**Supplementary Table 1. Selection of studies evaluating the use of telemedicine in gastroenterology**

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| **Reference** | **Year** | **Study Design** | **Sample** | **Intervention** | **Control** | **Objective** | **Conclusions** |
| Colorectal cancer |
| Cerezo-Ruiz and Parras-Mejias.(25) | 2016 | Multicenter, randomized controlled trial | Patients within a screening program of CRC; n=54 | Teleconsultation | In-person visit | Assess satisfaction with teleconsultation for CRC screening | • No difference in patient satisfaction |
| Edwards et al.(24)  | 2020 | Quality improvement | Patients who underwent resection for stage I to III CRC at a VA facility in Nashville, TN; n=160 | Implementation of a “virtual surveillance clinic” | Standard care | Increase proportion of patients completing endoscopic surveillance post-CRC resection | • Increase from 57% to 84% of patients undergoing surveillance endoscopy (p = 0.001)• Decrease in median time from resection to endoscopy from 1.19 to 1.0 years (p = 0.006) |
| Inflammatory bowel disease |
| Cross et al.(34) | 2016 | Retrospective | IBD patients at an IBD clinic at a tertiary referral center in Baltimore, MD; n=21 | Televisit | None | Assess televisit experience with VidyoDesktop software | • 65% of patients felt televisit platform was not complicated; 88% had no or little difficulty with hearing/seeing provider; 71% felt visit took less time than face-to-face. • 53% felt televisits saved 1-3 hours; 41% saved > 3 hours• 95% would like to have televisit again in future |
| Cross et al.(36)  | 2019 | Multicenter, randomized controlled trial | Patients at 3 academic medical centers in the USA; n=348 | Telemonitoring weekly (W) or every other week (EOW) | Standard care | Assess impact of IBD-TELE program on disease activity, quality of life, and utilization of healthcare resources | • No difference in improvement of disease activity and quality of life with TELE-IBD.• TELE-IBD participants in the weekly (W) arm experienced a decrease in hospitalizations (control: 14.7 to 16.4 encounters/100 participants, TELE-IBD W 24.1 to 9.8; p = 0.04)• However, there was also an increase in non-invasive diagnostic tests, telephone calls, and electronic encounters |
| de Jong et al.(37) | 2017 | Multicenter, randomized controlled trial | IBD patients at two academic and two non-academic hospitals in the Netherlands; n=909  | Telemonitoring | Standard care | Assess number of outpatient visits, patient-reported quality of care, and safety with myIBDcoach | • Telemonitoring group was associated with lower number of outpatient visits (1.55 vs 2.34, p<0.0001), and hospital admissions (0.05 vs 0.10, p<0.046)• No difference in quality of care scores, number of flares, corticosteroid courses, emergency visits, and surgeries.  |
| de Jong et al.(38) | 2017 | Multicenter, randomized controlled trial | IBD patients at two academic and two non-academic hospitals in the Netherlands; n=909 | Telemonitoring | Standard care | Compare healthcare costs with myIBDcoach | • Telemonitoring was associated with lower mean annual costs ($9965 vs $10587) |
| Li et al.(33) | 2017 | Retrospective | IBD patients at an IBD clinic in Hanover, NH; n=48 | Post-televisit | Pre-televisit | Assess quality outcomes using televisits via Virtual Visit and VidyoDesktop software | • With televisit, 98% of patients felt there was enough time; 91% felt that physicians understood their disease state; 78% clearly understood follow-up plan• No difference in steroid use (25% vs 15%, OR 0.51, P = 0.21), biologic therapy exposure (71% vs 77%, OR 1.39, P = 0.49), use of narcotics (4% vs 2%, OR 0.50, P = 0.57) |
| Shah et al.(35)  | 2021 | Retrospective | IBD patients at an IBD clinic at a tertiary referral center in Nashville, TN; n=2571 | Televisit | None | Assess televisit experience  | • Increasing age (OR 1.80), noncommercial insurance status (OR 1.89), and black race (OR 2.07), all P < 0.05 was associated with increased likelihood of a video encounter failure |
| Irritable bowel syndrome |
| Everitt et al.(42) | 2019 | Multicenter, randomized controlled trial | Patients with IBS at primary care and GI outpatient clinics in Southampton, UK and London, UK; n=323 | Telephone or web-based cognitive behavioral therapy (CBT) | Standard care | Assess effect of telemedicine on IBS Symptom Severity Score (IBS-SSS) and Work and Social Adjustment Scale (WSAS) | • At 24 months, mean IBS-SSS was 40.5 points lower in telephone-CBT group (p=0.002) and 12.9 points lower in the web-CBT group (p=0.33). • Mean WSAS score was 3.1 lower in the telephone-CBT group (p<0.001) and 1.9 points (0.036) in the web-CBT group |
| Celiac disease |
| Costa et al.(46) | 2019 | Prospective | Celiac disease patients on gluten-free diet in a Celiac disease clinic in Buenos Aires, Argentina; n=44 | Stool and urine gluten immunogenic peptide (GIP) testing | None | Assess performance of ELISA and point-of-care (POC) tests for GIP excretion | • GIP was concordant with dietary reports in 65.9% of cases• GIP can detect dietary transgressions irrespective of symptoms; excretion of GIP was detected in 8.4% of stool and/or urine samples from patients who reported strict compliance with a gluten-free diet  |
| Tangermann et al.(48) | 2019 | Prospective | Patients at 8 endoscopy centers in Germany; n=1055 | Simtomax point-of care test (detects deamidated gliadin peptide IgA and IgG antibodies | None | Assess accuracy of Simtomax point-of-care test | • Simtomax POC test identified patients with Celiac disease with 79% sensitivity and 94% specificity. Positive and negative predictive values were 37% and 99%. • In subset of adult patients, the test had a sensitivity of 100% and specificity of 95% |
| Chronic liver disease |
| Arora et al.(49) | 2011 | Prospective  | Patients with Hepatitis C infection at a university HCV clinic and primary care physicians in rural areas and prisons in New Mexico; n=407 | Treatment by primary care providers in the Extension for Community Healthcare Outcomes (ECHO) program  | Treatment by physicians at a university clinic | Compare sustained virologic response | • Similar sustained viral response rates between patients treated at a university clinic and those treated at an ECHO site (57.5% vs 58.2%, P=0.89)• Treatment at an ECHO site was associated with a lower rate of serious adverse events (6.9% vs 13.7%, P=0.02)  |
| Cooper et al.(50) | 2017 | Retrospective  | Patients followed for Hepatitis C in Eastern Ontario, Canada; n=1287 | Televisit | Standard care  | Compare sustained virologic response | • Similar sustained viral response rates with direct-acting antiviral regimens between patients treated via televisits and those treated via face-to-face visits (94.7%v vs 94.8%, P=0.99) |
| Ganapathy et al.(55) | 2017 | Prospective | Hospitalized patients with cirrhosis; n=40 | Telemonitoring  | None | Proof of concept for Patient Buddy App | • 17 patients were readmitted within 30 days but none for hepatic encephalopathy; authors estimate 8 potential hepatic encephalopathy-related readmissions were prevented |
| John et al.(51) | 2020 | Retrospective | Veterans who underwent evaluation for liver transplantation in Richmond, VA; n=465 | Televisit | In-person visit  | Compare effects on placement on liver transplant waitlist | • Televisits were associated with a reduction in time from referral to evaluation (HR 0.15, 95% CI 0.09-0.21, P<0.01) and listing (HR 0.26, 95% CI 0.12-0.40, P<0.01)• There was no difference in pre-transplant mortality  |
| Le et al.(53) | 2019 | Prospective | Liver transplant recipients at a transplant center in Los Angeles, CA; n=21 matched | Televisit | In-person visit | Assess impact of telemedicine on patient satisfaction and healthcare utilization  | • Patient satisfaction was similar between groups (P=0.89)• Televisits were associated with shorter commute and waiting times (both P<0.0001) |
| Lee et al.(58) | 2019 | Randomized controlled trial | Liver transplant recipients at a transplant center in Cincinnati, OH; n=100 | Telemonitoring | Standard care | Assess impact of telemonitoring | • Patients in the telemonitoring arm had a lower 90-day readmission rate compared with standard of care (28% vs 58%, P=0.004)• Telemonitoring was also associated with improved quality of life regarding physical function (P=0.02) and general health (P=0.05)  |
| Endoscopy |
| Påhlsson et al.(57) | 2013 | Prospective | Patients undergoing ERCP on a rural Swedish island; n=26 | Telementoring | None | Assess impact of teleguided ERCP procedures  | • Common bile duct cannulation was achieved in all cases• Local endoscopists reported teleguidance was crucial in 8 of the 26 cases, an important factor in 8, and less important in 10 cases• Overall cannulation rate increased from 85% to 99% at the local hospital after initiation of teleguided support |