

Multimedia Appendix 4: Metrics that were collected through digital health tools

Personal info and functions
Demographics, medical history, or user profile
Location (GPS)
Location (self-reported)
Time zone change
Goal setting function
Uploading photos/videos, including: baby bump photos, baby photos, ultrasound images, photos of food, photos of wounds
Facial recognition
Calendar (appointments, events, prescriptions)
Prescription refill request
Free text/notes/diary/voice recording
Baby sound recorder
Episodic audio recording – to detect sound of environment
Audio recording function for doctor’s visit
Interactive voice messaging system
Discussion board/online forum/social networks/direct messaging
Message health care provider or schedule medical appointment
Store health care provider contact information
Ask the app specific questions
Text the app for help/advice
Mental health, psychosocial measures, and pain-related
Mental well-being, mood tracker, or psychological status
Happiness during pregnancy
Worry

Energy level/fatigue
Enjoyment
Anxiety
Depression
Mood
Affect
Quality of Life
Health-related Quality of Life
Met/unmet needs
Stress
Self worth
Self esteem
Social support
Cognitive function
Physical ability
Fear of cancer recurrence
Self regulation (EMA*)
Experiences of racism/microaggressions
Pain/pain severity
Pain fear/avoidance
Pain catastrophizing
Pain acceptance
Pain self management
Pain with intercourse
Location on body where pain is experienced
Quality of recovery
Prepartum depression
Postpartum depression
Satisfaction with care
Self efficacy
Tracking mindfulness practice
Support

Anthropometric and general body-related
Posture (EMA*)
Self-reported barriers to reaching weight loss goals
Body mass index (BMI)
Weight/weight gain
Waist circumference
Shin circumference
Height
Physical activity, cardiovascular, or respiratory-related
Training load
Muscle soreness
Step count
Step cadence
Stride length
Aerobic steps
Distance travelled
Running speed
Jump height
Floors climbed/elevation
Grip strength / pressure
Grip reaction time
Grip endurance
Training load
Muscle soreness
Balance/strength
Reasons for not exercising/not meeting physical activity goals
Sedentary behaviour/time sitting
Physical activity/active minutes
Perceived physical exertion
Intensity of physical activity
Calories expended/metabolism
Metabolic equivalent rate (MET)

Blood pressure reading
Radial artery pulse wave signal
Lung function/obstruction (forced expiratory volume)
Respiratory rate
Heart rate/heart rate variability
VO2
Cardiac activity monitor
Pulse pressure
Skin perfusion
Blood oxygen saturation (oximeter)
Near body ambient temperature
Body temperature
Wrist skin temperature
Sweat measurements (electrodermal activity, volume)
Sweat rate
Sweat gland activation
Skin conductance
Sweat conductivity
ECG
Food, diet, and other consumption-related
Calorie counting
Diet, food diary (eating/drinking habits), or nutrition
Reasons for not meeting dietary goals
Food preferences
Food budget
Intake of vitamins and minerals (calcium, vitamin D)
Cravings
Appetite
Loss of control eating tracking
Degree of hunger before meal
Planned/unplanned meals
Alcohol consumption
Caffeine consumption

Blood alcohol level (breathalyzer)
Cost savings calculator for quitting smoking
Smoking "quit" date
Smoking behaviour/tracking
Number of cigarettes smoked
Smoking cravings
Smoking withdrawal symptoms
Pregnancy and postpartum-related
Trimester of pregnancy
Whether it is a first pregnancy
Pregnancy due date/milestones for fetal development tracking (eg, gestational week)
Preeclampsia symptoms
Protein changes in urine/proteinuria
Prenatal vitamins taken (folic acid)
Prenatal ultrasound
Fundal height
Estimated fetal weight
Pregnancy or birthing discomforts/symptoms
Pregnancy outcome
Neonatal outcomes
Cervical dilation
Uterine contractions
Fetal kicks/movement
Fetal ECG
CTG monitoring
Fetal heart rate/heart rate variation
Fetal anthropometrics
Embryotic fluid level
Fetal hypoxia
Baby's sex
Birth records

Vaccination record for newborn/child
Infant mood
Postpartum events/symptoms
Postpartum depression
Number of wet/dirty diapers or bowel movements
Breastfeeding challenges, annoyances
Breastfeeding patterns/tracking
Which breast during feed
Latching/breastfeeding position
Breast milk expression time tracker/pumping record
Bottle feeding tracker
Volume of breast milk expressed
Breastfeeding locations
Sleeping patterns of newborn
Proximity to baby
Baby's medical history
Baby's anthropometric measurements
Baby's mood
Baby/infant milestones
Baby's medication
Provision and duration of kangaroo care
Disease/condition and cancer-related
Asthma symptoms
Asthma medications
UVR exposure
Sun protection
Duration of activities done in clear daylight (vitamin D exposure)
Blood glucose levels
HbA1c levels
Ketonuria analysis results
Proteinuria analysis results

Current medications/adherence to medications and treatment regimens
Reasons for not taking medication
Insulin dosage
Metformin dosage
Illness events
Perioperative symptoms
Incontinence
Tracking pelvic floor exercise completion
Pelvic floor muscles – maximum voluntary contraction, relaxation
Urinary incontinence, number of daily voids
Urinary incontinence, daily leaks (symptom severity)
Urinary incontinence, number of pad changes
Urinary incontinence – Quality of Life
Breast cancer detection - sensor
Cancer diagnosis
Arm mobility (following breast cancer)
Tracking upper arm and shoulder exercises for upper limb dysfunction
Arm and shoulder flexibility
Breast cancer symptom tracker
Side effects/symptoms of cancer treatment
Severity of cancer treatment side effects/symptoms
Interference of ADLs due to severity of cancer symptoms
Post surgical symptoms and severity
Lymphedema symptoms/severity
Completion of daily lymphedema exercises
Osteoarthritis pain intensity
Perceived osteoarthritis pain improvement
Pain interference with activities of daily living
Tracking wear time of osteoarthritis gloves

Tracking exercises for osteoporosis
Symptoms of hypertension (headache, epigastric pain, nausea, vomiting, visual symptoms)
Breast abnormalities
Menstruation, fertility, and sexual health-related
Basal body temperature
Photo of urine dipstick
Ovulation/LH/urine test results
Saliva sample microfluidic sensor
STI symptoms
Previous STI treatments
Cervical fluid during the menstrual cycle
Cervical characteristics (open/closed, high/low)
Vaginal sensations (wetness)
Fever occurrence
Shower before sleep
Menstrual cycle tracker
Age of menarche
Menstrual cycle symptoms
Spotting between periods
Period blood volume estimation
Menstrual clots
Menstrual breakthrough bleeding/flooding
Intercourse/sexual activity
Sexual health
Sex drive
Sexuality
Pain medication taken
Number of days of sick leave taken
Self care activities
Tracking acupressure sessions
Pain during menstrual cycle
Adverse reactions to acupressure

Emotions and mood tracking during menstrual cycle
Hormonal contraceptive use
Description of contraceptive use
Pregnancy test result
Menopausal symptoms
Other
Lab results
Bowel movements/description
Current activity/type of activity (EMA*)
Symptoms following vaccination
Reasons for not completing the challenge
Sleep quality/measurements/satisfaction
Sleep interruptions/sleeping irregularities
Sleep stage
Sleep time/duration
Assessment of daily functional activity
Environmental sensors (temperature, humidity, air quality, air pressure, noise, quality of potable water)
Self reported environmental exposures
Humidity
Air quality
Noise
Quality of their potable water
Seizures
Current level of safety
Current level of fear in the relationship
How healthy she believes that her relationship is
Danger assessment

* EMA = ecological momentary assessment