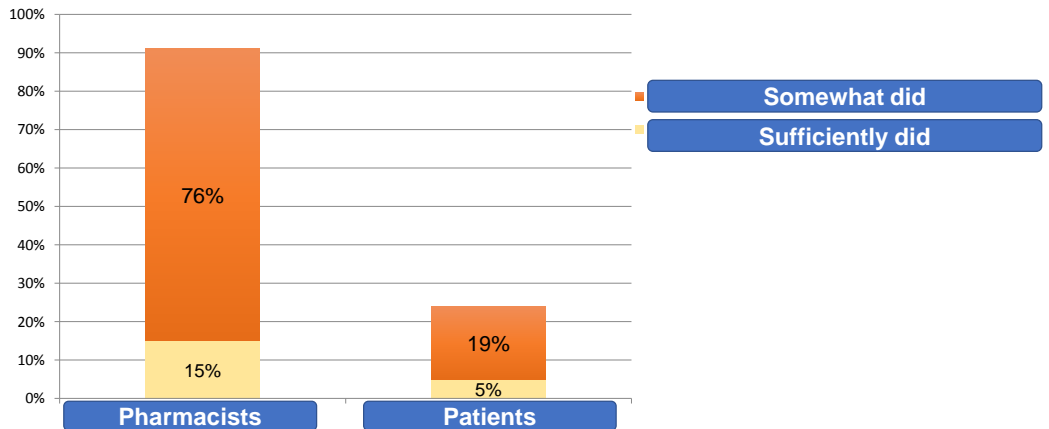
Use and potential “Misuse” of e-health equipment

- Promising E-health product should.

NOT be used	Simple auditing (punishing?) tool for checking COMPLIANCE
be used	Tool for upgrading not only adherence rate, but also the opportunity of interactive communication bet. patients and health care providers

Pharmacists say "checked and confirmed", while patients do NOT think they were checked

Did you check/Were you checked the status of "Unused Drug"?



Growing concern for polypharmacy and "unused" medication

- Unused medication would be beneficial for pharma?
 - It LOOKS beneficial in very short term (monetary)
 - It would be harmful, to downgrade the repetition of medication itself
- Unused medication must not be efficacious for patient
- Polypharmacy could be problematic in particular for psychometric (and/or dementia) area

RWD and HTA

- **MORE data would be required after market approval**
 - "GOOD" or "BAD" example of de-list of dementia medication
- **E-health could be somewhat helpful tools for post-marketing clinical studies?**

De-reimbursement of anti-dementia drugs in French-HAS

- Issues pointed out by HAS (at least from 2011)

Component	Issues
Efficacy	Few evidence for true endpoints (QOL, LY, delay for institutionalization)
Safety	Various safety issues around AE
Tolerability & External validity	Real world patients are more likely to be super-aged More patients have some problem for polypharmacy, which increase the risk of AE, discontinuation

RWD is crucial for justifying the presence of medications