### Supplementary Table 1: Top ten hashtags, handles and words\* in 2019, 2020 and 2021

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| --- | --- | --- |
| **Top 2019 Hashtags** | **Top 2020 Hashtags** | **Top 2021 Hashtags (Jan to 12th Feb only)** |
| #nhs | #covid19 | #covid19 |
| #rcgpac | #nhs | #nhs |
| #teamgp | #coronavirus | #covidvaccine |
| #babylosshour | #teamgp | #teamgp |
| #gp | #covid\_19 | #geribookclub |
| #brexit | #covid | #covidvaccination |
| #menshealth | #primarycare | #covid |
| #primarycarenetworks | #covid19uk | #oneteam |
| #sepsis | #gp | #medTwitter |
| #primarycare | #generalpractice | #primarycare |
| **Top 2019 Handles** | **Top 2020 Handles** | **Top 2021 Handles** |
| @rcgp | @rcgp | @nikkikf |
| @lowcarbgp | @nikkikf | @nhsengland |
| @nikkikf | @drsdeg | @rcgp |
| @nhsengland | @nhsengland | @parthaskar |
| @helenrcgp | @matthancock | @drsimonhodes |
| @drsdeg | @fhussain73 | @trisha\_the\_doc |
| @matthancock | @thebma | @yvettedoc50 |
| @sonalikinra | @trishgreenhalgh | @rbkingston |
| @thebma | @lowcarbgp | @drjamesgill |
| @fhussain73 | @movemoresheff | @nhskingston\_ |
| **Top words used in 2019** | **Top words used in 2020** | **Top words used in 2021**  |
| Thank | Thank | Thank |
| Great | Time | Vaccine |
| GP | Great | patient |
| Patient | Patient | Time |
| Time | People | People |
| Good | Good | Great |
| Work | Work | Covid |
| People | GP | GP |
| care | Care | Good |
| Health | Health | Work |

#### Key

Red =current affairs or politician, Blue – health or health service or health organisation, Orange = COVID-19, Green =primary care, GPs or heads of organisations, Grey =miscellaneous

\*Excludes stop words such as ‘the’, ‘and’, ‘is’

### Supplementary Table 2: Trends in terms used for selected topics 2019 to February 2021

|  |  |  |  |
| --- | --- | --- | --- |
| **Topic** | **Terms Searched** | **Highest Percentage of Daily Tweets** | **Notes** |
| **Vaccine** | Vaccination OR vaccinations OR vaccine OR vaccines OR vaccinated OR vaccinating OR #covidvaccine OR #vaccines OR #covidvaccination OR#vaccineswork OR #covid-19 OR#covid2019 OR #vaccine OR #vaccination OR #covidvaccines OR #covid19vaccine OR #vaccinessavelives OR #pfizervaccine OR #pfizer OR #astrazeneca OR #covidvacccine #vaccinate OR #getvaccinated | 23.4% | Prevalent from the 9th November 2020 onwards, with high volume from beginning of December. 9th November 2020 Pfizer announced results of their phase 3 clinical trial efficacy test results. Vaccination roll out began on 8th December 2020. |
| **COVID-19** | corona OR coronavirus OR covid OR covid19 OR pandemic OR virus#covid19 OR #coronavirus OR #covid2019 OR #covid\_19 OR #covid OR #covid\_19 OR #covid19uk OR #coronavirusuk OR #covid-19 OR #fightcovid19 OR#pandemic OR #covid\_\_19 OR #corona OR #covid\_19uk OR #coronavirusoutbreak OR #coronavirusupdate OR#covid2019uk OR #covid19pandemic OR #longcovid OR #covidassessmentcentre OR #coronacrisis OR #coronaviruspandemic OR #coviduk OR #coronacrisisuk OR #zerocovid OR #coronauk OR #coronavirusupdates OR#coronaoutbreak OR #coronaupdate OR #coronvirusuk OR #covidiots | 18.1% | Prevalent from Feb and March 2020 onwards. COVID became notifiable disease in UK on 5th March 2020. |
| **Transmission** | distancing OR isolate OR isolated OR isolating OR isolation OR lockdown OR mask OR socially OR transmission OR transmitted OR transmit OR vulnerable OR wave OR shielding OR #uklockdown OR #stayathomeandstaysafe OR #stayhomesavelives OR #lockdown OR #lockdown2 OR #lockdownuk OR #lockdownnow OR #socialdistancing OR #socialdistancinguk OR #stayhome OR #stayathome OR #staysafe OR #wearamask OR #flattenthecurve OR #stayinworkout OR #covidiots OR #washyourhands OR #wearamask OR #physicaldistancing OR #savelives OR #stayathomesavelives OR #stayhomestaysafe OR #mask OR #facemask OR #shielding OR #mymaskprotectsyou OR #staysafestayhome OR #selfisolation OR #flattenthecuve OR #stayathomeprotectthenhssavelives OR #protectthenhs OR #facemasks OR #saveournhs OR #coronaviruslockdownuk OR #selfisolating OR #socialdistancinguk OR #covidiot OR #mask OR #selfisolate OR #trackandtrace OR #coronaviruslockdown OR #socialdistanacing OR #shielding OR #coronalockdown OR #coronaviruslockdown OR #coronalockdown OR #social\_distancing OR #socialdistance OR #stayalert OR #keepyourdistance OR #isolation | 21.8% | Prevalent from March 2020 onwards. Peaks on topics of lockdowns, Dominic Cummings, and mask campaigning23 March 2020, the UK went into lockdown. 22 May News breaks of Mr Cummings trip to Durham, 24 July Compulsory face coverings in indoor public spaces, 31 October 2020 announcement of second lockdown |
| **Remote Working** | Telephone OR phone OR video OR OR virtual OR remote OR remotely OR teleconsultation OR accurx OR footfall OR econsult OR skype OR zoom OR #remoteworking OR #accurx OR #remoteconsultations OR #doctorlink OR #onlineconsultations #econsultations OR #teleconsultations OR #virtualgroupconsultations OR #newmodelsofconsultation OR #newconsultationmodels OR #videoconsultation OR #virtualconsulting OR #virtualmedicalmeetings OR #virtualmeetings OR #zoom OR #saturdayzooming OR #zoomlife OR #workingfromhome | 14.2% | Prevalent throughout 2019 to 2021. More consistently discussed from February 2020 onwards. Slight upward peak in March 2020 and larger peak 30 July 2020. NHS Long Term Plan committed practices to offer e-consultations from April 2020.30 July 2020 Matt Hancock state GPs ‘should do all consultations remotely going forward’. |
| **Testing** | test OR tested OR testing OR #covidtesting OR #testhealthcareworkersnow OR #testnhsstaff OR #testtesttest OR #testingforcovid19 OR #testthenhs OR #coronavirustesting OR #testing | 12.9% | Prevalent from March 2020 onwardsPeak in first wave and September 2020Testing was not widely available during the first wave even for HCPs.Shortages in testing was reported in September with people unable to get a test or travelling for miles to get one. |
| **Safety** | at-risk OR danger OR dangerous OR dangerously OR safe OR safely OR safer OR safety OR scary OR scare OR scaremongering OR risk OR risking OR risky OR unsafe | 11.1% | Prevalent from March 2020 onwardsPeak in March –April 2020First COVID death initially reported on 5 March 2020 (later earlier death on 30 January 2020 identified as first death). 25 March 2020 - first GP death. PPE shortages were widely reported during the first wave. |
| **Coping** | burnout OR cope OR coping OR difficult OR distress OR distressed OR distressing OR resilience OR stress OR stressed OR stressful OR struggle OR struggled OR struggling OR tough OR #burnout OR #resilience OR #physicianburnout OR #tackleburnout OR #coping OR #nhsresilience OR #betterworkloadnotmoreresilience OR #lessworknotmoreresilience OR #stress OR #workstress OR #doctorsindistress OR #stressed | 9.6% | Fluctuates throughout 2019 to 2021. Peaks reflect increase in posts on work related stress. |
| **PPE** | ppe OR protect OR protected OR protecting OR protective OR apron OR aprons OR glove OR gloves OR gown OR gowns OR doff OR doffing OR don OR visor OR visors OR goggles OR n95 OR ffp2 OR ffp3 OR #PPE OR #ppefornhs OR #ppeshortage OR #ppenow OR #properppe OR #weneedppe OR #ffp3 | 9.6% | Prevalent from March 2020 onwards. Peak on the 22nd April 2019. PPE shortages were widely reported during the first wave. |
| **Frontline Staff** | frontline OR staff OR frontliner OR #nhsheroes OR #frontlineheroes OR #frontliners OR #nhscovidheroes | 9.1% | Peaked in March to April 2020 with discussion of PPE and testing of staff and December 2020 to January 2021 with vaccinating staff.  |
| **Mortality** | death OR die OR died OR mortality OR #death OR #mortality | 8.0% | Peak in first wave First COVID death initially reported on 5 March 2020 (later earlier death on 30 January 2020 identified as first death). 25 March 2020 - first GP death. |
| **Sadness** | sad OR sadly OR sadness OR #sadly | 6.3% | Fluctuates throughout 2019 to 2021 |
| **Enjoyment** | enjoy OR enjoyable OR enjoyed OR enjoying OR enjoyment OR joy OR #joy | 6.3% | Dipped after the end of January 2020. Often referred to enjoying work, a course or learning. Before start of the pandemic more about enjoying an event such as cinema, xmas and after pandemic began walks, runs, cycling or countryside  |
| **Appreciation** | appreciate OR appreciated OR grateful OR #clapforourcarers OR #gratitude OR #clapforcarers OR #clapforthenhs OR #grateful | 6.3% | Fluctuates throughout 2019 to 2021 |
| **Wellbeing** | wellbeing OR well-being OR #wellbeing OR #mindfulness OR #wellness OR #nhswellbeing OR #wellbeingatwork OR #healthandwellbeing OR #worklifebalance OR #mindfullness OR #wellbeingmatters OR #worklife OR #healthandwellness OR #doctorwellbeing OR #nhsmentalwellbeing OR #waystowellbeing OR #bmawellbeing OR #staffwellbeing OR #juniordoctorwellbeing OR #workplacewellbeing OR #clinicianwellbeing OR #worklifebalance | 5.6% | More peaks before COVID-19 in March 2020. Often refers to support available, particularly for GPS after start of pandemic and for patients and staff before. |
| **Over worked** | overstretched OR over-stretched OR overwhelmed OR overwhelming OR overworked OR relentless OR relentlessly OR stretched OR unrelenting OR work-life OR workload OR work-load OR #gpworkload OR #workload OR #workloadpressures | 4.6% | Peaks on 23 January 2019 discussion on GP pharmacist role in reducing GP workload.5th September 2020 discussion on workload and F2F.18th October 2020 discussion on abuse of primary care7th January 2021 talk of workload prioritisation and vaccines 18th  |
| **Closed** | closing OR closed OR close OR #gpsareopen OR #gpisopen #weareopen OR #generalpracticeisopen | 4.3% | More frequently used in September 2020.Early September 2020 NHS England wrote to all GP practices to ‘reopen’ |
| **Flu** | Flu OR #flu OR #flujab OR #fluvaccine OR #influenza OR #fluclinic OR #flujabs OR #flu2020 OR #getyourflujab OR #flu2019 | 4.2% | More prevalent from September to November 2020 and in January 2019.1 September 2020 start of largest UK flu vaccination programme |
| **F2F** | F2F | 3.2% | More frequently used after March 2020.NHS Long Term Plan committed practices to offer e-consultations from April 2020 |
| **Morale** | demoralised OR demoralising OR demoralise OR morale OR #morale | 2.5% | More frequently used in September 2020.September 2020: Media coverage suggesting GP surgeries have been closed |
| **Bashing** | bashing OR bashed OR bash OR abuse OR abused | 1.3% | More frequently used in September 2020. GP abuse or bashing common thread in September 2020.September 2020: Media coverage suggesting GP surgeries have been closed |