**SUPPLEMENTARY**

**Table 1. Search strategies on ICT based cooperative care of chronic disease management (A. Hypertension, B. Diabetes, C. Heart failure) in older adults**

**A. Hyptertension**

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| --- |
| Searching date : 2018.10.06 |
| No | Searching word | Articles |
| 1 | Search ((((((((integrated or integrat\*)) OR (coordinated or coordination or coordinat\*)) OR (collaborative or collaboration or collaborat\*)) OR (multidisciplinary or multidiscipli\*)) OR cooperat\*) OR (shared or shar\*)) OR link\*) OR exchange\* | 2668711 |
| 2 | Search ((((((provider\*) OR physician\*) OR GP\*) OR general practitioner) OR professional\*) OR interprofessional\*) OR (staff or staff\*) | 1304631 |
| 3 | Search (elderly or elder$ or old$ or older or age$ or advanced years or aging or geriatric$ or old age or senior$) | 6890273 |
| 4 | Search (65 year? or "over 65" or "over 70" or "over 75" or "over 80" or "over 85" or 85 year?) | 156968 |
| 5 | Search (#4 or #3) | 6925057 |
| 6 | Search (((hypertension/) OR hypertens$) OR exp blood pressure/) OR ("blood pressure" or bloodpressure) | 754060 |
| 7 | Search (((((((((((((((((ICT) OR (information and communication technology)) OR (ehealth OR "e-health" OR electronic-health OR "electronic health")) OR (telemedicine OR tele-medicine)) OR (telehealth OR tele-health)) OR (telecare OR "remote health")) OR telemonitoring) OR mobile information system) OR telemetry) OR remote consultation) OR (videoconferencing OR videoconference OR video-conference)) OR ("mobile health" OR m-health OR mhealth)) OR ("online health" OR "on-line health")) OR telephone) OR (conference OR e-conference OR electronic-conference OR "electronic conference")) OR (consult OR e-consult OR "electronic consult" OR electronic-consult)) OR (teleconference OR teleconsult OR tele-consult OR tele-conference)) | 513774 |
| 8 | Search (#1 and #2 and #5 and #6 and #7) | 293 |
| 9 | Search (#1 and #2 and #5 and #6 and #7) Filters: published in the last 10 years | 226 |

**B. Diabetes**

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| Searching date : 2018.10.06 |
| No | Searching word | Articles |
| 1 | Search ((exp diabetes mellitus type 2/) OR (hyperglycemi\* or hyperglycaemi\*)) OR (NIDDM or T2DM or T2D or MODY) | 188316 |
| 2 | Search Diabetes Insipidus | 10354 |
| 3 | Search diabet\* insipidus | 10119 |
| 4 | Search (#2 or #3) | 10359 |
| 5 | Search (#1 not #4) | 188210 |
| 6 | Search ((((((((integrated or integrat\*)) OR (coordinated or coordination or coordinat\*)) OR (collaborative or collaboration or collaborat\*)) OR (multidisciplinary or multidiscipli\*)) OR cooperat\*) OR (shared or shar\*)) OR link\*) OR exchange\* | 2668711 |
| 7 | Search ((((((provider\*) OR physician\*) OR GP\*) OR general practicioner) OR professional\*) OR interprofessional\*) OR (staff or staff\*) | 1304631 |
| 8 | Search (elderly or elder$ or old$ or older or age$ or advanced years or aging or geriatric$ or old age or senior$) | 6890273 |
| 9 | Search (65 year? or "over 65" or "over 70" or "over 75" or "over 80" or "over 85" or 85 year?) | 156968 |
| 10 | Search (#9 or #8) | 6925057 |
| 11 | Search (((((((((((((((((ICT) OR (information and communication technology)) OR (ehealth OR "e-health" OR electronic-health OR "electronic health")) OR (telemedicine OR tele-medicine)) OR (telehealth OR tele-health)) OR (telecare OR "remote health")) OR telemonitoring) OR mobile information system) OR telemetry) OR remote consultation) OR (videoconferencing OR videoconference OR video-conference)) OR ("mobile health" OR m-health OR mhealth)) OR ("online health" OR "on-line health")) OR telephone) OR (conference OR e-conference OR electronic-conference OR "electronic conference")) OR (consult OR e-consult OR "electronic consult" OR electronic-consult)) OR (teleconference OR teleconsult OR tele-consult OR tele-conference)) | 513774 |
| 12 | Search (#5 and #6 and #7 and #10 and #11) | 139 |
| 13 | Search (#5 and #6 and #7 and #10 and #11) Filters: published in the last 10 years | 114 |

**C. Heart Failure**

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| --- |
| Searching date : 2018.10.06 |
| No | Searching word | Articles |
| 1 | Search ((((((((integrated or integrat\*)) OR (coordinated or coordination or coordinat\*)) OR (collaborative or collaboration or collaborat\*)) OR (multidisciplinary or multidiscipli\*)) OR cooperat\*) OR (shared or shar\*)) OR link\*) OR exchange\* | 2668711 |
| 2 | Search ((((((provider\*) OR physician\*) OR GP\*) OR general practicioner) OR professional\*) OR interprofessional\*) OR (staff or staff\*) | 1304631 |
| 3 | Search (elderly or elder$ or old$ or older or age$ or advanced years or aging or geriatric$ or old age or senior$) | 6890273 |
| 4 | Search (65 year? or "over 65" or "over 70" or "over 75" or "over 80" or "over 85" or 85 year?) | 156968 |
| 5 | Search (#4 or #3) | 6925057 |
| 6 | Search (((exp Heart Failure/) OR heart failure.tw.) OR cardiac failure.tw.) OR (((heart or cardiac or myocard\*) adj2 (fail \* or insufficien\* or decomp\*)).tw.) | 1640147 |
| 7 | Search (((((((((((((((((ICT) OR (information and communication technology)) OR (ehealth OR "e-health" OR electronic-health OR "electronic health")) OR (telemedicine OR tele-medicine)) OR (telehealth OR tele-health)) OR (telecare OR "remote health")) OR telemonitoring) OR mobile information system) OR telemetry) OR remote consultation) OR (videoconferencing OR videoconference OR video-conference)) OR ("mobile health" OR m-health OR mhealth)) OR ("online health" OR "on-line health")) OR telephone) OR (conference OR e-conference OR electronic-conference OR "electronic conference")) OR (consult OR e-consult OR "electronic consult" OR electronic-consult)) OR (teleconference OR teleconsult OR tele-consult OR tele-conference)) | 513774 |
| 8 | Search (#1 and #2 and #5 and #6 and #7) | 478 |
| 9 | Search (#1 and #2 and #5 and #6 and #7) Filters: published in the last 10 years | 346 |

**Figure 1. Flow chart of the results from the literature search**

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**Table 2. List of article on qualitative literature review**

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| No | Author (year) | Name | Journal |
| Hypertension (214-215 page) |
| 1 | Zullig et al (2014)  | The Cardiovascular Intervention Improvement Telemedicine Study (CITIES): rationale for a tailored behavioral and educational pharmacist-administered intervention for achieving cardiovascular disease risk reduction | Telemed J EHealth |
| 2 | Taylor et al. (2018) | Integrating Innovative Telehealth Solutions into an Interprofessional Team-Delivered Chronic Care Management Pilot Program | J Manag CareSpec Pharm |
| 3 | Sivakumaran, D.(2014) | Telemonitoring: use in the management of hypertension | Vasc Health Risk Manag |
| 4 | Saleh, S(2018) | Using Mobile Health to Enhance Outcomes of Noncommunicable Diseases Care in Rural Settings and Refugee Camps: Randomized Controlled Trial | JMIR Mhealth Uhealth |
| 5 | Rinfret, S.(2009) | The impact of a multidisciplinary information technology-supported program on blood pressure control in primary care | Circ Cardiovasc Qual Outcomes |
| 6 | Price-Haywood , E. G.(2017) | Clinical Pharmacist Team-Based Care in a Safety Net Medical Home: Facilitators and Barriers to Chronic Care Management | Popul Health Manag |
| 7 | North, F.(2015) | Internal e-consultations in an integrated multispecialty practice: a retrospective review of use, content, and outcomes | J Telemed Telecare |
| 8 | Nilsson, M.(2009) | The physician at a distance: the use of videoconferencing in the treatment of patients with hypertension | J Telemed Telecare |
| 9 | McManus, R. J.(2010) | Telemonitoring and self-management in the control of hypertension (TASMINH2): a randomised controlled trial | Lancet |
| 10 | Margolis, K. L.(2012) | Design and rationale for Home Blood Pressure Telemonitoring and Case Management to Control Hypertension (HyperLink): a cluster randomized trial | Contemp Clin Trials |
| 11 | Lv, Nan(2017) | Personalized Hypertension Management Using Patient-Generated Health Data Integrated With Electronic Health Records (EMPOWER-H): Six-Month Pre-Post Study | J Med Internet Res |
| 12 | Peisan Lee(2016) | Cloud-based BP system integrated with CPOE improves self-management of the hypertensive patients: A randomized controlled trial | Comput Methods Programs Biomed |
| 13 | Kronish, I. M.(2016) | An Electronic Adherence Measurement Intervention to Reduce Clinical Inertia in the Treatment of Uncontrolled Hypertension: The MATCH Cluster Randomized Clinical Trial | J Gen Intern Med |
| 14 | Hanley, J.(2013) | Experiences of patients and professionals | BMJ Open |
| 15 | Govercin, M.(2016) | SmartSenior@home: Acceptance of an integrated ambient assisted living system. Results of a clinical field trial in 35 households | Inform Health Soc Care |
| 16 | Dendale, P.(2012) | Effect of a telemonitoring-facilitated collaboration between general practitioner and heart failure clinic on mortality and rehospitalization rates in severe heart failure: the TEMA-HF 1 (TElemonitoring in the MAnagement of Heart Failure) study | Eur J Heart Fail |
| 17 | Bobrow, K.(2014) | Efficacy of a text messaging (SMS) based intervention for adults with hypertension: protocol for the StAR (SMS Text-message Adherence suppoRt trial) randomised controlled trial | BMC Public Health |
| 18 | Bengtsson, U.(2014) | Developing an interactive mobile phone self-report system for self-management of hypertension. Part 2: content validity and usability | Blood Press |
| 19 | Bengtsson, U.(2014) | Developing an interactive mobile phone self-report system for self-management of hypertension. Part 1: patient and professional perspectives | Blood Press |
| 20 | Bellicha, A.(2017) | Prescribing of Electronic Activity Monitors in Cardiometabolic Diseases: Qualitative Interview-Based Study | J Med Internet Res |
| 21 | Baig, M. M.(2013) | Wireless remote patient monitoring in older adults | Conf Proc IEEE Eng Med Biol Soc |
| 22 | Albini, F.(2016) | An ICT and mobile health integrated approach to optimize patients' education on hypertension and its management by physicians: The Patients Optimal Strategy of Treatment(POST) pilot study | Conf Proc IEEE Eng Med Biol Soc |
| 23 | Ajay, V. S.(2016) | Development of a Smartphone-Enabled Hypertension and Diabetes Mellitus Management Package to Facilitate Evidence-Based Care Delivery in Primary Healthcare Facilities in India: The mPower Heart Project | J Am Heart Assoc |
| Diabetes (211-212) |
| 1 | V. Baldo(2015) | Diabetes outcomes within integrated healthcare management programs | Prim Care Diabetes |
| 2 | Lorraine R Buis(2013) | Use of a text message program to raise type 2 diabetes risk awareness and promote health behavior change (part I): Assessment of Participant Reach and Adoption | J Med Internet Res |
| 3 | Jae-Hyoung Cho(2009) | Mobile Communication using a mobile phone with a glucometer for glucose control in Type 2 patients with diabetes: as effective as an Internet-based glucose monitoring system | J Telemed Telecare |
| 4 | Stephanie J. Fonda(2010) | Combining iGoogle and personal health records to create a prototype personal health application for diabetes self-management | Telemed J E Health |
| 5 | Stelios Fountoulakis(2015) | Impact and duration effect of telemonitoring on EtabA1c, BMI and cost in insulin-treated Diabetes Mellitus patients with inadequate glycemic control: A randomized controlled study | Hormones (Athens) |
| 6 | Guendalina Graffigna(2016) | The Motivating Function of Healthcare Professional in eHealth and mHealth Interventions for Type 2 Diabetes and the Mediating Role of Patient Engagement | J Diabetes Res |
| 7 | Deborah A Greenwood(2015) | Overcoming Clinical Inertia: A Randomized Clinical Trial of a Telehealth Remote Monitoring Intervention Using Paired Glucose Testing in Adults With Type 2 Diabetes | J Med Internet Res |
| 8 | William C. Hsu(2016) | Utilization of a Cloud-Based Diabetes Management Program for Insulin Initiation and Titration Enables Collaborative Decision Making Between Healthcare Providers and Patients | Diabetes Technol Ther |
| 9 | Ilias Lamprinos(2016) | Modular ICT-based patient empowerment framework for self-management of diabetes: Design perspectives and validation results | Int J Med Inform |
| 10 | Klaus Levin(2013) | Telemedicine diabetes consultations are cost-effective, and effects on essential diabetes treatment parameters are similar to conventional treatment: 7-year results from the Svendborg Telemedicine Diabetes Project | J Diabetes Sci Technol |
| 11 | Michael McFarland(2012) | Use of home telehealth monitoring with active medication therapy management by clinical pharmacists in veterans with poorly controlled type2 diabetes mellitus | Pharmacothera py |
| 12 | I. Odnoletkova(2016) | Patient and provider acceptance of telecoaching in type 2 diabetes: a mixed-method study embedded in a randomised clinical trial | BMC Med Inform Decis Mak |
| 13 | Anna-Leena Orsama(2013) | Active assistance technology reduces glycosylated hemoglobin and weight in individuals with type 2 diabetes: results of a theory-based randomized trial | Diabetes Technol Ther |
| 14 | Charlene C. Quinn(2011) | Cluster-randomized trial of a mobile phone personalized behavioral intervention for blood glucose control | Diabetes Care |
| 15 | Irena Tsui(2014) | Pilot study using mobile health to coordinate the diabetic patient, diabetologist, and ophthalmologist | J Diabetes Sci Technol |
| 16 | Alice J. Watson(2009) | Diabetes connected health: a pilot study of a patient-and provider-shared glucose monitoring we application | J Diabetes Sci Technol |
| 17 | Garry Welch(2015) | Telehealth program for type 2 diabetes: usability, satisfaction, and clinical usefulness in an urban community health center | Telemed J E Health |
| 18 | Emily D Williams(2012) | Randomised controlled trial of an automated, interactive telephone intervention (TLC Diabetes) to improve type 2 diabetes management: baseline findings and six-month outcomes | BMC Public Health |
| Heart Failure (212-213 page) |
| 1 | Anna-Leena Vuorinen(2014) | Use of home telemonitoring to support multidisciplinary care of heart failure patients in Finland: randomized controlled trial | J Med Internet Res |
| 2 | Villani, A.(2014) | Clinical and psychological telemonitoring and telecare of high risk heart failure patients | J Telemed Telecare |
| 3 | Veilleux, R. P.(2014) | Home diuretic protocol for heart failure: partnering with home health to improve outcomes and reduce readmissions | Perm J |
| 4 | Steventon, A.(2016) | Effect of telehealth on hospital utilisation and mortality in routine clinical practice: a matched control cohort study in an early adopter site | BMJ Open |
| 5 | Scalvini, S.(2018) | Maugeri Centre for Telehealth and Telecare: A real-life integrated experience in chronic patients | J Telemed Telecare |
| 6 | Press, M. J.(2015) | Postdischarge Communication Between Home Health Nurses and Physicians: Measurement, Quality, and Outcomes | J Am Geriatr Soc |
| 7 | Pisano, F.(2015) | Networking and data sharing reduces hospitalization cost of heart failure: the experience of GISC study | J Eval Clin Pract |
| 8 | Pedone, C.(2015) | Efficacy of a Physician-Led Multiparametric Telemonitoring System in Very Old Adults with Heart Failure | J Am Geriatr Soc |
| 9 | Martin-Lesend e, I.(2017) | Telemonitoring in-home complex chronic patients from primary care in routine clinical practice: Impact on healthcare resources use | Eur J Gen Pract |
| 10 | Lind, L.(2016) | Old-and With Severe Heart Failure: Telemonitoring by Using Digital Pen Technology in Specialized Homecare: System Description, Implementation, and Early Results | Comput Inform Nurs |
| 11 | Kotooka, N.(2018) | The first multicenter, randomized, controlled trial of home telemonitoring for Japanese patients with heart failure: home telemonitoring study for patients with heart failure (HOMES-HF) | Heart Vessels |
| 12 | Klack, L.(2013) | Telemedical versus conventional heart patient monitoring: a survey study with German physicians | Int J Technol Assess Health Care |
| 13 | Kato, N. P.(2015) | Heart Failure Telemonitoring in Japan and Sweden: A Cross-Sectional Survey | J Med Internet Res |
| 14 | Jaglal, S. B.(2013) | Increasing access to chronic disease self-management programs in rural and remote communities using telehealth | Telemed J E Health |
| 15 | Idris, S.(2015) | Home Telemedicine in Heart Failure: A Pilot Study of Integrated Telemonitoring and Virtual Provider Appointments | Rev Cardiovasc Med |
| 16 | Dendale, P.(2012) | Effect of a telemonitoring-facilitated collaboration between general practitioner and heart failure clinic on mortality and rehospitalization rates in severe heart failure: the TEMA-HF 1 (TElemonitoring in the MAnagement of Heart Failure) study | Eur J Heart Fail |
| 17 | Dehghani, P.(2013) | Management of adults with congenital heart disease using videoconferencing across Western Canada: a 3-year experience | Can J Cardio |
| 18 | Arjen E. de Vries(2013) | Health professionals' expectations versus experiences of internet-based telemonitoring: survey among heart failure clinics | J Med Internet Res |
| 19 | Abrashkin, K. A.(2016) | Providing Acute Care at Home: Community Paramedics Enhance an Advanced Illness Management Program-Preliminary Data | J Am Geriatr Soc |