APPENDIX A. SEARCH STRATEGIES

Database: MEDLINE (via Ovid MEDLINE(R) ALL 1946 to February 5, 2021)
Search Date: 2/7/2021

Search Set	Search Strategy	Results
#1 *Virtual Care terms*	exp Telemedicine/ or exp Remote Consultation/ or Videoconferencing/ or Telephone/ or exp Cell Phone/ or exp Computers, Handheld/ or (virtual or virtually or telehealth or tele-health or telemedicine or tele-medicine or telemedical or tele-medical or telecare or tele-care or teleconsult* or tele-consult* or telecommunicat* or tele-communicat* or telemanag* or tele-manag* or telehome or tele-home or telepharmac* or tele-pharmac* or telecardiol* or tele-cardiol* or tele-cardiac or teleintervention* or tele-intervention* or teleconferenc* or tele-conferenc* or telephon* or tele-phon* or cellphon* or cell-phon* or smartphon* or "mobile phone" or "mobile phones" or e-visit* or evisit* or e-care or ecare or e-consult* or econsult* or e-diagnos* or ediagnos* or e-medicine or emedicine or e-physician* or ephysician* or eclinician* or e-clinician* or e-pharm* or epharm* or "communication technology" or "communication technologies" or eHealth or e- health or "e health" or mHealth or m-health or "m health").ti,ab.	271,845
#2 *Virtual care terms, cont.*	((mobile or digital) adj health*).ti,ab.	6,153
#3 *Virtual care terms, cont*	((videoconferenc* or video-conferenc* or webconferenc* or web-conferenc* or webex or zoom or skype or ooVoo or FaceTime or Tango or GoToMeeting or "web based" or web-based or webbased) adj2 health*).ti,ab.	711
#4 *Virtual care terms, cont.*	(tele adj (care or diagnos* or health* or intervention* or manag* or therap* or treat* or medicine or medical or prescrib* or prescript*)).ti,ab.	404
#5 *Virtual care terms, cont.*	((remote* or video* or internet or web or online) adj2 (meet* or call* or chat* or conferenc* or consult* or care or counsel* or visit*)).ti,ab.	8,431
#6 *combining*	1 or 2 or 3 or 4 or 5	279,398
#7 *HF terms*	exp Heart Failure/ or (CHF or CCF or HFpEF or HFrEF or "systolic dysfunction" OR "diastolic dysfunction").ti,ab.	144,721
#8 *HF terms, cont.*	((heart or cardiac or cardiogenic) adj1 (failure or shock or arrest)).ti,ab.	226,892
#9 *HF terms, cont.*	((preserved or reduced) adj2 "ejection fraction").ti,ab.	9,110
#10	exp Diabetes Mellitus, Type 2/ or (DM or DM2 or DMii or T2D or T2DM or NIDDM or IDDM or MODY).ti,ab.	199,623

T2DM terms		
#11 *T2DM terms, cont.*	(diabet* adj2 ("type 2" or "type two" or II or "adult onset" or adult-onset or noninsulin or "non insulin" or non-insulin or maturity-onset or "maturity onset" or "slow onset" or slow-onset)).ti,ab.	165,479
#12 *COPD terms*	exp Pulmonary Disease, Chronic Obstructive/ or (COPD or COAD or emphysema*).ti,ab.	89,548
#13 *COPD terms, cont.*	(obstruct* adj2 (pulmonary or lung* or airflow* or airway* or bronch* or respirat*)).ti,ab.	87,246
#14 *COPD terms, cont.*	(chronic adj2 bronchit*).ti,ab.	11,051
#15 *combining*	7 or 8 or 9 or 10 or 11 or 12 or 13 or 14	653,893
#16 *combining*	6 and 15	7,731
#17 *Animal-only study exclusion*	16 not (exp animals/ not exp humans/)	7,532
#18 *Population exclusion*	17 not ((exp adolescent/ or exp child/ or exp infant/) not exp adult/)	7,345
#19 *Study designs*	exp Evaluation Studies as Topic/ or exp Cohort Studies/ or exp Longitudinal Studies/ or randomized controlled trial.pt. or controlled clinical trial.pt. or comparative study.pt. or clinical trial.pt. or evaluation study.pt. or (randomized or randomised or randomization or randomisation or placebo or randomly or trial or groups or "clinical trial" or "clinical trials" or "evaluation study" or "evaluation studies" or "intervention study" or "intervention studies" or cohort or longitudinal or longitudinally or prospective or prospectively or "follow up" or "comparative study" or "comparative studies" or nonrandom or "non-random" or nonrandomized or "non-randomized" or nonrandomised or "non-randomised" or quasi-experiment* or quasiexperiment* or quasirandom* or quasi-random* or quasi-control* or quasicontrol* or "pre-post" or posttest or "post-test" or pretest or "pre-test" or "repeated measure" or "repeated measures").ti,ab.	7,831,571
#20 *Study designs*	(before and after).ti,ab.	771,878
#21 *Study designs*	(before and during).ti,ab.	403,950
#22 *Study designs*	("time series" and interrupt*).ti,ab.	3,697
#23 *Study designs*	("time points" and (multiple or one or two or three or four or five or six or seven or eight or nine or ten or month or monthly or day or daily or week or weekly or hour or hourly)).ti,ab.	69,056
#24	19 or 20 or 21 or 22 or 23	8,265,282
#25	18 and 24	4,784

Database: EMBASE (via Elsevier)
Search date: 2/7/2021
Note: search from the Results page

Search Set	Search Strategy	Results
#1 *Virtual Care terms*	'telemedicine'/exp OR 'teleconsultation'/exp OR 'videoconferencing'/exp OR 'telephone'/exp OR 'mobile phone'/exp OR 'personal digital assistant'/exp OR (virtual OR virtually OR telehealth OR tele-health OR telemedicine OR tele-medicine OR telemedical OR tele-medical OR telecare OR tele-care OR teleconsult* OR tele-consult* OR telecommunicat* OR tele-communicat* OR telemanag* OR tele-manag* OR telehome OR tele-home OR telepharmac* OR tele-pharmac* OR telecardiol* OR tele-cardiol* OR tele-cardiac OR teleintervention* OR tele-intervention* OR teleconferenc* OR tele-conferenc* OR telephon* OR tele-phon* OR cellphon* OR cell-phon* OR smartphon* OR smart-phon* OR 'mobile phone' OR 'mobile phones' OR e-visit* OR evisit* OR e-care OR ecare OR e-consult* OR econsult* OR e-diagnos* OR ediagnos* OR e-medicine OR emedicine OR e-physician* OR ephysician* OR eclinician* OR e-clinician* OR e-pharm* OR epharm* OR 'communication technology' OR 'communication technologies' OR eHealth OR e- health OR 'e health' OR mHealth OR m-health OR 'm health'):ti,ab	324,073
#2 *Virtual care terms, cont.*	((mobile OR digital) NEAR/1 health*):ti,ab	6,902
#3 *Virtual care terms, cont*	((videoconferenc* OR video-conferenc* OR webconferenc* OR web-conferenc* OR webex OR zoom OR skype OR ooVoo OR FaceTime OR Tango OR GoToMeeting OR 'web based' OR web-based OR webbased) NEAR/2 health*):ti,ab	767
#4 *Virtual care terms, cont.*	(tele NEAR/1 (care OR diagnos* OR health* OR intervention* OR manag* OR therap* OR treat* OR medicine OR medical OR prescrib* OR prescript*)):ti,ab	896
#5 *Virtual care terms, cont.*	((remote* OR video* OR internet OR web OR online) NEAR/2 (meet* OR call* OR chat* OR conferenc* OR consult* OR care OR counsel* OR visit*)):ti,ab	11,958
#6 *combining*	#1 OR #2 OR #3 OR #4 OR #5	334,175
#7 *HF terms*	'heart failure'/exp OR (CHF OR CCF OR HFpEF OR HFrEF OR 'systolic dysfunction' OR 'diastolic dysfunction'):ti,ab	570,806
#8 *HF terms, cont.*	((heart OR cardiac OR cardiogenic) NEAR/1 (failure OR arrest OR shock)):ti,ab	383,299
#9	((preserved OR reduced) NEAR/2 'ejection fraction'):ti,ab	18,518

HF terms, cont.		
#10 *T2DM terms*	'non insulin dependent diabetes mellitus'/exp OR (DM OR DM2 OR DMii OR T2D OR T2DM OR NIDDM OR IDDM OR MODY):ti,ab	360,063
#11 *T2DM terms, cont.*	(diabet* NEAR/2 ('type 2' OR 'type two' OR II OR 'adult onset' OR adult-onset OR noninsulin OR 'non insulin' OR non-insulin OR maturity-onset OR 'maturity onset' OR 'slow onset' OR slow-onset)):ti,ab	249,817
#12 *COPD terms*	'chronic obstructive lung disease'/exp OR (COPD OR COAD OR emphysema*):ti,ab	196,655
#13 *COPD terms, cont.*	(obstruct* NEAR/2 (pulmonary OR lung* OR airflow* OR airway* OR bronch* OR respirat*)):ti,ab	130,569
#14 *COPD terms, cont.*	(chronic NEAR/2 bronchit*):ti,ab	17,776
#15 *combining*	#7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14	1,242,111
#16 *combining*	#6 AND #15	17,245
#17 *Animal-only study exclusion*	#16 AND [humans]/lim	15,940
#18 *Population exclusion*	#17 NOT (([child]/lim OR [infant]/lim OR [newborn]/lim OR [preschool]/lim) NOT ([adult]/lim OR [middle aged]/lim OR [young adult]/lim))	15,600
#19 *Study designs*	'randomized controlled trial'/exp OR 'crossover procedure'/exp OR 'double blind procedure'/exp OR 'single blind procedure'/exp OR randomization:ti,ab OR randomisation:ti,ab OR randomized:ti,ab OR randomised:ti,ab OR randomly:ti,ab OR crossover:ti,ab OR 'cross over':ti,ab OR placebo:ti,ab OR 'double blind':ti,ab OR 'double blinded':ti,ab OR 'single blind':ti,ab OR 'single blinded':ti,ab OR 'clinical study'/exp OR 'clinical trial':ti,ab OR 'clinical trials':ti,ab OR 'controlled study'/exp OR 'evaluation study'/exp OR 'evaluation study':ti,ab OR 'evaluation studies':ti,ab OR 'intervention study'/exp OR 'intervention study':ti,ab OR 'intervention studies':ti,ab OR 'case control study'/exp OR 'case control':ti,ab OR 'cohort analysis'/exp OR cohort:ti,ab OR cohorts:ti,ab OR longitudinal:ti,ab OR longitudinally:ti,ab OR prospective:ti,ab OR prospectively:ti,ab OR retrospective:ti,ab OR 'follow up'/exp OR 'follow up':ti,ab OR 'comparative effectiveness'/exp OR 'comparative study'/exp OR 'comparative study':ti,ab OR 'comparative studies':ti,ab	17,359,756
#20 *Study designs*	'pre post':ti,ab OR prepost:ti,ab OR 'post test':ti,ab OR posttest:ti,ab OR pretest:ti,ab OR 'pre test':ti,ab OR 'quasi experiment':ti,ab OR quasiexperiment:ti,ab OR 'quasi experimental':ti,ab OR quasiexperimental:ti,ab OR quasirandom:ti,ab OR 'quasi	132,600

	random':ti,ab OR 'quasi control':ti,ab OR quasicontrol:ti,ab OR 'repeated measure':ti,ab OR 'repeated measures':ti,ab	
#21 *Study designs*	('time series':ti,ab AND interrupt*:ti,ab) OR (before:ti,ab AND after:ti,ab) OR (before:ti,ab AND during:ti,ab)	1,360,078
#22 *Study designs*	'time points':ti,ab AND (multiple:ti,ab OR one:ti,ab OR two:ti,ab OR three:ti,ab OR four:ti,ab OR five:ti,ab OR six:ti,ab OR seven:ti,ab OR eight:ti,ab OR nine:ti,ab OR ten:ti,ab OR month:ti,ab OR monthly:ti,ab OR day:ti,ab OR days:ti,ab OR daily:ti,ab OR week:ti,ab OR weekly:ti,ab OR hour:ti,ab OR hourly:ti,ab)	115,754
#23 *combining*	#19 OR #20 OR #21 OR #22	17,784,738
#24 *combining*	#18 AND #23	11,324
#25 *exclusions*	#24 NOT ('case report'/exp OR 'case study'/exp OR 'editorial'/exp OR [editorial]/lim OR 'letter'/exp OR [letter]/lim OR 'note'/exp OR [note]/lim OR [conference abstract]/lim OR 'conference abstract'/exp OR 'conference abstract'/it)	6,461

Database: Cochrane Central Register of Controlled Trials (via Ovid)
Search date: 6/29/2021
Note: through May 2021

Search Set	Search Strategy	Results
#1 *Virtual Care terms*	exp Telemedicine/ or exp Remote Consultation/ or Videoconferencing/ or Telephone/ or exp Cell Phone/ or exp Computers, Handheld/ or (virtual or virtually or telehealth or tele-health or telemedicine or tele-medicine or telemedical or tele-medical or telecare or tele-care or teleconsult* or tele-consult* or telecommunicat* or tele-communicat* or telemanag* or tele-manag* or telehome or tele-home or telepharmac* or tele-pharmac* or telecardiol* or tele-cardiol* or tele-cardiac or teleintervention* or tele-intervention* or teleconferenc* or tele-conferenc* or telephon* or tele-phon* or cellphon* or cell-phon* or smartphon* or "mobile phone" or "mobile phones" or e-visit* or evisit* or e-care or ecare or e-consult* or econsult* or e-diagnos* or ediagnos* or e-medicine or emedicine or e-physician* or ephysician* or eclinician* or e-clinician* or e-pharm* or epharm* or "communication technology" or "communication technologies" or eHealth or e- health or "e health" or mHealth or m-health or "m health").ti,ab.	44,030
#2 *Virtual care terms, cont.*	((mobile or digital) adj health*).ti,ab.	1,594
#3 *Virtual care terms, cont*	((videoconferenc* or video-conferenc* or webconferenc* or web-conferenc* or webex or zoom or skype or ooVoo or FaceTime or	277

	Tango or GoToMeeting or "web based" or web-based or webbased) adj2 health*).ti,ab.	
#4 *Virtual care terms, cont.*	(tele adj (care or diagnos* or health* or intervention* or manag* or therap* or treat* or medicine or medical or prescrib* or prescript*)).ti,ab.	182
#5 *Virtual care terms, cont.*	((remote* or video* or internet or web or online) adj2 (meet* or call* or chat* or conferenc* or consult* or care or counsel* or visit*)).ti,ab.	3,208
#6 *combining*	1 or 2 or 3 or 4 or 5	46,651
#7 *HF terms*	exp Heart Failure/ or (CHF or CCF or HFpEF or HFrEF or "systolic dysfunction" OR "diastolic dysfunction").ti,ab.	14,236
#8 *HF terms, cont.*	((heart or cardiac or cardiogenic) adj1 (failure or shock or arrest)).ti,ab.	33,892
#9 *HF terms, cont.*	((preserved or reduced) adj2 "ejection fraction").ti,ab.	2,416
#10 *T2DM terms*	exp Diabetes Mellitus, Type 2/ or (DM or DM2 or DMii or T2D or T2DM or NIDDM or IDDM or MODY).ti,ab.	30,890
#11 *T2DM terms, cont.*	(diabet* adj2 ("type 2" or "type two" or II or "adult onset" or adult-onset or noninsulin or "non insulin" or non-insulin or maturity-onset or "maturity onset" or "slow onset" or slow-onset)).ti,ab.	42,140
#12 *COPD terms*	exp Pulmonary Disease, Chronic Obstructive/ or (COPD or COAD or emphysema*).ti,ab.	19,378
#13 *COPD terms, cont.*	(obstruct* adj2 (pulmonary or lung* or airflow* or airway* or bronch* or respirat*)).ti,ab.	16,735
#14 *COPD terms, cont.*	(chronic adj2 bronchit*).ti,ab.	1,877
#15 *combining*	7 or 8 or 9 or 10 or 11 or 12 or 13 or 14	109878
#16 *combining*	6 and 15	4,022
#17 *Animal-only study exclusion*	16 not (exp animals/ not exp humans/)	4,022
#18 *Population exclusion*	17 not ((exp adolescent/ or exp child/ or exp infant/) not exp adult/)	4,008
#19 *Study designs*	exp Evaluation Studies as Topic/ or exp Cohort Studies/ or exp Longitudinal Studies/ or (randomized or randomised or randomization or randomisation or placebo or randomly or trial or groups or "clinical trial" or "clinical trials" or "evaluation study" or	1,390,806

	"evaluation studies" or "intervention study" or "intervention studies" or cohort or longitudinal or longitudinally or prospective or prospectively or "follow up" or "comparative study" or "comparative studies" or nonrandom or "non-random" or nonrandomized or "non-randomized" or nonrandomised or "non-randomised" or quasi-experiment* or quasiexperiment* or quasirandom* or quasi-random* or quasi-control* or quasicontrol* or "pre-post" or posttest or "post-test" or pretest or "pre-test" or "repeated measure" or "repeated measures").ti,ab.	
#20 *Study designs*	("time series" and interrupt*).ti,ab.	395
#21 *Study designs*	("time points" and (multiple or one or two or three or four or five or six or seven or eight or nine or ten or month or monthly or day or daily or week or weekly or hour or hourly)).ti,ab.	20,644
#22	19 or 20 or 21	1,391,931
#23	18 and 22	3,637

APPENDIX B. STUDY CHARACTERISTICS TABLE

Study Country # Enrolled # Arms Funding Source Companion Paper	Type of intervention Frequency Duration	Eligibility	Population Mean Age (SD) Female % Race % VA based	Outcomes Types	Risk of Bias for Objective and Patient-Reported Outcomes
Congestive heart failure					
Hansen, 2018[28] Germany 210 patients 3 arms Abbott	Remote monitoring +telephone; Remote monitoring + in-person; Remote monitoring + automated telemetry follow-up Quarterly 12 months	Inclusion criteria: (1) 18-80 years; (2) CHF w/ LVEF ≤ 35%, NYHA class I-III; (3) home infrastructure to support use of a home transmitter and status post ICD/CRT-D implantation (new, upgrade, or generator replacement). Exclusion criteria: (1) 2nd degree Mobitz type II AV block; (2) 3rd degree AV block; (3) severe renal insufficiency; (4) less than 1-year life expectancy; (5) pregnant; (6) already enrolled in a study; (7) MI/ cardiac catheter within 3 months prior to the study.	Mean age: 65.1 (10.1) Female: 14.8% Race: NR Not VA based	NYHA class/symptoms Hospitalization	Objective: Unclear Patient reported: High
Type 2 diabetes mellitus					
Jeong, 2018[27] South Korea 338 patients 3 arms	Remote Monitoring + video; In-person 3 times 24 weeks	Inclusion criteria: T2DM with A1c range 7-11%. Exclusion criteria: (1) using insulin (basal or premixed insulin) more than twice a day; (2) unable to use a personal	Mean age: 53 (9.10) Female: 33% Race: NR Not VA based	A1c ER visits Hospitalization	Objective: Low Patient reported: Low

Korea Ministry of Health & Welfare		computer to access the Internet at home; (3) acute illness, liver dysfunction, renal dysfunction, or chronic lung disease, or any other medical conditions that could affect glycemic level.			
Klingeman, 2017[24] USA 60 patients 2 arms University of Michigan	Telephone and email monitoring; In-person Variable number of contacts per patient 1 year	Inclusion criteria: (1) adults w/ T2DM w/ 3+ diabetes meds +/- insulin; (2) A1c >/= 8%, </= 11; (3) able and willing to use telephonic communication regularly between visits; and (4) new patients prior to first visit to the endocrinology clinic. Exclusion criteria: (1) non-English speakers; (2) patients already treated by an endocrinologist; (3) shortened life expectancy.	Mean age: 54.4 (9.6) Female: 47% Race: 87% White; 10% Black; 2% Hispanic; 2% Other Not VA based	A1c ER visits Hospitalization	Objective: High Patient reported: High
Rasmussen, 2016[29] Denmark 40 patients 2 arms Danish National Health Department	Video visits conducted via specialized equipment (TandBerg E20) 3 weeks	Inclusion criteria: (1) live at home; (2) able to communicate by video telephone; (3) no psychiatric disorders; (4) age 40-85 years; (5) able to administer medication themselves. Exclusion criteria: (1) type 1 diabetes mellitus; (2) speech disabilities; (3) non-Danish speakers; (4) severe chronic disease (renal failure, liver insufficiency, current cancer treatment).	Median age: 62.7 Female: 32% Race: 100% White Not VA based	A1c	Objective: Low Patient reported: NA
Whitlock, 2000[30] USA 28 patients	Video telemedicine was delivered via the Aviva tele-care equipment	Inclusion criteria: (1) adults with a A1c > 8%; (2) diagnosis of T2DM.	Mean age: 63 (NR) Female: 61% Race: NR Not VA based	A1c	Objective: High

2 arms Department of Defense	which included a blood pressure meter and an electronic stethoscope. Nurse case manager contact once a week and physician contact once a month 3 months	Exclusion criteria: (1) inability to use equipment; (2) pending surgery; (3) documented psychiatric history; (4) A1c < 8.0%.			Patient reported: Unclear

Abbreviations. A1c = Hemoglobin A1c; AV = atrioventricular; CHF = congestive heart failure; CRT -D = cardiac resynchronization therapy-defibrillator; ER = emergency room; ICD = implanted cardioverter defibrillator; LVEF = left ventricular ejection fraction; MI = myocardial infarction; NR = not reported; NYHA= New York Heart Association; T2DM = type 2 diabetes mellitus.

APPENDIX C. INTERVENTION CHARACTERISTICS TABLE

Author, Year # Enrolled # Arms	Intervention description	Mode of intervention Platform Type of Clinician(s)	Frequency of contacts Duration of contact	Data available at the time of the virtual interaction	Comparator
Congestive heart failure					
Hansen 2018 [28] 210 patients 3 arms	Patients with CHF followed for 12 months between first and 13th month post-implantation of ICD/CRT-D – 1 arm with remote telemetry monitoring with automated quarterly follow-up and a second arm in which patients received personal, scheduled quarterly follow-up. Personal contact arm randomized to phone vs in-person contact for follow-up (comparison of interest).	Remote monitoring + telephone; Remote monitoring + in-person; Remote monitoring + automated follow-up Remote monitoring and automated follow-up were reported via Merlin.net and "Merlin@Home"™ transmitter Cardiologist	4 phone contacts; 4 face-to-face contacts 12 months	ICD/CRT-D telemetry data	Arm 1: Remote monitoring + in-person, previously scheduled visits; Arm 2: Remote monitoring + automated follow-up
Type 2 diabetes mellitus					
Jeong, 2018 [27] 338 patients 3 arms	Three arms (1 usual care, 2 active intervention); comparison of interest among 2 intervention arms Telemonitoring group: involves asynchronous transmission of home glucose values via "Smart Care Unit" and receives automated responses by algorithm and weekly general DM education with in-person follow-up on 8, 16, 24 weeks	Video; In-person Smart care unit: personal tablet with abilities to: (1) video conference and text message endocrinologist; (2) auto-transmit blood glucose data from patient's glucometer; (3) provide additional	8, 16, 24 weeks 24 weeks	Remote monitoring home glucose values; body composition analyzer	Arm 1: Conventional care; Arm 2: telemonitoring with all visits in-person

	Telemedicine group: involves telemonitoring as described but follow-up with endocrinology were by video at weeks 8 and 16 while 24-week follow-up was in person.	information to support diabetes self-care. Endocrinologist			
Klingeman, 2017 [24] 60 patients 2 arms	The intervention consisted of endocrinology clinic-initiated and pre-scheduled phone calls or emails; frequency of interaction was tailored to each patient. Interactions consisted of reviewing glucose readings and monitoring blood pressure. Ad hoc clinic visits could be added as indicated, and pre-scheduled contact intervals adjusted.	Telephone; In-person; email Endocrinologist	Variable "tailored" per patient 1 year	BP, glucose checks	Usual In-person care
Rasmussen, 2016[29] 40 patients 2 arms	Tested home treatment of T2DM by video consultation versus standard outpatient care. Patients who completed higher-level T2DM care with an endocrinologist for poor metabolic control were transferred back to their GP at the completion of this care (usually 3 weeks). The intervention consisted of video consultations alternating between the clinician or nurse and patient. The control group attended outpatient visits.	Video Videophone (model TandBerg E20) Endocrinologist; Nurses	NR 3 weeks	BP	Usual In-person care
Whitlock, 2000[30] 28 patients	Over a 3-month study period, the intervention group received weekly telemonitoring (voice and video interaction) visits by the case manager and once a	Video Video system: Aviva 20/20 and then 10/10	Nurse case manager contact once a week and physician contact once a month	Data from case manager: blood glucose readings, blood pressure, weight,	Usual In-person care

2 arms	month physician telemedicine (voice and video interaction) visits compared to the control group which received usual care. For intervention participants, the case manager, internist, and family practitioner emailed about the patient's status, progress, and medication.	Internist, family practitioner, case manager	3 months	hypoglycemic episodes	

Abbreviations. BP = blood pressure; CHF = congestive heart failure; CRT -D = cardiac resynchronization therapy-defibrillator; GP = general practitioner; ICD =implanted cardiac defibrillator; T2DM = type 2 diabetes mellitus

APPENDIX D. REPORTED OUTCOMES TABLE

Study	Outcomes reported
Type 2 diabetes mellitus	
Jeong, 2018[27]	- Change in A1c
Klingeman, 2017[24]	- Change in A1c
Rasmussen, 2016[29]	- Change in A1c
Whitlock, 2000[30]	- Change in A1c
Klingeman, 2017[24]	- Hospitalization
Klingeman, 2017[24]	- Hospitalization
Jeong, 2018[27]	- ED attendance
Klingeman, 2017[24]	- ED attendance
Congestive heart failure	
Hansen, 2018[28]	- NYHA class/symptoms
Hansen, 2018[28]	- Hospitalization
Harms	
Jeong, 2018[27]	- Adverse events - Death
Klingeman, 2017[24]	- Hypoglycemia
Other utilization outcomes	
Hansen, 2018[28]	- Unscheduled follow-ups - Proportion of all follow-ups that had disease-relevant findings
Klingeman, 2017[24]	- Additional diabetes education - Face-to-face visits - Phone calls - Emails
Rasmussen, 2016[29]	- Consultations
Other clinical outcomes	
Hansen, 2018 [28]	- Arrhythmias - Number of delivered/appropriate ICD Therapies - Changes in QoL - All-cause mortality
Jeong, 2018 [27]	- Frequency of hypoglycemia - Changes in fasting blood glucose - Lipid profiles

	- Body weight - BMI - Percent achieving goal A1c - Compliance with medications - Compliance with self-monitoring of blood glucose - Labs: AST, ALT, creatinine
Klingeman, 2017[24]	- Statin use - Insulin use - Foot ulcers - Blood pressure - BMI
Rasmussen, 2016[29]	- Mean glucose - Systolic blood pressure - Diastolic blood pressure - Cholesterol - LDL - Weight
Whitlock, 2000[30]	- Total body weight - Microalbumin - Creatinine - Triglycerides - LDL
Other outcomes	
Whitlock, 2000[30]	- DQOL survey and SF36 - Clinician survey (limited results reported in this paper)

Abbreviations. A1c = hemoglobin A1c; ALT = alanine aminotransferase; AST = aspartate aminotransferase; BMI = body mass index; DQOL = Diabetes Quality of Life; ED = emergency department; ICD = implanted cardio-defibrillator; LDL = low density lipoprotein cholesterol; NYHA = New York Heart Association; QoL = quality of life; SF36 = Medical Outcome Study Health Survey

APPENDIX E. EXCLUDED STUDIES

	Exclusion Reason					
Study	**Not OECD**	**Not Population**	**Not Intervention**	**Not Outcomes**	**Not Comparator**	**Not Design**
Antonicelli, 2010[1]			X			
Basudev, 2016[2]			X			
Bekelman, 2015[3]			X			
Benatar, 2003[4]			X			
Bentley, 2014[5]			X			
Berkhof, 2015[6]			X			
Biermann, 2000[7]		X				
Blumenthal, 2014[8]			X			
Bowles, 2009[9]			X			
Brandon, 2009[10]			X			
Carral, 2015[11]		X				
Cartwright, 2013[12]			X			
Chen, 2019[13]	X					
Chen, 2011[14]	X					
Choe, 2005[15]			X			
Chwalow, 1989[16]			X			
Clifford, 2005[17]			X			
Cohen, 2020[18]					X	
Comin-Colet, 2016[19]			X			
Creason, 2001[20]			X			
Cui, 2013[21]			X			
Dadosky, 2018[22]			X			
Dale, 2007[23]						X
Dansky, 2008[24]			X			
Dansky, 2009[25]			X			
de la Porte, 2007[26]			X			

	Exclusion Reason					
Study	**Not OECD**	**Not Population**	**Not Intervention**	**Not Outcomes**	**Not Comparator**	**Not Design**
De Simone, 2015[27]			X			
de Vries, 2011[28]			X			
Dienstl, 2011[29]						X
Dixon, 2020[30]					X	
Doyle, 2017[31]			X			
Durso, 2003[32]			X			
Egede, 2018[33]			X			
Egede, 2017[34]			X			
Ell, 2012[35]		X				
Farrero, 2001[36]			X			
Farsaei, 2011[37]	X					
Gamez-Lopez, 2012[38]			X			
Gellis, 2012[39]			X			
González-Guerrero, 2018[40]			X			
Gorodeski, 2020[41]			X			
Hallberg, 2018[42]			X			
Hansen, 2017[43]			X			
Haynes, 2020[44]			X			
Herold, 2018[45]			X			
Holmen, 2016[46]			X			
Hsu, 2016[47]			X			
Huizinga, 2010[48]			X			
Inoriza, 2017[49]			X			
Jakobsen, 2015[50]		X				
Jakobsson, 2015[51]		X				
Jerant, 2003[52]			X			
Jimenez-Marrero, 2020[53]			X			
Kashem, 2008[54]			X			

	Exclusion Reason					
Study	**Not OECD**	**Not Population**	**Not Intervention**	**Not Outcomes**	**Not Comparator**	**Not Design**
Kashem, 2006[55]			X			
Kaur, 2015[56]	X					
Kessler, 2018[57]			X			
King, 2009[58]			X			
Kobb, 2003[59]		X				
Koehler, 2018[60]			X			
Koehler, 2011[61]			X			
Koehler, 2012[62]			X			
Krein, 2004[63]			X			
LaFramboise, 2003[64]			X			
Lam, 2011[65]					X	
Lauffenburger, 2019[66]					X	
Lauffenburger, 2019[67]					X	
Layman, 2020[68]			X			
Lehmann, 2006[69]			X			
Leichter, 2013[70]		X				
Lilholt, 2017[71]			X			
Liou, 2014[72]	X					
Litke, 2018[73]					X	
Lopez Cabezas, 2006[74]			X			
Lyons, 2016[75]		X				
Majithia, 2020[76]					X	
Martinez, 2013[77]				X		
Mayes, 2010[78]			X			
McElroy, 2016[79]		X				
Moayeri, 2019[80]			X			
Moore, 2017[81]		X				
Morguet, 2008[82]		X				

	Exclusion Reason					
Study	**Not OECD**	**Not Population**	**Not Intervention**	**Not Outcomes**	**Not Comparator**	**Not Design**
Mortara, 2009[83]			X			
Moyer-Knox, 2004[84]						X
Myers, 2020[85]					X	
Nakayama, 2020[86]			X			
Nguyen, 2008[87]			X			
Nield, 2012[88]			X			
Nouryan, 2019[89]			X			
Odegard, 2005[90]			X			
Odeh, 2015[91]			X			
Oh, 2003[92]			X			
Pare, 2006[93]			X			
Pedone, 2015[94]			X			
Perez-Rodriguez, 2015[95]			X			
Polonsky, 2020[96]					X	
Quinn, 2016[97]			X			
Ringbaek, 2015[98]			X			
Rodriguez-Idigoras, 2009[99]			X			
Rüter, 2014[100]			X			
Salvo, 2012[101]						X
Sarayani, 2018[102]	X					
Scalvini, 2005[103]						X
Scalvini, 2006[104]						X
Schmidt, 2019[105]					X	
Smith, 2008[106]				X		
Sorocco, 2013[107]		X				
Steventon, 2014[108]			X			
Stewart, 2015[109]			X			
Stone, 2010[110]					X	

	Exclusion Reason					
Study	**Not OECD**	**Not Population**	**Not Intervention**	**Not Outcomes**	**Not Comparator**	**Not Design**
Tabak, 2014[111]			X			
Taylor, 2009[112]			X			
Veenstra, 2015[113]					X	
Vidula, 2020[114]			X			
Vitacca, 2009[115]		X				
Wakefield, 2012[116]			X			
Wakefield, 2008[117]			X			
Whitten, 2007[118]			X			
Wild, 2016[119]			X			
Woodend, 2008[120]			X			
Wright, 2019[121]			X			
Wu, 2005[122]			X			
Yan, 2018[123]	X					
Yoo, 2009[124]			X			

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APPENDIX F. PEER REVIEW DISPOSITION

Question Text	Reviewer Number	Comment	Response
Are the objectives, scope, and methods for this review clearly described?	1	Yes	
	3	No - All of the KQs are written in this format: "Among adults, what is the effect of synchronous virtual care (*ie*, phone and/or video) compared to in-person care (or phone vs video)..." It is not clear from this wording what is the comparator. I am not sure what "phone vs. video" means in this context. I believe they are trying to say synchronous care compared to in-person care. KQ 4 is not really about patients. It should be reworded. This is really a systems question, not a patient question.	We appreciate the need for clarification in our KQs and have adjusted the wording to clarify that in-person care was an acceptable comparator, but that we would also accept phone if the synchronous care were delivered via video. KQ4 has been reworded to clarify that adverse effects of interest occurred at the patient, clinical team member, and clinic/facility levels.
	4	Yes	
	5	Yes	
	6	Yes	
	7	Yes	
Is there any indication of bias in our synthesis of the evidence?	1	No	
	3	No	
	4	No	
	5	No	
	6	No	
	7	No	
Are there any published or unpublished studies that we may have overlooked?	1	No	
	3	No	
	4	No	
	5	No	
	6	No	
	7	No	

Additional suggestions or comments can be provided below. If applicable, please indicate the page and line numbers from the draft report.	1	The proposed project is of high significance and the research questions are appropriate. The project was very thorough and was well conducted. There seems to be a slight disconnect between paltry number of articles and the potential identified in the horizon scan. For the future, further consideration of increasing the inclusion criteria may be needed. Many of the comments below pertain to the inclusion/exclusion criterion	Noted
	1	For the future – the authors may want to include in addition to inter-individual differences (virtual versus in-person) intra-individual – examining differences within individuals who may be in-person and then for a period go to virtual. Covid as an event may make the intra-individual analyses complex, but it may also increase the potential studies available to inform the proposed questions.	We agree that looking at studies in which a given patient obtained care both virtually and in-person is important. Note that if the study design were appropriate, we would have included such a study but did not find any.
	1	It was surprising not to see hypertension as an area of focus which may be more amenable to virtual.	Note that we focused on studies related to diabetes, CHF, and COPD. They may be studies focusing specifically on synchronous virtual care for hypertension, but they would not have been included. Much work has been done in this area as an addition (vs replacement) to routine in-person care – see 2016 AHRQ review.[31]
	1	The 4 key areas to inform future research is highly significant. The proposal of formal review template for future authors to consider should be emphasized.	We appreciate the reviewer recognizing this point. We made edits to emphasize the importance of having virtual care interventions be thoroughly described in the peer-reviewed literature (see Page 44). Of note, members of this team will be working on a subsequent project further outline the types of key items important to report in future work.
	1	In addition, future discussion on fidelity of interventions, both in-person and virtual should be considered.	We have added this to Table 5 as an important aspect for future study.
	1	One wonders if there is a lot more data related to comparing the two modes of intervention administration, but these data are captured as quality improvement.	We agree and suspect this is the case and included this in the limitations of the existing literature. Future work could look at this literature though often QI does not end up in peer-review journals.

	1	Is it possible that virtual may not necessarily replace all vs. a portion, but also reinforce?	We agree that it is possible for virtual care to reinforce or boost in-person care – this has been the focus of much work previously. See AHRQ review for additional summary of this body of literature.[31]
	1	It would be important to describe how the proposed evidence synthesis differs from the one published in 2016 by AHRQ	We agree and have rewritten the introduction to the 'prior systematic reviews' section on page 40 to clarify the difference between our review and the 2016 AHRQ evidence map.
	1	Page 16. An additional unanswered question is in what context is virtual appropriate or should be used compared to in-person care.	We have added this question on page 18.
	1	Why was there a requirement that selected articles had to have >2 encounters? Did this significantly impacted the selection of articles?	We included this eligibility criteria to focus on literature describing the longitudinal care of a chronic condition compared to a one-time urgent care episode. Our center is working on a separate review of tele-urgent care.
	1	Related why was tele-cardiac and tele-pulmonary studies excluded?	We excluded tele-*rehab* studies because rehabilitation by nature is a discrete, time-limited course of care and so conceptually distinct from longitudinal care of chronic conditions. Of note, there are existing reviews of telecardiac.[46]
	1	Is it worth reporting proportion of disagreements given the low number of identified articles?	Our team had many discussions about eligibility criteria in order to align all team members prior to and during citation screening. All citations were reviewed by two team members at the full text level. Any disagreements were usually related to lack of clarity in description of intervention by a given citation. All disagreements were resolved by the two reviewers or sometimes by the larger study team as needed. Thus, we do not feel that the proportion of disagreements would lend valuable information. Non-specifically, we can share that common reasons for exclusion at full-text included the individual conducting the virtual care visit not being a prescribing

			clinician and the virtual care visit not replacing in-person care.
	1	Given the low number of articles identify, consider further explaining the transition from 129 to 5 included studies. It was not clear what was meant by population – something other than the three conditions?	Yes, articles that are studying a population other than what we have described in our PICOTS table for eligibility were excluded. For example, an otherwise eligible study about patients with thyroid disease or only among children would be excluded by "population".
	1	Worth further justifying/explaining why the focus of the project was on replacing versus adding intervention support.	This focus was chosen by our operations partner as the area of greatest interest. In addition, given the previous extensive work on telehealth as an adjunct to in-person care (see comments above) – it was determined that focusing on replacement of in-person care with virtual care would provide the greatest amount of new information to the large existing evidence base about telehealth.
	3	Beginning on page 13, line 21, it would be helpful if the authors included the citation for the studies that met the inclusion criteria.	Thank you, we do not usually add citations to the executive summary of the reports. The citations for included the included studies are listed in the results section of the main report.
	3	As there are so few studies that met the criteria, it would be helpful to readers for the authors to give some context for the studies that did meet the criteria (*eg,* US/non-US; Veteran population or not; etc.) within the KQs.	Reviewers are directed to the characteristics of included studies sections as well as Table 2 (evidence profile) and Appendix B (study characteristics table).
	3	In Table 2 (page 28), it is not clear why there is a footnote stating that one study had 225 participants. In fact, none of the studies seem to have that number of participants.	Thank you, we clarified the language and corrected the number of patients to 338 in Table 2.
	3	On page 33, line 49, the percentages for the post part of the study are reported in the opposite order of the pre- part of the study.	Thank you, we changed the order of the percentages for the intervention and the control arm at 6-months to match the order at baseline in the 4th paragraph of the Detailed Findings: KQ3a section.
	4	I applaud the study authors for their comprehensive review of the literature and adhering to rigorous methods of study evaluation and reporting. While the overall low number of studies that were able to be included was somewhat surprising (particular for COPD). This observation in and of itself highlights an important and unmet need.	Thank you.

	5	Overall, this Evidence-Synthesis is informative because it highlights the contrast between the paucity of data we have about the effectiveness of telehealth when it *replaces* in-person care, as compared with the large evidence base regarding telehealth when it *supplements* in-person care. The main take-home message of this review is that we still know very little about telehealth as a replacement for in-person care in terms of efficacy, equity, safety, and best practices. VHA, as the largest national program implementing telehealth, is in a unique position to explore these topics in the future.	Acknowledged.
	5	Unfortunately, as indicated above, the actual review of the literature was sparse. With no research in COPD, 1 study in heart failure, and 4 in diabetes- few definitive conclusions can be drawn from the research. This is in striking contrast to the broad expansion of telehealth in light of COVID-19. We really know very little as a field about this practice model. As the authors note, most likely this future evidence base will need to be explored in more pragmatic clinical trials that reflect the likely heterogeneity of what VHA clinics and virtual health clinics see in day-to-day practice. The investigators specifically added a focus on any differences by race/ethnicity, gender, age, and rural status. In light of the scant research and small sample sizes, it is not surprising there was no conclusive evidence for equity concerns. Nonetheless, it is important to start including this in reviews to highlight the need for such analyses in future (and ongoing) research.	Acknowledged. We agree and have added a sentence starting on page 42 to more clearly point to this need in future research.
	5	For this reviewer, one analytic question arose repeatedly throughout the review – what is the appropriate statistical analysis for comparing same-room care verses telehealth? This issue needs more discussion and the field needs more visible guidance. In this reviewer's opinion, the most appropriate framework would be comparative effectiveness research using non-inferiority statistical tests. In the report, it appears (but is not made entirely clear) that the predominant analysis was testing for group differences over time. Therefore, it is difficult to draw a conclusion when there are no group differences, as was predominantly the case. Generally, this would be a good sign, indicating telehealth could be a viable substitute for same-room care if confirmed in future research. If anything, the only indicator of a group difference was superiority for	This is an excellent point. Interestingly, one of our included studies noted a hypothesis which implied an equivalence objective though the study design and analysis did not use non-inferiority methods.[29] We have added discussion of the issue of appropriate statistical analysis to the discussion under "research gaps". And have noted the above point about Rasmussen in the results section. Finally, we also made note the analytical approaches as available in the horizon scan includes.

		telehealth. But again, what do we conclude from null findings in studies that do not appear to be using comparative effectiveness methods? The review authors cannot go back and redesign the studies reviewed but some discuss of the correct statistical analysis for future studies would be helpful.	
	5	In making recommendations for future research, telehealth offers some unique outcomes/process variables that are critical to VHA operations: number of visits, number of missed visits, and consultation time. The finding that veterans had fewer missed visits, but those visits were shorter (presumably more efficient) could make a huge difference IF virtual versus in-person care is non-inferior. This difference has been reported in the mental health telehealth literature. This gets at the question of value of telehealth and it is fairly easy data to collect. So it may be something you want to include in your recommendations for future research.	We appreciate this suggestion and have included this in our “research gaps” section (see page 44, Table 5).
	5	Page 8: The study selection specifications are thoughtful and well-operationalized. On line 59- it indicates that some telehealth interventions could include in-person visits. This needs a little more clarification and justification. Also, does this pertain to the one study reported where this model was used? If so, it could be mentioned that this was rare and the investigators had to make a decision about how to treat this one study. Nonetheless, in the future, it is possible and even likely that mixed telehealth/same room care models will proliferate so this specific inclusion criterion is informative for future work	The study selection specifications on page 9 apply to any screened study. This reviewer makes a good point. We would have included studies that had a mix of in-person and video (even if more than one in-person visit) as long as the video or phone visits replaced in-person visits. We did not find any additional such studies in our search. This is also mentioned in Table 5 as an evidence gap that could be addressed in future research.
	5	Page 11: Line 56-60. The description of the Klingemann study is confusing. Didn’t the protocol control for number of education visits? It is presented as an outcome. The same is true for use of email. Are these types of contact an outcome? The study treatment arms and main outcomes need to be specified more clearly.	In the identified section, we are describing the number of contacts and utilization of participants among those receiving virtual care visits vs usual in-person care. We have clarified the experimental and usual care arm in this paragraph.
	5	Page 12: The lack of differences in adverse events is promising but, of course, not conclusive. For some of the larger sample sizes, would it be helpful to provide N and then percentage? I defer to the authors on this judgement call, but it was hard for the reader to gage the burden of adverse events in the studies reported.	The reviewer makes a good point. We now include percentages to help the reader gauge the burden of adverse events in the studies reported.

	5	Page 13: The discussion of Future Research should include a separate paragraph discussing equity. As telehealth is critical to access to care both during and after pandemics, it is essential VA *does not* build in greater inequity which can only be assessed with research. The discussion of future research may also address the most effective design with a discussion of the relevance or not of comparative effectiveness methods. This reviewer does not require the recommendation of comparative effectiveness methods, but it needs to be discussed intelligently as it is an obvious application in this field of research.	We agree that this is an important point and have added a paragraph on page 45 as recommended.
	5	Page 16: Lines 20-25, one assumes the AHRQ synthesis was NOT addressing telehealth as a substitute for care. If that is the case, this should be made clear as the results discussed contradict what this report is stating. The distinction between “counseling” and “clinic consultation” is not clear. The final paragraph on this page is much more clear and does clarify -but this needs clarity is needed earlier also.	We have revised that line to make clear the AHRQ’s focus on virtual care in addition to in-person care.
	5	Page 17: Lines 33-40. I think this point deserves greater emphasis and placement earlier in the background justification. Chronic heart, lung, and metabolic disease are the bread and butter of VHA primary care and much of its specialty care. Nonetheless, we were thrown into a pandemic with broad telehealth expansion and very little knowledge of effectiveness of this modality. These disorders, in contrast with mental health, often call for physical touch to assess vitals and illness status, so the efficacy of telehealth is not self-evident and requires systematic exploration.	We have revised the sentence highlighted and added this point to the first paragraph of the introduction.
	5	Page 18: For topic development, I wish you would provide better context for the exploration of differences by age, gender, race/ethnicity, and rurality- even though the data was not available. This additional question was truly more than an afterthought to try and find some interesting publishable results. The authors could mention that the pandemic led to the topic choice of telehealth replacing in-person care. Then it is logical to elaborate that the pandemic also revealed the huge fault lines in our public health and health care system regarding race/ethnicity. Research going forward must determine the degree to which innovations are widening those gaps or overcoming them.	We have expanded the description of topic development to include these important points.
	5	Page 21: Given the paucity of studies that met criteria, this reviewer is curious how many studies were excluded because they were	While we do not collect specific details about why each study is excluded at full text review,

		uncontrolled, prospective or retrospective observational studies, or studies that looked at mixed chronic conditions. I am not arguing the inclusion/exclusion criteria but if these numbers are large, it is important to know there is preliminary work that could also guide future more tightly controlled studies. Similarly, on Page 24, it is indicated that 84 studies are excluded based on the intervention investigated. Can there be some narrative of what these were so we understand why this large number of studies were excluded?	some of this information is contained in Figure 2 and appendix E. Of note, there were only 6 studies excluded due to design. Common reasons for excluding studies by intervention included virtual care that supplemented rather than replaced in-person care and virtual care interventions delivered by non-prescribing clinicians. We have added detail to the limitations section (page 44) and to the description of the literature flow (page 27) to clarify this point.
	5	Page 26: Line 25-30: What do the authors mean by “quarterly automated telemetry”? What was this intervention? Did it involve any personal care? It is not clear to me what these intervention arms were.	We added additional text to clarify that that study arm received asynchronous web-based follow-up/review of telemetry data. However, our ability to describe the study further is limited by the somewhat unclear description from the primary paper by Hansen.
	5	Page 30 Lines 30-42: This description is confusing because the treatment arms are confusing. What does it mean that the differences are due to email exchange?	We amended the text to clarify the treatment arms and remote contact as much as able due to available description in the Klingemann article. In addition, we have moved detail about contact between arms to utilization finding section.
	5	Figures 3-5 are excellent.	Thank you.
	5	Page 34: The statistically significant difference by education needs better explanation. What was this actual finding? “Veterans with less than a high school degree.	We amended the text to clarify the results in regards to education.
	6	This is a very clearly written evidence synthesis, focused on how virtual care compares to in person care for people with CHF, COPD or DM.	Thank you.
	6	Page 13, paragraph 4, lines 35-56 – In this paragraph on “Research gaps/future research”, the four key areas outlined are excellent.	Thank you.
	6	Page 30, lines 24-26 and 44-46 – “usual endocrine care” (lines 24-26) and “endocrine care” (lines 44-46) are vague. Is this provided by an endocrinologist (*eg,* in Endocrine or Diabetes Clinic) or in primary care?	We amended the text to be more clear about the setting of the study.

	6	Page 30, lines 30-33 – In what I think is an RCT, the commentary talks about “statistically significant difference was seen at baseline”. In general, tests of significance are not appropriate for baseline data in an RCT. They look at the likelihood that observed differences could have happened by chance when baseline differences in an RCT are 100% likely to be by chance (since participants were randomized).	We agree with this reviewer’s point and have removed reference to statistically significant differences in baseline data but have left the notation that there were potentially clinically significant differences between treatment groups at baseline.
	6	Page 34, lines 12-16 – The report notes “There were statistically significant differences in reduction of A1c for all groups…” It is not clear what is being compared here. Is it high compliance vs. lower compliance?	Yes, the comparison in this study was among patients with high levels of compliance with monitoring blood glucose vs those with low compliance. We amended the text to clarify.
	6	Page 36, lines 27-30 – The sentence “Findings suggested that A1c may decrease…” seems overstated since “this finding was not statistically significant in the one adequately powered, low ROB study”.	We amended the text to clarify and reword the sentence to make it clear that there was suggestion of A1c decrease in only one adequately powered, low ROB study, but that overall conclusions cannot be drawn.
	6	Page 36, lines 35-36 – Change “low ROB studies” to “low ROB study”.	Thank you, this statement was adjusted to reflect the suggested change.
	6	Page 37 – The section “Prior Systematic Reviews” is really important, and a summary of this should make it into the Executive Summary.	We have added a summary of prior systematic reviews to the executive summary as suggested.
	6	Page 39, lines 11-17 – The last two sentences of the first paragraph is really important, pointing out that all of the covered studies took place in specialty clinics, while management of CHF, COPD and DM typically takes place in primary care.	Acknowledged.
	6	Page 40, lines 9-10 – The sentence “Given the standard deviation… would be preferable.” is grammatically incorrect and needs to be edited.	Thank you, this sentence was reworded.
	7	This is an extremely well-written and rigorous report with potential to inform future research in VA as well as short-term policy decisions regarding the use of virtual care (specifically synchronous virtual care as a substitute for in-person care) in specific contexts. It also underscores the critical need for additional research on this topic.	Thank you.

	7	Regarding the research gaps/future research section of the executive summary and the summary and discussion section at the end of the report, the first, third, and fourth noted (virtual care interventions should be thoroughly described, key outcomes were omitted from the reviewed studies, the a priori identification of subgroup evaluations) are less areas of future research focus and more suggestions for reporting and enhancing the quality and rigor of work in this area. The authors may want to consider rephrasing these points as such.	We have rephrased the identified areas for improvement to read “there are 5 key areas in which future research on this topic could fill existing gaps and/or could improve the approach” in both locations in the report.
	7	The distinction that the authors draw in the introduction between use of virtual care to augment usual care and the use of virtual care with only limited in-person evaluation is extremely important and clearly presented. This helps further sharpen the focus (use of synchronous virtual care as a substitute for in-person care in the management of select chronic conditions) of the review.	Thank you.
	7	Given the conceptual model that the authors present, key distinctions are being drawn between “providers” and other “care team members.” The authors appear to use these terms very intentionally throughout the report, but in a small number of instances, I questioned if the terms were being used more casually. The authors are encouraged review and confirm that these terms, along with other terms like “clinicians” are used as intended throughout the report. There are several minor typos across the document that should be corrected.	Thank you for this thoughtful comment. We agree that clarifying our terms is important in this review. We have amended the text to indicate “prescribing clinician” and “clinical team member” and removed instances of “provider/s” from the text. We have reviewed the text and resolved all noted typos.