Government management of the COVID-19 communication and public perception of the pandemic

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Executive summary

The study presented here discusses public reception of the UK-wide government restrictions and regulations in relation to the COVID-19 pandemic, focusing on language use on Twitter to (1) track the prevalence of diverse opinions and changes in public perceptions and (2) reflect on clarity of official messaging. Our report relates to the four themes outlined as part of the *Initial learning from the government's response to the COVID-19 pandemic* collated by the National Audit Office:

- transparency and public trust: providing transparent public-facing advice through clear and timely communication.
- data and evidence: monitoring public perception of government advice, identifying issues with public compliance and quantifying different types of behaviours/reactions (compliance, non-compliance, call for stricter measures), validating the effectiveness of interventions by systematically gathering and evaluating end-user feedback (comments from the public).
- coordination and delivery models: ensuring that public facing communication from government departments, central and local government, and public sector bodies is effectively coordinated and well-aligned.
- supporting and protecting people: understanding the pandemic's impact on different groups and the risk of widening inequalities.

The report is based on the results of the UKRI/AHRC-funded TRAC:COVID project carried out at Birmingham City University. The first section draws on the dashboard created as part of the project, accessible online at https://traccovid.com. The dashboard is an open access tool based on 84,138,394 tweets related to coronavirus posted by users in the UK between 1st January 2020 and 30th April 2021. The tool helps explore how social media have been used in the UK during the pandemic to talk about COVID-19. Our analysis shows that throughout the pandemic there has been a widespread support for the main measures used to contain the COVID-19 virus outbreak. In fact, a considerable number of tweets supported the introduction of even stronger measures than those imposed by the government, and many criticised non-compliance as a sign of selfish behaviour. The results also indicate a presence of users who actively used terms related to conspiracy theories and, although these views were found to be in the minority, it is important not to underestimate the role they play in undermining the efforts to contain the pandemic.

The second part of the report reflects on the comprehensibility of official messages sent from government accounts and the accounts of public health bodies. The analysis shows a wide range of language-related problems, ranging from complex use of vocabulary and grammar and vague references to inaccurate information and potential exclusion of some of the intended recipients.

1 Context and justification for the project

During the COVID-19 pandemic, the importance of the rapid dissemination of trustworthy information and clear guidance on the restrictions became crucial for managing the outbreak. In fact, the importance of government communication in relation to nationwide regulations, safety measures and healthcare concerns grew exponentially as it was becoming clear that the pandemic would have a long-term impact on all aspects of society and the economy as well as the health and well-being of individuals. Yet, the clarity of government messaging surrounding COVID-19 has been questioned on numerous occasions, more recently in relation to the cancellation of the previously implied restrictions on travel in and out of areas hardest hit by the 'Indian variant' B.1.617.2. Where ambiguity is introduced, so is the potential for the public to act against the advice, which has knock-on effects for the NHS, law enforcement and public health in general. What ensures adherence of the public to the necessary guidance is the clarity and confidence with which it is being delivered (Wright et al. 2020, Newton 2020).

In response to the global threat, the government has drawn on the SAGE committee expertise, predominantly medical experts and data scientists, but also experts in social sciences, behavioural sciences and psychology. What has been missing so far is input from applied linguists. It is language studies that can support such crucial aspects of official communication as comprehensibility, cognitive framing, contextualisation, the balance between explicitness and implicitness in meaning and expression, and the link between ambiguity and misinterpretation. These are the very components that constitute the building blocks for clear and confident tone, which we know is directly related to compliance from the public (Wright et al. 2020, Newton 2020).

Understandably, one of the major challenges was that the government communication needed to be delivered at the time when the scientific evidence about the then little-known virus was being developed. The communication thus needed to cover a wide range of topics and functions: (1) introduce new regulations, (2) change existing regulations and (3) constantly (re)establish and adapt the overall COVID-19 strategy. The communication thus needed to be carefully constructed on the micro-linguistic level (clarity in sentence structure, choice of vocabulary) and the macro-linguistic level (coherence of the information presented, framing of the information, selection of topics and their focus, persuasive and informative functions of messaging). The institutional voice of government bodies was directly relayed via press conferences, press releases and social media accounts. Unlike the first two communication channels, the use of social media enables direct interaction with the public as individuals have an opportunity to respond to the original messaging and create the public voice through their responses. It is thus important to analyse language use on social media to explore the clarity of government messaging and the uptake of government advice by the public.

2 The team and the project

The project team draws on their expertise and resources from the Research & Development Unit for English Studies (RDUES) in the School of English at Birmingham City University. Through the UKRI-funded WebCorp projects, RDUES has developed linguistically-informed systems for web-crawling, text-processing, search and statistical analysis. The project team has extensive expertise in collecting and analysing structured and unstructured data from the web (full details at https://www.bcu.ac.uk/english/research/english-linguistics).

Drawing on our long-standing expertise in processing large scale textual data, we created the *TRAC:COVID* dashboard, containing 84,138,394 tweets, related to coronavirus in UK in between 1st January 2020 and 30th April 2021. The tweets were collected using the Twitter Historical PowerTrack API. The criteria for data collection were as follows: tweets classified as English language, tweets or user profiles matching the United Kingdom country parameter, tweets mentioning COVID or Coronavirus (upper or lower case spelling) in the text or matching frequent COVID-19 related hashtags (see https://traccovid.com).

The dashboard allows us to explore the public perception of the pandemic by drawing on corpus linguistic methods; such semi-automatic techniques for analysing textual data allow for a large-scale contextualisation of language use. The dashboard has a number of functions: searching for individual words, hashtags and websites; identification of the most frequently used words, hashtags and websites; plotting search words and hashtags on a timeline to show their frequency throughout the pandemic; extraction of keywords identified by comparing our COVID-19 specialised dataset to a generic, randomly sampled Twitter dataset; identification of co-occurring words/hashtags with search words/hashtags. These functions allow us to compare the use and frequency of words/hashtags across different periods and different types of messages – original tweets or the whole dataset (original tweets, replies and quote tweets). The dashboard thus presents a powerful tool for exploring the immediate context of search terms (through co-occurring words) as well as the wider context (through the robust quantitative identification of frequently co-occurring words). The results extracted from the dashboard can thus provide a clear overview of public opinion and perceptions of the pandemic and government policies or of any other topic discussed in relation to the pandemic.

To explore the clarity of official messaging, we collated a different dataset with tweets specifically from government and public health bodies' Twitter accounts (see section 3) and analysed their comprehensibility and function.

Overall, the aims and objectives of the report are as follows:

- to explore the public reaction to government regulations and any changes in such perceptions during the pandemic (section 3)
- to explore public perception of the pandemic (section 3)
- to evaluate the clarity of official messaging from the Twitter accounts of government bodies (section 4)

3 Illustrations of public perceptions reflected in the *TRAC:COVID* dashboard

The *TRAC:COVID* dashboard was used to explore public perceptions of the government's management of the COVID-19 pandemic. The results retrieved from the dashboard dataset were based on the exploration of the following linguistic features: (1) most frequent words, keywords and hashtags, e.g. *people*, *government, vaccine, lockdown, #lockdown*; (2) concepts which stand out in the data, e.g. *#covidiots*; (3) health and safety measures, e.g. *masks*; and (4) hashtags related to government messaging, e.g. *#stayhomesavelives, #handsfacespace, #protectthenhs.* Below are some observations we were able to draw based on the results.

i) Government campaigns

Many of the most frequent hashtags used in all UK tweets about the pandemic relate to government campaigns and slogans: *#stayhomesavelives* (appearing in 91.3K tweets from 42.2K accounts), *#stayhome* (83.7K tweets from 41.6K accounts), *#stayathome* (60.7K tweets from 36.3K accounts) *#handsfacespace* (13.05K tweets from 3.9K accounts), *#staysafe* (106.9K tweets from 46.2K accounts), *#stayalert* (22.7K tweets from 8.35K accounts), *#protectthenhs* (10.85K tweets from 6.2K accounts). The mere frequency of their occurrence in the dataset indicates their importance; the peak in their occurrence is around the first lockdown between mid-March and mid-May (beginning of July for *#staysafe*). They predominantly co-occur with words linked to requests and appreciation (*please, reminder, help, follow, save, protect, need, thank, everyone, must, important, #nhsheroes, #nhsthankyou, #nhscovidheroes*), alongside the criticism of non-compliance or political approach (*#covidiots, #paycutmps, #borishasfailed*).

<u>Finding 1</u>: Overall, the high frequency of hashtags related to government campaigns illustrates the wide public support for government-imposed safety measures.

ii) Criticism of non-compliance

One of the most frequent hashtags in the data is different spellings of *covid(id)iot(s)*: *#covidiots* (96.2K tweets from 40.8K accounts), *#covididiots* (29.9K tweets from 16.79K accounts), *#covidiot* (25.23K tweets from 13.52K accounts), *#covididiot* (2.12K tweets from 1.4K accounts). These hashtags co-occur with the following words and topics: dissatisfaction with non-compliance (*fault, blame, idiots, selfish, fucking, stupid; #secondwave, #antimasker, #wearadamnmask*); reinstatement of safety measures (*#stayathomesavelives, #lockdown, #coronaviruslockdown, #uklockdown, #nhs, #socialdistancing, #wearamask, #stayathome, #facemasks*); and occasionally with criticism of gatherings (*#bournemouthbeach, #trafalgarsquare, #bournemouth, #hydepark*) or dissatisfaction with politics (names of politicians, *#toryshambles, #toriesout, #borisout*).

<u>Finding 2</u>: The high frequency of tweets mentioning *#covididiots* and their occurrence within the above themes further shows that there is significant support for COVID-related health and safety measures and, at the same time, criticism of non-compliant behaviour and, potentially, disapproval of inefficient approaches to containing the outbreak.

iii) Polarised opinions: supporting government introduced measures + stricter measures vs. supporting easing of restrictions

Hashtags can present a way of exploring public opinion as they condense a clear message and organise the stream of information (Ferragina et al. 2015, Wikström 2014). For instance, exploring the most frequent hashtags linked to *lockdown*, we can identify semantically-loaded hashtags explicitly promoting, for instance, stricter measures (e.g. *#lockdownnow* vs. the more neutral *#lockdown*). The occurrence of such hashtags can signal the predominance of conflicting opinions: even the raw frequency of hashtags linked to supporting lockdowns (e.g. *#lockdownnow* with the occurrence of 6.3K tweets from 5.2K accounts, *#lockdownextension*: 6.3K tweets from 4.3K accounts, *#lockdownuknow*: 5.4K tweets from 3.6K accounts, *#keepthelockdown*: 1.4K tweets from 760 accounts) as opposed to those against lockdowns (e.g. *#antilockdown*: 1.3K tweets from 623 accounts, *#endthelockdownuk*: 1.3K tweets from 426 accounts, *#endthelockdown*: 4K tweets from 1.3K accounts, *#lockdownend*: 2K tweets from 1.4K accounts, *#endlockdown*: 1.8K tweets from 833 accounts) can indicate that the public opinion (among the Twitter users in the collected dataset) is generally in favour of stricter measures in terms of introducing the lockdown earlier or maintaining it for longer.

Similarly, there has been vivid debate about mask-wearing, as illustrated by the high frequency of relevant words and hashtags:

- tweets predominantly supporting government policies: *masks* (311K tweets from 136.6K accounts), *mask* (283K tweets from 135.9K accounts), *facemasks* (6.86K tweets from 5K accounts), *#masks* (15.56K tweets from 6.9K accounts), *#facemasks* (15.1K tweets from 7.5K accounts), *#facemask* (13.4K tweets from 6.8K accounts), *#mask* (9.4K tweets from 4.8K accounts);
- tweets reinforcing the measures: *#wearamask* (24.8K tweets from 11.1K accounts), *#maskup* (6.95K tweets from 3.4K accounts), *#wearadamnmask* (3.5K tweets from 2.1K accounts);
- tweets criticising non-compliance: *anti-mask* (4.8K tweets from 3.2K accounts), *anti-maskers* (3.22K tweets in 2.6K accounts), *#antimaskers* (733 tweets from 479 accounts);
- tweets disapproving government-introduced measures: *maskless* (4.75K tweets in 3.7K accounts), *#nomasks* (3.3K tweets in 1.3K accounts).

Unsurprisingly, those hashtags which proclaim to be against wearing masks (i.e. *#nomask, #nomasks*) link to conspiracy theories and lockdown/COVID deniers (*#kbf* [Keep Britain Free], *#plandemic, #nonewnormal, #covidhoax, #nolockdown, #scamdemic, #nolockdowns*). Hashtags urging people to wear masks (i.e. *#wearamask, #wearadamnmask, #wearamasksavealife*) occur more frequently from the end of June (when masks were introduced on public transport) and co-occur with criticism of non-compliance (#covidiots, #covididiots, #covidiot), reinforcement of rules (#staysafe, #washyourhands, #socialdistancing, #stayathome, #stayhomesavelives, #stopthespread, #maskssavelives, #covidisairborne) and only occasionally hashtags linked to conspiracy theories (#kbf, #nomask, #saynotolockdown). Equally, the hashtags *#antimaskers, #antimask* and words like *anti-mask, anti-maskers* link to *#covidiots, #lookagain, #covididiots*, *anti-lockdown, deniers, anti-vaxxer, anti-vaxxers, covid-deniers, conspiracy* and thus express the dissatisfaction of users with non-compliance and undermining of the seriousness of the situation.

<u>Finding 3</u>: Public support for existing measures and for even stricter measures is expressed more often than the desire for the releasing of restrictions.

iv) Changes in perceptions throughout the pandemic

By comparing the co-occurring words and hashtags with, for instance, *lockdown* during the first lockdown (app. 21 March 2020 – 2 July 2020) and during the second and third lockdowns (app. 16 September 2020 – 28 February 2021), we can see a shift in what was being discussed and the emergence of support campaigns (*#zerocovid, #excludeduk*), but also a stronger polarisation of opinions in the later period: on the one hand support for stricter measures and concerns (*#closetheschools, #longcovid*) but also criticism of lockdowns (*#lockdowncostlives, #nomorelockdowns*). The criticism of non-compliance has been present throughout the pandemic, judging from the co-occurrence of *lockdown* with *#covidiots, #covididiots* and *#covidiot* (overall, the co-occurrence of these hashtags with *lockdown* amounts to 0.8% during the first lockdown and 0.67% during the following two lockdowns). Equally, the support for stricter measures was present throughout the pandemic (the co-occurrence of *lockdown* with *#lockdownnow* is 0.14% and with *#lockdownuknow* is 0.18% in the first period; the co-occurrence of *lockdown* with *#closetheschools* is 0.06% in the second period). At the same time, there are signs of emerging opposition to restrictions, but these views are not as frequent (the co-occurrence of *lockdown* with *#lockdownscostlives* is 0.04% and 0.03% with *#nomorelockdowns*). In the more recent data, between 1 March 2021 and 30 April 2021, we can see a similar trend portrayed through slightly different hashtags, with the opposition to restrictions remaining less frequent (the co-occurrence of *lockdown* with *#endthelockdown* is 0.16%, *#antilockdown* 0.06%, *#endlockdownnow* 0.04%), than the support for restrictions and criticism of non-compliance (the co-occurrence of *lockdown* with *#covidiots* is 0.87%, *#covididiots* 0.17%, #zerocovid 0.17%, *#staysafe* 0.16%, *#staysafe* 0.01%, *#lockdownuk* 0.1%, *#covidsafe* 0.08%, *#wearamask* 0.05%).

Similarly, exploring the occurrence of the word *vaccine* between 11 March and 31 May 2020 (when Moderna started Phase I trials and a few weeks after Oxford University and BioNTech started Phase I trials) and between 5 November 2020 and 28 February 2021 (when the first trial results were announced and the vaccination programme was rolled out), we can see several changes: the decrease in links to conspiracy theories (in the first period, the co-occurrence of the word *vaccine* with *#billgates* is 0.2% and 0.08% with *#plandemic;* but the co-occurrence between *vaccine* and *#cybersecurity* is only 0.07% in the second period); criticism of covid-deniers throughout both periods (in the first period, the co-occurrence of *vaccine* with *#antivaxxers* is 0.06%, 0.06% with *#antivax,* 0.1% with *#covidiots*; in the second period, the co-occurrence of *vaccine* with *#covidiots* is 0.11%); emergence of pro-vaccination campaigns in the second period (the co-occurrence of *vaccine* with *#getvaccinated* is 0.09% and 0.13% with *#vaccineswork,* 0.15% with *#peoplesvaccine,* 0.07% with *#zerocovid*). Similarly, more recently, between 1 March and 30 April, the hashtags co-occurring with *vaccine* are predominantly pro-vaccine *(#vaccineswork, #peoplesvaccine, #getvaccinated, #endcovideverywhere, #letsgetvaccinated, #thankyounhs, #myjab*).

We can observe similar trends for the use of words *mask* and *masks*. With the introduction of masks on public transport on 15th June 2020, we see the appearance of hashtags signalling the emergence of pro-mask campaigns (*#maskup, #wearadamnmask, #maskssavelives* and *#wearamasksavealife*) as well as anti-mask opinions (*#nomasks, #nomask, #covidhoax* and *#covidsnitch*). But as masks became mandatory in more settings, the debate became more polarised (e.g. pro-mask hashtags *#coveryourface* and *#itsjustamask* vs. anti-mask hashtags *#muzzles*). Most of the top-ranked hashtags revolve around amplifying pro-mask safety slogans (*#wearamask, #staysafe, #maskup*) and criticism of those not wearing masks or speaking out against them (*#covidiots, #trumphascovid, #covidiot, #covididiots*), alongside more general topic markers (#masks, #facemasks, *#lockdownuk, #lockdown, #nhs, #ppe*). Anti-mask hashtags co-occur with hashtags criticising restrictions (*#madness, #kbf* [Keep

Britain Free], *#scamdemic*), but what is more important is that they generally have a lower frequency than hashtags supporting government policies, which remain stronger throughout the pandemic.

Finding 4: Tracking the use of different words and hashtags shows that, throughout the pandemic, public opinion became gradually more polarised. What is key, however, is that criticism of non-compliance and support for government measures were stronger than support for earlier easing of restrictions.

4 Government messaging

As part of the project (separate to the dashboard), we were interested in identifying communication strategies utilised by governments and public health bodies during the pandemic and exploring public perceptions of official communication. To explore these aspects, we drew on the Twitter event 'COVID-19 Tweets from UK authorities' (https://twitter.com/i/events/1239876088337059840) and explored the tweets sent from these accounts:

- government accounts, including those of devolved administrations (@10DowningStreet, @WelshGovernment, @scotgov, @niexecutive)
- UK-wide accounts of national public health bodies (@NHSuk, @PHE_uk, @DHSCgovuk)
- accounts of local health bodies (@NHSEngland, @NHS24, @PublicHealthW, @scotgovhealth, @publichealthni, @healthdpt)

This dataset captures tweets mentioning *covid* and *coronavirus* from the accounts above. The main focus here is placed on original tweets (729,157 words) rather than on public reception as in the previous section. The analysis of messaging by government and public health bodies in this section leads to the identification of problems in communication strategies and a list of specific recommendations to address these.

Our analysis of sequences of words (phrases) indicates that the majority of tweets from, for instance, @10DowningStreet provide links to external content (e.g. *watch live coronavirus press conference*), report on official figures (e.g. *people in hospital with covid*) or refer to previous announcements and publications (*the government's action plan to tackle the spread of coronavirus*). Although such information is useful to some extent, the messages themselves lack specific content, which results in: (1) key information not being framed for social media users (see research on the impact of cognitive framing on the users' perceptions and interaction/engagement e.g. Wagner et al. 2017) and (2) engagement with followers not being focused on specific content as users are simply redirected to external (often longer) content. The lack of more specific engagement with followers is at odds with the fact that social media accounts present a unique opportunity for direct engagement with the public. government bodies could do more to make use of such opportunities in times of crisis and high reliance on public compliance (Kavanaugh et al. 2012, Criado et al. 2012).

Although messages with a specific content are in the minority, they are indicative of the degree of comprehensibility and linguistic framing employed in government communication. One example of such a message is as follows:

We appreciate all the effort people are putting into containing the spread of coronavirus. However, if you leave your home or gather in public for any reason other than those specified, the police have the powers to disperse you and issue fines.

(@10DowningStreet)

The message does not have a single clearly defined function as it praises the effort of the general public and, at the same time, warns them against not following the rules. It also lacks a coherent audience design strategy: is it directed towards those who make the effort or those who leave home for reasons not allowed?. The message moves confusingly from generic *people* to a direct warning to individuals with the pronoun *you*. The lexico-grammatical characteristics of the message are typical of bureaucratic and impersonal styles of writing:

- complex grammar and syntax (too many conditions: *if you leave your home…, any reason other than those specified*; multiple embedded phrases in the main sections of sentences: *all the effort people are putting into containing the spread of coronavirus; gather in public for any reason other than those specified*)
- complex vocabulary (*containing, powers, disperse, issue*)
- apparent specificity (*for any reason other than those specified*), without any reasons actually being specified and without any indication of where these might be found.

The ultimate result is that messages such as this one raise ambiguity and confusion and may thus be less likely to be comprehended and more likely to elicit a negative reaction (as is the case with responses to this tweet). The multi-level complexity produces an authoritarian institutional voice, which can create boundaries on the cognitive and linguistic levels (e.g. for non-native users of English, those with learning/communication difficulties or with lower literacy levels) and may not be successful at engaging effectively with the wider audience. Poorly constructed messages or messages without specific content fail to maximise the advantages of social media in creating meaningful engagement with an online community of followers.

The exploration of sequences of words from government accounts managed by devolved administrations (Wales, Scotland and Northern Ireland) partially confirm the trend discussed above: many messages simply link to announcements, press conferences and further information (*latest update health advice, a press conference on*) or report on case numbers (e.g. *patients who tested positive, total confirmed as positive*). Our analysis also reveals an abundance of examples of messages which provide clear instructions and guidance (e.g. *prevent/stop/control the spread of coronavirus*):

Help prevent the spread of coronavirus (#COVID19):
#StayAtHome
#WashYourHands well and often
#KeepYourDistance (2m/ 6ft)

(@niexecutive)

The above communication strategies, such as using short sentences and phrases, detailing specific steps to follow, and adding the necessary amount of detail (*well and often, 2m/6ft*), help define the purpose of the message in clear terms and present the content in a coherent manner. Showing sympathy creates an additional strategy for building rapport with followers:

Thank you everyone for continuing to play your part in reducing the spread of coronavirus by staying home this weekend [non-recognisable sign] *We*

know it's tough and we appreciate the sacrifices you're making. Please stick with it - here's a reminder why [external link] 💔 *#StayHome*
(@WelshGovernment)

This message reads as a friendly note, which shows understanding of how people feel and appreciation for their efforts. The reminder of the rules is framed as a polite request to ask followers to carry on complying, rather than a warning of police fines (as seen above). The two messages are indicative of the tone employed in accounts managed by devolved administrations, which are by definition closer to their citizens.

The accounts of health bodies also fulfil the functions discussed above, but with different priorities: reporting on the numbers of covid-related developments (*testing in the UK as of*, *covid dashboard has been updated*, *individuals have tested positive for covid*), providing links to external sources of information (*update on coronavirus*, *find out how we are responding*), informing people (*if you have symptoms*) but also collecting experiences of people or advertising new volunteering opportunities for clinical trials (e.g. *you can share your experiences*). One key feature is the provision of information on what to do and what not to do:

YOU can help slow the spread of #coronavirus and save lives.
You must stay at home. Only leave the house for essentials, like food and medicine, for work, or to exercise.
#StayHomeSaveLives

(@DHSCgovuk)

The message draws on individuals' sense of responsibility (*you can, you must*) and provides specific reasons for leaving the house (*food and medicine, work, exercise*). Interestingly, this also includes a reference to a specific type of abode, *house,* as opposed to the more general *home* (which is used initially). Urbanisation and poor access to green spaces have been linked to health inequalities, which were brought to light by the pandemic (Geary et al 2021). This type of framing may create a feeling of exclusion for some people and lead to a form of passive or active non-compliance, with a range of motivating factors (Wright et al. 2021, Kooistra at al. 2020). A careful use of vocabulary is important for an inclusive approach to public messaging.

Detailed attention to language use and the communicative purpose of individual messages can help ensure that micro level (vocabulary) and macro level (sentence structure) characteristics support the building of rapport with the wider community and encourage public compliance.

5 Findings and recommendations

The discussion of the most frequent words, keywords and hashtags, alongside the reflection on the government campaigns and the development of public opinions on safety measures have illustrated how the *TRAC:COVID* dashboard can be used to help identify emerging trends in public opinion and thus explore important socio-political topics (e.g. estimating the scale of anti-mask vs. pro-mask sentiment). The lists of hashtags, words and keywords can provide an overview of which themes are more frequently discussed on Twitter, and exploring them as shown above can lead to the identification of key themes and the contexts in which they typically occur. Our analysis shows that the prevailing opinion among UK Twitter users is in favour of the safety measures put in place by the government (as seen in the use of hashtags reflecting official campaigns like *#stayhomesavelives*), with many people advocating stricter measures (e.g. *#lockdownextension*) or criticising non-compliance (e.g. *#covidiots*). Despite the fact that those sharing messages related to conspiracy theories or opposing the government's- health and safety measures are apparently in the minority, their impact should not be underestimated as such messages can undermine the government and wider public's efforts.

Social media platforms can be instrumental in improving public services, government policies and communication with the wider public, but their effective use requires a recognition of the bi-directional information flow (Criado et al. 2013). One difficulty lies in categorising the vast amount of textual data produced on social media and identifying the significance of events and spikes in their occurrence and then finding meaningful changes in patterns and linking them to shifts in public opinion (Kavanaugh et al. 2012). This is where the TRAC:COVID dashboard and corpus linguistic analysis can be useful as it presents an opportunity to explore changes in public opinion in a fast and efficient manner.

This report also demonstrates the role applied linguistics can play in creating a coherent approach for social media use by government bodies. We have shown how even short Twitter messages should have coherent presentation of content, inclusive of the wider public's needs and circumstances. There should also be a clear strategy for addressing the audience in an approachable way, using easily comprehensible language. In order to help them engage with followers and maximise the opportunities offered by social media, we provide a list of recommendations for public bodies to follow:

1. Follow plain language principles and avoid using bureaucratic language. Use short sentences and everyday vocabulary.
2. Provide enough detail and ensure the details included are correct. Avoid being vague.
3. Ensure there is only one communicative function per message.
4. Address the audience in a clear way.
5. Be inclusive of people from different backgrounds.
6. Avoid posting too many messages which do not provide much information and only link to external content.
7. Develop a strategy for addressing common misconceptions and emerging conspiracy theories.
8. Involve experienced applied linguists in the process of designing public communication strategies and analysing their effectiveness.
9. Consider involving linguists to quantitatively and qualitatively explore the textual data on social media.

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