

NHS England
Technology Enabled Care Services (TECS) Evidence Database

TELEHEALTH EVIDENCE

The evidence base for using technology to enhance care is large, complex and continuing to grow rapidly. TECS is a complex intervention involving people, process and technology, therefore results are dependent on all these elements. The evidence is based on a range of methodologies and can – in some contexts – provide mixed messages on the clinical and cost-effectiveness of TECS. It would therefore be impractical and unhelpful to try and provide a definitive list of all studies on all TECS in all clinical areas.

This database provides a list of individual studies as well as a link to a single key paper for selected as selected clinical areas. The lists are limited to the most recent studies and may not be exhaustive. They are intended to help those considering TECS how these solutions might best address their needs. Some resources may need to be purchased and in many cases the link is to a summary of the paper rather than the full content.

1. **Home BP Monitoring Using a Telemonitoring System is Effective for Controlling BP in a Remote Island in Japan.** <http://www.ncbi.nlm.nih.gov/pubmed/25267008>
2. **Prediction of heart failure decompensation events by trend analysis of telemonitoring data.** <http://www.ncbi.nlm.nih.gov/pubmed/25248206>
3. **Smart wearable body sensors for patient self-assessment and monitoring.** <http://www.ncbi.nlm.nih.gov/pubmed/25232478>
4. **Automatic prediction of chronic obstructive pulmonary disease exacerbations through home telemonitoring of symptoms.** <http://www.ncbi.nlm.nih.gov/pubmed/25227099>
5. **Use of pharmacist blood pressure telemonitoring systems in diagnosis of nocturnal hypertension in a young healthy male.** <http://www.ncbi.nlm.nih.gov/pubmed/25214769>
6. **Home telemonitoring of vital signs - Technical challenges and future directions.** <http://www.ncbi.nlm.nih.gov/pubmed/25163076>
7. **Telemonitoring implants for patients with heart failure.** <http://www.ncbi.nlm.nih.gov/pubmed/25131968>
8. **The impact of telemonitoring on adherence to nasal corticosteroid treatment in children with seasonal allergic rhinoconjunctivitis.** <http://www.ncbi.nlm.nih.gov/pubmed/25109375>

9. **Weight loss by telemonitoring of nutrition and physical activity in patients with metabolic syndrome for 1 year.** <http://www.ncbi.nlm.nih.gov/pubmed/25105874>
10. **Is Telerehabilitation a Safe and Viable Option for Patients with COPD? A Feasibility Study.** <http://www.ncbi.nlm.nih.gov/pubmed/25093419>
11. **Improvements in illness self-management and psychological distress associated with telemonitoring support for adults with diabetes.** <http://www.ncbi.nlm.nih.gov/pubmed/25065270>
12. **Collection and analysis of a Parkinson speech dataset with multiple types of sound recordings.** <http://www.ncbi.nlm.nih.gov/pubmed/25055311>
13. **Telemonitoring with respect to mood disorders and information and communication technologies: overview and presentation of the PSYCHE project.** <http://www.ncbi.nlm.nih.gov/pubmed/25050321>
14. **Multi-sources data fusion framework for remote triage prioritization in telehealth.** <http://www.ncbi.nlm.nih.gov/pubmed/25047520>
15. **Telemonitoring of patients with Parkinson's disease using inertia sensors.** <http://www.ncbi.nlm.nih.gov/pubmed/25024764>
16. **A Standardized SOA for Clinical Data Interchange in a Cardiac Telemonitoring Environment.** <http://www.ncbi.nlm.nih.gov/pubmed/25014978>
17. **Self-operated endovaginal telemonitoring versus traditional monitoring of ovarian stimulation in assisted reproduction: an RCT.** <http://www.ncbi.nlm.nih.gov/pubmed/24993931>
18. **The Utah Remote Monitoring Project: improving health care one patient at a time.** <http://www.ncbi.nlm.nih.gov/pubmed/24991923>
19. **Randomized controlled trial of a health plan-level mood disorders psychosocial intervention for solo or small practices** <http://www.biomedcentral.com/2050-7283/2/48/abstract>
20. **EHMTI-0340. Distance treatment programs for individuals with complex chronic headaches living far from the hospital: the Canadian experience** <http://www.thejournalofheadacheandpain.com/content/15/S1/D16>
21. **Store-and-forward teledermatology: a case report** <http://www.biomedcentral.com/1756-0500/7/588>

22. **Self-management support interventions to reduce health care utilisation without compromising outcomes: a systematic review and meta-analysis**
<http://www.biomedcentral.com/1472-6963/14/356>
23. **Using QALYs in telehealth evaluations: a systematic review of methodology and transparency**
<http://www.biomedcentral.com/1472-6963/14/332>
24. **Effect of telehealth on glycaemic control: analysis of patients with type 2 diabetes in the Whole Systems Demonstrator cluster randomised trial**
<http://www.biomedcentral.com/1472-6963/14/334>
25. **A pilot randomised controlled trial of a Telehealth intervention in patients with chronic obstructive pulmonary disease: challenges of clinician-led data collection**
<http://www.trialsjournal.com/content/15/1/313>
26. **Characteristics and effectiveness of diabetes self-management educational programs targeted to racial/ethnic minority groups: a systematic review, meta-analysis and meta-regression** <http://www.biomedcentral.com/1472-6823/14/60>
27. **Use of handheld computers in clinical practice: a systematic review**
<http://www.biomedcentral.com/1472-6947/14/56>
28. **Systematic review of Kinect applications in elderly care and stroke rehabilitation**
<http://www.jneuroengrehab.com/content/11/1/108>
29. **Remote telemonitoring for patients with heart failure: might monitoring pulmonary artery pressure become routine?** <http://www.ncbi.nlm.nih.gov/pubmed/24984847>
30. **Telemonitoring in heart failure: Big Brother watching over you.**
<http://www.ncbi.nlm.nih.gov/pubmed/24972644>
31. **Home based telemedicine intervention for patients with uncontrolled hypertension--a real life non-randomized study.** <http://www.ncbi.nlm.nih.gov/pubmed/24920046>
32. **Assessment of Patient Perceptions About Web Telemonitoring Applied to Artificial Pancreas Use at Home.** <http://www.ncbi.nlm.nih.gov/pubmed/24876571>
33. **Can Telemonitoring Reduce Hospitalization and Cost of Care? A Health Plan's Experience in Managing Patients with Heart Failure.** <http://www.ncbi.nlm.nih.gov/pubmed/24865986>
34. **Remote monitoring of implantable cardioverter-defibrillators : Problems and implications using a telemonitoring system.** <http://www.ncbi.nlm.nih.gov/pubmed/24848864>

35. Telemonitoring in heart failure: a state-of-the-art review.
<http://www.ncbi.nlm.nih.gov/pubmed/24830309>
36. Use of home blood pressure monitoring among hypertensive adults in primary care: Minhang community survey. <http://www.ncbi.nlm.nih.gov/pubmed/24801269>
37. TELEMOLD project: oximetry and exercise telemonitoring to improve long-term oxygen therapy. <http://www.ncbi.nlm.nih.gov/pubmed/24796364>
38. The effect of a randomized trial of home telemonitoring on medical costs, 30-day readmissions, mortality, and health-related quality of life in a cohort of community-dwelling heart failure patients. <http://www.ncbi.nlm.nih.gov/pubmed/24769270>
39. Will telemonitoring be adopted by patients with chronic heart failure?
<http://www.ncbi.nlm.nih.gov/pubmed/24722932>
40. Is age a factor in the success or failure of remote monitoring in heart failure? Telemonitoring and structured telephone support in elderly heart failure patients.
<http://www.ncbi.nlm.nih.gov/pubmed/24681423>
41. Integrated telehealth care for chronic illness and depression in geriatric home care patients: the Integrated Telehealth Education and Activation of Mood (I-TEAM) study.
<http://www.ncbi.nlm.nih.gov/pubmed/24655228>
42. Do the benefits of participation in a hypertension self-management trial persist after patients resume usual care? <http://www.ncbi.nlm.nih.gov/pubmed/24619321>
43. Telemonitoring can assist in managing cardiovascular disease in primary care: a systematic review of systematic reviews. <http://www.ncbi.nlm.nih.gov/pubmed/24606887>
44. Frequent Home Monitoring of ICD Is Effective to Prevent Inappropriate Defibrillator Shock Delivery. <http://www.ncbi.nlm.nih.gov/pubmed/24592279>
45. Bringing care home: how telemonitoring can expand population health management beyond the hospital. <http://www.ncbi.nlm.nih.gov/pubmed/24569764>
46. Cost-effectiveness of telehealth interventions for chronic heart failure patients: a literature review. <http://www.ncbi.nlm.nih.gov/pubmed/24495581>
47. An exploration of the effects of introducing a telemonitoring system for continence assessment in a nursing home. <http://www.ncbi.nlm.nih.gov/pubmed/24479697>
48. Home telemonitoring effectiveness in COPD: a systematic review.
<http://www.ncbi.nlm.nih.gov/pubmed/24472009>

49. **Telemonitoring for COPD does not reduce hospital admissions.**
<http://www.ncbi.nlm.nih.gov/pubmed/24461753>
50. **A novel multimodal tool for telemonitoring patients with COPD.**
<http://www.ncbi.nlm.nih.gov/pubmed/24380372>
51. **Perceptions of transmission of body weight and telemonitoring in patients with heart failure?** <http://www.ncbi.nlm.nih.gov/pubmed/24345687>
52. **Randomized trial of a home monitoring system for early detection of choroidal neovascularization home monitoring of the Eye (HOME) study.**
<http://www.ncbi.nlm.nih.gov/pubmed/24211172>
53. **A randomized trial of weekly symptom telemonitoring in advanced lung cancer.**
<http://www.ncbi.nlm.nih.gov/pubmed/24210705>
54. **Patient-oriented Computerized Clinical Guidelines for Mobile Decision Support in Gestational Diabetes.** <http://www.ncbi.nlm.nih.gov/pubmed/24876573>
55. **DialBetics: A Novel Smartphone-based Self-management Support System for Type 2 Diabetes Patients.** <http://www.ncbi.nlm.nih.gov/pubmed/24876569>
56. **A heads-up display for diabetic limb salvage surgery: a view through the google looking glass.** <http://www.ncbi.nlm.nih.gov/pubmed/24876445>
57. **Improving Type 1 Diabetes Management With Mobile Tools: A Systematic Review.**
<http://www.ncbi.nlm.nih.gov/pubmed/24876414>
58. **Techniques of monitoring blood glucose during pregnancy for women with pre-existing diabetes.** <http://www.ncbi.nlm.nih.gov/pubmed/24782359>
59. **Mobile applications for diabetics: a systematic review and expert-based usability evaluation considering the special requirements of diabetes patients age 50 years or older.**
<http://www.ncbi.nlm.nih.gov/pubmed/24718852>
60. **Internet protocol television for personalized home-based health information: design-based research on a diabetes education system.**
<http://www.ncbi.nlm.nih.gov/pubmed/24613862>
61. **Impact of phone call intervention on glycemic control in diabetes patients: a systematic review and meta-analysis of randomized, controlled trials.**
<http://www.ncbi.nlm.nih.gov/pubmed/24586596>
62. **Teleretinal screening for diabetic retinopathy in six Los Angeles urban safety-net clinics: final study results.** <http://www.ncbi.nlm.nih.gov/pubmed/24551394>

63. Design of a randomized, non-inferiority trial to evaluate the reliability of videoconferencing for remote consultation of diabetes.
<http://www.ncbi.nlm.nih.gov/pubmed/24528569>
64. The efficiency of telemedicine to optimize metabolic control in patients with type 1 diabetes mellitus: Telemed study. <http://www.ncbi.nlm.nih.gov/pubmed/24528195>
65. Nurse-led telecoaching of people with type 2 diabetes in primary care: rationale, design and baseline data of a randomized controlled trial.
<http://www.ncbi.nlm.nih.gov/pubmed/24495633>
66. Impact of patient use of an online patient portal on diabetes outcomes.
<http://www.ncbi.nlm.nih.gov/pubmed/24485208>
67. glUCModel: a monitoring and modeling system for chronic diseases applied to diabetes.
<http://www.ncbi.nlm.nih.gov/pubmed/24407050>
68. A novel telemonitoring device for improving diabetes control: protocol and results from a randomized clinical trial. <http://www.ncbi.nlm.nih.gov/pubmed/24404816>
69. Use of a text message program to raise type 2 diabetes risk awareness and promote health behavior change (part II): assessment of participants' perceptions on efficacy.
<http://www.ncbi.nlm.nih.gov/pubmed/24356359>
70. Text messaging intervention for teens and young adults with diabetes.
<http://www.ncbi.nlm.nih.gov/pubmed/25172879>
71. Pilot Study Using Mobile Health to Coordinate the Diabetic Patient, Diabetologist, and Ophthalmologist. <http://www.ncbi.nlm.nih.gov/pubmed/24876413>
72. Perceptions of successful cues to action and opportunities to augment behavioral triggers in diabetes self-management: qualitative analysis of a mobile intervention for low-income Latinos with diabetes. <http://www.ncbi.nlm.nih.gov/pubmed/24476784>
73. Diabetes self-management support using mHealth and enhanced informal caregiving.
<http://www.ncbi.nlm.nih.gov/pubmed/24374137>
74. Internet interventions to support lifestyle modification for diabetes management: a systematic review of the evidence. <http://www.ncbi.nlm.nih.gov/pubmed/24332469>
75. Trial to examine text message-based mHealth in emergency department patients with diabetes (TEXT-MED): a randomized controlled trial.
<http://www.ncbi.nlm.nih.gov/pubmed/24225332>

76. Research article **Palliative care professional education via video conference builds confidence to deliver palliative care in rural and remote locations**
<http://www.biomedcentral.com/1472-6963/14/272>
77. **Impact of a Telenursing service on satisfaction and health outcomes of children with inflammatory rheumatic diseases and their families: a crossover randomized trial study protocol** <http://www.biomedcentral.com/1471-2431/14/151>
78. **Home telehealth and paediatric palliative care: clinician perceptions of what is stopping us?** <http://www.biomedcentral.com/1472-684X/13/29>
79. **Stroke patients' utilisation of extrinsic feedback from computer-based technology in the home: a multiple case study realistic evaluation** <http://www.biomedcentral.com/1472-6947/14/46>
80. **Mobile videoconferencing for enhanced emergency medical communication - a shot in the dark or a walk in the park? — A simulation study**
<http://www.sjtem.com/content/22/1/35>
81. **Examination of Prior Experience with Telehealth and Comfort with Telehealth Technology as a Moderator of Treatment Response for PTSD and Depression in Veterans.**
<http://www.ncbi.nlm.nih.gov/pubmed/25354926>
82. **Adherence to Antidepressant Medications: A Randomized Controlled Trial of Medication Reminding in College Students.** <http://www.ncbi.nlm.nih.gov/pubmed/25338175>
83. **Self-Management of Diabetes in Children and Young Adults Using Technology and Smartphone Applications.** <http://www.ncbi.nlm.nih.gov/pubmed/25311195>
84. **Distance therapy to improve symptoms and quality of life: complementing office-based care with telehealth.**<http://www.ncbi.nlm.nih.gov/pubmed/25304115>
85. **Exercise Recognition for Kinect-based Telerehabilitation.**
<http://www.ncbi.nlm.nih.gov/pubmed/25301322>
86. **Design of telehealth trials - Introducing adaptive approaches.**
<http://www.ncbi.nlm.nih.gov/pubmed/25293533>
87. **Are Telehealth Technologies for Hypertension Care and Self-management Effective or Simply Risky and Costly?** <http://www.ncbi.nlm.nih.gov/pubmed/25290443>
88. **Tweet content related to sexually transmitted diseases: no joking matter.**
<http://www.ncbi.nlm.nih.gov/pubmed/25289463>

89. Feasibility and efficacy of cognitive telerehabilitation in early Alzheimer's disease: a pilot study. <http://www.ncbi.nlm.nih.gov/pubmed/25284993>
90. A telehealth program for self-management of COPD exacerbations and promotion of an active lifestyle: a pilot randomized controlled trial. <http://www.ncbi.nlm.nih.gov/pubmed/25246781>
91. Replacing ambulatory surgical follow-up visits with mobile app home monitoring: modeling cost-effective scenarios. <http://www.ncbi.nlm.nih.gov/pubmed/25245774>
92. Automatic prediction of chronic obstructive pulmonary disease exacerbations through home telemonitoring of symptoms. <http://www.ncbi.nlm.nih.gov/pubmed/25227099>
93. The potential for telehealth technologies to facilitate charity care. Creating virtual dental homes. <http://www.ncbi.nlm.nih.gov/pubmed/25219192>
94. An android-based heart monitoring system for the elderly and for patients with heart disease. <http://www.ncbi.nlm.nih.gov/pubmed/25210513>
95. Designing clinically valuable telehealth resources: processes to develop a community-based palliative care prototype. <http://www.ncbi.nlm.nih.gov/pubmed/25189279>
96. Effectiveness and cost-effectiveness of telehealthcare for chronic obstructive pulmonary disease: study protocol for a cluster randomized controlled trial <http://www.trialsjournal.com/content/15/1/178>
97. Medical and economic benefits of telehealth in low- and middle-income countries: results of a study in four district hospitals in Mali <http://www.biomedcentral.com/1472-6963/14/S1/S9>
98. An interprofessional nurse-led mental health promotion intervention for older home care clients with depressive symptoms <http://www.biomedcentral.com/1471-2318/14/62>
99. Impact of a chronic disease self-management program on health care utilization in rural communities: a retrospective cohort study using linked administrative data <http://www.biomedcentral.com/1472-6963/14/198>
100. A cohort study of a tailored web intervention for preconception care <http://www.biomedcentral.com/1472-6947/14/33>
101. A remote monitoring and telephone nurse coaching intervention to reduce readmissions among patients with heart failure: study protocol for the Better Effectiveness After Transition - Heart Failure (BEAT-HF) randomized controlled trial <http://www.trialsjournal.com/content/15/1/124>

102. **Nurses' and community support workers' experience of telehealth: a longitudinal case study** <http://www.biomedcentral.com/1472-6963/14/164>
103. **Scheduled telephone visits in the veterans health administration patient-centered medical home** <http://www.biomedcentral.com/1472-6963/14/145>
104. **Telemonitoring can assist in managing cardiovascular disease in primary care: a systematic review of systematic reviews** <http://www.biomedcentral.com/1471-2296/15/43>
105. **Smart wearable body sensors for patient self-assessment and monitoring** <http://www.archpublichealth.com/content/72/1/28>
106. **Telemonitoring can assist in managing cardiovascular disease in primary care: a systematic review of systematic reviews** <http://www.biomedcentral.com/1471-2296/15/43>
107. **Research Tele-monitoring reduces exacerbation of COPD in the context of climate change—a randomized controlled trial** <http://www.ehjournal.net/content/12/1/99>
108. **Telemonitoring in the management of high blood pressure.** <http://www.ncbi.nlm.nih.gov/pubmed/25341853>
109. **Clinical and psychological telemonitoring and telecare of high risk heart failure patients.** <http://www.ncbi.nlm.nih.gov/pubmed/25339632>
110. **Practical use of home blood pressure monitoring in chronic kidney disease.** <http://www.ncbi.nlm.nih.gov/pubmed/25254033>