



Public Health
England

Protecting and improving the nation's health

PHE and NPIS COVID-19 Toxicovigilance and Chemical Surveillance summary report 2

1 January to 26 July

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1.0 Main findings

A review of UK poisoning and chemical incident data (from England) between January and July 2020, when compared to the equivalent period in 2019, has found that there has been:

An overall decrease in telephone enquiries between March 2nd and July 26th to the National Poisons Information Service (NPIS) related to poisonings, from 16128 to 15504 calls, which represents a 3.9% decrease.

There is currently no evidence to suggest there has been an increase in enquiries in relation to intentional methanol or chloroquine exposures to prevent or treat COVID-19. There is limited evidence to suggest that there has been an increase in enquiries for preventing or treating COVID-19 through the intentional use of bleach, disinfectants and essential oils.

The previous reports have described a statistically significant increase in enquiries related to analgesic pharmaceuticals in dental patients. This increase may have been a result of a reduction in available dental services under lockdown measures. Further to this, following an analysis of the seven weeks of data since non-emergency dental practices reopened in England on the 8th June, the number of dental analgesic enquiries have shown a statistically significant increase over this period, rising from 133 (average 19 per week) to 274 (average 39 per week) when compared to 2019.

It should be noted that dental analgesic enquiry numbers were relatively low and only one enquiry in 2020 reported severe symptoms, one reported moderate symptoms, and all others were mild or asymptomatic at the time of enquiry. However, delayed symptoms following analgesic overdose are possible. The overall public health risk is likely to be low, but PHE will continue to monitor such enquiries going forward.

Please note that the previous toxicovigilance report (January to June) provided a more detailed assessment of enquiries regarding hand sanitisers, cleaning products (disinfectants, bleaches, mixing of chemicals), total enquiries in children under 6, methanol and pharmaceuticals of concern such as (hydroxy)chloroquine

1.1 Limitations to data (see further Appendix 1)

It is not possible for the data provided in this report to demonstrate a causal association between poisoning and the COVID-19 pandemic as there may be other unrelated factors influencing trends, such as climatic or seasonal differences. It should be noted that trends identified may correspond with increased media coverage of COVID-19, use of specific products, and public health interventions including “lockdown” and handwashing.

Small changes in enquiry numbers or percentage of total enquiries should be interpreted with caution. Statistical tests have been undertaken where indicated to identify potential significant trends in data.

Enquiries (especially TOXBASE® accesses) may be for educational reasons rather than directly related to a case. Enhanced media coverage may also lead to an increase in TOXBASE enquiries.

NPIS data are usually obtained at the time of initial presentation of the patient. Although follow-up of serious enquiries is attempted, information on patient outcome is often unavailable.

2.0 Background

Toxicovigilance is the active process of identifying and assessing the threat or potential toxicity from exposure in a community or population to consumer products, pesticides, pharmaceuticals, environmental and industrial chemicals, controlled substances, and natural toxins. It involves the monitoring of data to identify potential and confirmed trends in poisoning exposures and the emergence of new risks associated with toxic substances, as well as to assess the effectiveness of preventive measures.

Since the onset of the COVID-19 outbreak, a number of proposed novel treatments, including a range of chemical and pharmaceutical preparations, have been proposed. In addition, due to changes in behaviour, members of the public may be at increased risk of being exposed to other domestic chemicals, such as cleaning products. Public Health England (PHE) has undertaken an analysis of their chemical incident data and UK poisoning data provided by the National Poisons Information Service (NPIS) to evaluate whether there are any potential public health risks related to toxic substances as a result of the COVID-19 pandemic. This was also informed by anecdotal reports of poisoning / exposures from NPIS and PHE staff. Further, this analysis seeks to inform potential preventative and harm-reduction measures where necessary.

This report builds on the previous two toxicovigilance reports and considers an extra month of data. This report has been prepared by the Centre for Radiation Chemicals and Environmental Hazards (CRCE) at Public Health England in conjunction with the NPIS. Please direct any enquiries regarding this report to the PHE National Incident Co-ordinating Centre (NICC) PHE.NICC30@phe.gov.uk.

3.0 National Poisons Information Service (NPIS) data

3.1 Interpretation of NPIS data

The majority of NPIS data presented in this section is from telephone enquiries recorded on the UK Poisons Information Database (UKPID).

Data is also provided where indicated on the number of total enquiries and hand sanitiser-related enquiries made on the NPIS clinical management database, TOXBASE. TOXBASE is available to all health professionals in the UK and, in treating a suspected poisoning, is normally accessed in the first instance. Typically, the NPIS are then telephoned directly for more complex enquiries. Whilst NPIS data cannot reflect the actual incidence of poisonings in the UK, the collated information does provide a good indication of overall trends to identify toxicovigilance “signals”, particularly when the data is compared to that of previous years.

Further detail on the interpretation of UKPID enquiry TOXBASE enquiry data can be found in Appendix 1.

3.2 Total enquiries to the National Poisons Information Service

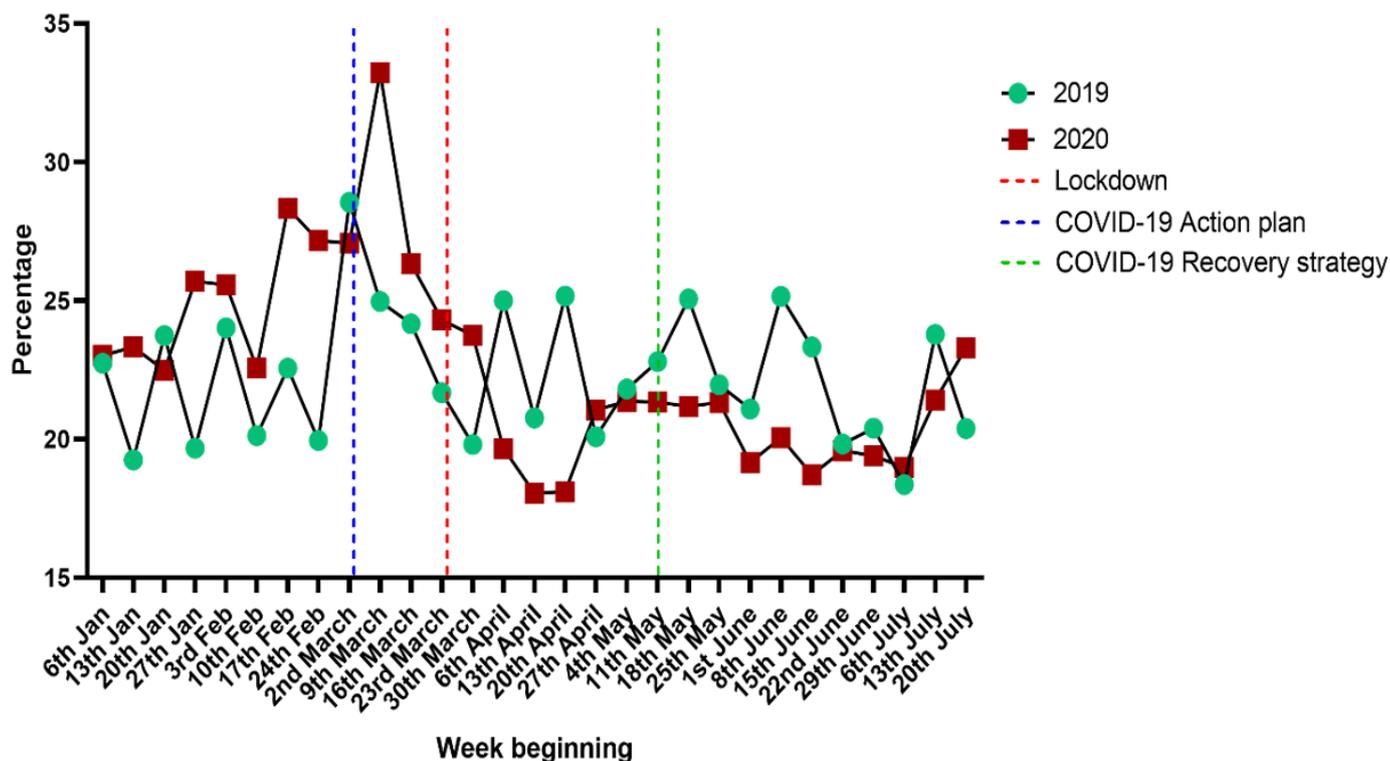
A review of NPIS data between the 2nd March and 26th July 2020, compared to the corresponding period in 2019 (March 4th to 28th July) was undertaken and shows the following:

Total telephone enquiry numbers were lower in 2020 compared to the same period in 2019, falling from 16128 to 15504, which represents a 3.9% decrease. This decrease is potentially due to a reduction in enquiries reaching the NPIS from NHS 111, due to the latter system becoming overwhelmed as a main point of contact for COVID-related queries in March.

A decrease in telephone enquiries from the 2nd of March, and a return to more typical enquiry numbers was reported from the 20th of April onwards.

There was a statistically significant decrease in the proportion of total enquiries related to intentional exposures, falling from 22.6% to 21.5%, this corresponded to a decrease in total intentional enquiries from 3643 to 3332. The decrease was less pronounced than the previous report which showed a decrease from 23.2% (2995 enquiries) to 20.6% (2529 enquiries) in the proportion of total enquiries. It appears that there has been an increase in intentional enquiries recently (see figure 1) based on limited data from the last two weeks from the w/c 13th July. Intentional enquiries will be monitored further in future toxicovigilance reports.

Figure 1: UKPID Total Percentage of Intentional Enquiries 6 January to 26 July 2020



3.3 Analgesic enquiries due to dental pain

An analysis of NPIS enquiries involving paracetamol (and compound preparations), aspirin, other non-steroidal anti-inflammatory drugs (NSAIDs), and codeine-containing preparations was undertaken. These were further narrowed by enquiry records that referred to dental pain.

The analysis showed:

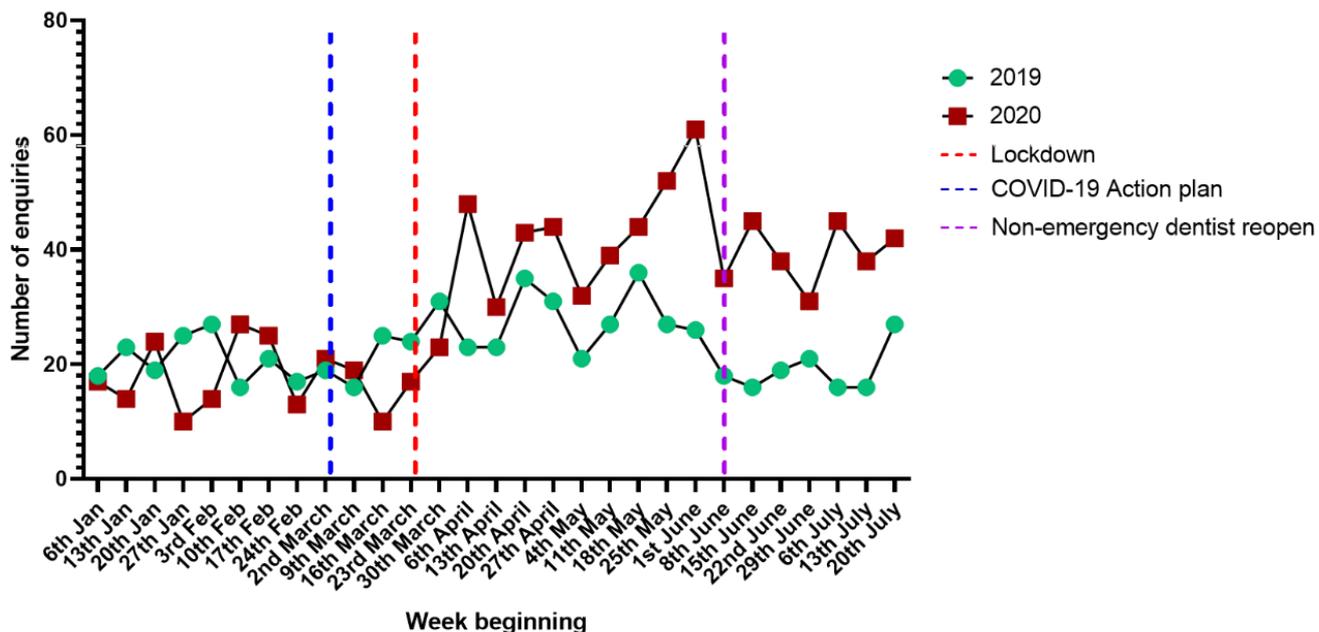
As reported previously, there is a statistically significant increase in enquiries in relation to dental patients, rising from 437 telephone enquiries (24.4 average per week) to 707 (average 39.3 per week). These enquiries are a result of suprathreshold (excessive) dosages with analgesic pharmaceuticals (see Figure 2). This increase was initially observed following a reduction in available dental services due to “lockdown” measures.

There is a statistically significant increase in analgesic enquiries when considering data after the reopening of non-emergency dentists in England from the 8th June 2020, rising from 133 in 2019 (average 19 per week) to 274 (average 39 per week) in 2020. This suggests that the reopening of dental practices has not yet resulted in a reduction in phone enquiries to the NPIS.

Of the 707 enquiries since the 23rd March, the poisoning severity score was determined as no symptoms in 643, minor in 50, moderate in 1 severe in 1 and unknown in 12 at the time of

enquiry. The severity of poisoning at the time of enquiry appears comparable between the two periods but outcome data is often not available

Figure 2: UKPID Telephone enquiries for dental analgesics



Appendix 1: Interpretation of NPIS data

NPIS data reflects UK health professionals accessing information about specific substances via TOXBASE® or via the NPIS telephone information service. The following should be taken into account in its interpretation:

(i) The numbers of TOXBASE® accesses or telephone enquiries do not correlate directly with numbers of patients presenting to health professionals with toxicity for the following reasons:

(a) There may not be a contact with NPIS if the health professional is already familiar with the substance. Familiarity may increase with time and this effect may distort time trends

(b) Enquiries (especially TOXBASE® accesses) may be for educational reasons rather than directly related to a case. Enhanced media coverage may also lead to an increase in enquiries for TOXBASE.

(c) There may be several contacts for the same patient from different health professionals

(d) Contact by telephone is increasingly likely when poisoning is associated with severe features or when the presentation is unusual

(ii) NPIS data are usually obtained at the time of initial presentation of the patient. Although follow up of serious enquiries is attempted, information on patient outcome is often unavailable.

(iii) Telephone enquiry data are based on reported exposure. Analytical confirmation is not available.

(iv) Total numbers of NPIS telephone enquiries (all substances) have been declining as use of TOXBASE® increases, so time trends in total numbers of TOXBASE® accesses or telephone enquiries to specific drugs may be misleading. Annual data may therefore be expressed as proportions of the total numbers of TOXBASE® accesses or telephone enquiry numbers. Data collected over shorter time periods, such as that included in the current report, is unlikely to need correction in this way.

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