Study	Study type	Tech. used	No. Patients	Long term condition included	Medication Adherence	Clinical Outcomes	Patient satisfaction
A [1]	Non-randomised controlled trial	IVR	303	Diabetes	↑*	Not studied	Not studied
B [2]	Non-randomised controlled trial	IVR	221	Depressive disorders	↑	↔	Not studied
C [3]	Cohort study	IVR	200	Various prescription medication included	Not studied	Not studied	☺
D [4]	Randomised controlled trial	IVR	50	Asthma	↑*	↔	Not studied
E [5]	Randomised controlled trial	SMS	40	Acne	↔	↔	😐
F [6]	Randomised controlled trial	IVR or SMS	70	Glaucoma	↑*	Not studied	☺
G [7]	Randomised controlled trial	IVR or web-based	241	Hypertension	↔	↑	Not studied
H [8]	Randomised controlled trial	IVR	245	Osteoporosis	↑*	Not studied	Not studied
I [9]	Service evaluation	SMS	3381	Various included	Not studied	Not studied	☺
J [10]	Randomised controlled trial	IVR	267	Hypertension	↑*	↑*	☺
K [11]	Randomised controlled trial	SMS	109	HIV/ AIDS	↑*	↔	☺
L [12]	Randomised controlled trial	IVR	312	Glaucoma	↑*	Not studied	☺
M [13–15]	Randomised controlled trial	Pager device	224	HIV/ AIDS	↔	↑*	😐
N [16]	Randomised controlled trial	IVR or SMS	98	Diabetes	↑	↔	Not studied
O [17]	Cohort study	SMS	85	HIV/ AIDS	↑	↑*	Not studied
P [18]	Randomised controlled trial	Pager device	50	Diabetes	Not studied	↑*	☺
Q [19]	Randomised controlled trial	IVR	338	Hypertension	↔	↑*	Not studied
R [20]	Cohort study	IVR and SMS	80	Diabetes	↑*	↑*	Not studied

Study	Study type	Tech. used	No. Patients	Long term condition included	Medication Adherence	Clinical Outcomes	Patient satisfaction
S [21]	Randomised controlled trial	SMS	58	HIV+ and co-occurring bipolar disorder	Not studied	↔	Not studied
T [22,23]	Case-control study	SMS and IVR	240	Diabetes	↔	↔	Not studied
U [24,25]	Cohort study	SMS	74	Diabetes	Not studied	↑*	☺
V [26,27]	Randomised controlled trial	SMS	90	Cardiovascular disease	Not studied	↑*	☺
W [28]	Randomised controlled trial	SMS	123	Cardiovascular disease	↑	↑	☺
X [29]	Randomised controlled trial	IVR	280	Diabetes	↑*	↑	Not studied
Y [30]	Cohort study	IVR	125	Diabetes; Hypertension	↑	↑*	☺
Z [31]	Randomised controlled trial	IVR	331	Cardiovascular disease	↑*	Not studied	☺
AA [32]	Randomised controlled trial	IVR	1347	Cardiovascular disease	↑*	Not studied	☺
AB [33]	Randomised controlled trial	SMS	75	Cancer	↔	Not studied	☺
AC [34]	Randomised controlled trial	IVR	497	Prescription for statins	↑*	Not studied	Not studied
AD [35]	Randomised controlled trial	IVR	647	Depressive disorders	↔	Not studied	☹
AE [36]	Cohort study	IVR	44	HIV/ AIDS	↔	Not studied	Not studied
AF [37]	Randomised controlled trial	IVR	7918	Asthma	↑*	Not studied	😐
AG [38]	Randomised controlled trial	IVR	21752	Cardiovascular disease	↑*	↔	☺
AH [39]	Randomised controlled trial	SMS	303	Patients on blood pressure or lipid lowering medication	↑*	↔	Not studied
AI [40]	Cohort study	IVR	9054	Various prescription items	↑*	Not studied	Not studied
AJ [41]	Randomised controlled trial	IVR	372	Heart failure	↔	Unclear	Not studied

Reference List

[1]   Aikens JE, Trivedi R, Aron DC, Piette JD. Integrating support persons into diabetes telemonitoring to improve self-management and medication adherence. J Gen Intern Med 2015;30:319–26. doi:10.1007/s11606-014-3101-9.

[2]   Aikens JE, Trivedi R, Heapy A, Pfeiffer PN, Piette JD. Potential Impact of Incorporating a Patient-Selected Support Person into mHealth for Depression. J Gen Intern Med 2015;30:797–803. doi:10.1007/s11606-015-3208-7.

[3]   Auger C, Forster AJ, Oake N, Tamblyn R. Usability of a computerised drug monitoring programme to detect adverse drug events and non-compliance in outpatient ambulatory care. BMJ Qual Saf 2013;22:306–16. doi:10.1136/bmjqs-2012-001492.

[4]   Bender BG, Apter A, Bogen DK, Dickinson P, Fisher L, Wamboldt FS, et al. Test of an interactive voice response intervention to improve adherence to controller medications in adults with asthma. J Am Board Fam Med JABFM 2010;23:159–65. doi:10.3122/jabfm.2010.02.090112.

[5]   Boker A, Feetham HJ, Armstrong A, Purcell P, Jacobe H. Do automated text messages increase adherence to acne therapy? Results of a randomized, controlled trial. J Am Acad Dermatol 2012;67:1136–42. doi:10.1016/j.jaad.2012.02.031.

[6]   Boland M V, Chang DS, Frazier T, Plyler R, Jefferys JL, Friedman DS. Automated telecommunication-based reminders and adherence with once-daily glaucoma medication dosing: The automated dosing reminder study. JAMA Ophthalmol 2014;132:845–50. doi:10.1001/jamaophthalmol.2014.857.

[7]   Bove AA, Homko CJ, Santamore WP, Kashem M, Kerper M, Elliott DJ. Managing hypertension in urban underserved subjects using telemedicine-A clinical trial. Am Heart J 2013;165:615–21. doi:10.1016/j.ahj.2013.01.004.

[8]   Cizmic AD, Heilmann RMF, Milchak JL, Riggs CS, Billups SJ, AD C, et al. Impact of interactive voice response technology on primary adherence to bisphosphonate therapy: a randomized controlled trial. Osteoporos Int 2015;26:2131–6. doi:10.1007/s00198-015-3116-z.

[9]   Cottrell E, Cox T, O'Connell P, Chambers R. Patient and professional user experiences of simple telehealth for hypertension, medication reminders and smoking cessation: a service evaluation. BMJ Open 2015;5:e007270–e007270. doi:10.1136/bmjopen-2014-007270.

[10]   Friedman RH, Kazis LE, Jette A, Smith MB, Stollerman J, Torgerson J, et al. A telecommunications system for monitoring and counseling patients with hypertension. Impact on medication adherence and blood pressure control. Am J Hypertens 1996;9:285–92.

[11]   Garofalo R, Kuhns L, Hotton A, Johnson A, Muldoon A, Rice D. A Randomized Controlled Trial of Personalized Text Message Reminders to Promote Medication Adherence Among HIV-Positive Adolescents and Young Adults. AIDS Behav 2016;20:1049–59. doi:10.1007/s10461-015-1192-x.

[12]   Glanz K, Beck AD, Bundy L, Primo S, Lynn MJ, Cleveland J, et al. Impact of a health communication intervention to improve glaucoma treatment adherence: Results of the interactive study to increase glaucoma adherence to treatment trial. Arch Ophthalmol 2012;130:1252–8. doi:10.1001/archophthalmol.2012.1607.

[13]   Harris LT, Lehavot K, Huh D, Yard S, Andrasik MP, Dunbar PJ, et al. Two-way text messaging for health behavior change among human immunodeficiency virus-positive individuals. Telemed J E Health 2010;16:1024–9. doi:10.1089/tmj.2010.0050.

[14]   Yard SS, Huh D, King KM, Simoni JM. Patient-level moderators of the efficacy of peer support and pager reminder interventions to promote antiretroviral adherence. AIDS Behav 2011;15:1596–604. doi:10.1007/s10461-011-0001-4.

[15]   Simoni JM, Huh D, Frick PA, Pearson CR, Andrasik MP, Dunbar PJ, et al. Peer support and pager messaging to promote antiretroviral modifying therapy in Seattle: a randomized controlled trial. J Acquir Immune Defic Syndr 2009;52:465–73. doi:10.1097/QAI.0b013e3181b9300c.

[16]   Katalenich B, Shi L, Liu S, Shao H, McDuffie R, Carpio G, et al. Evaluation of a Remote Monitoring System for Diabetes Control. Clin Ther 2015;37:1216–25. doi:10.1016/j.clinthera.2015.03.022.

[17]   King E, Kinvig K, Steif J, Qiu AQ, Maan EJ, Albert AY, et al. Mobile Text Messaging to Improve Medication Adherence and Viral Load in a Vulnerable Canadian Population Living With Human Immunodeficiency Virus: A Repeated Measures Study. J Med Internet Res 2017;19:e190–e190. doi:10.2196/jmir.6631.

[18]   Leu MG, Norris TE, Hummel J, Isaac M, Brogan MW. A Randomized, Controlled Trial of an Automated Wireless Messaging System for Diabetes. Diabetes Technol Ther 2005;7:710–8. doi:10.1089/dia.2005.7.710.

[19]   Magid DJ, Ho PM, Olson KL, Brand DW, Welch LK, Snow KE, et al. A Multimodal Blood Pressure Control Intervention in 3 Healthcare Systems. Am J Manag Care 2011;17:e96–103.

[20]   Mayberry LS, Mulvaney SA, Johnson KB. The MEssaging for Diabetes Intervention Reduced Barriers to Medication Adherence among Low-Income, Diverse Adults with Type 2. J Diabetes Sci Technol 2017;11:92–9.

[21]   Moore DJ, Poquette A, Casaletto KB, Gouaux B, Montoya JL, Posada C, et al. Individualized texting for adherence building (iTAB): improving antiretroviral dose timing among HIV-infected persons with co-occurring bipolar disorder. AIDS Behav 2015;19:459–71. doi:10.1007/s10461-014-0971-0.

[22]   Nelson LA, Mulvaney SA, Gebretsadik T, Ho YX, Johnson KB, Osborn CY. Disparities in the use of a mHealth medication adherence promotion intervention for low-income adults with type 2 diabetes. J Am Med Informatics Assoc 2016;23:12–8. doi:10.1093/jamia/ocv082.

[23]   Nelson L, Mulvaney S, Gebretsadik T, Johnson K, Osborn C. The MEssaging for Diabetes (MED) intervention improves short-term medication adherence among low-income adults with type 2 diabetes. J Behav Med 2016;39:995–1000. doi:10.1007/s10865-016-9774-2.

[24]   Nundy S, Mishra A, Hogan P, Lee SM, Solomon MC, Peek ME. How do mobile phone diabetes programs drive behavior change? Evidence from a mixed methods observational cohort study. Diabetes Educ 2014;40:806–19. doi:10.1177/0145721714551992.

[25]   Nundy S, Lu C-YE, Hogan P, Mishra A, Peek ME, S. N, et al. Using patient-generated health data from mobile technologies for diabetes self-management support: Provider perspectives from an academic medical center. J Diabetes Sci Technol 2014;8:74–82. doi:10.1177/1932296813511727.

[26]   Park LG, Howie-Esquivel J, Chung ML. A text messaging intervention to promote medication adherence for patients with coronary heart disease: A randomized controlled trial. Patient Educ Couns 2014;94:261–8.

[27]   Park LG, Howie-Esquivel J, Whooley MA, Dracup K. Psychosocial factors and medication adherence among patients with coronary heart disease: A text messaging intervention. Eur J Cardiovasc Nurs J Work Gr Cardiovasc Nurs Eur Soc Cardiol 2015;14:264–73. doi:10.1177/1474515114537024.

[28]   Pfaeffli Dale L, Whittaker R, Jiang Y, Stewart R, Rolleston A, Maddison R. Text Message and Internet Support for Coronary Heart Disease Self-Management: Results From the Text4Heart Randomized Controlled Trial. J Med Internet Res 2015;17:e237–e237. doi:10.2196/jmir.4944.

[29]   Piette JD, Weinberger M, McPhee SJ, Mah CA, Kraemer FB, Crapo LM, et al. Do automated calls with nurse follow-up improve self-care and glycemic control among vulnerable patients with diabetes? Am J Med 2000;108:20–7. doi:10.1016/S0002-9343(99)00298-3.

[30]   Shane-McWhorter L, Lenert L, Petersen M, Woolsey S, McAdam-Marx C, Coursey JM, et al. The Utah Remote Monitoring Project: improving health care one patient at a time. Diabetes Technol Ther 2014;16:653–60. doi:10.1089/dia.2014.0045.

[31]   Sherrard H, Struthers C, SA K, Wells G, Mesana T, H. S, et al. Using technology to create a medication safety net for cardiac surgery patients: a nurse-led randomized control trial. Can J Cardiovasc Nurs 2009;19:9–15.

[32]   Sherrard H, Duchesne L, Wells G, Kearns SA, Struthers C. Using interactive voice response to improve disease management and compliance with acute coronary syndrome best practice guidelines: A

randomized controlled trial. Can J Cardiovasc Nurs 2015;25:10–5.

[33] Spoelstra SL, Given CW, Sikorskii A, Coursaris CK, Majumder A, DeKoekkoek T, et al. Proof of Concept of a Mobile Health Short Message Service Text Message Intervention That Promotes Adherence to Oral Anticancer Agent Medications: A Randomized Controlled Trial. Telemed E-HEALTH 2016;22:497–506. doi:10.1089/tmj.2015.0126.

[34] Stacy JN, Schwartz SM, Ershoff D, Shreve MS. Incorporating tailored interactive patient solutions using interactive voice response technology to improve statin adherence: results of a randomized clinical trial in a managed care setting. Popul Health Manag 2009;12:241–54. doi:10.1089/pop.2008.0046.

[35] Stuart GW, Laraia MT, Ornstein SM, Nietert PJ. An interactive voice response system to enhance antidepressant medication compliance. Top Health Inf Manage 2003;24:15–20.

[36] Tucker JA, Simpson CA, Huang J, Roth DL, Stewart KE. Utility of an interactive voice response system to assess antiretroviral pharmacotherapy adherence among substance users living with HIV/AIDS in the rural South. AIDS Patient Care STDS 2013;27:280–6. doi:10.1089/apc.2012.0322.

[37] Vollmer WM, Feldstein A, Smith DH, Dubanosk JP, Waterbury A, Schneider JL, et al. Use of Health Information Technology to Improve Medication Adherence. Am J Manag Care 2011;17:SP79-87.

[38] Vollmer WM, Owen-Smith AA, Tom JO, Laws R, Ditmer DG, Smith DH, et al. Improving adherence to cardiovascular disease medications with information technology. Am J Manag Care 2014;20:SP502-SP510.

[39] Wald DS, Bestwick JP, Raiman L, Brendell R, Wald NJ. Randomised trial of text messaging on adherence to cardiovascular preventive treatment (INTERACT trial). PLoS One 2014;9:e114268. doi:10.1371/journal.pone.0114268.

[40] Zabinski RA, Skinner EP, Buysman EK. Addressing gaps in care: Impact of barrier-specific medication adherence intervention. Am J Pharm Benefits 2012;4:e109--e117.

[41] Piette JD, Striplin D, Marinec N, Chen J, Trivedi RB, Aron DC, et al. A Mobile Health Intervention Supporting Heart Failure Patients and Their Informal Caregivers: A Randomized Comparative Effectiveness Trial. J Med Internet Res 2015;17:e142. doi:10.2196/jmir.4550.