FCI COVID-19 Coding for General Practice Webinar - Q&A Session

Q. What are COVID-19 excluded criteria? What consideration has been given to poor pick up of late swabbing and uncertainty in diagnostic performance of NO&OP swabs?

A. These are clinical research questions. There clearly are criteria for excluding COVID-19 as a diagnosis, beginning with '*the history and physical exam simply do not fit; I don't even need to test*' and ending perhaps with *'a Gold Standard PCR Test was negative 5 days in a row'.*

But it seems very likely that more than one set of criteria will emerge both over time and also in parallel operation. The confidence with which a COVID-19 diagnosis can be/was considered to be excluded may therefore be different depending on which of these criteria were applied. The reliability of negative test results, including the extent to which this is affected by the method and timing of specimen acquisition, are clearly of great research interest.

Right now, we lack exclusion criteria that are either clearly articulated or whose reliability is known. Notwithstanding continuing uncertainty about when you can (or should) say the diagnosis is definitively excluded, I would assume that we can all mostly agree on what it means when you do say it. The clinical notion of 'non-caseness' clearly still stands even if the criteria controlling its use remain to be defined. And so a trio of codes have been prospectively authored so that we can make some headway in assessing the accuracy of any criteria that do get used:

1321101000000103 [UK] COVID-19 excluded

1321111000000101 [UK] COVID-19 excluded by laboratory test

1321121000000107 [UK] COVID-19 excluded using clinical diagnostic criteria

How these codes get used - if at all - before clinically validated exclusion criteria become stable and agreed is therefore a research and professional guidance problem. But, in order to evaluate any candidate exclusion criteria, researchers would need to identify patients in whom the diagnosis is stated to be excluded but then later confirmed. To retrieve patients with that particular story, we clearly need some way for a clinician to say 'COVID-19 excluded'.

Of course eventually it may become important to know precisely which version of which exclusion criteria was applied so that clinicians know which "COVID-19 excluded" statements must be treated with more caution than others. At this moment in time, however, we at least have the minimum capability to record and retrieve some aspect of "non-caseness" even if only relatively crudely also the clinical basis of that assessment.

Q. Should the excluded code not be something different until anti body tests available?

A. Where a clinician wants to say not only that the basis of their exclusion of SARS-CoV-2 infection is based on negative lab testing, but also to specify exactly which lab testing protocol was used, I would personally much prefer that this be recorded as a cluster of more than one code rather than e.g:

- COVID-19 excluded by point-of-care rtPCR testing for offset reading frame a and spike protein RNA sequence b1 using an oral-only self-swab taken within 48 hours of first symptom
- COVID-19 excluded by point-of-care rtPCR testing for offset reading frame b and spike protein RNA sequence b2 using an healthcare worker taken nasopharyngeal swab, taken within 48 hours of first symptom
- COVID-19 excluded by central laboratory rtPCR testing for offset reading frame b and spike protein RNA sequence b3 in a midstream urine sample taken within 56 hours of first symptom
- COVID-19 excluded by point-of-care direct testing for SARS-CoV-2 specific IgG in stool specimen taken more than 168 hours after appearance of first symptom

Etc.

Q. To highlight a gap in the new Snomed-CT releases, how do we deal with patients being removed from the Shielding list? At present advice seems to be to just delete the original code signifying on the Shielded list and rely on GP System audit trails. Ideally we should have another code to say 'Removed from Shielding list' so that historical events preserved.

A. The fact of currently being on the shielding (or vulnerable) lists - whether or not appropriately - would be coded by adding that status as a new problem or diagnosis code, similar to any other new EPR statement of a new and clinically relevant patient state. Should the patient later need to come off that list – either because the original record was never clinically appropriate, or the condition that originally put a patient on the list legitimately somehow resolves (e.g. no longer pregnant) - then this would be done using the same method used to record when any other previously valid or invalid clinical statement was no longer true. The EPR would therefore show the same code, but in the system status of 'ended' as a problem. We have a modest number of codes for stating which patients are on a similar register:

- 160887007 Child on protection register
- 160888002 Family member on protection register
- 224354005 Child on at risk register
- 228117001 Placement on child register
- 288850009 Risk situation requiring placement on supervision register
- 1025471000000102 Family member no longer on child protection register
- 276101000000100 Patient on regional cancer register
- 293371000000108 Family member on child protection register

…but not all of them are matched with a corresponding 'removed from register' code; only these three appear to exist:

- 160889005 Child removed from protection register
- 160890001 Family member removed from protection register
- 512541000000107 Patient removed from supportive care register

There are also relatively few (about 40) codes of the general form 'diagnosis resolved'; mostly only those connected to QOF, for example:

- 196381000000100 Depression resolved

- 198181000000102 Obesity resolved
- 200951000000109 Psychosis, schizophrenia and bipolar affective disorder resolved
- 285491000000101 Bipolar affective disorder resolved
- 285521000000103 Schizophrenia resolved
- 285551000000108 Psychosis resolved
- 711341000000106 Osteoporosis resolved
- 711391000000101 Osteopenia resolved
- 761381000000102 Hepatitis C resolved

From this I would assume that removal from disease, risk or administrative registers – as with statements that diagnoses or other patient states more generally are resolved - are normally represented by some other non-coded means, such as I've outlined above. I would therefore recommend that the "ending" of a COVID-19 infection, or membership of a shielding list, should be represented in that usual way rather than following any relatively uncommon exception pattern and so requiring additional dedicated codes.

Q. Is there any advice on how we migrate from the current use of code to indicate on Shielding list (for us using Read it is 9d44.), to the newly released code for Shielding?

A. None I'm aware of.

The SNOMED code that corresponds to [9d44.] is 443999008|Risk of exposure to communicable disease (situation)|

This code (and its READ2 and CTV3 precursors) were pressed into service on March 19th as the only already released and widely deployed SNOMED code that also had the following required properties:

- a term string that could plausibly be interpreted as meaning 'at high risk of bad outcome IF infected' even if in fact the code originally and properly means something entirely different (somewhere along the lines of 'highly likely to be an STD contact')
- corresponding READ2 and CTV3 codes already in existence and deployed
- very low if not actually zero known historical use in primary care settings of the SNOMED, READ or CTV3 codes

The trio of new risk stratification SNOMED codes had not yet been released and so were unlikely to become widely deployed into live systems until mid-April.

The Cabinet Office needed to deploy the Shielded Patient flag more urgently than that, and so this code was recommended as the "least bad" solution.

I'm not sure what plans if any were made either centrally or by suppliers to eventually migrate the coded EPR entries originally made using this code around March 20th to its newer replacement of 1300561000000107 High risk category for developing complication from COVID-19 infection

Q. ICD10 Coding indicated that Confirmed COVID19 is by Lab test yet advice for SNOMED CT is that this is by clinical case definition how do we resolve this for nation/international reporting?

A. SNOMED offers 5 codes relating to the confidence of a COVID-19 diagnosis:

- 1321101000000103 COVID-19 excluded
- 1240761000000102 Suspected COVID-19 = WHO SUSPECTED COVID-19
- 1240751000000100 COVID-19 = WHO COVID-19, not known whether confirmed or probable
- 1300721000000109 COVID-19 confirmed by laboratory test = WHO CONFIRMED COVID-19
- 1300731000000106 COVID-19 confirmed using clinical diagnostic criteria = WHO PROBABLE COVID-19

These map onto the WHO definitions of suspected, confirmed and probable COVID as shown.

Q. I'm concerned about the code for High Risk, the description of which could lead to inappropriate use to describe a patient who is at high risk of contracting the disease rather than high risk of complications.

A. There are two kinds of risk that need to be addressed. High risk for developing complication and high risk of catching.

The official SNOMED term and code is:

- 1300561000000107 High risk category for developing complication from COVID-19 infection

The official description with the code distinguishes between the high risk of catching COVID or being in close contact, and the risk of developing a complication due to COVID. The downside is that this is a longwinded phrase, but this is needed for precision.

In the FCI guidance, the left hand column (*to record*) is to correlate with PRSB guidance. What will appear in the system is what is in the middle column (*look for this description*), which matches with the official SNOMED codes.

Q. We are used to communicating read codes in General Practice. I'm concerned that the SNOMED IDs are not human readable. Where codes are described on the FCI guidance, there is the suggestion that they should be transcribed (e.g. from a PDF) and that the GP will either need to type them into their system or copy and paste.

This does not appear to be a safe way of communicating precisely what needs to be found. Putting the fully specified name instead of the concept ID (or both if necessary), is safer, as precise, and more human readable.

A. In the introduction to the FCI guidance, it mentions that you should look for the full description and that the coding is present for those who need to know what the codes are, as there are other users of this list than those who will be entering data into records. The Y codes are there because there was an earlier problem with TPP when users couldn't search SNOMED descriptions, so put temporarily.

Perhaps the Faculty should make it clearer that there is no expectation that SNOMED Concept IDs should be used by GPs to find things in the system. The Y codes are there because there was an earlier problem with TPP when users couldn't search SNOMED descriptions, so put temporarily.

Lastly, in SNOMED/data entry, nobody should ever type or copy and paste a SNOMED identifier. To standardise use, a variety of structured data entry forms are needed. Code strings are needed for

retrieval, so GPs know what they should be looking for. It's difficult to keep data retrieval and data capture elements separate, and they often end up on the same document, which may be what's causing difficulty here.

Q. Are there any usage statistics for the Wuhan codes used earlier this year? Have GP systems suppliers been advised to replace those earlier temporary codes retrospectively?

A. The Wuhan codes were used initially, but are not used now as suppliers have removed them from picking list. There were also a lot of non-specific Coronavirus codes being used, the usage of which significantly peaked earlier in year. We had to assume that people meant COVID-19 at that stage, as there was a mixture of Wuhan and non-specific at the start.

Suppliers won't change entries in the record that were made in the past, but will remove from picking list. EMIS edited 'Wuhan' out and replaced with 'Novel Coronavirus', which is now a synonym of the preferred term. This helped to bridge the gap, but also caused confusion by having different codes circulating at the same time. Recommendation now is to ignore all previous codes and just use SARS-CoV-2 and COVID-19 for the disease.

Q. The list of local codes includes positive and negative, but nothing for inconclusive tests or technical failure. Is there a need for this and will this be included?

There is a need for this, and it was released yesterday (22nd April as of the day of recording) in the third emergency release.

Currently, the only way of testing is real-time PCR but we expect other modalities of testing to come soon for mass testing. When asking for a test, we really want to know whether they have the organism or not. The answers to this could be:

1. Yes
2. No
3. Not sure
4. Lost specimen/something went wrong

So 4 result codes are needed.

We will also need another four codes when we are able to move to antibody testing, to see whether people are immune. So there is likely to be changes to the guidance over the next 4/5 weeks.

Q. As a non-SNOMED user in Scotland, are these other codes going to need local equivalents and is there a mechanism for this?

A. The FCI have two representatives on the pathology standards governance board, who are discussing all of this and are working to ensure that any solutions work everywhere and across the four UK nations.

Positive/negative equivalent unknowns will need precoordinated SNOMED concepts. If they are specific, we would expect that suppliers in England will have to produce matching system-wide local codes. We could then contact suppliers and ask them to make these usable across the UK.

Q. Is there a national algorithm available used to trigger the code selection, with codes, and how were these triggered initially without codes? We would like the codes so we can crosscheck, particularly with hospital data.

Some suppliers have developed audits based on national extract, but this was wider than the defined shielding set. The shielding definition is a bit vague, but more explicit definitions and codes are available at NHS Digital, Health Protection Scotland and National Wales Informatics Service.

We are waiting for a response from NHS Digital on producing audits to identify those to put on shielded list.