Belfast Health and Social Care Trust
caring supporting improving together

FOI/24818

6 July 2021

Number of Cycles you have been using on the PCR

1. I would like to know the number of cycles you have been using on the PCR (Polymerase Chain Reaction) test as standard and if that number has ever been changed at any time for whatever reason.

There are many assays and platforms in use in Belfast Trust for molecular testing of SARS CoV2. Manufacturers set the total number of PCR cycles for each of those assays and there is no deviation from that within Belfast Trust. Standard PCRs that mostly employ Taqman chemistry, including SARS CoV2 assays, are either 40 or 45 cycles of PCR.

2. I would also like to know how many children under the age of 16 have been logged as a death from SARSCoV2 without any underlying health issues.

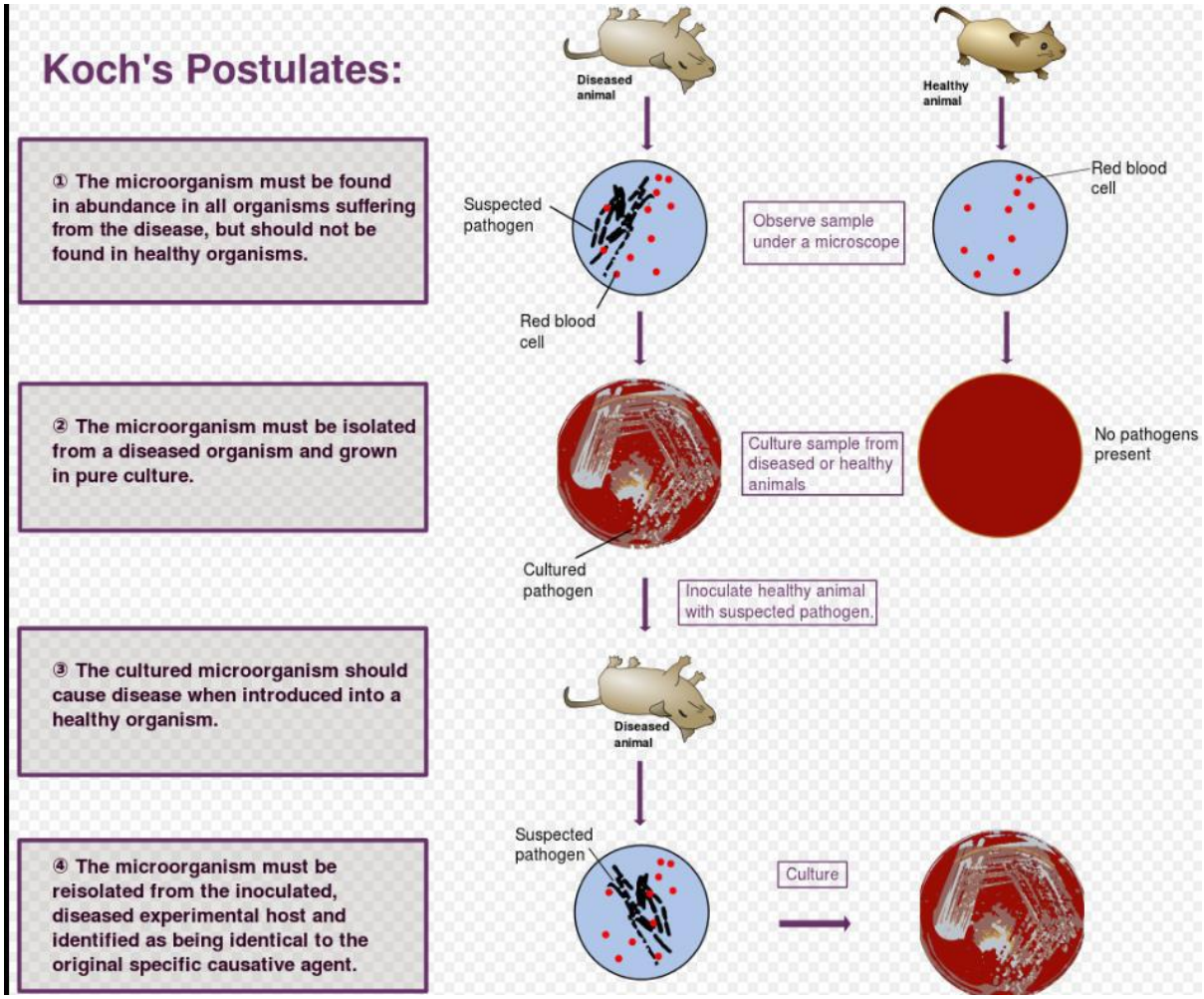
For the period 1st March 2020 to 31st May 2021 there was 1 inpatient death in a person under the age of 16 who had COVID-19 recorded on Part 1c of the Medical Certificate of Cause of Death (MCCD). The patient also had multiple co-morbidities recorded on their MCCD.
There were zero cases of an inpatient death in a person under the age of 16 from COVID-19 without any underlying health conditions.

3. And can you tell me if you have any records of SARSCoV2 going through Koch's Postulates?

Our Laboratory colleagues advise that this is more of an academic question and not relevant for a diagnostic laboratory where Belfast Trust apply diagnostic tests.
The Regional Virus Laboratory (and HSC laboratories in Northern Ireland) do not use viral cell culture as part of their clinical diagnostic repertoire. Cell culture techniques are concentrated in specialist referral laboratories such as those within Public Health England. All respiratory samples for SARS-CoV2 testing undergo PCR, isothermal amplification or antigen testing. There is no cell culture involved.

You may wish therefore to re refer to scientific research publications for answers to this question, e.g. from Wiki see below:

6 July 2021


Koch's Postulates:
① The microorganism must be found in abundance in all organisms suffering from the disease, but should not be found in healthy organisms.
② The microorganism must be isolated from a diseased organism and grown in pure culture.
③ The cultured microorganism should cause disease when introduced into a healthy organism.
④ The microorganism must be reisolated from the inoculated, diseased experimental host and identified as being identical to the original specific causative agent.
Diseased animal
Healthy animal
Suspected pathogen
Red blood cell
Observe sample under a microscope
Red blood cell
Culture sample from diseased or healthy animals
No pathogens present
Cultured pathogen
Inoculate healthy animal with suspected pathogen.
Diseased animal
Suspected pathogen
Culture