

*Additional file 3. Excluded studies (N=47)*

Study	Reason for exclusion
Abaza H, Marschollek M. mHealth application areas and technology combinations. A comparison of literature from high and low/middle income countries. <i>Methods of Information in Medicine</i> . 2017;56(7):e105-e22.	Low quality
Abhyankar P, Volk RJ, Blumenthal-Barby J, Bravo P, Buchholz A, Ozanne E, et al. Balancing the presentation of information and options in patient decision aids: an updated review. <i>BMC Med Inf Decis Mak</i> . 2013;13 Suppl 2:S6.	Not a systematic review
Aranda-Jan CB, Mohutsiwa-Dibe N, Loukanova S. Systematic review on what works, what does not work and why of implementation of mobile health (mHealth) projects in Africa. <i>BMC Public Health</i> . 2014;14(188).	Low quality
Atherton H, Huckvale C, Car J. Communicating health promotion and disease prevention information to patients via email: a review. <i>J Telemed Telecare</i> . 2010;16(4):172-5.	Low quality
Balas EA, Weingarten S, Garb CT, Blumenthal D, Boren SA, Brown GD. Improving preventive care by prompting physicians. <i>Arch Intern Med</i> . 2000;160(3):301-8.	Not a focus of our overview
Balatsoukas P, Kennedy CM, Buchan I, Powell J, Ainsworth J. The Role of Social Network Technologies in Online Health Promotion: A Narrative Review of Theoretical and Empirical Factors Influencing Intervention Effectiveness. <i>J Med Internet Res</i> . 2015;17(6):e141.	Low quality
Barac R, Stein S, Bruce B, Barwick M. Scoping review of toolkits as a knowledge translation strategy in health. 2014.	Low quality
Barello S, Triberti S, Graffigna G, Libreri C, Serino S, Hibbard J, et al. eHealth for patient engagement: A systematic review. <i>Frontiers in Psychology</i> . 2015;6:2013.	Low quality
Bosch-Capblanch X, Abba K, Prictor M, Garner P. Contracts between patients and healthcare practitioners for improving patients' adherence to treatment, prevention and health promotion activities. <i>Cochrane Database Syst Rev</i> . 2007(2):CD004808.	Not a focus of our overview
Buhi ER, Trudnak TE, Martinasek MP, Oberne AB, Fuhrmann HJ, McDermott RJ. Mobile phone-based behavioural interventions for health: A systematic review. <i>Health Education Journal</i> . 2012;72(5):564-83.	Low quality
Chan Y, Nagurka R, Bentley S, Ordonez E, Sproule W. Medical utilization of kiosks in the delivery of patient education: a systematic review (Provisional abstract). <i>Database of Abstracts of Reviews of Effects [Internet]</i> . 2014; (2):[1-8 pp.]. Available from: <a href="http://cochranelibrary-wiley.com/o/cochrane/cldare/articles/DARE-12014050174/frame.html">http://cochranelibrary-wiley.com/o/cochrane/cldare/articles/DARE-12014050174/frame.html</a> .	Not a systematic review
Cornet VP, Holden RJ. Systematic review of smartphone-based passive sensing for health and wellbeing. <i>J Biomed Inform</i> . 2018;77:120-32.	Low quality
Coylewright M, Branda M, Inselman JW, Shah N, Hess E, LeBlanc A, et al. Impact of sociodemographic patient characteristics on the efficacy of decision AIDS: a patient-level meta-analysis of 7 randomized trials. <i>Circ Cardiovasc Qual Outcomes</i> . 2014;7(3):360-7.	Not a systematic review
Coylewright M, Branda M, Shah N, Hess E, LeBlanc A, Montori V, et al. Shared decision-making results in knowledge transfer across diverse patient subgroups: An encounter-level meta-analysis of decision aid trials. <i>Journal of the American College of Cardiology</i> . 2012:E1847.	Low quality

Study	Reason for exclusion
Diviani N, van den Putte B, Giani S, van Weert JC. Low health literacy and evaluation of online health information: a systematic review of the literature. <i>J Med Internet Res.</i> 2015;17(5):e112.	Low quality
Donkin L, Christensen H, Naismith SL, Neal B, Hickie IB, Glozier N. A systematic review of the impact of adherence on the effectiveness of e-therapies. <i>J Med Internet Res.</i> 2011;13(3):e52.	Low quality
Fagerlin A, Ubel PA, Smith DM, Zikmund-Fisher BJ. Making numbers matter: present and future research in risk communication. <i>American Journal of Health Behavior.</i> 2007;31:S47-56.	Not a systematic review
Farrell EH, Whistance RN, Phillips K, Morgan B, Savage K, Lewis V, et al. Systematic review and meta-analysis of audio-visual information aids for informed consent for invasive healthcare procedures in clinical practice. <i>Patient Educ Couns.</i> 2014;94(1):20-32.	Is not a focus of our overview
Feldman-Stewart D, O'Brien MA, Clayman ML, Davison BJ, Jimbo M, Labrecque M, et al. Providing information about options in patient decision aids. <i>BMC Med Inf Decis Mak.</i> 2013;13 Suppl 2:S4.	Not a systematic review
Fernandez-Luque L, Staccini P. All that Glitters Is not Gold: Consumer Health Informatics and Education in the Era of Social Media and Health Apps. Findings from the Yearbook 2016 Section on Consumer Health Informatics. <i>Yearb.</i> 2016(1):188-93.	Not a systematic review
Gagliardi AR, Brouwers MC, Palda VA, Lemieux-Charles L, Grimshaw JM. How can we improve guideline use? A conceptual framework of implementability. 2011.	Not a systematic review
Gurman TA, Rubin SE, Roess AA. Effectiveness of mHealth behavior change communication interventions in developing countries: a systematic review of the literature. <i>J Health Commun.</i> 2012;17 Suppl 1:82-104.	Low quality
Hall CS, Fottrell E, Wilkinson S, Byass P. Assessing the impact of mHealth interventions in low- and middle-income countries - what has been shown to work? <i>Global Health Action.</i> 2014;7(0).	Low quality
Hardiker NR, Grant MJ. Factors that influence public engagement with eHealth: A literature review. <i>Int J Med Inf.</i> 2011;80(1):1-12.	Low quality
Higgins O, Sixsmith J, Barry MM, Domegan C. A literature review on health information-seeking behaviour on the web: a health consumer and health professional perspective. Stockholm: ECDC; 2011.	Not a systematic review
Horvat L, Horey D, Romios P, Kis-Rigo J. Cultural competence education for health professionals. <i>Cochrane Database Syst Rev.</i> 2014(5):CD009405.	Is not a focus of our overview
Househ M, Borycki E, Kushniruk A. Empowering patients through social media: the benefits and challenges. <i>Health Inform J.</i> 2014;20(1):50-8.	Not a systematic review
Ishikawa H, Yano E. Patient health literacy and participation in the health-care process. <i>Health Expect.</i> 2008;11(2):113-22.	Not a systematic review
Kim H, Xie B. Health literacy in the eHealth era: A systematic review of the literature. <i>Patient Education and Counseling.</i> 2017;100(6):1073-82.	Low quality
Kinnersley P, Phillips K, Savage K, Kelly MJ, Farrell E, Morgan B, et al. Interventions to promote informed consent for patients undergoing surgical and other invasive healthcare procedures. <i>Cochrane Database Syst Rev.</i> 2013;2013(7):1-247.	Is not a focus of our overview

Study	Reason for exclusion
Krishna S, Balas EA, Boren SA, Maglaveras N. Patient acceptance of educational voice messages: a review of controlled clinical studies. <i>Methods Inf Med</i> . 2002;41(5):360-9.	Not a systematic review
Kurtzman ET, Greene J. Effective presentation of health care performance information for consumer decision making: A systematic review. <i>Patient Educ Couns</i> . 2016;99(1):36-43.	Not a systematic review
Lewis D. Computer-based approaches to patient education: a review of the literature. <i>Journal of the American Medical Informatics Association : JAMIA</i> . 1999;6(4):272-82.	Not a systematic review
Lewis D. Computers in patient education. <i>Comput Inform Nurs</i> . 2003;21(2):88-96.	Not a systematic review
Lin H, Wu X. Intervention strategies for improving patient adherence to follow-up in the era of mobile information technology: a systematic review and meta-analysis. <i>PLoS ONE</i> . 2014;9(8):e104266.	Is not a focus of our overview
Lundahl B, Molteni T, Burke BL, Butters R, Tollefson D, Butler C, et al. Motivational interviewing in medical care settings: a systematic review and meta-analysis of randomized controlled trials. <i>Patient Educ Couns</i> . 2013;93(2):157-68.	Is not a focus of our overview
Nhavoto JA, Gronlund A. Mobile technologies and geographic information systems to improve health care systems: A literature review. <i>JMIR mHealth and uHealth</i> . 2014;2(2):e21.	Low quality
Or CK, Karsh BT. A systematic review of patient acceptance of consumer health information technology. <i>J Am Med Inform Assoc</i> . 2009;16(4):550-60.	Low quality
Sadowski C, Hussain G. Evaluating readability and legibility of patient health information: A review of available tools. <i>Canadian Pharmacists Journal</i> . 2017;150(4):S40.	Not a systematic review
Santo A, Laizner AM, Shohet L. Exploring the value of audiotapes for health literacy: A systematic review. <i>Patient Education and Counseling</i> . 2005;58(3 SPEC. ISS.):235-43.	Low quality
Shahmoradi L, Safadari R, Jimma W. Knowledge Management Implementation and the Tools Utilized in Healthcare for Evidence-Based Decision Making: A Systematic Review. <i>Ethiop</i> . 2017;27(5):541-58.	Low quality
Smith CA. Consumer language, patient language, and thesauri: a review of the literature. <i>J Med Libr Assoc</i> . 2011;99(2):135-44.	Not a systematic review
Staccini P, Fernandez-Luque L. Health Social Media and Patient-Centered Care: Buzz or Evidence? Findings from the Section "Education and Consumer Health Informatics" of the 2015 Edition of the IMIA Yearbook. <i>Yearb</i> . 2015;10(1):160-3.	Not a systematic review
Theis SL, Johnson JH. Strategies for teaching patients: a meta-analysis. <i>Clin Nurse Spec</i> . 1995;9(2):100-5, 20.	Low quality
Tugwell P, Robinson V, Grimshaw J, Santesso N. Systematic reviews and knowledge translation. <i>Bull World Health Organ</i> . 2006;84(8):643-51.	Not a systematic review
Wallace J, Byrne C, Clarke M. Improving the uptake of systematic reviews: a systematic review of intervention effectiveness and relevance. <i>BMJ Open</i> . 2014;4(10):e005834.	Is not a focus of our overview

<b>Study</b>	<b>Reason for exclusion</b>
Ye J, Rust G, Fry-Johnson Y, Strothers H. E-mail in patient-provider communication: A systematic review. Patient Education and Counseling. 2010;80(2):266-73.	Not a systematic review