

Supplement

List of included studies provided in pages 21-26 of this supplement.

Table: Summary of digital health innovations (DHI) implemented for non-communicable disease (NCD) management in COVID-19 pandemic era.

| SL No | Author last name | DHI | Summary of DHI | Communication medium/device | Non-digital/ non-remote component of DHI (if any) | Mode of delivery | Online platform used | Security/ ethical aspects | Financial aspects | Targeted NCD | Comparison |
|---|----------------------------|--|---|---|---|---------------------------------|---|---------------------------|---|--------------------|-------------------|
| Mental health (Including neurological & neurodevelopmental disorders) | | | | | | | | | | | |
| 1 | Banks2021 ¹ | Telemedicine Low-cost high Value E-care (LoVE)-virtual clinics | Telemedicine. Low-cost high Value E-care (LoVE)-virtual clinics. OPD clinic appointments over telephone calls, emails. | Telephonic calls, Emails | - | Remote | No online platform | Unclear | Unclear | Chronic epilepsy | Pre-pandemic data |
| 2 | Budhwani2021 ² | Virtual care management Part of Women's Virtual | Part of Women's Virtual. Virtual care and virtual registration, scheduling, check-in, management. Video and phone. | Video and phone | Option of in-person visits | Remote with option of in-person | Zoom, EPIC Electronic medical record (EMR) portal integrated MyHealthRecord | Secure; details unclear | Billing codes for phone & video visits | Mental health | Pre-pandemic data |
| 3 | Carroll2021 ³ | Telehealth outpatient consultation and rehabilitation services | Telehealth video conference and call-consultations/ review, therapy, rehab, group and individual, interdisciplinary assessment. | Videoconference and call | - | Remote | MS teams, call | Unclear | Unclear | Mental health | None |
| 4 | Cooper2021 ⁴ | Telemedicine Cognitive well-being intervention | Group-based, videocall, cognitive well-being intervention (multiple intervention domains). | Step-counting watch, food package, video call | Non-perishable food delivery; a step-counting watch; session materials provided to participants before intervention start | Both | Zoom | Unclear | Initial £18 worth food package provided to participants | Dementia | None |
| 5 | d'Arma2021 ⁵ | "Virtual Instrument fOr healthy Lifestyle Adherence" Healthy lifestyle promotion | "Virtual Instrument fOr healthy Lifestyle Adherence" lifestyle promotion (multiple intervention domains). Computer or phone. | Computer or phone | - | Remote | VIOLA app (Virtual Instrument fOr healthy Lifestyle Adherence) | Unclear | Unclear | Multiple sclerosis | None |
| 6 | Davenport2021 ⁶ | Pre-clinic triage | Person-centred care: Data collection, storage, | Unclear | - | Remote | InnoWell platform | Unclear | Unclear | Mental health | None |

| | | | | | | | | | | | |
|----|--|---|--|--|---|---------------------------------|---|--|--|---------------|------|
| | | | scoring, transmission, self-management, early intervention, shared decision making, routine outcome monitoring. Personalised, measurement-based care model of care. | | | | | | | | |
| 7 | Di Lorito ²⁰²¹ ⁷ | Tele-rehabilitation | Tele-rehabilitation- Video patient consultation. | Video | - | Remote | Q-health | Secure access by one-time use code | Unclear | Dementia | None |
| 8 | Gromatsky 2021 ⁸ | VA Caring for Our Nation's Needs Electronically. | VA Caring for Our Nation's Needs Electronically behavioural therapy, psychoeducation & support. Telehealth | Phone | - | Remote | VA CONNECT, Qualtrics, VA WebEx and/or VA video connect (VVC) | Encrypted, Health Insurance Portability and Accountability Act (HIPAA)-compliant Veterans health administration (VHA) videoconferencing platform | Health Insurance Portability and Accountability Act (HIPAA) | Mental health | None |
| 9 | Guan ²⁰²¹ ⁹ | FOCUS program Virtual continuity of care including rehabilitation and support | FOCUS program. Virtual multidisciplinary continuity of care visits by telephone/online tele-health platforms. Monitoring, management, guidance, assistance, rehabilitation, recovery support. | Mobile phones and tablet computers | Option of in-person visits | Remote with option of in-person | Zoom | Privacy-compliant | Limited mobile phones and tablet computers, with data plans, mobilized from public and corporate donors. | Mental health | None |
| 10 | Hom ²⁰²⁰ ¹⁰ | Virtual/remote partial hospital program (PHP) Stepping down from In-patient care management | Virtual/remote partial hospital program (PHP) based on day of care. Packet emailed to patient with information and resources/ handouts. Videoconferencing. Group meetings. Individual tutorial, assessment and goal setting, behavioural therapy, meeting, after care planning, individualized therapy | Email, video, videoconferencing, patient package | Evaluation of patient by inpatient team | Both | Zoom | Unclear | Unclear | Mental health | None |

| | | | | | | | | | | | |
|----|----------------------------|--|--|--|---|-----------|---|--|---|--------------------------|------|
| | | | planning, medication management, therapy sessions, vocational counselling, 1 family meeting (encouraged) | | | | | | | | |
| 11 | Kidorf2021 ¹¹ | Medminder "Jon" version electronic pillbox Take home medicine management | Commercially available Medminder "Jon" version electronic pillbox. Take-home medicine management: alerts/audio & visual prompts, pre-programmed time windows & auto unlock at medication time. Staff reprogrammable, monitoring (e.g. suspected tampering), support & counselling. | Pillbox, Telephonic call | In-person refill visits, nurse monitoring, prescription cards | Both | Medminder website. | HIPAA-compliant. Secure cloud-based server (without patient identifiers) via an autonomous cellular signal independent from patient cellular access. | Monthly pillbox lease costs covered by Johns Hopkins Bayview Medical Center (\$40.00/pillbox; ~\$1.00/day). HIPAA-compliant | Substance abuse disorder | None |
| 12 | Kim2021 ¹² | Exercise management strategy | Remotely supervised technology-based, reinforcing, and multimodal exercise management strategy. Recorded video-guided exercise, reminders. Individualized monitoring and management. | Smartphone, Videos | For app install on smartphones and information provision. | Both | Customized app | Unclear | Unclear | Parkinsonism | None |
| 13 | Levinson2021 ¹³ | Telehealth exposure-based Intensive outpatient program (IOP) | Telehealth exposure-based IOP (includes all initial assessment & intake procedures). Individual multidisciplinary meetings, group meetings. Meals eaten in group setting &/or with individual therapists. | unclear | - | Remote | Zoom | Unclear | Unclear | Eating disorders | None |
| 14 | Lima2021 ¹⁴ | Clinical telemedicine using hybrid face robot Cognitive engagement and mental health support delivery | Clinical telemedicine using hybrid face robot for cognitive engagement and mental health support delivery. Multi-modal robotic framework with animated emotions | (Clinician room) laptop with robot's control, Bluetooth wireless microphone (Patient room in clinic) Tablet with hybrid face robot, webcam to | - | In-person | Hybrid face robot. Voice system with cloud-based AI support | Unclear | Low cost | Dementia | None |

| | | | | | | | | | | | |
|----|----------------------------|---|---|---|---|---------------------------------|---|---|--|---|--|
| | | | representation. Voice system with cloud-based AI support. Telemedicine at SCARF with a dementia patient. Robotic affective communication (Wizard of Oz). | capture participant's emotions 2 phones: Troubleshoot 2-way voice communication | | | | | | | |
| 15 | Locke2021 ¹⁵ | Telemedicine program Virtual mental health and behavioural change intervention | Telemedicine program: Virtual mental health and behavioural change intervention. Individual and group classes and therapy including yoga. Live, synchronous, 2-way interaction between HABIT dyads and HABIT staff. | Computer/ laptop with web camera and microphone | - | Remote | Mayo Clinic's Video Anyplace Telemedicine program via Zoom; supported by Mayo Clinic's Connected Care Video Support Team. | HIPAA compliant | HIPAA-compliant. Other details unclear | Mild cognitive impairment | Pre-pandemic face to face treatment model |
| 16 | Looi2021 ¹⁶ | Telepsychiatry consultations and psychotherapy | Telepsychiatry consultations- individual and group psychotherapy video and telephone consultations. Videos and articles, discussions, instructions and support, medication management | Video and telephone | Option of in-person visit | Remote with option of in-person | Video & telephone/audio software platforms | Cybersecurity challenges encountered | Medicare benefits schedule | Mental health/psychiatry | In-person consultation from July 2018 to June 2019 |
| 17 | Mesika2021 ¹⁷ | Telehealth psychotherapy | Telehealth meetings, group therapy (including dance therapy), activity and psychotherapy. Mobile phone videos, online and outdoor therapy. | Voice call, voice conference call, and video | Initial in-person interview, outdoor group sessions within the hospital (e.g. basketball field and the gardens) | Both | WhatsApp | Unclear | Unclear | Chronic post-traumatic stress disorder (PTSD) | Treatment as usual group (Or Standard care) |
| 18 | Malka2021 ¹⁸ | Telepsychiatry therapy & support | Telepsychiatric visits, follow up, maintenance care, tele-clinic therapy. | Computer | - | Remote | Zoom API version 2.0.0 | Details unclear; only that it was approved by Ministry | Unclear | Adult depression | None |
| 19 | Motolese2021 ¹⁹ | Remote patient monitoring (RPM) | Remote patient monitoring self-evaluation, monitoring, email and video instruction (in app). Smartphone-based neurological tests (iOS and Android). Phone call, email. | Smartphone-based neurological tests (iOS and Android), Phone call, email, video | - | Remote | Encephalog HomeTM smartphone application (Montfort Brain Monitor LTD) | Anonymized app data. Secure transmission (using HTTPS); Azure for data store and processing | Unclear | Parkinsonism | None |

| | | | | | | | | | | | |
|----|----------------------------|--|--|--|--|----------------------------------|----------------------------------|-------------------------------|--|--|-------------------|
| 20 | Nicholas2021 ²⁰ | BRACE project Telehealth therapy | Part of BRACE project. Telehealth service delivery via videoconferencing. Therapy, risk assessment, management. Computer or smartphone with microphone, video. | Videoconferencing. Computer or smartphone with microphone, video | In-person review in clinical exceptions | Remote unless in-person required | Unclear | Unclear | Unclear | Mental health | Pre-pandemic data |
| 21 | Palma2021 ²¹ | Palliative Hospital-Centered Spiritual and Psychological Telehealth System | Palliative Hospital-Centered Spiritual and Psychological Telehealth System, a mobile palliative care team, synchronic videoconferences. | Videoconferences, 2 Ipads, 2 smartphones with camera & audio | At least one in-person assessment and information delivery | Both | Zoom, WhatsApp | Anonymous electronic database | Unclear | Mental health/life-limiting illness | None |
| 22 | Panda2020 ²² | Teleconsultation, therapy and support | Teleconsultation: disease review, prescription, medication and adverse effects management, advice, counsel, treatment, follow-up teleconsultations were not arranged follow-ups. telephone calls, SMS, text, picture, video messages- Multiple modes for compliance, to avoid errors/ misinterpretation/ | Telephone calls, SMS, text, picture, video messages- Multiple modes for compliance, to avoid errors/ misinterpretation | - | Remote | WhatsApp | Unclear | Unclear | Child epilepsy, other neurological disorders with epilepsy | None |
| 23 | Paul2020 ²³ | Tele-psychotherapy | Tele-psychotherapy sessions, VR headset for simulation and data collection. Activity engagement between sessions. | VR headset | - | Remote | Zoom | Unclear | Unclear | Major depressive disorder | None |
| 24 | Peralta2020 ²⁴ | Teleconsultation | Special telephone service with exclusive line with telephonic contacts & schedules of specialists: free care and referral through calls, video calls, or text message. | Calls, video calls, or text message | In-person evaluation when required | Remote unless in-person required | *462 emergency operations center | Unclear | Free, without requiring a specific contract with a telephone carrier | Mental health | None |
| 25 | Ping2020 ²⁵ | Ultra-brief psychological interventions (UBPI) | Ultra-brief psychological interventions (UBPI) modified. Virtual PFA for | Phone | - | Remote | Web-based platform, COVID- | Unclear | Unclear | Mental health | None |

| | | | | | | | | | | | |
|----|-------------------------------|---|--|--|---------------------------------|----------------------------------|---------------------------|--|---|--|---|
| | | Tele-mental health and psychosocial support service. Hotlines. | psychological interventions based on 'look, listen and link'. | | | | care web chat portal | | | | |
| 26 | Pollard2021 ²⁶ | Telehealth therapy | Telehealth service delivery of ABA treatment. synchronous videoconferencing. 3 models: technician-delivered, caregiver-assisted, caregiver-implemented telehealth model. | Smartphone, computer, and tablet | - | Remote | Not specified/Unclear | HIPAA compliant teleservices; privacy protection | Patient insurance plan. HIPAA compliant. Provision of technology &/or Wi-Fi for some. | Autism spectrum disorders | Telehealth model prior to direct treatment telehealth model |
| 27 | Puspitasari2021 ²⁷ | Adult transitions program tele behavioural therapy and support | Adult Transitions Program (ATP). Tele-therapy programme: video teleconferencing individual and group-based interventions for targeted symptom management, recovery support, discussion, therapy/ behavioural interventions. | Smartphone, laptop, or computer, videoconferencing | In-person session when required | Remote unless in-person required | Zoom | HIPAA-approved encrypted software | HIPAA compliant. Other details unclear | Transdiagnostic psychiatric conditions | None |
| 28 | Ravindran2020 ²⁸ | 24/7 National Helpline for psychosocial support and mental health services | 24/7 National Helpline for Psychosocial Support and Mental Health Services. Crisis helpline for psychosocial support. IVRS telephone call with professional support, call forwarding, follow-up. Linkage with network of local resources and professionals as needed. they need. | Telephone | - | Remote | IVRS phone call | Unclear | Free | Mental health | None |
| 29 | Rojas2021 ²⁹ | Cognitive-behavioral therapy for suicide prevention (BCBT-SP) Clinical video telehealth (CVT) | Clinical video telehealth (CVT) for cognitive-behavioral therapy for suicide prevention (BCBT-SP). Video/ phone sessions: targeted behavioural intervention, maintenance. | Video/ phone | - | Remote | Clinical video telehealth | Unclear | Unclear | Mental health | None |

| | | | | | | | | | | | |
|----|------------------------------|--|--|-------------------------------------|---|--------|---|--|------------------|---|--|
| 30 | Sennott2020 ³⁰ | Telehealth outreach well-being support | Tele-outreach to supplement care. Telephonic needs assessment, scheduling, referrals, resources. | Telephone | | Remote | Unclear | Unclear | No-cost services | Parkinsonism | None |
| 31 | Shah2021 ³¹ | Teleconsultations and management | Online Text-based intervention for identification and management (including contingency management), discussion. | Telephone, text | - | Remote | WhatsApp messenger. Monkey Platform could be assessed by only one of the investigators. Whenever physical abuse was reported, it was handled keeping with international best practice in ethics | Authorized access. International best ethics practices-compliant management of physical abuse complaints | Unclear | Attention deficit hyperactivity disorder (ADHD) | None |
| 32 | Sharma2020 ³² | Tele-mental health learning services | Real-time interactive videoconferencing. Online program for clinic-to-clinic and at home services. Didactic self-administered modules, post-test on the. Clinic-to-clinic observation of TMH session. | Phone | - | Remote | Direct-to-consumer (DTC) platforms, hospital's learning center | Unclear | Unclear | Child psychiatry | None |
| 33 | Sun2021 ³³ | Mindfulness for growth and resilience mindfulness-based learning mHealth | Mindfulness-based mHealth "Mindfulness for Growth and Resilience". Videoconferencing experiential & group meetings, didactic learning videos, audio recordings, journaling option. Tailored text responses. Asynchronous group communication and discussion (messaging-based group). | Text, picture, audio-based messages | | Remote | Zoom, WeChat-based mini-program | Unclear | Unclear | Mental health | Social support-based mhealth Zoom and WeChat |
| 34 | Tunuguntla2021 ³⁴ | Yoga of Immortals (YOI) therapy | Yoga of Immortals (YOI) intervention: | Mobile | - | Remote | Yoga of Immortals (YOI) app | Unclear | Unclear | Insomnia | None |

| | | | | | | | | | | | |
|----|---|---|---|------------------------------|---|--------|--|---|---|---------------------|---|
| | | | video and audio sessions (including yoga, exercises, sound therapy, meditation) | | | | | | | | |
| 35 | Vukc ² evic ² Markovic ² 020 ³⁵ | Online expressive writing intervention | Expressive writing intervention sessions | Email | - | Remote | Online platform unclear | Password-protected data | Free support & materials | Mental health | Treatment as usual. Informal support through families, friends and networks |
| 36 | Weintraub 2021 ³⁶ | Caroline County TeleMedicine mobile treatment unit (TM-MTU) initiative | Caroline County TM mobile treatment unit (TM-MTU) initiative patient-centered recovery support services. Integrated telemedicine (videoconferencing) & mobile services (remote buprenorphine prescription) Doctor-on-a-screen encounters conducted in treatment facilities in rural communities. Screening, individual counselling, scheduling, follow-up. Point-to-point interactive video conferencing sessions. electronic prescription to a local pharmacy post-TM, self-pick up of medications. | Videoconference | Assessment and point-of-care test before appointment scheduling | Both | Video conferencing. Epic Systems Corp (EPIC) and PatTrac databases. Modified recreational vehicle, backup power supply | HIPAA—via internet protocol connections | HIPAA compliant. Fully covered by Medicare, Medicaid, private insurance schemes | Opioid use disorder | None |
| 37 | Wightman ² 021 ³⁷ | Emergency department (ED) Call back Harm reduction services and addiction treatment | Emergency department (ED) Call back pilot project: Telephone calls, offered naloxone, harm reduction resources, peer recovery program, treatment | Telephone, text, mail, email | Home delivery of naloxone | Both | No online platform | Unclear | Unclear | Opioid overdose | None |

| | | | | | | | | | | | |
|------------------------|-------------------------------|--|---|--|---|--------|--|--|--|------------------------|------------------|
| | | | referrals, service availability update | | | | | | | | |
| 38 | Yellowlees 2020 ³⁸ | Virtual Telepsychiatry Clinic consultations | Virtual Telepsychiatry Clinic. Initial telephone consultation. Phone calls and voice mails intimation. Videoconferencing for appointment. | Phone calls and voice mails | - | Remote | Epic's MyChart, Zoom | Unclear | Financially viable clinic | Mental health | None |
| Cardiovascular disease | | | | | | | | | | | |
| 1 | Nogueira2021 ³⁹ | Telemedicine consultations and management | Teleconsultations to assess care type, scheduling, prescription and drug management, home-based phlebotomy. | Telephone, SMS, email | Urgent/ emergent in-patient elective diagnostic and therapeutic procedures. Stress tests cancelled due to COVID-19 constraints | Both | Probably no online platforms | Unclear | Free (covered by National health service budget) | Chronic heart failure | Standard of care |
| 2 | Bakogiannis2021 ⁴⁰ | The Hellenic Educational Self-care and Support Heart Failure app [ThessHF app] | The Hellenic Educational Self-care and Support Heart Failure app [ThessHF app]. Patient-oriented mHealth app. App-directed alerts to contact providers, measurement, symptom tracking, measurement, education, reminder, gamification, visualization, in diabetics. | Mobile | Perusal of app history patient visits to hospital | Both | ThessHF app | No user data transmitted (medico-legal challenges). No user data prior to app download | Unclear | Heart failure | None |
| 3 | Batalik2021 ⁴¹ | Telerehabilitation and support | Telerehabilitation- home-based exercise, teleconsultation, telemonitoring training, education and motivation. Participant profile creation. Remote coach. Scheduled telephone feedback. | Telephone, computer or mobile | In-person walking tests evaluation, education at hospital. Lent web platform -compatible devices. Optional contact with physiotherapist at centre | Both | PolarFlow web platform | Shared password and access only to authorized persons; secure external hard drive. | Unclear | Coronary heart disease | None |
| 4 | Lalande2021 ⁴² | Healing Hearts Together (HHT) Couple telepsychology | Healing Hearts Together (HHT) couples-based intervention including telepsychology via | Email, camera & mic, smartphone/ laptop/ tablet/ chromebook/ desktop | In-person visits for assessments | Both | Web-Based HHT Intervention and Research Protocol. Web- | Secure delivery of intervention. Hospital-approved | Unclear | Cardiovascular disease | Regular care |

| | | | | | | | | | | | |
|---|--------------------------------|---|---|--|---|--------|---|---|------------------------------------|---------------------|-----------------|
| | | | videoconferencing. Electronic materials/resources, Didactic presentations, videos, group and couple discussions, Feedback, contingency planning, conflict resolution, exercises (homework), email, camera & mic, smartphone/ laptop/ tablet/ chromebook/ desktop. | | | | based collaborative workspace | secure platform linked with hospital's secure EMR software. | | | |
| 5 | Li2020 ⁴³ | Telemedicine consultation | Telemedicine consultation | Telephone call, video camera/video link or smart phone | - | Remote | Online platform unclear | | | Vascular patients | None |
| 6 | McLachlan 2021 ⁴⁴ | Telehealth consultations & support | Telehealth programme. Self-monitoring using device, nurse practitioner (NP)-led telephone support, consultation, guidance, reviews, follow ups. | Text, phone call | In-person option available. Provision of devices for self-monitoring. | Both | Zoom, email, new electronic ePrescription and eLabform process | Unclear | Funded devices for self-monitoring | Heart failure | None |
| 7 | Rosman2021 ⁴⁵ | Virtual Atrial Fibrillation (AF) self-management program. | AF-At-Home Program. self-monitoring, skill development, and behavioral risk factor modification. automated EHR algorithms screening. group sessions, platform. email. Didactic instruction, interactive group discussion. diverse group of health care professionals. education. digital educational materials and website links to video recordings of the didactic portion of the session | smartphone, tablet, or computer. | - | Remote | EHR-based patient portal (i.e., EPIC MyChart), video-conferencing | secure video-conferencing platform | Unclear | Atrial fibrillation | None (Pre-post) |
| 8 | Scherrenberg2021 ⁴⁶ | Tele psychological consultations, counselling and support | Interactive live group session: education, dietary advice, option for website | telephonic/ Jitsi, podcasts | - | Remote | Rehabilitation centre website, Facebook, LinkedIn, Jitsi | Unclear | Payment for service | Cardiac | None |

| | | | | | | | | | | | |
|----|---------------------------|---|--|---|---|--------|---|------------------|---------|--|---|
| | | | journaling, telephonic/ Jitsi discussions, Psychological counselling: Interactive live group sessions & individual consultations, live group exercises with specialist, telephonic advice. | | | | | | | | |
| 9 | Wali2021 ⁴⁷ | Medly program Telemonitoring | Videoconferencing visits/ telephone calls. Medly program, smartphone, self-monitoring and -report with devices, self-report questions. | Videoconferencing visits/ telephone calls, smartphone | - | Remote | Medly app | Unclear | Unclear | Health failure patients | None |
| 10 | Yiaslas2020 ⁴⁸ | Heart disease reversal program TeleManagement | Heart Disease Reversal Program- interdisciplinary lifestyle interventions. videoconferencing of consultation-referral within the EHR, group appointments, electronic sharing of materials and messaging of logs. Telephone screening. Education and guidance, stress management. Option of indoor home exercise (poor air quality due to California fires). consult/referral process via videoconferencing. group sessions, diet/ nutrition component, physical activity, stress management training, and medication management. | Videoconferencing | - | Remote | VA COVID Coach app, Cisco Webex when VA Video Connect faced tech barriers | Secure messaging | Unclear | Heart disease | None |
| 11 | Zhao2021 ⁴⁹ | Part of ReACT program Telemanagement & support | Part of ReACT program. Virtual multidisciplinary clinic for management. Online or telephone. Scheduling, remote interrogation, review of data including | Telephone | - | Remote | Zoom interface integrated with Epic EMR, WeChat-based mini-program | Unclear | Unclear | Health failure patients with CRT devices | In-person visit group during the period of intervention |

| | | | | | | | | | | | |
|---------------|--------------------------|--|--|---|--|-----------|---|---|---------|--|------|
| | | | medications, management. No physical exams/ tests | | | | | | | | |
| Cancer | | | | | | | | | | | |
| 1 | Aghedo2021 ⁵⁰ | Tele-multidisciplinary clinic (MDC) | Tele-multidisciplinary clinic (MDC): Single supervised guided telehealth encounter at the clinic. Patient presence at clinic (to remove technological barriers) required for assisted remote encounter with multiple specialists. | Phone, desktop computer | Initial staging workup | In-person | Zoom | Institutional platform with increased cybersecurity. Secure link. | Unclear | Colon, rectal, anal, recurrent uroepithelial carcinoma cancers | None |
| 2 | Berlin2021 ⁵¹ | Virtual care management system (VCMS) using Agile service design process | Virtual Care Management System (VCMS) using Agile service design process. Telephone or video appointment. Scheduling, documentation, rapid contextualization, order communication. Email, phone call, mail. | Email, phone call, mail, and video | Based on triage: in-person visit, reschedule or delay the visit. | Both | Browser-based application integrates with the enterprise scheduling system Pathways Healthcare Scheduling (McKessonCorp) and electronic medical record system (QuadraMed Corp). OTN, MS Teams | Secure remote access (Citrix Receiver, Citrix Systems Inc, US) | Unclear | Cancer | None |
| 3 | Brown2021 ⁵² | "Virtual-Hybrid Approach to clinic" Telemedicine services | "Virtual-Hybrid Approach to clinic", telemedicine services and referral. Smartphones, iPads, and tablets, with direct web browser video links from the electronic health record mobile application. Direct video calls. Electronic triage, assessment, consultation, referral, management, referral network. | Smartphones, iPads, tablets, and video call | Physical patient visits eventually integrated | Both | Telemedicine platforms integrated with Epic and /or using Doximity video call function | Unclear | Unclear | Breast, lung, and hematologic cancers | None |

| | | | | | | | | | | | |
|---|---------------------------|--|---|--|------------------------------|---------------------------------|---|--|--|------------------------|--|
| 4 | Chen2021 ⁵³ | Teleconsultation and medication management | Remote real-time patient consultation, assessment, online prescription generation, drug dispensing alert system, automatically generated delivery service tracking number, instructions, tracking and refund patient request, chat support. | Mobile, mobile phone camera (on demand) Android and iOS | Home delivery of medications | Both | Cloud Sun Yat-sen university cancer center (SYSUCC) app for therapeutic interface -private cloud- integrated with internal Hospital information system (HIS) using web services internet tool | Unique staff ID & password, verification by automated drug rationality review system integrated into cloud-based HIS | Registration fee for Cloud SYSUCC increased from US \$7 to US \$70/ user during intervention | Cancer | None |
| 5 | Emard2021 ⁵⁴ | Virtual mind-body program | Virtual mind-body program with live integrative medicine via videoconferencing. Registration, group therapy sessions (e.g., fitness, yoga, tai chi, dance & music therapy, meditation), feedback, discussion | Videoconferencing | - | Remote | Zoom, Patient messaging portal | Unclear | Unclear | Cancer | None |
| 6 | Gardner2021 ⁵⁵ | Tele-neuropsychology continuity of care | Tele-neuropsychology (direct-to-home) continuity of care services. video conferencing via telephone/ computer/ tablet/ combination. virtual assessment and substitute tests. | Telephone, computer, tablet, combination, and video conferencing | Option for in-person visits | Remote with option of in-person | Unclear | Encrypted technology; stand-alone platform transitioned to software embedded in EMR portal; private and quiet space, patient destruction of written/or drawn items at session end. | Unclear | Cancer | In-person visits |
| 7 | Gothe2021 ⁵⁶ | STAYFit exercise management intervention | STAYFit remote at-home synchronized group exercise classes, live instructor for cognitive function improvement. Group exercise or individualized. | Computer, tablet, smartphone | - | Remote | Zoom | Unclear | Unclear | Adult cancer survivors | Three groups (Hatha Yoga, Stretching-toning) with in-person sessions |

| | | | | | | | | | | | |
|----|--------------------------------|---|---|---|---|-----------------------------------|---------------------------------------|--|--|---|--|
| 8 | Karacin2021 ⁵⁷ | Teleconsultation/ telemedicine based on clean and pandemic hospital | Telemedicine management based on telephonic assessment of COVID-19 risk-consultation, scheduling, referral. Based on 2 pandemic hospitals and 1 clean hospital separate teleconsultation/ telemedicine based on those receiving CT (clean hospital) and those not receiving CT (pandemic hospital). | Unclear | Clinic visits for procedures to pandemic hospital | Remote, both for certain patients | Unclear | Unclear | Unclear | Cancer | Admission data of previous year of pandemic |
| 9 | Knoerl2021 ⁵⁸ | Tele-yoga intervention | Virtual yoga intervention. Individualized, expert and self-guided (videos). discussions. | Telephonic, email, videos | Received yoga balls and blocks | Both | Zoom | Patient privacy preserved. No direct observation of patient practice by instructor | Free parking vouchers when attending yoga sessions at center | Breast, gastrointestinal, gynecological cancer survivors with chronic chemotherapy-induced peripheral neuropathy pain | Regular care |
| 10 | Loneragan2020 ⁵⁹ | Tele-clinic visits | Televisits via video conferencing platform with a pre-existing workflow. | Phone call, video conferencing | In-person visits for specific, urgent cases. | Both | Zoom | HIPAA compliant. Login required | HIPAA compliant. Other details unclear | Cancer | Pre-COVID video consultation |
| 11 | Marchese2021 ⁶⁰ | Virtual pharmacy care model | Telepsychology, multidisciplinary. video and phone based (discontinued coverage on thoracic cancer team). | Telephone, phone or laptop with video capabilities. | In-person interaction if not suitable for virtual interaction | Remote unless in-person required | Microsoft Visio software for workflow | Unclear | Unclear | Cancer | None |
| 12 | Myers Virtue2021 ⁶¹ | Tele-psychology | Telepsychology, multidisciplinary. video and phone based (discontinued coverage on thoracic cancer team). | Telephone, phone or laptop with video capabilities | Option of limited in-person appointments | Remote with option of in-person | Unclear | Unclear | Unclear | Cancer | Referral data from the previous year of pandemic |

| | | | | | | | | | | | |
|-----------------|-----------------------------|---|--|--|---|---------------------------------|---|---|---|---------------|-----------------------------|
| 13 | Patt2021 ⁶² | Remote patient symptom management | Remote patient symptom management via an ePRO digital remote monitoring tool. self-reported, real-time notification and triage, nurse tracking and follow up. | Email, smartphone, e-mail, text | Optional symptom report collection by nursing staff for patients with technological barriers. | Remote with option of in-person | Health Tracker, an ePRO platform, care coordination dashboard | Unclear | Unclear | Cancer | None |
| 14 | Pritchett2021 ⁶³ | Mayo Clinic COVID-19 RPM program | Mayo Clinic COVID-19 Remote patient monitoring (RPM) program: Passively data collection, patient alerts, self-measurement, assessment, patient-generated data trigger alerts parameters. | Patient given cellular-enabled tablet preloaded with vended clinical RPM software, preconnected, Bluetooth-enabled devices | - | Remote | Tablet preloaded with vended clinical RPM software. integrated with the EHR (Epic). Resideo Life Care Solutions, WI | Unclear | Patient given cellular-enabled tablet preloaded with vended clinical RPM software, preconnected, Bluetooth-enabled devices. | Cancer | Outpatient data without RPM |
| 15 | Specht2020 ⁶⁴ | Telehealth pre- and post-operative services | Virtual patient portal and telehealth services for pre- & post-operative consultation and patient evaluation. | Unclear | Same-day approach to breast reconstruction-novel same-day surgery protocol | Both | Virtual patient portal | Unclear | Unclear | Breast cancer | None |
| 16 | Steimer ⁶⁵ | RPM program | RPM. Education, self-monitoring and entry, clinical recommendations, emergency calls. | Call | Patients provided devices, a configured Apple iPad to enter vital results. Option for in-person visit to emergency department | Both | Patient dashboard for clinicians, Locus Health platform | Password-protected patient dashboard, secure portal | Established patients reimbursed by Centers for Medicare & Medicaid services | Cancer | None |
| 17 | Yerram2021 ⁶⁶ | Telemedicine visits & CPS intervention | Telemedicine visits. Virtual desktop access & other technology. CPS interventions: drug acquisition, medication optimization, drug information and safety, patient education | Virtual desktop access and other technology. Telephone | Certain medications shipped to patient directly | Remote | NS | Unclear | Unclear | Cancer | None |
| Diabetes | | | | | | | | | | | |

| | | | | | | | | | | | |
|---|------------------------------|---|---|--|--|--------|---|---|--|---|--|
| 1 | Alromaihi2020 ⁶⁷ | Telemedicine consultation and medication management | Telemedicine. Remote consultations, drug entry integrated with pharmacy tracking and coordination for pick-up or delivery/ medication refill, transfer of data from patient devices. remote clinics to patient door | Video/ audio calls over smartphones donated by telecom provider, landlines, remote clinics to patient door | In-person consultations at hospital. Remote clinic using hospital's home health care cars. Team downloads patients' data and adjusts settings. | Both | Upgraded EHR | Unclear | Smartphones donated by telecom provider, landlines, | Diabetes mellitus | None |
| 2 | Braune2021 ⁶⁸ | Digital diabetes clinic using service design methods | Digital diabetes clinic using service design methods. Remote consultations, scheduling, data upload and review, management, training. training to use software. Web-based video chat app. | Webcams with integrated microphones and speakers provided. Computer, tablets, smartphone cameras | - | Remote | Patientus [Jameda Gesellschaft mit beschränkter Haftung]. Tidepool platform (Tidepool Project). Server-Charité – Universitätsmedizin Berlin. Dexcom Clarity (Dexcom Inc) and Abbott FreeStyle LibreView (Abbott Diabetes Care Inc) also used by some participants | Secure platform. Adapted to hospital's IT infrastructure and local data protection requirements | Sensor and pump supplies fully covered by patient health insurance (public/private). Webcams with integrated microphones and speakers provided | Pediatric diabetes mellitus | None |
| 3 | Fraticeili2020 ⁶⁹ | Web-based nutritional intervention | Web-based group interactions, feedback, one-to-one chat (when web platform not user friendly), self-measurement at home. | Unclear | In-person visits for outcome assessment | Both | Web-based platform | Access using personal credentials | Free and reusable tools or material | Type 2 diabetes, impaired glucose regulation in overweight, obesity | In-person traditional face to face individual and group-based intervention |
| 4 | Hanson2020 ⁷⁰ | Low carb program health app. Remote digital health intervention | Remote digital health intervention personalized and structured content. Tailored Low carb | Video conferencing sessions, telephonic, email, smartphone, print, videos, and | Offered initial in-person consultation. Physical "starter pack" for digitally excluded patient. Ongoing | Both | Low Carb Program App streamlined National health | Unclear | Unique code-enabled free app activation of | Diabetes mellitus | Data from group educational |

| | | | | | | | | | | | |
|---|-------------------------------|--|---|---|---|--------|--|--|--|-------------------------------------|--|
| | | | program: education, strategies, visualization, self-monitoring, discussion board, searchable library, telephonic review, virtual meetups through coach-led video conferencing sessions, peer support networks, feedback. Self-monitoring data submission (via digital tools.) | podcasts. Telephone (esp. for digitally excluded patients) | input & follow-up with hospital-based as part of usual care | | service (NHS) approved medical device ("Software as a Medical Device"). Connection of their wearables to online platform | | the app (downloaded from NHS App Library). No cost to patients | | sessions between 2016 to 2019 |
| 5 | Jiwani2020 ⁷¹ | Behavioral lifestyle intervention | Smartphone-based behavioral lifestyle intervention: Self-monitoring, goal setting, feedback, mindful eating, social support, rewards, problem-solving, relapse prevention, and handling holidays, support. Group sessions. Self-measurement and recording on Fitbit. | Fitbit, smartphone | In-person group sessions. Fitbit provided to all | Both | Webex, Fitbit app | Unclear | Unclear | Type 2 diabetes mellitus | None |
| 6 | Jones2020 ⁷² | Virtual co-management service Teleconsultations | Virtual co-management service. Automatic consults for COVID-19 patients. Telephonic patient/family interview. Electronic/telephone consultations, rounds. | Telephonic | - | Remote | Cisco Webex. Epic reports | Unclear | Unclear | Diabetes mellitus | Before implementation of DCT during May 2019 to January 2020 |
| 7 | Leon-Vargas2021 ⁷³ | Remote diabetes management | Remote patient communication, device data review, visualization, information retrieval and transmission (via uploader using USB connection). Web, Mobile, and Uploader. | Web, mobile, and uploader. Smartphone (iOS or Android) and computer | In-person visits for screening and follow-up. | Remote | Tidepool cloud-based software platform | Random assignment of numeric username & password. Anonymised accounts. | Free to use cloud software | Type 1 and Type 2 diabetes mellitus | None |

| | | | | | | | | | | | |
|------------------------------------|------------------------------|---|--|--------------------|---------------------------------------|--------|---|--|-------------------|-------------------------------------|--|
| 8 | Luzi2021 ⁷⁴ | Tele-monitoring for remote care continuity Remote glucose control system | Tele-monitoring for remote care continuity. Remote glucose control system (Flash Glucose control). | Phone, mail, email | - | Remote | LIBREVIEW® platform | Unclear | Unclear | Type 1 and type 2 diabetes mellitus | Diabetes patients on insulin but non-users of LIBREVIEW platform |
| 9 | Mackenzie 2021 ⁷⁵ | Massive Open Online Course for self-management | MOOC for self-management of diabetes. Structured education with interactive content, discussion boards, goal setting, assessments, surveys, summary course emails. Facebook and Twitter livestream with professionals. Registration, progress tracking, personalized certificates. developed using LearnDash WordPress LMS plugin software, and in line with web content accessibility guidelines (WCAG level AA). | Unclear | - | Remote | MyWay Digital Health Ltd (MWDH) portal, Facebook, Twitter, GravityForms | Site's privacy policy | Free, open access | Type 2 diabetes mellitus | None |
| 10 | Zeller Jr.2021 ⁷⁶ | Diabetes Reporting Telemedicine support | Telemedicine. Diabetes Reporting. Initial online visit with specialist. Online conferences on support (psychological, technological). Group sessions. | Unclear | - | Remote | Diabetes Reporting (peer-reviewed software) | Unclear | Unclear | Type 1 diabetes mellitus | Type 1 diabetes patients from Exchange registry in the 3 months period prior to the survey |
| Chronic respiratory disease | | | | | | | | | | | |
| 1 | Jangalee2021 ⁷⁷ | Home-based virtual pulmonary rehabilitation program with RPM | Home-based virtual multidisciplinary pulmonary rehabilitation program. | Laptop, PC, tablet | Participants provided with monitoring | Both | Zoom, optional mobile app, email | Anonymized data (random six-digit identifier) authorized | Unclear | Chronic lung disease | None |

| | | | | | | | | | | | |
|------------------------------|------------------------------|---|--|---|---|--------|--|--|---|--|------------------|
| | | | RPM system integrated with video-conferencing, connected smart devices. Real-time access to/ monitoring of health data and adherence. Safety checklist. Mobile app for motivation and reminder. | | devices prior to program commencement | | web-dashboard, mobile app | access to patient data; no recording of session for preserving privacy. Encrypted retained data. | | | |
| 2 | Philip2020 ⁷⁸ | Singing for lung health (SLH) intervention | Singing for lung health (SLH): online singing exercise sessions | Compact disc also given | - | Remote | Zoom | Unclear | Unclear | Chronic obstructive pulmonary disease (COPD) | Regular services |
| Chronic liver disease | | | | | | | | | | | |
| 1 | Motz2021 ⁷⁹ | Telehealth exercise management | Telehealth exercise training programs. Outdoor/ at-home training, real-time direct supervision and feedback, fitness activity trackers with heart rate monitors, dietary counselling. Mobile device. | Mobile device | - | Remote | Audio-visual telehealth platform | Unclear | Unclear | Non-alcoholic fatty liver disease | None |
| Multiple NCD domains | | | | | | | | | | | |
| 1 | Kesavadev 2021 ⁸⁰ | Telemedicine for patient management/ in-patient level care | Telemedicine for patient management. Group educational webinars/ sessions. Virtual COVID in-patient (VCIP) care. Virtual at-home inpatient-level care. Targeted audio-video consultations, assessment, review, therapy, follow-up, home self-monitoring, training, psychotherapeutic counselling, referrals. | Audio-video | Home delivery of devices, medications. Home laboratory tests. | Remote | WhatsApp (group with care team), Zoom | Unclear | Unclear | Multiple NCDs/ comorbidities | None |
| 2 | Pareyson2021 ⁸¹ | Neuro-telemedicine services, including tele-visits and tele-neurorehabilitation | Comprehensive, multidisciplinary and multidimensional, neuro-telemedicine services, including tele-visits and | Video conferencing platforms, voice or video-call, resources via email. Computer with AV equipment. | - | Remote | Teams; Microsoft 365. online dyslexia platform (RIDinet, | General data protection regulations (GDPR)- compliant secure connection, compliant; licensed | No regulation or pricing for certain adult patients | Chronic neurological disorders | None |

| | | | | | | | | | | | |
|---|--------------------------------|---|--|--|--|---------------------------------|---|--|---|---------------------------|------|
| | | | tele-neurorehabilitation using video conferencing platforms continuity of care. consultation, rehab, monitoring, coaching, support, remote assessment, follow up, specialized management. voice or video-call, resources via email. computer with AV equipment. | 2 monitors (physicians, whenever possible)- 1 -to see patient, 2nd - electronic clinical record prep, & to see documents, history etc. | | | with Reading Trainer app). Not used insecure platforms despite requests- emails, phone calls, WhatsApp, text messages | platform. Password-protected documents to certain patients (password conveyed verbally during televisit). Sharepoint system (Microsoft 365) with regulated access- privacy and data protection | | | |
| 3 | Songsermpong2021 ⁸² | Teleconsultations | Telemedicine. NCD clinic text-messaging accounts. 24/7 online real-time/ asynchronous teleconsultations. Facebook page for patient inquiries & follow-up. | Text | Option to: -Medication pick-up by patient/ relative at district hospital and HPH -Drive-through facility at district hospital providing prescribed medications from a window - Home delivery of devices, medicines - Home monitoring by community health volunteers (CHVs) | Remote with option of in-person | LINE, Facebook | Secure Facebook page | Universal health coverage (UHC) via 3 public health insurance schemes | Hypertension and diabetes | None |
| 4 | Wu2020 ⁸³ | Telehealth for palliative care family conferences with shared decision making | Telehealth-based family conferences, multidisciplinary team. Shared decision making & the value, acknowledge, listen, understand, and elicit (VALUE) integration. Team talk, option talk (treatment discussion, symptom management, discharge planning), decision talk (advanced care planning), evaluation. | Smartphone | | Remote | Video software | Unclear | Unclear | Cancer and stroke | None |

List of included studies:

1. Banks J, Corrigan D, Grogan R, et al. LoVE in a time of CoVID: Clinician and patient experience using telemedicine for chronic epilepsy management. *Epilepsy & Behavior* 2021;115:107675.
2. Budhwani S, Fujioka JK, Chu C, et al. Delivering Mental Health Care Virtually During the COVID-19 Pandemic: Qualitative Evaluation of Provider Experiences in a Scaled Context. *JMIR Formative Research* 2021;5(9):e30280.
3. Carroll Á, Carty A. Innovation and transformation in a time of crisis; a national rehabilitation hospitals response to covid-19. *Irish Medical Journal* 2020:1-4.
4. Cooper C, Mansour H, Carter C, et al. Social connectedness and dementia prevention: Pilot of the APPLE-Tree video-call intervention during the Covid-19 pandemic. *Dementia* 2021:14713012211014382.
5. d'Arma A, Rossi V, Pugnetti L, et al. Managing chronic disease in the COVID-19 pandemic: an e-learning application to promote a healthy lifestyle for persons with multiple sclerosis. *Psychology, Health & Medicine* 2021:1-8.
6. Davenport TA, LaMonica HM, Rowe S, et al. Innovative preclinic triage system to guide Australians to the right mental health care first time. *Australian Health Review* 2021;45(5):578-83.
7. Di Lorito C, Duff C, Rogers C, et al. Tele-Rehabilitation for People with Dementia during the COVID-19 Pandemic: A Case-Study from England. *International Journal of Environmental Research and Public Health* 2021;18(4):1717.
8. Gromatsky M, Sullivan SR, Mitchell EL, et al. Feasibility and acceptability of VA CONNECT: Caring for our nation's needs electronically during the COVID-19 transition. *Psychiatry Research* 2021;296:113700.
9. Guan I, Kirwan N, Beder M, et al. Adaptations and innovations to minimize service disruption for patients with severe mental illness during COVID-19: Perspectives and reflections from an assertive community psychiatry program. *Community mental health journal* 2021;57(1):10-17.
10. Hom MA, Weiss RB, Millman ZB, et al. Development of a virtual partial hospital program for an acute psychiatric population: Lessons learned and future directions for telepsychotherapy. *Journal of Psychotherapy Integration* 2020;30(2):366.
11. Kidorf M, Brooner RK, Dunn KE, et al. Use of an electronic pillbox to increase number of methadone take-home doses during the COVID-19 pandemic. *Journal of Substance Abuse Treatment* 2021;126:108328.
12. Kim A, Yun SJ, Sung K-S, et al. Exercise Management Using a Mobile App in Patients With Parkinsonism: Prospective, Open-Label, Single-Arm Pilot Study. *JMIR mHealth and uHealth* 2021;9(8):e27662.
13. Levinson CA, Spoor SP, Keshishian AC, et al. Pilot outcomes from a multidisciplinary telehealth versus in-person intensive outpatient program for eating disorders during versus before the Covid-19 pandemic. *International Journal of Eating Disorders* 2021;54(9):1672-79.
14. Lima MR, Wairagkar M, Natarajan N, et al. Robotic telemedicine for mental health: a multimodal approach to improve human-robot engagement. *Frontiers in Robotics and AI* 2021;8
15. Locke DE, Khayoun R, Shandera-Ochsner AL, et al. Innovation Inspired by COVID: A Virtual Treatment Program for Patients With Mild Cognitive Impairment at Mayo Clinic. *Mayo Clinic Proceedings: Innovations, Quality & Outcomes* 2021;5(5):820-26.
16. Looi JC, Allison S, Bastiampillai T, et al. Private practice metropolitan telepsychiatry in larger Australian states during the COVID-19 pandemic: an analysis of the first 2 months of new MBS telehealth item psychiatrist services. *Australasian Psychiatry* 2020;28(6):644-48.

17. Lotan Mesika S, Wengrower H, Maoz H. Waking up the bear: dance/movement therapy group model with depressed adult patients during Covid-19 2020. *Body, Movement and Dance in Psychotherapy* 2021;16(1):32-46.
18. Malka M, Gropp C, Jaworowski S, et al. Telepsychiatry for Patients with Post-traumatic Stress Disorder During the COVID-19 Outbreak. *Current Treatment Options in Psychiatry* 2021:1-8.
19. Motolese F, Magliozzi A, Puttini F, et al. Parkinson's disease remote patient monitoring during the COVID-19 lockdown. *Frontiers in neurology* 2020;11:1190.
20. Nicholas J, Bell IH, Thompson A, et al. Implementation lessons from the transition to telehealth during COVID-19: a survey of clinicians and young people from youth mental health services. *Psychiatry Research* 2021;299:113848.
21. Palma A, Rojas V, Ihl F, et al. Implementation of a palliative hospital-centered spiritual and psychological telehealth system during COVID-19 pandemic. *Journal of Pain and Symptom Management* 2021
22. Panda PK, Dawman L, Panda P, et al. Feasibility and effectiveness of teleconsultation in children with epilepsy amidst the ongoing COVID-19 pandemic in a resource-limited country. *Seizure* 2020;81:29-35.
23. Paul M, Bullock K, Bailenson J. Virtual Reality Behavioral Activation as an Intervention for Major Depressive Disorder: Case Report. *JMIR mental health* 2020;7(11):e24331.
24. Peralta EA, Taveras M. Effectiveness of teleconsultation use in access to mental health services during the coronavirus disease 2019 pandemic in the Dominican Republic. *Indian Journal of Psychiatry* 2020;62(Suppl 3):S492.
25. Ping NPT, Shoemith WD, James S, et al. Ultra brief psychological interventions for COVID-19 pandemic: introduction of a locally-adapted brief intervention for mental health and psychosocial support service. *The Malaysian journal of medical sciences: MJMS* 2020;27(2):51.
26. Pollard JS, LeBlanc LA, Griffin CA, et al. The effects of transition to technician-delivered telehealth ABA treatment during the COVID-19 crisis: A preliminary analysis. *Journal of applied behavior analysis* 2021;54(1):87-102.
27. Puspitasari AJ, Heredia D, Coombes BJ, et al. Feasibility and Initial Outcomes of a Group-Based Teletherapy Psychiatric Day Program for Adults With Serious Mental Illness: Open, Nonrandomized Trial in the Context of COVID-19. *JMIR mental health* 2021;8(3):e25542.
28. Ravindran S, Channaveerachari NK, Seshadri SP, et al. Crossing barriers: Role of a tele-outreach program addressing psychosocial needs in the midst of COVID-19 pandemic. *Asian Journal of Psychiatry* 2020;53:102351.
29. Rojas SM, Gold SD, Bryan CJ, et al. Brief Cognitive-Behavioral Therapy for Suicide Prevention (BCBT-SP) via Video Telehealth: A Case Example During the COVID-19 Outbreak. *Cognitive and Behavioral Practice* 2021
30. Sennott B, Woo K, Hess S, et al. Novel outreach program and practical strategies for patients with parkinsonism in the COVID-19 pandemic. *Journal of Parkinson's disease* 2020(Preprint):1-6.
31. Shah R, Raju VV, Sharma A, et al. Impact of COVID-19 and lockdown on children with ADHD and their families—an online survey and a continuity care model. *Journal of Neurosciences in Rural Practice* 2021;12(01):071-79.
32. Sharma A, Sasser T, Schoenfelder Gonzalez E, et al. Implementation of home-based telemental health in a large child psychiatry department during the COVID-19 crisis. *Journal of child and adolescent psychopharmacology* 2020;30(7):404-13.

33. Sun S, Lin D, Goldberg S, et al. A mindfulness-based mobile health (mHealth) intervention among psychologically distressed university students in quarantine during the COVID-19 pandemic: A randomized controlled trial. *Journal of Counseling Psychology* 2021
34. Tunuguntla R, Tunuguntla HSGR, Kathuria H, et al. Effectiveness of App-Based Yoga of Immortals (YOI) Intervention for Insomnia in Asian Population during Pandemic Restrictions. *International journal of environmental research and public health* 2021;18(11):5706.
35. Vukčević Marković M, Bjekić J, Priebe S. Effectiveness of expressive writing in the reduction of psychological distress during the COVID-19 pandemic: a randomized controlled trial. *Frontiers in psychology* 2020;11:2936.
36. Weintraub E, Seneviratne C, Anane J, et al. Mobile Telemedicine for Buprenorphine Treatment in Rural Populations With Opioid Use Disorder. *JAMA network open* 2021;4(8):e2118487-e87.
37. Wightman RS, Jacka B, Uber J, et al. Tele-buprenorphine for emergency department overdose visit follow up and treatment initiation. *The American Journal of Emergency Medicine* 2021;50:409-12.
38. Yellowlees P, Nakagawa K, Pakyurek M, et al. Rapid conversion of an outpatient psychiatric clinic to a 100% virtual telepsychiatry clinic in response to COVID-19. *Psychiatric Services* 2020;71(7):749-52.
39. Afonso Nogueira M, Ferreira F, Raposo AF, et al. Impact of telemedicine on the management of heart failure patients during coronavirus disease 2019 pandemic. *ESC Heart Failure* 2021;8(2):1150-55.
40. Bakogiannis C, Tsarouchas A, Mouselimis D, et al. A Patient-Oriented App (ThessHF) to improve self-care quality in heart failure: from evidence-based design to pilot study. *JMIR mHealth and uHealth* 2021;9(4):e24271.
41. Batalik L, Konecny V, Dosbaba F, et al. Cardiac Rehabilitation Based on the Walking Test and Telerehabilitation Improved Cardiorespiratory Fitness in People Diagnosed with Coronary Heart Disease during the COVID-19 Pandemic. *International journal of environmental research and public health* 2021;18(5):2241.
42. Lalonde K, Greenman PS, Bouchard K, et al. The Healing Hearts Together Randomized Controlled Trial and the COVID-19 Pandemic: A Tutorial for Transitioning From an In-Person to a Web-Based Intervention. *Journal of medical Internet research* 2021;23(4):e25502.
43. Li H-L, Chan YC, Huang J-X, et al. Pilot study using telemedicine video consultation for vascular patients' care during the COVID-19 period. *Annals of vascular surgery* 2020;68:76-82.
44. McLachlan A, Aldridge C, Morgan M, et al. An NP-led pilot telehealth programme to facilitate guideline-directed medical therapy for heart failure with reduced ejection fraction during the COVID-19 pandemic. *The New Zealand Medical Journal (Online)* 2021;134(1538):77-6.
45. Rosman L, Armbruster T, Kyazimzade S, et al. Effect of a virtual self-management intervention for atrial fibrillation during the outbreak of COVID-19. *Pacing and Clinical Electrophysiology* 2021;44(3):451-61.
46. Scherrenberg M, Falter M, Dendale P. Patient experiences and willingness-to-pay for cardiac telerehabilitation during the first surge of the COVID-19 pandemic: single-centre experience. *Acta Cardiologica* 2021;76(2):151-57.
47. Wali S, Margarido MG, Shah A, et al. Expanding telemonitoring in a virtual world: A case study of the expansion of a heart failure telemonitoring program during the COVID-19 pandemic. *Journal of Medical Internet Research* 2021;23(1):e26165.
48. Yiaslas TA, Sood A, Ono G, et al. The Design and Implementation of a Heart Disease Reversal Program in the Veterans Health Administration: Before and During the COVID-19 Pandemic. *Federal Practitioner* 2020;37(12):558.

49. Zhao M, Qin D, Cataldo G, et al. Virtual multidisciplinary care for heart failure patients with cardiac resynchronization therapy devices during the Coronavirus Disease 2019 pandemic. *IJC Heart & Vasculature* 2021;100811.
50. Aghedo BO, Svoboda S, Holmes L, et al. Telehealth Adaptation for Multidisciplinary Colorectal Cancer Clinic During the COVID-19 Pandemic. *Cureus* 2021;13(9)
51. Berlin A, Lovas M, Truong T, et al. Implementation and outcomes of virtual care across a tertiary cancer center during COVID-19. *JAMA oncology* 2021;7(4):597-602.
52. Brown S-A, Patel S, Rayan D, et al. A virtual-hybrid approach to launching a cardio-oncology clinic during a pandemic. *Cardio-oncology* 2021;7(1):1-15.
53. Chen Z-J, Liang W-T, Liu Q, et al. Use of a Remote Oncology Pharmacy Service Platform for Patients With Cancer During the COVID-19 Pandemic: Implementation and User Acceptance Evaluation. *Journal of medical Internet research* 2021;23(1):e24619.
54. Emard N, Lynch KA, Liou KT, et al. Virtual Mind-Body Programming for Patients With Cancer During the COVID-19 Pandemic: Qualitative Study. *JMIR cancer* 2021;7(2):e27384.
55. Gardner MM, Aslanzadeh FJ, Zarrella GV, et al. Cancer, Cognition, and COVID: Delivering Direct-to-Home Tele-Neuropsychology Services to Neuro-Oncology Patients. *Neuro-Oncology Practice* 2021
56. Gothe NP, Erlenbach E. Feasibility of a yoga, aerobic and stretching-toning exercise program for adult cancer survivors: the STAYFit trial. *Journal of Cancer Survivorship* 2021:1-10.
57. Karacin C, Acar R, Bal O, et al. "Swords and Shields" against COVID-19 for patients with cancer at "clean" and "pandemic" hospitals: are we ready for the second wave? *Supportive Care in Cancer* 2021:1-7.
58. Knoerl R, Giobbie-Hurder A, Berfield J, et al. Yoga for chronic chemotherapy-induced peripheral neuropathy pain: a pilot, randomized controlled trial. *Journal of Cancer Survivorship* 2021:1-10.
59. Lonergan PE, Washington Iii SL, Branagan L, et al. Rapid utilization of telehealth in a comprehensive cancer center as a response to COVID-19: Cross-sectional analysis. *Journal of medical Internet research* 2020;22(7):e19322.
60. Marchese M, Heintzman A, Pasetka M, et al. Development of a process map for the delivery of virtual clinical pharmacy services at Odette Cancer Centre during the COVID-19 pandemic. *Journal of Oncology Pharmacy Practice* 2021;27(3):650-57.
61. Myers Virtue S, Howrey HL, Duffy NM, et al. Shifting psychosocial oncology care to telepsychology during the COVID-19 pandemic. *Journal of Psychosocial Oncology* 2021:1-9.
62. Patt D, Wilfong L, Hudson KE, et al. Implementation of Electronic Patient-Reported Outcomes for Symptom Monitoring in a Large Multisite Community Oncology Practice: Dancing the Texas Two-Step Through a Pandemic. *JCO Clinical Cancer Informatics* 2021;5:615-21.
63. Pritchett JC, Borah BJ, Desai AP, et al. Association of a Remote Patient Monitoring (RPM) Program With Reduced Hospitalizations in Cancer Patients With COVID-19. *JCO Oncology Practice* 2021:OP. 21.00307.
64. Specht M, Sobti N, Rosado N, et al. High-efficiency same-day approach to breast reconstruction during the COVID-19 crisis. *Breast cancer research and treatment* 2020;182(3):679-88.
65. Steimer M, Leabo J, Wang H, et al. Remote home monitoring of patients with cancer during the COVID pandemic: A pilot study. *JCO Oncology Practice* 2021:OP. 20.00995.

66. Yerram P, Thackray J, Modelevsky LR, et al. Outpatient clinical pharmacy practice in the face of COVID-19 at a cancer center in New York City. *Journal of Oncology Pharmacy Practice* 2021;27(2):389-94.
67. Alromaihi D, Alamuddin N, George S. Sustainable diabetes care services during COVID-19 pandemic. *diabetes research and clinical practice* 2020;166:108298.
68. Braune K, Boss K, Schmidt-Herzel J, et al. Shaping workflows in digital and remote diabetes care during the COVID-19 pandemic via service design: Prospective, longitudinal, open-label feasibility trial. *JMIR mHealth and uHealth* 2021;9(4):e24374.
69. Fraticelli F, Nicola MD, Vitacolonna E. A nutritional web-based approach in obesity and diabetes before and during COVID-19 lockdown. *Journal of Telemedicine and Telecare* 2020:1357633X20966933.
70. Hanson P, Summers C, Panesar A, et al. Low Carb Program health app within a hospital-based obesity setting: cluster randomised service evaluation. *JMIR Formative Research* 2021
71. Jiwani R, Dennis B, Bess C, et al. Assessing acceptability and patient experience of a behavioral lifestyle intervention using fitbit technology in older adults to manage type 2 diabetes amid COVID-19 pandemic: A focus group study. *Geriatric Nursing* 2021;42(1):57-64.
72. Jones MS, Goley AL, Alexander BE, et al. Inpatient transition to virtual care during COVID-19 pandemic. *Diabetes technology & therapeutics* 2020;22(6):444-48.
73. León-Vargas F, Martin C, Garcia-Jaramillo M, et al. Is a cloud-based platform useful for diabetes management in Colombia? The Tidepool experience. *Computer methods and programs in biomedicine* 2021:106205.
74. Luzi L, Carruba M, Crialesi R, et al. Telemedicine and urban diabetes during COVID-19 pandemic in Milano, Italy during lock-down: epidemiological and sociodemographic picture. *Acta Diabetologica* 2021;58(7):919-27.
75. Mackenzie SC, Cumming KM, Garrell D, et al. Massive open online course for type 2 diabetes self-management: adapting education in the COVID-19 era. *BMJ Innovations* 2021;7(1)
76. Zeller Jr WP, DeGraff R, Zeller W. A novel telemedicine protocol improved outcomes for high-risk patients with type 1 diabetes: A 3-month quality improvement project during the COVID-19 pandemic. *Journal of Clinical and Translational Endocrinology: Case Reports* 2021;19:100078.
77. Jangalee JV, Ghasvareh P, Guenette JA, et al. Incorporating remote patient monitoring in virtual pulmonary rehabilitation programs. *Canadian Journal of Respiratory Therapy: CJRT= Revue Canadienne de la Thérapie Respiratoire: RCTR* 2021;57:83.
78. Philip KE, Lewis A, Jeffery E, et al. Moving singing for lung health online in response to COVID-19: experience from a randomised controlled trial. *BMJ open respiratory research* 2020;7(1):e000737.
79. Motz V, Faust A, Dahmus J, et al. Utilization of a Directly Supervised Telehealth-Based Exercise Training Program in Patients With Nonalcoholic Steatohepatitis: Feasibility Study. *JMIR formative research* 2021;5(8):e30239.
80. Kesavadev J, Basanth A, Krishnan G, et al. A new interventional home care model for COVID management: Virtual Covid IP. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews* 2021;15(5):102228.
81. Pareyson D, Pantaleoni C, Eleopra R, et al. Neuro-telehealth for fragile patients in a tertiary referral neurological institute during the COVID-19 pandemic in Milan, Lombardy. *Neurological Sciences* 2021:1-8.

82. Songsermpong S, Bunluesin S, Khomgongsuwan P, et al. Innovations to Sustain Non-Communicable Disease Services in the Context of COVID-19: Report from Pakkred District, Nonthaburi Province, Thailand. *Global Heart* 2021;16(1)
83. Wu Y-R, Chou T-J, Wang Y-J, et al. Smartphone-enabled, telehealth-based family conferences in palliative care during the COVID-19 pandemic: pilot observational study. *JMIR mHealth and uHealth* 2020;8(10):e22069.