

Electronic Supplementary Material 4

Table Review characteristics

First author year	Type of review	Aim	Period searched	Inclusion/Exclusion criteria	n primary research studies(n participants)	Primary outcome/s	Quality assessment tool	AMSTAR score
<u>Hypertension</u>								
Jaana 2007	SR	Evaluate the evidence for the effectiveness of hypertension telemonitoring.	1966 to 2006	<u>Design:</u> Experimental or quasi-experimental <u>Participants:</u> Chronic hypertension <u>Intervention:</u> Home telemonitoring	14(1119)	BP	None	4
AbuDagga 2010	SR & MA	What is the impact of BP telemonitoring technologies on clinical, patient-centred outcomes, healthcare utilization & cost?	1995 to September 2009	<u>Design:</u> RCT, single group, quasi-experimental <u>Participants:</u> Established diagnosis of uncontrolled hypertension <u>Intervention:</u> Telemonitoring	15(3192)	BP	None	4
<u>COPD</u>								

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Turnock 2005	SR & MA	Determine whether action plans alone, or as part of a broader self-management intervention, are an effective way to manage COPD exacerbations.	Not stated	<u>Design:</u> RCT <u>Participants:</u> Diagnosed primary COPD <u>Intervention:</u> Action planning	3(367)	Hospital admissions	Jadad scale & Cochrane	4
McLean 2012	SR & MA	To review the effectiveness of telehealthcare for COPD compared with face-to-face usual care in improving quality of life & reducing accident & emergency department visits & hospitalisations.	Inception to January 2010	<u>Design:</u> RCT <u>Participants:</u> Diagnosed COPD <u>Intervention:</u> Telehealthcare	10(1307)	Quality of life, healthcare utilisation	Cochrane risk of bias	5
<i>Heart failure</i>								

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Louis 2003	SR	To present the current evidence on telemonitoring as a means of reducing hospitalisations in heart failure.	1996 to 2002	<u>Design:</u> NR <u>Participants:</u> Diagnosed HF <u>Intervention:</u> Telemonitoring	24(3643)	Acceptability, hospital admissions	None	4
Jovicic 2006	SR & MA	Determine the effectiveness of self-management interventions on hospital readmission rates, mortality & QoL in patients diagnosed with heart failure.	1966 to Nov 2005	<u>Design:</u> RCT <u>Participants:</u> Hospitalised with diagnosed HF <u>Intervention:</u> Self-management	6(857)	Readmissions, mortality	Author designed	7
Martinez 2006	SR	To assess the value of home monitoring for heart failure patients.	1966 to Apr-04	<u>Design:</u> Experimental studies <u>Participants:</u> Not stated <u>Intervention:</u> Home monitoring	42(2303)	Patient acceptability	Jovell & Navarro-Rubio scale	6

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Chaudhry 2007	SR	In-depth examination of a wide range of telemonitoring interventions in heart failure to find out which components are effective.	1966 to Aug-06	<u>Design:</u> Randomized study design <u>Participants:</u> Adults with HF <u>Intervention:</u> Home monitoring	9(3582)	Hospitalization, mortality	Juni et al & York Centre for Reviews & Dissemination	5
Clark 2007	SR & MA	To determine whether remote monitoring without regular clinic or home visits improves outcomes for patients with CHF.	Jan 2002 to May 2006	<u>Design:</u> RCT <u>Participants:</u> HF, living at home <u>Intervention:</u> Remote monitoring	14(4264)	Hospitalization, mortality	Cochrane	8
Dang 2009	SR	Examine the evidence base for home telehealth & remote monitoring interventions in the management of heart failure.	1966 to Apr-09	<u>Design:</u> RCT <u>Participants:</u> HF <u>Intervention:</u> Home telehealth & remote monitoring	9(2017)	Hospitalization, mortality	Adapted Hailey et al which was adapted from Jovell & Navarro-Rubio scale	5

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Klersy 2009	SR & MA	Assess the effect of remote patient monitoring on the outcome of CHF patients.	Jan 2000 to October 2008	<u>Design:</u> RCT, observational cohort studies <u>Participants:</u> CHF, living at home <u>Intervention:</u> Remote patient monitoring	32(8612)	Hospitalization, mortality	CONSORT & STROBE	6
Maric 2009	SR	Review studies conducted in heart failure telemonitoring, which are not telephone based, but utilize the concept of patient self-monitoring in heart failure.	Inception to August 2007	<u>Design:</u> Any <u>Participants:</u> HF <u>Intervention:</u> Use of technology or device to assist in self-monitoring	56(NR)	Hospitalization	None	2

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Polisena 2010	SR & MA	Conduct a SR & MA to look at clinical outcomes, patient QoL & the use of healthcare services for home telemonitoring compared to usual care for patients with CHF.	1998 to 2008	<u>Design:</u> RCT, observational studies <u>Participants:</u> CHF <u>Intervention:</u> Home telemonitoring	22(3028)	Hospitalization, mortality	Adapted version Jovell & Navarro-Rubio scale	5
Inglis 2010	SR & MA	To review RCTs of structured telephone support or telemonitoring compared to standard practice for patients with CHF.	From 2006 onwards	<u>Design:</u> RCT <u>Participants:</u> CHF, within the community <u>Intervention:</u> Structured telephone support or telemonitoring	30(10490)	Hospitalization, mortality	Author designed	9
Clarke 2011	MA	To assess the effectiveness of telemonitoring on primary & secondary outcomes.	From January 1969 to October 2009	<u>Design:</u> RCT <u>Participants:</u> CHF <u>Intervention:</u> Telemonitoring	13(NR)	Hospitalization, mortality	None	5

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Giamouzis 2012	SR	To assess whether telemonitoring provides any substantial benefit in patients with heart failure.	Inception to November 2011	<u>Design:</u> RCT <u>Participants:</u> CHF <u>Intervention:</u> Telemonitoring	12(3877)	Mortality, healthcare utilisation	None	3
Pandor 2013	SR & MA	To determine whether RM strategies improve outcomes for adults who have been recently discharged (<28 days) following an unplanned admission due to heart failure.	2008 to January 2012 (plus papers from 2 earlier reviews)	<u>Design:</u> RCT, observational cohort studies <u>Participants:</u> Adults, HF, discharged from hospital with <28days <u>Intervention:</u> Remote monitoring	21(6317)	All-cause mortality	Criteria based on The Delphi list & The Newcastle-Ottawa Scale	6

AMSTAR – Assessing the Methodological Quality of Systematic Reviews; BP – Blood Pressure; CHF - Chronic Heart Failure; CONSORT - Consolidated Standards of Reporting Trials; COPD - Chronic Obstructive Pulmonary Disease; HF- Heart Failure; MA – Meta-Analysis; NR – Not Reported; QoL – Quality of Life; RCT – Randomised Controlled Trial; SR – Systematic Review; STROBE - Strengthening the Reporting of Observational studies in Epidemiology; RM – remote monitoring