Supplemental Tables

Table S1: Number of clinical notes per year for patients with "Unknown" Mychart status

Year	Clinical notes of patients with "Unknown" Mychart status (n)	Cumulative count	Proportion	Cumulative proportion
2012	793090	793090	9.4%	9.4%
2013	1738166	2531256	20.6%	29.9%
2014	897803	3429059	10.6%	40.6%
2015	886489	4315548	10.5%	51.0%
2016	906546	5222094	10.7%	61.8%
2017	782911	6005005	9.3%	71.0%
2018	622492	6627497	7.4%	78.4%
2019	782529	7410026	9.3%	87.6%
2020	470211	7880237	5.6%	93.2%
2021	47331	7927568	0.6%	93.8%
2022	526639	8454207	6.2%	100.0%
Total	8454207	100%	100%	100%

Table S2: Average rate of growth in digital health terms from 2012-2022

Digital health term	CAGR (%)	Count
internet based	-28.31436	4205
mobile eeg	-10.404154	6
onetouch reveal	-9.983581	1383
contour link	-6.6967008	110
digital technologies	-3.5038905	76
jawbone up	-1.11E-14	35
digital game	-1.11E-14	18
upright go	-1.11E-14	32
digital intervention	0	34
mobile technology	0	147
digital medicine	0	4
digital mental health	0	3
sleep dot	0	2
smart glove	0	6
motorola smart phone	0	2
digital storytelling	0	4
handheld pulse oximeter	0	3
digital therapeutic	0	7
smart stick thermometer	0	0
digital training	0	14
smart sock	0	7
digital solution	0	2
digital service	0	57
digital education	0	2
headspace health	0	1
watchpat	0	3
ua heart rate	0	0
tyto	0	4
bayer contour	0	207
bluetooth blood pressure	0	8
sensor insole	0	1
bluetooth scale	0	2
samsung gear	0	4
breathing baby monitor	0	1
digital biomarker	0	4

bluetooth thermometer	0	6
bluetooth enabled	4.1379744	90
mobile ecg	7.17734625	15
guardian connect	7.17734625	76
digital application	7.17734625	18
digital cognitive behavioral	7.17734625	12
apnea link	7.17734625	17
digital contact	7.17734625	42
free style lite	7.91208075	3228
bg star	9.09870487	951
accu check	9.31360348	2640
computer based	9.43437243	1661
fingertip pulse oximeter	11.6123174	22
digital devices	11.6123174	273
sound level meter app	11.6123174	7
iphone	13.0397313	34077
hinge health	14.8698355	23
smart scale	14.8698355	12
internet access	15.7477956	2649
smart technology	17.4618943	8
mobile device	19.0614066	1435
digital platform	19.6231199	56
actigraph	20.0160058	316
digital media	20.5402149	1260
zio	22.7241888	259
wearable	23.308917	4440
remote monitoring	24.3660939	10230
digital therapy	27.0981615	87
contour next	28.9227858	28247
android	30.8040674	10386
smartphone	30.9963785	37456
internet connection	33.2288389	2357
freestyle navigator	33.5141363	1946
mobile health	35.2618696	129
fitness app	36.2204367	224
google play	38.5151685	227
apple health	41.4213562	333
guardian sensor	45.6621935	627

tracking app	47.6973472	2118
health technologies	53.3674687	823
garmin	53.5791593	326
embrace watch	53.9948249	545
mobile app	59.1630703	2753
health app	66.2197358	837
tandem insulin pump	66.3226904	1501
virtual reality	67.8966382	1283
freestyle precision	68.084339	763
digital health	69.2605434	723
gluten sensor	71.1769859	1320
noom	77.3597515	2681
smartwatch	80.6425987	1196
wellness app	82.2376626	987
app based	88.3534726	4481
apple watch	127.745302	15008
free style libre	147.612089	37317
DH notes	26.883556	226898
All notes	7.31851293	119114733

Table S3: Average rate of growth in digital health notes by department from 2012-2022

Specialty	CAGR (%)	Count
General Surgery	-15.141482	3538
Symptom Management	-12.944944	17
Anesthesiology	-10.404154	14
Neuropsychology	-10.404154	7
Gynecologic Oncology	-9.1128123	135
Anticoagulation	-7.0768072	217
Lab	-6.6967008	10
Pediatric Immunology	-3.9735499	63
Pediatric Ophthalmology	0	3
Radiation Therapy	0	1
Endocrinology	0	6
Memory & Aging	0	15
Maternal and Fetal Medicine	0	9
Prenatal Diagnosis	0	26
Podiatry	0	21
Orthopedic Surgery Hand	0	1
Pediatric Hematology and Oncol	0	2
Dysphagia	0	1
Lactation	0	1
Pediatrics Specialties	0	3
Iron Overload	0	2
Pediatric Pulmonary Function	0	4
Pediatric Plastic Surgery	0	40
Plastic Surgery	0	46
Pediatric Physical Therapy	0	25
Dialysis	0	9
Rett Syndrome	0	9
Thoracic Oncology - Cancer Cen	0	2
Interpreting Services	0	2
Behavioral Health	0	33
Bone Density	0	1
Support Service - Cancer Cente	0	24
Pathology	0	2
Pediatric Anesthesiology	0	9

Case Management	0	4
Home Health Services	0	3
Pediatric Cardiothoracic Surge	0	10
Neurodiagnostics	0	5
Center for Child Protection	0	24
Adolescent Medicine	1.91043975	475
Genetics - Cancer Center	4.1379744	32
Employee Health Services	6.05404816	128
Exercise	7.17734625	14
Obstetrics	7.17734625	10
Pediatric Bone Marrow Transpla	7.17734625	100
Dentistry	7.17734625	10
Orthopedic Surgery Arthroplast	7.17734625	17
All notes	7.31851293	119114733
Pediatric Neurology	10.2786228	2613
Rehabilitation	11.6123174	23
Diabetes Services	13.181913	2975
Pediatric Occupational Therapy	14.8698355	30
Pediatric Genetics	14.8698355	284
Neonatology	14.8698355	25
Pediatric Critical Care Medici	14.8698355	31
Occupational Therapy	14.8698355	20
Investigational Therapy	14.8698355	58
Intensive Care	14.8698355	10
ALS	14.8698355	38
Pelvic Physiology	14.8698355	80
Clinical Research	14.8698355	37
Pediatric Pulmonology	15.2238534	879
Sleep Medicine	15.6797285	1886
Medical Genetics	17.4618943	11
Pediatric Orthopedic Surgery	17.4618943	295
Pediatric Hematology	17.9234929	315
Ophthalmology	18.5867779	1467
Pediatric Infectious Disease	18.9413235	259
Emergency Medicine	19.4295508	3279
Pediatric Speech Therapy	19.6231199	163

OHNS Plastics	19.6231199	40
Periop	20.3976465	165
Pediatric Nephrology	20.4512877	369
Orthopedic Surgical Oncology	20.7687006	141
Dysplasia	21.4814044	67
Otolaryngology, Head and Neck	21.8991027	2448
General Pediatrics	22.0186231	3873
General Internal Medicine	22.7080865	8350
Endocrinology and Metabolism	23.0746692	9025
Developmental and Behavioral P	23.1144413	189
Dermatology	23.1674053	3929
Audiology	23.7097344	10001
Radiology MR	24.573094	75
Speech Therapy	24.573094	10
Neuro-Interventional Radiology	24.573094	52
Psychology - Cancer Center	24.573094	461
Orthotics	24.573094	58
Infusion and Transfusion	24.573094	72
Neurosurgery	25.1658049	1971
Craniofacial Anomalies	25.8925412	53
Orthopedic Surgery Sports	25.8925412	65
Pediatric Infusion and Transfu	26.2037869	455
Pediatric Cardiology	26.4534014	2297
DH notes	26.883556	226898
Occupational Medicine	27.0981615	46
Oral Medicine	27.0981615	28
Hepatology	27.5121982	756
Radiation Oncology	28.0296947	368
Reproductive Endocrinology and	28.2088854	97
HIV Program	28.2088854	342
Thoracic Surgery	29.2392221	42
Surgical Oncology	29.2392221	82
Nutrition	29.3805457	467
Gastroenterology	29.9323578	726
Orthopedic Surgery	30.0603677	2300

Weight Management	30.4177323	1152
Family Medicine	30.6991399	1449
Pediatric Endocrinology	30.8091213	21746
Cardiology	30.9207798	18966
Pediatric Allergy	31.1019423	133
Endocrine Surgery	31.9507911	88
Neurology	32.1645622	13592
Pulmonology	32.6325368	1888
Cancer Survivorship	32.7531675	75
Geriatric Medicine	33.2144288	1984
Inpatient Nursing	33.2333392	6607
Pediatric Surgery	33.5141363	85
Hematology and Oncology	33.5141363	919
Pediatric Urology	34.2379651	87
Nephrology	34.2820571	1991
Pediatric Gastroenterology	34.7776095	3827
Pharmacy	34.9282848	137
Pediatric Neurosurgery	34.9282848	218
Pancreas Transplant	36.2204367	101
Cardiothoracic Surgery	36.2204367	160
Pain Medicine	36.4254374	2242
Rheumatology	36.6778505	650
Nuclear Medicine	36.8273083	63
Pediatric Oncology	37.1218886	573
Infectious Diseases	37.6945048	196
Urology	37.8144659	834
Pediatric Rheumatology	37.9729661	235
Pediatric Physical Medicine an	38.5151685	161
Melanoma	38.5151685	293
Interventional Radiology	38.8663029	437
Palliative Medicine	39.038917	424
Pediatric Otolaryngology, Head	39.038917	195
Physical Therapy	39.4900151	3614
Social Services	39.5454894	278
Colorectal Surgery	40.0360331	104
Obstetrics and Gynecology	40.3420513	3614
Allergy and Immunology	40.5115826	161
Transplant	40.9730738	147

Orthopedic Surgery Spine	40.9730738	62
Radiology	41.4213562	122
Vascular Surgery	41.8572035	187
Gynecologic Oncology - Cancer	41.8572035	176
Urologic Oncology	41.8572035	693
Executive Health	42.0706871	302
Gynecology	43.0969081	138
Radiology CT	44.2468908	75
Head & Neck Cancer Center	45.319846	121
Pediatric Diabetes	45.6621935	372
Breast Care - Cancer Center	45.7747179	775
Gastrointestinal Oncology	48.3135134	1326
Mental Health	49.0182215	695
Lung Transplant	49.1556298	655
Primary Care	50.2585319	11049
Heart Transplant	50.3436886	1061
Otolaryngology	50.8457169	221
Thoracic Oncology	52.4933451	331
Integrative Medicine	52.6718063	3353
Kidney Transplantation	53.0810599	1449
Hematology	55.9343853	275
Cancer Center	56.8282336	330
Hospital Medicine	57.843653	402
Liver Transplant	58.9584878	562
Cardiac Rehabilitation	61.935538	414
Oncology	62.3231164	863
Optometry	66.9286681	609
Psychiatry	89.5582463	3110

Table S4: Top terms and counts of clinical notes in each digital health topic

Topic number	Top terms	Document counts
2	test,blood,glucose,strip,contour,next,strips,use,directed,day	19050
10	watch,apple,heart,hr,atrial,rate,fibrillation,monitor,rhythm,bpm	17569
1	mg,tablet,take,daily,mouth,total,capsule,ml,every,times	17052
5	freestyle,libre,patient,cgm,please,call,plan,continue,using,today	15105
21	phone,smart,computer,video,access,app,visit,smartphone,internet,laptop	13370
4	freestyle,libre,misc,glucose,day,flash,sensor,route,scanning,kit	12059
17	iphone,patient,hearing,belongings,sent,aid,home,aids,phone,vision	12038
11	sleep,bed,avoid,blue,screen,smartphone,information,hours,bedtime,reviewed	10060
7	pain,free,app,therapy,ios,use,breathing,management,stress,meditation	8905
16	iphone,well,time,pain,connection,playing,difficulty,symptoms,able,internet	7794
27	monitoring,remote,device,follow,home,rn,months,continue,month,set	7673
29	glucose,monitoring,blood,next,continuous,contour,using,type,tests,system	6760
20	android,available,iphone,app,free,apple,help,ios,self,may	6312
12	patient,last,also,week,dr,started,changes,recent,since,using	5743
13	normal,kg,exam,lb,bp,iphone,cm,physical,oz,well	5369
18	exercise,food,daily,sleep,mobile,meals,intake,regular,app,eat	5180
19	classes,fitness,yoga,free,including,range,strength,day,cardio,wide	4506
9	date,visit,type,results,plan,diabetes,pa,last,history,value	4485
14	insulin,units,pump,goal,term,per,target,lantus,weeks,bg	4156
3	cgm,school,bg,mg,diabetes,student,guardian,may,dose,dl	3981
22	school,camera,yes,following,microphone,development,ipad,family,capabilities,headset	3586
25	sound,generators,wearable,devices,noise,tinnitus,apps,hearing,use,ear	3309
26	patient,medical,health,consent,ucsf,procedures,provided,via,telehealth,evaluation	3114
8	gluten,free,celiac,living,recipes,information,restaurant,blog,disease,websites	3012
6	disp,rfl,history,past,cms,code,file,medical,current,medications	2540
23	pm,time,day,dl,start,negative,bg,mg,data,last	1787
24	pt,yes,use,substance,per,program,pcp,unknown,reason,referral	1699

15	oral,prn,pain,mg,inhaler,scheduled,bid,dose,per,denies	1695
28	md,glucagon,urine,call,ketones,mg,large,check,acetone,moderate	1419

Table S5: Digital health terms screened

Term	Regex	Source	Results on EMERSE
google play	google play	Pubmed	Yes
digital platform	digital platform	Multiple	Yes
mobile health	(?<!mychart) mobile health	Multiple	Yes
digital biomarker	digital biomarker	Marra_2020	Yes
digital health	digital health	Multiple	Yes
internet access	internet access	Pubmed	Yes
internet connection	internet connection	CTGOV	Yes
internet based	internet[-]*based	Multiple	Yes
bluetooth enabled	bluetooth[-]*enabled	Marra_2020	Yes
computer based	computer[-]*based	Multiple	Yes
app based	app[^a-zA-Z0-9]+based	Synonym	Yes
mobile technology	(?<!mychart) mobile technolog	Multiple	Yes
bluetooth blood pressure	bluetooth blood[-]*pressure	Marra_2020	Yes
bluetooth scale	bluetooth scale	Marra_2020	Yes
bluetooth thermometer	bluetooth thermometer	Marra_2020	Yes
breathing baby monitor	breathing baby monitor	Marra_2020	Yes
continuous monitoring	continuous monitoring	Pubmed	Removed due to other uses
fingertip pulse oximeter	fingertip pulse oximeter	Marra_2020	Yes
gluten sensor	gluten sensor	Marra_2020	Yes
handheld pulse oximeter	handheld pulse oximeter	Marra_2020	Yes
health technologies	health technologies	Pubmed	Yes
mobile ecg	mobile[-]*ecg	Marra_2020	Yes
mobile eeg	mobile[-]*eeg	Marra_2020	Yes
remote monitoring	remote monitoring	Pubmed	Yes
sensor insole	sensor insole	Marra_2020	Yes
smart glove	smart[-]*glove	Marra_2020	Yes

smart scale	smart[-]*scale	Marra_2020	Yes
smart sock	smart[-]*sock	Marra_2020	Yes
smart stick thermometer	smart stick thermometer	Marra_2020	Yes
smart technology	smart technology	Marra_2020	Yes
sound level meter app	sound level meter app	Marra_2020	Yes
virtual reality	virtual reality	Synonym	Yes
wearable	wearable	Multiple	Yes
tracking app	tracking app[^a-zA-Z0-9]+	Synonym	Yes
fitness app	fitness app[^a-zA-Z0-9]+	Synonym	Yes
wellness app	wellness app[^a-zA-Z0-9]+	Synonym	Yes
mobile app	(?<!mychart) mobile app[^a-zA-Z0-9]+	Marra_2020	Yes
digital application	digital application	CTGOV	Yes
digital cognitive behavioral	digital cognitive behavioral	CTGOV	Yes
digital contact	digital contact	Pubmed	Yes
digital education	digital education	Pubmed	Yes
digital game	digital game	CTGOV	Yes
digital intervention	digital intervention	Multiple	Yes
digital media	digital media	CTGOV	Yes
digital medicine	digital medicine	Pubmed	Yes
digital mental health	digital mental health	Multiple	Yes
digital service	digital service	Pubmed	Yes
digital solution	digital solution	CTGOV	Yes
digital storytelling	digital storytelling	CTGOV	Yes
digital technologies	digital technolog	Multiple	Yes
digital therapeutic	digital therapeutic	Multiple	Yes
digital therapy	digital therapy	CTGOV	Yes
digital training	digital training	CTGOV	Yes
health app	health app[-,.]+	Pubmed	Yes
tracking app	tracking app[^a-zA-Z0-9]+	Synonym	Yes
mobile device	(?<!mychart) mobile device	Multiple	Yes

mobile phone	(?<!mychart) mobile phone	Multiple	Removed due to other uses
iphone	(?<!from my)[^a-zA-Z0-9]+iphone	Multiple	Yes
android	android	Multiple	Yes
apple health	apple[-]*health	Marra_2020	Yes
apple watch	apple[-]*watch	Multiple	Yes
digital devices	digital devices	Pubmed	Yes
motorola smart phone	motorola smart phone	Marra_2020	Yes
samsung gear	samsung gear	Marra_2020	Yes
smartphone	smart[-]*phone	Multiple	Yes
smartwatch	smart[-]*watch	CTGOV	Yes
digital data	digital data	Pubmed	Removed due to other uses
10s fork	10s fork	Marra_2020	0
7000a finger probe	7000a finger probe	Marra_2020	0
accugait	accugait	Marra_2020	0
accupedo	accupedo	Marra_2020	0
achillex	achillex	Marra_2020	0
actical	actical	Marra_2020	0
actiheart	actiheart	Marra_2020	0
actisleep	actisleep	Marra_2020	0
actitrac	actitrac	Marra_2020	0
activepal	activepal	Marra_2020	0
activepers	activepers	Marra_2020	0
activity monitor comparison	activity monitor comparison	Marra_2020	0
activity tracker	activity tracker	Multiple	0
activpal	activpal	Marra_2020	0
actiware	actiware	Marra_2020	0
actiwatch	actiwatch	Marra_2020	0
actiwatch 64	actiwatch 64	Marra_2020	0
actiwatch spectrum	actiwatch spectrum	Marra_2020	0
actofit	actofit	Marra_2020	0
actofit smartscale	actofit smartscale	Marra_2020	0
adamm	adamm	Marra_2020	0
adherium	adherium	Marra_2020	0

adidas zone	adidas zone	Marra_2020	0
adis16400bmlz	adis16400bmlz	Marra_2020	0
adlcare	adlcare	Marra_2020	0
adxl 335	adxl 335	Marra_2020	0
adxl105jqc	adxl105jqc	Marra_2020	0
adxl330	adxl330	Marra_2020	0
adxl345	adxl345	Marra_2020	0
adxl346	adxl346	Marra_2020	0
agamatrix	agamatrix	Marra_2020	0
aiocare	aiocare	Marra_2020	0
airbeam	airbeam	Marra_2020	0
aircurve	aircurve	Marra_2020	0
airsense	airsense	Marra_2020	0
akern bioresearch	akern bioresearch	Marra_2020	0
akili	akili	Marra_2020	0
alcohoot edge	alcohoot edge	Marra_2020	0
alex namu	alex namu	Marra_2020	0
alvita optimized pedometer	alvita optimized pedometer	Marra_2020	0
am1	am1	Marra_2020	0
amazfit	amazfit	Marra_2020	0
ambiotex	ambiotex	Marra_2020	0
ambygear	ambygear	Marra_2020	0
amiigo	amiigo	Marra_2020	0
apdm	apdm	Marra_2020	0
apnea risk evaluation system	apnea risk evaluation system	Marra_2020	0
apostherapy	apostherapy	Marra_2020	0
aquagenie	aquagenie	Marra_2020	0
aquapulse	aquapulse	Marra_2020	0
armour39	armour39	Marra_2020	0
ascensia diabetes	ascensia diabetes	Marra_2020	0
asus phone	asus phone	Marra_2020	0
athos full body	athos full body	Marra_2020	0
athos leggings	athos leggings	Marra_2020	0
athos shirt	athos shirt	Marra_2020	0
atlas shape	atlas shape	Marra_2020	0
atlas wristband	atlas wristband	Marra_2020	0

auto device asthma monitor	auto device asthma monitor	Marra_2020	0
autoset s8	autoset s8	Marra_2020	0
autoset s9	autoset s9	Marra_2020	0
avant 2120	avant 2120	Marra_2020	0
avant tabletop	avant tabletop	Marra_2020	0
aw 64	aw 64	Marra_2020	0
aw64	aw64	Marra_2020	0
awair baby	awair baby	Marra_2020	0
awair glow	awair glow	Marra_2020	0
aware headphones	aware headphones	Marra_2020	0
axivity	axivity	Marra_2020	0
b o l t	b o l t	Marra_2020	0
baby gigl	baby gigl	Marra_2020	0
baby smartband	baby smartband	Marra_2020	0
baby vida	baby vida	Marra_2020	0
baby wireless thermometer	baby wireless thermometer	Marra_2020	0
bagnoli	bagnoli	Marra_2020	0
bahr monitor	bahr monitor	Marra_2020	0
balansens	balansens	Marra_2020	0
bayer breeze	bayer breeze	Marra_2020	0
beam brush	beam brush	Marra_2020	0
beam toothbrush	beam toothbrush	Marra_2020	0
beddit	beddit	Marra_2020	0
beddr	beddr	Marra_2020	0
beets blu	beets blu	Marra_2020	0
beetsblu	beetsblu	Marra_2020	0
bellabeat	bellabeat	Marra_2020	0
better therapeutics	better therapeutics	Marra_2020	0
bgstar	bgstar	Marra_2020	0
bi sl2 breathalyzer	bi sl2 breathalyzer	Marra_2020	0
bi sobrietor	bi sobrietor	Marra_2020	0
bi tad monitor	bi tad monitor	Marra_2020	0
bia sports watch	bia sports watch	Marra_2020	0
biancamed	biancamed	Marra_2020	0
bioharness	bioharness	Marra_2020	0
biomeme	biomeme	Marra_2020	0

biosensics	biosensics	Marra_2020	0
biosport earbuds	biosport earbuds	Marra_2020	0
biostamp	biostamp	Marra_2020	0
biostamprc	biostamprc	Marra_2020	0
biostrap	biostrap	Marra_2020	0
biotelemetry	biotelemetry	Marra_2020	0
blipcare	blipcare	Marra_2020	0
blitz smart watch	blitz smart watch	Marra_2020	0
blocks modular watch	blocks modular watch	Marra_2020	0
bloomlife	bloomlife	Marra_2020	0
blueair aware	blueair aware	Marra_2020	0
bluemaestro	bluemaestro	Marra_2020	0
bluesmart mia	bluesmart mia	Marra_2020	0
bluestar app	bluestar app	Marra_2020	0
bluetooth enabled blood pressure	bluetooth enabled blood pressure	Marra_2020	0
bluetooth linked thermometer	bluetooth linked thermometer	Marra_2020	0
bluetooth posture step tracker	bluetooth posture step tracker	Marra_2020	0
bodimetrics	bodimetrics	Marra_2020	0
body organ life tracker	body organ life tracker	Marra_2020	0
bodybugg	bodybugg	Marra_2020	0
bodyguardian	bodyguardian	Marra_2020	0
bodymedia	bodymedia	Marra_2020	0
bodytrak	bodytrak	Marra_2020	0
bp1 blood pressure	bp1 blood pressure	Marra_2020	0
bp2 blood pressure monitor	bp2 blood pressure monitor	Marra_2020	0
bpmphysio	bpmphysio	Marra_2020	0
bragi	bragi	Marra_2020	0
breas	breas	Marra_2020	0
breas medical	breas medical	Marra_2020	0
breas sweden	breas sweden	Marra_2020	0
breas vivo	breas vivo	Marra_2020	0
breathemate	breathemate	Marra_2020	0
breathometer	breathometer	Marra_2020	0

breeze 2 meter	breeze 2 meter	Marra_2020	0
breeze2	breeze2	Marra_2020	0
bresodx	bresodx	Marra_2020	0
bresotec	bresotec	Marra_2020	0
bruxoff	bruxoff	Marra_2020	0
bsxinsight	bsxinsight	Marra_2020	0
btooth enabled bathroom scale	btooth enabled bathroom scale	Marra_2020	0
btooth enabled blood pressure	btooth enabled blood pressure	Marra_2020	0
bts bioengineering	bts bioengineering	Marra_2020	0
camntech	camntech	Marra_2020	0
cardea solo	cardea solo	Marra_2020	0
cardiacdesigns	cardiacdesigns	Marra_2020	0
cardiacsense	cardiacsense	Marra_2020	0
cardiokey	cardiokey	Marra_2020	0
cardiolight	cardiolight	Marra_2020	0
cardiomedix	cardiomedix	Marra_2020	0
cardiosecur	cardiosecur	Marra_2020	0
cardioskin	cardioskin	Marra_2020	0
care predict tempo	care predict tempo	Marra_2020	0
caretaker4	caretaker4	Marra_2020	0
carrot sense	carrot sense	Marra_2020	0
centrepoint insight watch	centrepoint insight watch	Marra_2020	0
cercacor	cercacor	Marra_2020	0
chatbot	chatbot	Multiple	0
checkme	checkme	Marra_2020	0
choicemmed	choicemmed	Marra_2020	0
choicemmed md100e	choicemmed md100e	Marra_2020	0
chrono quit smoking solution	chrono quit smoking solution	Marra_2020	0
cicer	cicer	Marra_2020	0
clearsky t6	clearsky t6	Marra_2020	0
clevercap	clevercap	Marra_2020	0
clinicloud	clinicloud	Marra_2020	0
cloud based	cloud based	Pubmed	0
cloud dx	cloud dx	Marra_2020	0
co breath sensor	co breath sensor	Marra_2020	0

coaguchek	coaguchek	Marra_2020	0
cocoon cam	cocoon cam	Marra_2020	0
code4armour	code4armour	Marra_2020	0
cogito	cogito	Marra_2020	0
cognision	cognision	Marra_2020	0
cognoa	cognoa	Marra_2020	0
cohero health	cohero health	Marra_2020	0
contour xt	contour xt	Marra_2020	0
cookoo 2	cookoo 2	Marra_2020	0
coros watch	coros watch	Marra_2020	0
cosinuss	cosinuss	Marra_2020	0
cpap s9 series	cpap s9 series	Marra_2020	0
cyberglove	cyberglove	Marra_2020	0
dario bgms	dario bgms	Marra_2020	0
dario blood glucose	dario blood glucose	Marra_2020	0
darma pro	darma pro	Marra_2020	0
darma sleep	darma sleep	Marra_2020	0
deloitte smart helmet	deloitte smart helmet	Marra_2020	0
delsys	delsys	Marra_2020	0
dexcom	dexcom	Marra_2020	0
diabeo	diabeo	Marra_2020	0
digi walker	digi walker	Marra_2020	0
digital accelerometer	digital accelerometer	Marra_2020	0
digital phenotyping	digital phenotyping	Pubmed	0
digital tool	digital tool	CTGOV	0
digitsole	digitsole	Marra_2020	0
dip io	dip io	Marra_2020	0
dorsavi sensor	dorsavi sensor	Marra_2020	0
dreem	dreem	Marra_2020	0
duofertility	duofertility	Marra_2020	0
dycare rehub	dycare rehub	Marra_2020	0
dynaport	dynaport	Marra_2020	0
dynosense	dynosense	Marra_2020	0
e series psg	e series psg	Marra_2020	0
e4 wristband	e4 wristband	Marra_2020	0
earlysense	earlysense	Marra_2020	0

eartrumpet	eartrumpet	Marra_2020	0
ecgmove	ecgmove	Marra_2020	0
echo smart patch	echo smart patch	Marra_2020	0
eko devices	eko devices	Marra_2020	0
ekso bionics	ekso bionics	Marra_2020	0
eksogt	eksogt	Marra_2020	0
electricfoxy	electricfoxy	Marra_2020	0
elemnt	elemnt	Marra_2020	0
ember sport	ember sport	Marra_2020	0
embletta	embletta	Marra_2020	0
embletta device	embletta device	Marra_2020	0
emfit	emfit	Marra_2020	0
emotion faros	emotion faros	Marra_2020	0
emotiv epoc	emotiv epoc	Marra_2020	0
emotiv insight	emotiv insight	Marra_2020	0
empatica	empatica	Marra_2020	0
emwave 2	emwave 2	Marra_2020	0
enlite	enlite	Marra_2020	0
epatch	epatch	Marra_2020	0
epi mobile health	epi mobile health	Marra_2020	0
epoc by emotiv	epoc by emotiv	Marra_2020	0
epson watch	epson watch	Marra_2020	0
equivital	equivital	Marra_2020	0
eshirt	eshirt	Marra_2020	0
esight	esight	Marra_2020	0
eva colpo	eva colpo	Marra_2020	0
eveline fertility	eveline fertility	Marra_2020	0
everion	everion	Marra_2020	0
everon	everon	Marra_2020	0
eversense	eversense	Marra_2020	0
eyenetra	eyenetra	Marra_2020	0
eyeque	eyeque	Marra_2020	0
eyes on glasses	eyes on glasses	Marra_2020	0
f a b system	f a b system	Marra_2020	0
faros 360	faros 360	Marra_2020	0
faros ecg	faros ecg	Marra_2020	0
fever scout	fever scout	Marra_2020	0
fhir	fhir	Pubmed	0
fitbit	fitbit	Multiple	0

fitbit aria	fitbit aria	Marra_2020	Substring
fitbit charge	fitbit charge	Marra_2020	Substring
fitbit flex 2	fitbit flex 2	Marra_2020	Substring
fitglance	fitglance	Marra_2020	0
fitguard	fitguard	Marra_2020	0
fitmate	fitmate	Marra_2020	0
fitmeter	fitmeter	Marra_2020	0
fitness tracker	fitness tracker	Marra_2020	0
flyfit	flyfit	Marra_2020	0
fora 2 in 1	fora 2 in 1	Marra_2020	0
fora system	fora system	Marra_2020	0
fossil smartwatch	fossil smartwatch	Marra_2020	0
fox insight app	fox insight app	Marra_2020	0
fox insight self	fox insight self	Marra_2020	0
fr74 hrm earphone	fr74 hrm earphone	Marra_2020	0
free style freedom	free style freedom	Marra_2020	0
free style insulinx	free style insulinx	Marra_2020	0
free style navigator	free style navigator	Marra_2020	0
free style precision	free style precision	Marra_2020	0
freeemg	freeemg	Marra_2020	0
freescan	freescan	Marra_2020	0
freespira	freespira	Marra_2020	0
freestyle freedom	freestyle freedom	Marra_2020	0
freestyle insulinx	freestyle insulinx	Marra_2020	0
freewavz	freewavz	Marra_2020	0
fridababy	fridababy	Marra_2020	0
fuelband se	fuelband se	Marra_2020	0
functional assess biomech system	functional assess biomech system	Marra_2020	0
g4 platinum	g4 platinum	Marra_2020	0
g5 platinum	g5 platinum	Marra_2020	0
galaxy s4	galaxy s4	Marra_2020	0
galaxy s5	galaxy s5	Marra_2020	0
galaxy s6	galaxy s6	Marra_2020	0
galaxy s7	galaxy s7	Marra_2020	0
galaxy s8	galaxy s8	Marra_2020	0
galaxy sii	galaxy sii	Marra_2020	0
galaxy tab	galaxy tab	Marra_2020	0

galvanic pip	galvanic pip	Marra_2020	0
geneactiv	geneactiv	Marra_2020	0
geopalz	geopalz	Marra_2020	0
ginger io	ginger io	Marra_2020	0
glucome	glucome	Marra_2020	0
glucoscout	glucoscout	Marra_2020	0
glucotel	glucotel	Marra_2020	0
glucotrack	glucotrack	Marra_2020	0
glucowizzard	glucowizzard	Marra_2020	0
go2 achieve	go2 achieve	Marra_2020	0
gobe2	gobe2	Marra_2020	0
googlefit	googlefit	Marra_2020	0
gospiro	gospiro	Marra_2020	0
gow heart	gow heart	Marra_2020	0
gt3x	gt3x	Marra_2020	0
gt9x link	gt9x link	Marra_2020	0
guardian real time	guardian real time	Marra_2020	0
guardian real time	guardian real time	Marra_2020	0
gyenno spoon	gyenno spoon	Marra_2020	0
h2opal	h2opal	Marra_2020	0
hailie smart	hailie smart	Marra_2020	0
hal lower limb nonmedical	hal lower limb nonmedical	Marra_2020	0
hal lumbar care support	hal lumbar care support	Marra_2020	0
hal lumbar labor support	hal lumbar labor support	Marra_2020	0
hal peripherals	hal peripherals	Marra_2020	0
hal single joint	hal single joint	Marra_2020	0
hapifork	hapifork	Marra_2020	0
happify	happify	Marra_2020	0
healthband	healthband	Marra_2020	0
healthkit	healthkit	Marra_2020	0
healthpatch	healthpatch	Marra_2020	0
heartcheck	heartcheck	Marra_2020	0
heartguide	heartguide	Marra_2020	0
heartmath	heartmath	Marra_2020	0
heartrak	heartrak	Marra_2020	0
heartscan	heartscan	Marra_2020	0

heartscope	heartscope	Marra_2020	0
heddoko	heddoko	Marra_2020	0
helios smart ring	helios smart ring	Marra_2020	0
helo classic	helo classic	Marra_2020	0
helo lx	helo lx	Marra_2020	0
herotracker	herotracker	Marra_2020	0
hexoskin	hexoskin	Marra_2020	0
hidrate	hidrate	Marra_2020	0
hijiband	hijiband	Marra_2020	0
holland hybrid	holland hybrid	Marra_2020	0
huawei band	huawei band	Marra_2020	0
huawei color	huawei color	Marra_2020	0
huawei fit	huawei fit	Marra_2020	0
huawei talkband	huawei talkband	Marra_2020	0
huawei watch	huawei watch	Marra_2020	0
huinno	huinno	Marra_2020	0
humon hex	humon hex	Marra_2020	0
hxm heart	hxm heart	Marra_2020	0
hxm smart	hxm smart	Marra_2020	0
hydracoach	hydracoach	Marra_2020	0
hyginex sensor	hyginex sensor	Marra_2020	0
hygreen hand hygiene	hygreen hand hygiene	Marra_2020	0
ibeat wristwatch	ibeat wristwatch	Marra_2020	0
ibgstar	ibgstar	Marra_2020	0
ibrain	ibrain	Marra_2020	0
ichoice	ichoice	Marra_2020	0
ideea	ideea	Marra_2020	0
idm perform footbeds	idm perform footbeds	Marra_2020	0
ifit axis	ifit axis	Marra_2020	0
ifit vue	ifit vue	Marra_2020	0
iglucose	iglucose	Marra_2020	0
ihealth	ihealth	Marra_2020	0
ihealth wless bpressure monitor	ihealth wless bpressure monitor	Marra_2020	0
iheart	iheart	Marra_2020	0
imotions	imotions	Marra_2020	0
inbody band	inbody band	Marra_2020	0

inertial measurement units	inertial measurement units	Marra_2020	0
inpen	inpen	Marra_2020	0
insole sensor	insole sensor	Marra_2020	0
instabeat	instabeat	Marra_2020	0
insulet	insulet	Marra_2020	0
insulia	insulia	Marra_2020	0
inui home urine analysis test	inui home urine analysis test	Marra_2020	0
iota tracker	iota tracker	Marra_2020	0
ipro cgm	ipro cgm	Marra_2020	0
ipro continuous	ipro continuous	Marra_2020	0
ipro glucose	ipro glucose	Marra_2020	0
iproven thermometer	iproven thermometer	Marra_2020	0
ir20 ear thermometer	ir20 ear thermometer	Marra_2020	0
iriveron	iriveron	Marra_2020	0
ironman sleek	ironman sleek	Marra_2020	0
istride	istride	Marra_2020	0
ithermometer	ithermometer	Marra_2020	0
ivyhealth body analysis scale	ivyhealth body analysis scale	Marra_2020	0
jabra elite	jabra elite	Marra_2020	0
jabra sport	jabra sport	Marra_2020	0
jaeger am2	jaeger am2	Marra_2020	0
jazz wireless	jazz wireless	Marra_2020	0
kaia	kaia	Marra_2020	0
kanega	kanega	Marra_2020	0
kardia	kardia	Marra_2020	0
kardia band	kardia band	Marra_2020	0
kardia heart	kardia heart	Marra_2020	0
kardia mobile	kardia mobile	Marra_2020	0
kardiaband	kardiaband	Marra_2020	0
kardiamobile	kardiamobile	Marra_2020	0
kehel	kehel	Marra_2020	0
kenz	kenz	Marra_2020	0
kid power band	kid power band	Marra_2020	0
kinect	kinect	Marra_2020	0

kinesia	kinesia	Marra_2020	0
kingston bracelet	kingston bracelet	Marra_2020	0
kinsa thermometer	kinsa thermometer	Marra_2020	0
kionix	kionix	Marra_2020	0
kolibree tooth brush	kolibree tooth brush	Marra_2020	0
koogeek scale	koogeek scale	Marra_2020	0
koogeek thermometer	koogeek thermometer	Marra_2020	0
leaf nature	leaf nature	Marra_2020	0
leaf sensor	leaf sensor	Marra_2020	0
leaf urban	leaf urban	Marra_2020	0
leapband	leapband	Marra_2020	0
lechal smart	lechal smart	Marra_2020	0
legsys	legsys	Marra_2020	0
leikr 1 watch	leikr 1 watch	Marra_2020	0
level smart glasses	level smart glasses	Marra_2020	0
levl	levl	Marra_2020	0
lg watch	lg watch	Marra_2020	0
lief therapeutics	lief therapeutics	Marra_2020	0
lifeband	lifeband	Marra_2020	0
lifebeam	lifebeam	Marra_2020	0
lifecorder	lifecorder	Marra_2020	0
lifefuels bottle	lifefuels bottle	Marra_2020	0
lifelight	lifelight	Marra_2020	0
lifetrak	lifetrak	Marra_2020	0
lifevest	lifevest	Marra_2020	0
logicink	logicink	Marra_2020	0
lowdown focus	lowdown focus	Marra_2020	0
lully sleep guardian	lully sleep guardian	Marra_2020	0
lumafit	lumafit	Marra_2020	0
lumee	lumee	Marra_2020	0
lumo lift	lumo lift	Marra_2020	0
lumo run	lumo run	Marra_2020	0
luna watch	luna watch	Marra_2020	0
lvl hydration	lvl hydration	Marra_2020	0
mad apparel	mad apparel	Marra_2020	0
magik toothbrush	magik toothbrush	Marra_2020	0

mars holter	mars holter	Marra_2020	0
masimo radius	masimo radius	Marra_2020	0
master caution	master caution	Marra_2020	0
mbody	mbody	Marra_2020	0
medminder	medminder	Marra_2020	0
medrhythms	medrhythms	Marra_2020	0
medsignals	medsignals	Marra_2020	0
medtronic biomodule	medtronic biomodule	Marra_2020	0
medtronic carelink	medtronic carelink	Marra_2020	0
medtronic minimed	medtronic minimed	Marra_2020	0
mente autism	mente autism	Marra_2020	0
metamax 3b	metamax 3b	Marra_2020	0
metamax3b	metamax3b	Marra_2020	0
metria sensor	metria sensor	Marra_2020	0
mevics	mevics	Marra_2020	0
mhealth	mhealth	Multiple	0
mi band	mi band	Marra_2020	0
micoach	micoach	Marra_2020	0
micropem	micropem	Marra_2020	0
microsoft band	microsoft band	Marra_2020	0
microsoft band 2	microsoft band 2	Marra_2020	0
milestone sports pod	milestone sports pod	Marra_2020	0
milo sens blood alcohol track	milo sens blood alcohol track	Marra_2020	0
mini mitter	mini mitter	Marra_2020	0
minimed paradigm	minimed paradigm	Marra_2020	0
minimed paradigm real time revel	minimed paradigm real time revel	Marra_2020	0
minimed revel	minimed revel	Marra_2020	0
minimitter	minimitter	Marra_2020	0
miniwear smart watch	miniwear smart watch	Marra_2020	0
mio fuse	mio fuse	Marra_2020	0
mio heart rate monitor	mio heart rate monitor	Marra_2020	0
mio slice	mio slice	Marra_2020	0
mio watch	mio watch	Marra_2020	0

mio wristband	mio wristband	Marra_2020	0
mira fertility	mira fertility	Marra_2020	0
misfit app	misfit app	Marra_2020	0
misfit flash	misfit flash	Marra_2020	0
mixfree sports watch	mixfree sports watch	Marra_2020	0
mma7260q accelerometer	mma7260q accelerometer	Marra_2020	0
mma7361 accelerometer	mma7361 accelerometer	Marra_2020	0
monbaby	monbaby	Marra_2020	0
monica an24	monica an24	Marra_2020	0
monterey hybrid	monterey hybrid	Marra_2020	0
moov hr	moov hr	Marra_2020	0
moov now	moov now	Marra_2020	0
moticonscience	moticonscience	Marra_2020	0
motionlogger	motionlogger	Marra_2020	0
motionwatch	motionwatch	Marra_2020	0
motiv ring	motiv ring	Marra_2020	0
moto 360	moto 360	Marra_2020	0
motoactv	motoactv	Marra_2020	0
motorola droid	motorola droid	Marra_2020	0
movemonitor	movemonitor	Marra_2020	0
movesense	movesense	Marra_2020	0
movisens	movisens	Marra_2020	0
mpu6050	mpu6050	Marra_2020	0
mshorts	mshorts	Marra_2020	0
mspirometer	mspirometer	Marra_2020	0
mtw awinda	mtw awinda	Marra_2020	0
multisense	multisense	Marra_2020	0
muse headband	muse headband	Marra_2020	0
muse meditation	muse meditation	Marra_2020	0
my uv patch	my uv patch	Marra_2020	0
mybabyscale	mybabyscale	Marra_2020	0
mycite	mycite	Marra_2020	0
mycoach pulse	mycoach pulse	Marra_2020	0
mygluco	mygluco	Marra_2020	0
myoxy	myoxy	Marra_2020	0
myspiroo	myspiroo	Marra_2020	0

mystar	mystar	Marra_2020	0
mystar dosecoach	mystar dosecoach	Marra_2020	0
mystar extra	mystar extra	Marra_2020	0
mytens	mytens	Marra_2020	0
mythermo	mythermo	Marra_2020	0
myzone	myzone	Marra_2020	0
nabi compete	nabi compete	Marra_2020	0
nabu x	nabu x	Marra_2020	0
nadi x	nadi x	Marra_2020	0
namu alex	namu alex	Marra_2020	0
nanit	nanit	Marra_2020	0
nanit insights	nanit insights	Marra_2020	0
neofect	neofect	Marra_2020	0
neptune pine	neptune pine	Marra_2020	0
neuroon open	neuroon open	Marra_2020	0
neurosky	neurosky	Marra_2020	0
neurotracker	neurotracker	Marra_2020	0
nevo watch	nevo watch	Marra_2020	0
nexus6	nexus6	Marra_2020	0
nightware	nightware	Marra_2020	0
nike fuelband	nike fuelband	Marra_2020	0
nike sensor	nike sensor	Marra_2020	0
nike sportswatch	nike sportswatch	Marra_2020	0
nokia blood pressure monitor	nokia blood pressure monitor	Marra_2020	0
nokia body	nokia body	Marra_2020	0
nokia bpm	nokia bpm	Marra_2020	0
nokia go	nokia go	Marra_2020	0
nokia steel	nokia steel	Marra_2020	0
nokia thermo	nokia thermo	Marra_2020	0
nonin 3230 pulse oximeter	nonin 3230 pulse oximeter	Marra_2020	0
nonin onyx ii	nonin onyx ii	Marra_2020	0
nonin pulse oximet	nonin pulse oximet	Marra_2020	0
nonin pulse oximeter	nonin pulse oximeter	Marra_2020	0
noraxon software	noraxon software	Marra_2020	0
northeast monitoring	northeast monitoring	Marra_2020	0
nosefrida	nosefrida	Marra_2020	0

notch motion capture	notch motion capture	Marra_2020	0
noteband	noteband	Marra_2020	0
nox music	nox music	Marra_2020	0
nox sleep light	nox sleep light	Marra_2020	0
nox t3	nox t3	Marra_2020	0
nox t3	nox t3	Marra_2020	0
nuerotrail	nuerotrail	Marra_2020	0
olfinity	olfinity	Marra_2020	0
olympus ls5	olympus ls5	Marra_2020	0
omada health	omada health	Marra_2020	0
omate	omate	Marra_2020	0
omnipod	omnipod	Marra_2020	0
omron	omron	Marra_2020	0
onduo app	onduo app	Marra_2020	0
one drop premium	one drop premium	Marra_2020	0
onyx vantage	onyx vantage	Marra_2020	0
opal device	opal device	Marra_2020	0
opernative	opernative	Marra_2020	0
optalert	optalert	Marra_2020	0
optimeye	optimeye	Marra_2020	0
oral b 7000	oral b 7000	Marra_2020	0
orcam	orcam	Marra_2020	0
orpyx	orpyx	Marra_2020	0
oura ring	oura ring	Marra_2020	0
oxitone	oxitone	Marra_2020	0
oxitone 1000	oxitone 1000	Marra_2020	0
oxxiom	oxxiom	Marra_2020	0
oxywatch	oxywatch	Marra_2020	0
ozmo active	ozmo active	Marra_2020	0
pacifier thermometer	pacifier thermometer	Marra_2020	0
pal technologies	pal technologies	Marra_2020	0
palmsat	palmsat	Marra_2020	0
palo alto health sciences	palo alto health sciences	Marra_2020	0
pam am101	pam am101	Marra_2020	0
pam am300	pam am300	Marra_2020	0
pamsys	pamsys	Marra_2020	0

pavlok	pavlok	Marra_2020	0
pavlok 2	pavlok 2	Marra_2020	0
pear therapeutics	pear therapeutics	Marra_2020	0
pebble activity monitor	pebble activity monitor	Marra_2020	0
pebble monitor	pebble monitor	Marra_2020	0
pebble watch	pebble watch	Marra_2020	0
peerbridge	peerbridge	Marra_2020	0
personal vision tracker	personal vision tracker	Marra_2020	0
philips actiwatch	philips actiwatch	Marra_2020	0
philips body analysis scale	philips body analysis scale	Marra_2020	0
philips dti 2	philips dti 2	Marra_2020	0
philips ear thermometer	philips ear thermometer	Marra_2020	0
philips gosafe	philips gosafe	Marra_2020	0
philips health watch	philips health watch	Marra_2020	0
philips lifeline	philips lifeline	Marra_2020	0
philips upper arm blood pressure	philips upper arm blood pressure	Marra_2020	0
philips wrist blood pressure	philips wrist blood pressure	Marra_2020	0
physilog	physilog	Marra_2020	0
physiotrace	physiotrace	Marra_2020	0
physiowave	physiowave	Marra_2020	0
pivot breath sensor	pivot breath sensor	Marra_2020	0
pivotal living band	pivotal living band	Marra_2020	0
pixie smart pads	pixie smart pads	Marra_2020	0
pkmas	pkmas	Marra_2020	0
plume labs flow	plume labs flow	Marra_2020	0
polar a300	polar a300	Marra_2020	0
polar a360	polar a360	Marra_2020	0
polar a370	polar a370	Marra_2020	0
polar active watch	polar active watch	Marra_2020	0
polar axn500	polar axn500	Marra_2020	0
polar axn700	polar axn700	Marra_2020	0
polar balance	polar balance	Marra_2020	0

polar beat	polar beat	Marra_2020	0
polar coach	polar coach	Marra_2020	0
polar cs	polar cs	Marra_2020	0
polar electro	polar electro	Marra_2020	0
polar f11	polar f11	Marra_2020	0
polar f55	polar f55	Marra_2020	0
polar f6	polar f6	Marra_2020	0
polar f7	polar f7	Marra_2020	0
polar flow for club	polar flow for club	Marra_2020	0
polar ft	polar ft	Marra_2020	0
polar h10	polar h10	Marra_2020	0
polar heart rate sensor	polar heart rate sensor	Marra_2020	0
polar loop	polar loop	Marra_2020	0
polar m200	polar m200	Marra_2020	0
polar m400	polar m400	Marra_2020	0
polar m430	polar m430	Marra_2020	0
polar m450	polar m450	Marra_2020	0
polar m600	polar m600	Marra_2020	0
polar oh1	polar oh1	Marra_2020	0
polar rc	polar rc	Marra_2020	0
polar rs	polar rs	Marra_2020	0
polar s410	polar s410	Marra_2020	0
polar s510	polar s510	Marra_2020	0
polar s520	polar s520	Marra_2020	0
polar s610	polar s610	Marra_2020	0
polar s625x	polar s625x	Marra_2020	0
polar s710	polar s710	Marra_2020	0
polar s720i	polar s720i	Marra_2020	0
polar s725	polar s725	Marra_2020	0
polar s810i	polar s810i	Marra_2020	0
polar sleep plus	polar sleep plus	Marra_2020	0
polar t31	polar t31	Marra_2020	0
polar teampro	polar teampro	Marra_2020	0
polar v650	polar v650	Marra_2020	0
polar v800	polar v800	Marra_2020	0
polar vantage	polar vantage	Marra_2020	0
popit	popit	Marra_2020	0

portable albumin tester	portable albumin tester	Marra_2020	0
pour moi	pour moi	Marra_2020	0
prana tech	prana tech	Marra_2020	0
pressure guardian	pressure guardian	Marra_2020	0
pressureguardian	pressureguardian	Marra_2020	0
pressuretel	pressuretel	Marra_2020	0
professional care 7000	professional care 7000	Marra_2020	0
propeller health	propeller health	Marra_2020	0
prosense watch	prosense watch	Marra_2020	0
proteus digital health	proteus digital health	Marra_2020	0
proteus discover	proteus discover	Marra_2020	0
protokinetics zeno	protokinetics zeno	Marra_2020	0
pryme vessyl	pryme vessyl	Marra_2020	0
pulsox 300	pulsox 300	Marra_2020	0
pulsox 300	pulsox 300	Marra_2020	0
q poc	q poc	Marra_2020	0
qardio arm	qardio arm	Marra_2020	0
qardioarm	qardioarm	Marra_2020	0
qardiobase	qardiobase	Marra_2020	0
qardiocore	qardiocore	Marra_2020	0
quardio base	quardio base	Marra_2020	0
quardio core	quardio core	Marra_2020	0
quatix	quatix	Marra_2020	0
quell device	quell device	Marra_2020	0
quick care thermometer	quick care thermometer	Marra_2020	0
quicksee	quicksee	Marra_2020	0
radar pace	radar pace	Marra_2020	0
rapael	rapael	Marra_2020	0
rapael smart	rapael smart	Marra_2020	0
rayvs1	rayvs1	Marra_2020	0
readiband	readiband	Marra_2020	0
recon jet	recon jet	Marra_2020	0
reemo	reemo	Marra_2020	0
rehacom	rehacom	Marra_2020	0
relion	relion	Marra_2020	0

remedy digital scale	remedy digital scale	Marra_2020	0
rempark system	rempark system	Marra_2020	0
renault sport t shirt	renault sport t shirt	Marra_2020	0
researchkit	researchkit	Marra_2020	0
resmed s9	resmed s9	Marra_2020	0
resperate	resperate	Marra_2020	0
reston z	reston z	Marra_2020	0
rhealthx1	rhealthx1	Marra_2020	0
ringly luxe	ringly luxe	Marra_2020	0
ringly smart	ringly smart	Marra_2020	0
rootirx	rootirx	Marra_2020	0
rpm bp100	rpm bp100	Marra_2020	0
rpm scale	rpm scale	Marra_2020	0
rpm scale100	rpm scale100	Marra_2020	0
runscribe	runscribe	Marra_2020	0
runsense watch	runsense watch	Marra_2020	0
ruputer	ruputer	Marra_2020	0
s3 connected health	s3 connected health	Marra_2020	0
s9 autoset	s9 autoset	Marra_2020	0
s9 resmed	s9 resmed	Marra_2020	0
s9 vpap	s9 vpap	Marra_2020	0
safebeing	safebeing	Marra_2020	0
samsung galaxy	samsung galaxy	Marra_2020	0
scallop touchscreen	scallop touchscreen	Marra_2020	0
scanadu scout	scanadu scout	Marra_2020	0
screeneye x	screeneye x	Marra_2020	0
seeq	seeq	Marra_2020	0
sense u	sense u	Marra_2020	0
sense with voice sleep	sense with voice sleep	Marra_2020	0
senseonics	senseonics	Marra_2020	0
sensewear	sensewear	Marra_2020	0
sensor dot	sensor dot	Marra_2020	0
sensoria heart rate monitor	sensoria heart rate monitor	Marra_2020	0
sensoria socks	sensoria socks	Marra_2020	0

sensoria sports bra	sensoria sports bra	Marra_2020	0
sensoria t shirt	sensoria t shirt	Marra_2020	0
sensoria tshirt	sensoria tshirt	Marra_2020	0
sensoscan	sensoscan	Marra_2020	0
sensyu	sensyu	Marra_2020	0
sentio feel wristband	sentio feel wristband	Marra_2020	0
shade ultraviolet sensor	shade ultraviolet sensor	Marra_2020	0
shapa	shapa	Marra_2020	0
shft run	shft run	Marra_2020	0
shimmer sensor	shimmer sensor	Marra_2020	0
shimmer3	shimmer3	Marra_2020	0
silvercloud	silvercloud	Marra_2020	0
simpill	simpill	Marra_2020	0
sippo	sippo	Marra_2020	0
siren diabetic socks	siren diabetic socks	Marra_2020	0
sleep profiler	sleep profiler	Marra_2020	0
sleep shepherd	sleep shepherd	Marra_2020	0
sleep tracker	sleep tracker	Marra_2020	0
sleepio	sleepio	Marra_2020	0
sleepminder	sleepminder	Marra_2020	0
sleeppeanut	sleeppeanut	Marra_2020	0
sleeptracker	sleeptracker	Marra_2020	0
smart apparel	smart apparel	Marra_2020	0
smart bed sheet	smart bed sheet	Marra_2020	0
smart body analyzer	smart body analyzer	Marra_2020	0
smart bra	smart bra	Marra_2020	0
smart brush	smart brush	Marra_2020	0
smart doppler fetal monitor	smart doppler fetal monitor	Marra_2020	0
smart ear thermometer	smart ear thermometer	Marra_2020	0
smart garment	smart garment	Marra_2020	0
smart glasses	smart glasses	Marra_2020	0
smart glucose meter	smart glucose meter	Marra_2020	0
smart headphone	smart headphone	Marra_2020	0

smart inhaler	smart inhaler	Marra_2020	0
smart insole	smart insole	Marra_2020	0
smart kid scale	smart kid scale	Marra_2020	0
smart phone	smart phone	Marra_2020	0
smart pill bottle	smart pill bottle	Marra_2020	0
smart powered toothbrush	smart powered toothbrush	Marra_2020	0
smart shoe insole	smart shoe insole	Marra_2020	0
smart textile	smart textile	Marra_2020	0
smart thermometer	smart thermometer	Marra_2020	0
smart toothbrush	smart toothbrush	Marra_2020	0
smart workout gloves	smart workout gloves	Marra_2020	0
smartband	smartband	Marra_2020	0
smartbra	smartbra	Marra_2020	0
smartcap	smartcap	Marra_2020	0
smartex	smartex	Marra_2020	0
smartinhaler	smartinhaler	Marra_2020	0
smartscale	smartscale	Marra_2020	0
smartshoe	smartshoe	Marra_2020	0
smartsleep	smartsleep	Marra_2020	0
smarttemp	smarttemp	Marra_2020	0
smartturbo	smartturbo	Marra_2020	0
smokebeat	smokebeat	Marra_2020	0
snap40	snap40	Marra_2020	0
solos cycling glasses	solos cycling glasses	Marra_2020	0
somaxis cricket	somaxis cricket	Marra_2020	0
somnowatch	somnowatch	Marra_2020	0
sonomat	sonomat	Marra_2020	0
sony playstation	sony playstation	Marra_2020	0
sony smart b	sony smart b	Marra_2020	0
sony smartband	sony smartband	Marra_2020	0
sony smartwatch	sony smartwatch	Marra_2020	0
soundsport wireless	soundsport wireless	Marra_2020	0
spark watch	spark watch	Marra_2020	0
spire health tag	spire health tag	Marra_2020	0
spire stone	spire stone	Marra_2020	0

spirodoc	spirodoc	Marra_2020	0
spirotel	spirotel	Marra_2020	0
spotnsave band	spotnsave band	Marra_2020	0
spree headband	spree headband	Marra_2020	0
spree smartcap	spree smartcap	Marra_2020	0
sproutling baby monitor	sproutling baby monitor	Marra_2020	0
sproutling smart sleep	sproutling smart sleep	Marra_2020	0
spry health loop	spry health loop	Marra_2020	0
spry loop	spry loop	Marra_2020	0
sqord	sqord	Marra_2020	0
stealth system ecg recorder	stealth system ecg recorder	Marra_2020	0
stepwatch	stepwatch	Marra_2020	0
stethee	stethee	Marra_2020	0
strava	strava	Marra_2020	0
stridalyzer	stridalyzer	Marra_2020	0
striiv apex	striiv apex	Marra_2020	0
sugarbeat	sugarbeat	Marra_2020	0
sunbit	sunbit	Marra_2020	0
sunsprite	sunsprite	Marra_2020	0
surrosense rx	surrosense rx	Marra_2020	0
suunto	suunto	Marra_2020	0
suunto spartan	suunto spartan	Marra_2020	0
sync burn	sync burn	Marra_2020	0
sync calorie	sync calorie	Marra_2020	0
sync distance	sync distance	Marra_2020	0
sync elite	sync elite	Marra_2020	0
sync fit	sync fit	Marra_2020	0
sync gps	sync gps	Marra_2020	0
sync step	sync step	Marra_2020	0
sync watch	sync watch	Marra_2020	0
synertial igs 180	synertial igs 180	Marra_2020	0
t slim	t slim	Marra_2020	0
t slim	t slim	Marra_2020	0
tabletop pulse oximeter	tabletop pulse oximeter	Marra_2020	0
tactix	tactix	Marra_2020	0

tandem diabetes care	tandem diabetes care	Marra_2020	0
tb breathalyser	tb breathalyser	Marra_2020	0
telcare 2 0 bgm	telcare 2 0 bgm	Marra_2020	0
telcare blood glucose meter	telcare blood glucose meter	Marra_2020	0
telcare glucometer	telcare glucometer	Marra_2020	0
teleconsultation	teleconsultation	Pubmed	0
temptraq	temptraq	Marra_2020	0
texas instruments wearit	texas instruments wearit	Marra_2020	0
the quell	the quell	Marra_2020	0
thermos bottle	thermos bottle	Marra_2020	0
ti wearit	ti wearit	Marra_2020	0
tickr	tickr	Marra_2020	0
tinke	tinke	Marra_2020	0
tiny logics memo	tiny logics memo	Marra_2020	0
tlink watch	tlink watch	Marra_2020	0
tm 750 thermometer	tm 750 thermometer	Marra_2020	0
tmjoint	tmjoint	Marra_2020	0
tobii	tobii	Marra_2020	0
tobii pro	tobii pro	Marra_2020	0
tom tom spark	tom tom spark	Marra_2020	0
tomtom	tomtom	Marra_2020	0
tomtom runner	tomtom runner	Marra_2020	0
tomtom spark	tomtom spark	Marra_2020	0
tosense cova	tosense cova	Marra_2020	0
touch tracker	touch tracker	Marra_2020	0
touchhb	touchhb	Marra_2020	0
trago bottle	trago bottle	Marra_2020	0
triggerfish	triggerfish	Marra_2020	0
trigno	trigno	Marra_2020	0
true metrix	true metrix	Marra_2020	0
truemetrix	truemetrix	Marra_2020	0
trueresult	trueresult	Marra_2020	0
truetrack	truetrack	Marra_2020	0
tslim	tslim	Marra_2020	0
tzoa haven	tzoa haven	Marra_2020	0

ua 651ble blood pressure	ua 651ble blood pressure	Marra_2020	0
ua band	ua band	Marra_2020	0
ua hovr	ua hovr	Marra_2020	0
uc 352ble scale	uc 352ble scale	Marra_2020	0
uchek	uchek	Marra_2020	0
ulla hydration reminder	ulla hydration reminder	Marra_2020	0
umana t1	umana t1	Marra_2020	0
under armour	under armour	Marra_2020	0
under armour band	under armour band	Marra_2020	0
under armour burn	under armour burn	Marra_2020	0
under armour calorie	under armour calorie	Marra_2020	0
under armour distance	under armour distance	Marra_2020	0
under armour elite	under armour elite	Marra_2020	0
under armour fit	under armour fit	Marra_2020	0
under armour fitness tracker	under armour fitness tracker	Marra_2020	0
under armour heart rate	under armour heart rate	Marra_2020	0
under armour hovr	under armour hovr	Marra_2020	0
under armour sync	under armour sync	Marra_2020	0
upright pro	upright pro	Marra_2020	0
valedo	valedo	Marra_2020	0
varia vision	varia vision	Marra_2020	0
variable node co2	variable node co2	Marra_2020	0
vector mouthguard	vector mouthguard	Marra_2020	0
verily study watch	verily study watch	Marra_2020	0
versame starling	versame starling	Marra_2020	0
vibe 5atm	vibe 5atm	Marra_2020	0
vibe hiking	vibe hiking	Marra_2020	0
vigo fatigue monitor	vigo fatigue monitor	Marra_2020	0
viiiiva heart rate monitor	viiiiva heart rate monitor	Marra_2020	0
vimove	vimove	Marra_2020	0
vincense	vincense	Marra_2020	0

visi mobile	visi mobile	Marra_2020	0
vital moto mod	vital moto mod	Marra_2020	0
vital scout	vital scout	Marra_2020	0
vitality glowcap	vitality glowcap	Marra_2020	0
vitalograph	vitalograph	Marra_2020	0
vitalpatch	vitalpatch	Marra_2020	0
vitalsense	vitalsense	Marra_2020	0
vitalsignals	vitalsignals	Marra_2020	0
vitascan	vitascan	Marra_2020	0
vivoactive	vivoactive	Marra_2020	0
vivofit	vivofit	Marra_2020	0
vivoki	vivoki	Marra_2020	0
vivomove	vivomove	Marra_2020	0
vivosense	vivosense	Marra_2020	0
vivosmart	vivosmart	Marra_2020	0
vívosmart	vívosmart	Marra_2020	0
vivosport	vivosport	Marra_2020	0
vivowatch	vivowatch	Marra_2020	0
voluntis	voluntis	Marra_2020	0
vue smart glasses	vue smart glasses	Marra_2020	0
wahoo fitness	wahoo fitness	Marra_2020	0
walking style pro	walking style pro	Marra_2020	0
walking style x	walking style x	Marra_2020	0
wavelet clip	wavelet clip	Marra_2020	0
wavelet sensor	wavelet sensor	Marra_2020	0
wavelet wristband	wavelet wristband	Marra_2020	0
wearable defibrillator	wearable defibrillator	Marra_2020	Substring
wearable gym	wearable gym	Marra_2020	Substring
wearable uv sensor	wearable uv sensor	Marra_2020	Substring
weighttel	weighttel	Marra_2020	0
wellograph watch	wellograph watch	Marra_2020	0
wherecom k3	wherecom k3	Marra_2020	0
wireless arm bpressure monitor	wireless arm bpressure monitor	Marra_2020	0
wireless weight scale	wireless weight scale	Marra_2020	0
wireless wrist bpressure monitor	wireless wrist bpressure monitor	Marra_2020	0

withings	withings	Marra_2020	0
witscale	witscale	Marra_2020	0
wiwe	wiwe	Marra_2020	0
wme wristband	wme wristband	Marra_2020	0
wordle	wordle	Marra_2020	0
wristox	wristox	Marra_2020	0
wynd air quality tracker	wynd air quality tracker	Marra_2020	0
wynd essential	wynd essential	Marra_2020	0
wynd plus	wynd plus	Marra_2020	0
x doria	x doria	Marra_2020	0
x2 biosystems	x2 biosystems	Marra_2020	0
xiaomi	xiaomi	Marra_2020	0
xmetrics	xmetrics	Marra_2020	0
xpod 3012	xpod 3012	Marra_2020	0
xsens	xsens	Marra_2020	0
yofimeter	yofimeter	Marra_2020	0
ze tel	ze tel	Marra_2020	0
zeband	zeband	Marra_2020	0
zeblaze	zeblaze	Marra_2020	0
zecircle	zecircle	Marra_2020	0
zeclock	zeclock	Marra_2020	0
zeeq	zeeq	Marra_2020	0
zefit	zefit	Marra_2020	0
zen sensor	zen sensor	Marra_2020	0
zen watch	zen watch	Marra_2020	0
zensor	zensor	Marra_2020	0
zephone	zephone	Marra_2020	0
zephyr biopatch	zephyr biopatch	Marra_2020	0
zeraph	zeraph	Marra_2020	0
zeround	zeround	Marra_2020	0
zesplash	zesplash	Marra_2020	0
zesport	zesport	Marra_2020	0
zetime	zetime	Marra_2020	0
zewatch	zewatch	Marra_2020	0
zikto	zikto	Marra_2020	0
zio patch	zio patch	Marra_2020	Substring
zio xt	zio xt	Marra_2020	Substring
zio xt patch	zio xt patch	Marra_2020	Substring

zwift runpod	zwift runpod	Marra_2020	0
software	software	Pubmed	Removed due to other uses
basis peak	basis peak	Marra_2020	Removed due to other uses
boil and bite mouthguard	boil and bite mouthguard	Marra_2020	Removed due to other uses
caretaker medical	caretaker medical	Marra_2020	Removed due to other uses
digital camera	digital camera	Marra_2020	Removed due to other uses
digitalization	digitalization	Pubmed	Removed due to other uses
digitally	digitally	Pubmed	Removed due to other uses
ehealth	ehealth	Pubmed	Removed due to other uses
g walk	g walk	Marra_2020	Removed due to other uses
gait up	gait up	Marra_2020	Removed due to other uses
holter monitor	holter monitor	Marra_2020	Removed due to other uses
loop band	loop band	Marra_2020	Removed due to other uses
med reminder	med reminder	Marra_2020	Removed due to other uses
med reminder	med reminder	Marra_2020	Removed due to other uses
misfit	misfit	Marra_2020	Removed due to other uses
mobile based	mobile based	Pubmed	Removed due to other uses
nintendo wii	nintendo wii	Marra_2020	Removed due to other uses
push band	push band	Marra_2020	Removed due to other uses
qsun	qsun	Marra_2020	Removed due to other uses
rpm bp	rpm bp	Marra_2020	Removed due to other uses
silver mother	silver mother	Marra_2020	Removed due to other uses

sleep monitor	sleep monitor	Marra_2020	Removed due to other uses
the pip	the pip	Marra_2020	Removed due to other uses
xbox	xbox	Marra_2020	Removed due to other uses
activity trackers	activity trackers	Pubmed	Substring
chatbots	chatbots	Pubmed	Substring
digital health applications	digital health applications	Pubmed	Substring
digital health care	digital health care	Pubmed	Substring
digital health intervention	digital health intervention	Pubmed	Substring
digital health interventions	digital health interventions	Pubmed	Substring
digital health interventions	digital health interventions	Pubmed	Substring
digital health literacy	digital health literacy	Pubmed	Substring
digital health technologies	digital health technologies	Pubmed	Substring
digital health technologies	digital health technologies	Pubmed	Substring
digital health technology	digital health technology	Pubmed	Substring
digital health technology	digital health technology	Pubmed	Substring
digital health tools	digital health tools	Pubmed	Substring
digital healthcare	digital healthcare	Pubmed	Substring
digital interventions	digital interventions	Pubmed	Substring
digital solutions	digital solutions	Pubmed	Substring
digital technology	digital technology	Pubmed	Substring
digital therapeutics	digital therapeutics	Pubmed	Substring
digital tools	digital tools	Pubmed	Substring
digitally delivered	digitally delivered	Pubmed	Substring
ehealth interventions	ehealth interventions	Pubmed	Substring
ehealth literacy	ehealth literacy	Pubmed	Substring
garmin forerunner	garmin forerunner	Marra_2020	Substring
health applications	health applications	Pubmed	Substring

mhealth apps	mhealth apps	Pubmed	Substring
mhealth intervention	mhealth intervention	Pubmed	Substring
mhealth interventions	mhealth interventions	Pubmed	Substring
mhealth technologies	mhealth technologies	Pubmed	Substring
mobile application	mobile application	Pubmed	Substring
mobile applications	mobile applications	Pubmed	Substring
mobile apps	mobile apps	Pubmed	Substring
mobile devices	mobile devices	Multiple	Substring
mobile health apps	mobile health apps	Pubmed	Substring
mobile phones	mobile phones	Pubmed	Substring
mobile technologies	mobile technologies	Pubmed	Substring
smart watch	smart watch	Marra_2020	Substring
smartphone application	smartphone application	Multiple	Substring
smartphone apps	smartphone apps	Pubmed	Substring
smartphone based	smartphone based	Multiple	Substring
smartphone breathalyzer	smartphone breathalyzer	Marra_2020	Substring
smartphones	smartphones	Pubmed	Substring
telemedicine services	telemedicine services	Pubmed	Substring
text messages	text messages	Multiple	Substring
text messaging	text messaging	Multiple	Substring
wearable device	wearable device	Multiple	Substring
wearable devices	wearable devices	Multiple	Substring
wearable sensor	wearable sensor	Pubmed	Substring
wearables	wearables	Pubmed	Substring
digital platforms	digital platforms	Marra_2020	Substring
smartwatches	smartwatches	Multiple	Substring
bluetooth enabled scale	bluetooth[-]*enabled scale	Marra_2020	Substring
digital biomarkers	digital biomarkers	Pubmed	Substring
remote monitoring device	remote monitoring device	Marra_2020	Substring
zio	[^a-zA-Z0-9]zio[^a-zA-Z0-9]	Marra_2020	Yes

mysugr	mysugr	Marra_2020	0
accu check	accu[^a-zA-Z0-9]*che[c]*k [rma]+	Marra_2020	Yes
actigraph	actigraph	Marra_2020	Yes
apnea link	apnea[-]*link	Marra_2020	Yes
bayer contour	bayer contour	Marra_2020	Yes
bg star	bg[-]*star	Marra_2020	Yes
contour link	contour link	Marra_2020	Yes
contour next	contour next	Marra_2020	Yes
embrace watch	embrace[-2]*watch	Marra_2020	Yes
freestyle navigator	free[-]*style navigator	Marra_2020	Yes
freestyle precision	free[-]*style precision	Marra_2020	Yes
free style libre	free[-]*style[-,.]*libre	Marra_2020	Yes
free style lite	free[-]*style[-]*lite	Marra_2020	Yes
garmin	garmin	Marra_2020	Yes
guardian connect	guardian connect	Marra_2020	Yes
guardian sensor	guardian sensor	Marra_2020	Yes
hinge health	hinge health	Synonym	Yes
headspace health	headspace health	Marra_2020	Yes
jawbone up	jawbone[-]*up	Marra_2020	Yes
noom	noom	CTGOV	Yes
onetouch reveal	one[ ]*touch [rma]+	Marra_2020	Yes
sleep dot	sleep[-]*dot	Marra_2020	Yes
tandem insulin pump	tandem insulin pump	Marra_2020	Yes
tyto	tyto	Marra_2020	Yes
ua heart rate	ua heart rate	Marra_2020	Yes
upright go	upright go	Marra_2020	Yes
watchpat	watchpat	Marra_2020	Yes
wing device	[^a-zA-Z0-9]wing device	Marra_2020	Removed due to other uses
telerehabilitation	telerehabilitation	Multiple	Yes
text message	text message	CTGOV	Yes
telehealth	telehealth	Multiple	Yes
telemedicine	telemedicine	Pubmed	Yes
telemonitoring	telemonitoring	Multiple	Yes
telepsychiatry	telepsychiatry	Pubmed	Yes

videoconferencing	video[\s]*conferencing	Pubmed	Yes
video consultation	video[\s]+consultation	Pubmed	Yes
mahana	mahana	Wang_2023	0
freespira	freespira	Wang_2023	0
insulia	insulia	Wang_2023	0
reseto	reset[-]*o	Wang_2023	0
mindmotion	mindmotion go	Wang_2023	0
mindmaze	mindmaze	Wang_2023	0
propeller mobile	propeller [ham]+	Wang_2023	0
tali digital	TALI Digital	Wang_2023	0
tali train	TALI train	Wang_2023	0
Somryst	Somryst	Wang_2023	0
Nightware	Nightware	Wang_2023	0
nerivio	nerivio	Wang_2023	0
endeavorrx	endeavorrx	Wang_2023	0
welldoc	welldoc	Wang_2023	0