Multimedia Appendix 2. Results reported on use of the intervention, health behaviour and health outcomes.

Primary author	Outcomes usage digital intervention/ asynchronous communication A actual use B asynchronous communication C usability	Outcomes health behaviour A knowledge B healthcare utilization C self efficacy/self-management	Outcomes health A clinical B physical C psychosocial	Patient satisfaction
Berman 2009	A median use over 6 wks 22.5 times. One visited 211 times, A 78% had intention to do exercise at log off. In follow-up survey 95.3% said they did the exercises without going on line B not reported C 81% believed intervention to be helpful C 88.4% easy to use C 95.3% would recommend intervention to others C all modules were perceived as helpful C 10 had limited difficulties using site: log on and navigating or downloading C 2 people did not appreciate the intervention C "having the intervention handy confirmed that someone was anxious about their pain" C "felt like you were talking to me" C made them more aware of their pain experience and made them focus on self care C suggestions to add more content, additional introductory text, changing layout, communication with other users	P= 0.05 C Awareness of responses to pain + C Confidence using non-medical techniques +	P= 0.05 B Pain intensity + B Pain scores at log on/off suggests immediate impact on reduction of pain	
Bond 2007	B not reported		P = 0.001 A HbA1c p= .01 A Weight p= .001 A Cholesterol p= .05 A HDL p= .05	
Cruz 2007	A minor technical problems 9 with internet connection 5 with PIKO 5 with paper diaries A Patients tried both diaries. Internet could only be entered			

	daily, whereas paper more days could be entered at a time A looking at previous data was considered easier on internet B not analyzed C Preference for internet diaries C Internet diaries less complete C most important features of intervention according to patient: - asthma diary 93% - educational content 82% - receiving information about asthma 85% - exchanging messages with doctor 85% - self-assessment tool before consultation 79% - receiving messages about medication 69% - receiving messages about consultation 67% - 50% were prepared to monitor always - 33 % prepared to monitor daily, rest less			
Ghahari 2010	A no sign diff participation rate (nr of sessions completed) I A / I B B not reported		B Physical subscale Fatigue Impact p=.04 C Personal Wellbeing (for I B) p=.03	
Hill 2006	B not reported		C Self-esteem p= .016 C Social support p= .038 C Empowerment p= .016	
Kwon 2004	A average frequency monitoring 71.5±36.2 (I) and 38.1±24.8 (C) A mean Logon 42.3±32.2/patient A have more contact with physician. A received medical advice according to recent data B Total number of e-mail questions was 167. Mean number of questions posted per patient in 12 weeks was 13.5 ± 14.7. Detailed list of questions asked via the Internet		A I HbA1c p= .001	

	homepage by the patients in the intervention group to their health care providers			
Lin 2005	A 85% obtained user account for portal A 31% used the portal A 175 admin. requests and 239 clinical messages (phone and e-mail) sent by portal patients (1 message/day for every 250 patients) A 27% sent during and 73% outside clinic hours. B n=76 asynchronous messages Urgent message 3% (of n) Medication question 1% Medication action 21% Biomedical concerns/questions 42% Test results 17 Test action 7 Psychosocial concerns 9% "for your information" 18% Home monitoring 5% Prevention 5% Miscellaneous 18% C Patients more likely to send informational and psychosocial messages by portal than by phone C 75% likely to use portal in future C 85% prefer portal to phone C Of all surveyed patients, 162/341 (48%) were willing to pay for online correspondence with their physician. Of those willing to pay, the median amount cited was US $2 a message C 81% of users said it saved them a phone call C 33% said it saved them a visit C weak positive correlation between frequent users and - satisfaction with portal services p=.02 - improved comm. with clinic p= .01 - satisfaction with physician messaging p=.03	B improved communication with clinic p= .001		Patient satisfaction overall care p= .04
Lorig 2002	A 69% sent 1 or more emails to the group. A Active members posted a mean of 8 messages in a year.	B Health care utilization decreased but ns p= .07 C self care orientation	B Pain p= .045 C Disability p= .02 C Role function p= .007 C Health distress p= .	

	B not reported C 41% read most of the email messages, 37% read only emails with subjects of interest.	p= .002 C self efficacy p= .02	001	
McMahon 2005	A Frequent intervention use was related to improved health outcomes A greater amount of uploads of monitoring data related to improved health outcomes p= .02 B not reported		A HbA1c p= .05 A persistent users greater improvement HbA1c than intermittent p= .05 or education and usual care p= .05 A Blood pressure p= .01 A cholesterol p= .05	
Meer 2009	A 5.9 contacts/pat asthma nurse (1yr) A Report lung function scores 108 days B not reported	B physician visits p= .07	A FEV p= .025 A Asthma control p= .001 C Asthma QOL p= .001	
Nguyen 2012	A Logins median 148 over 12 mths (n= 43) A 75% used website at least once B not reported C preferred using website to smart phone for recording daily exercises and symptoms	B high levels support perceived C arm endurance p= .04 C self efficacy trend p= .06	A Severity of dyspnoea no difference	
Ralston 2009	A 76% accessed EHR (n=39) A 43% HbA1c upload A 33% entered other data A Uploads of HbA1c levels show trend to improvement A 1146 web pages EHR viewed in 12 mths (=2.3/mth) - 26% transcribed notes - 20% labresults - 9% problem lists A number of page views is not related to HbA1c improvement A uploads of blood glucose levels (n=189) trend to improvement p= .09 B 69% used Email		A HbA1c p= .01	
Ross 2004	A Logins 581 by 43 pat. (n=54) A 0.4 hitdays/pat/mth A Clinical notes and lab results viewed 95% A Educ.guide reviewed 63% A Use high first 3 mths B 24% use e-mail	C Adherence general p= .01		

	B e-Mail volume 63 by 95% patients C Doctor-patient comm. satisfaction trend			
Weinert 2008	B not reported	A Health knowledge (A+B gained sign.) p= .000		
Weinert 2011	A 4 had problems with using computer 2 had problems with internet B not reported		C Stress p= .005 C Depression p= .01 C Self-esteem p= .018 C Acceptance of illness p= .001 C Loneliness p= .04	