



Part 1

Infection control and biosecurity during COVID-19

Alan Radford BVSc BSc PhD MRCVS

Tim Nuttall BVSc BSc CertVD PhDCBiol MRSB MRCVS

Pam Mosedale BVetMed MRCVS

The Covid-19 Pandemic: Infection control in veterinary practice

Pam Mosedale BVetMed MRCVS

Chair of the RCVS Knowledge Quality Improvement Advisory Board

Lead PSS Assessor – RCVS

Bella Moss Clinical Advisor



RCVS Knowledge's mission is to advance the quality of veterinary care for the benefit of animals, the public, and society.

We meet this mission by championing the use of an evidence-based approach to veterinary medicine, inspiring a culture of continuous quality improvement in practice, and making our resources available to the profession and wider public.

We are a separate organisation to RCVS.

www.rcvsknowledge.org

Session will cover

- Coronavirus – know your enemy
- Infection control in the face of the Covid-19 pandemic
- Your questions answered

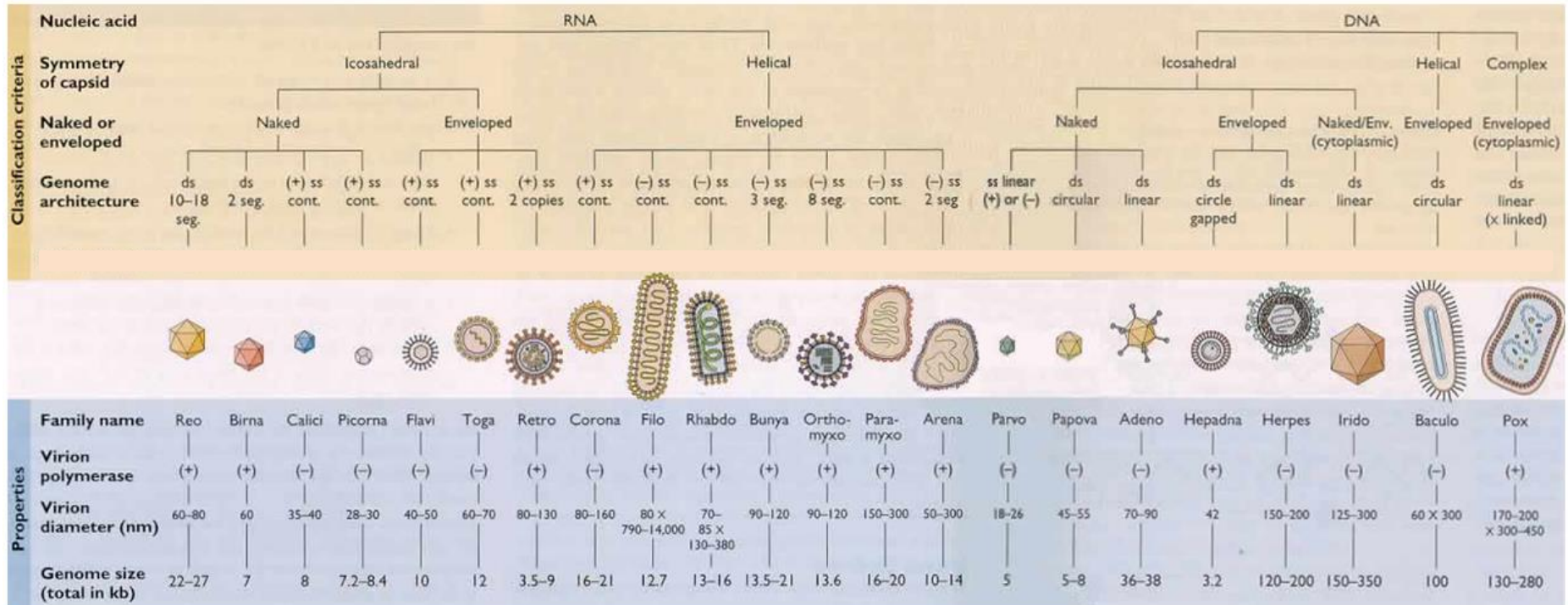
Coronavirus – know your enemy

Prof Alan Radford BVSc BSc PhD MRCVS

Professor in Veterinary Health Informatics – University of Liverpool
& RCVS Knowledge Quality Improvement Advisor

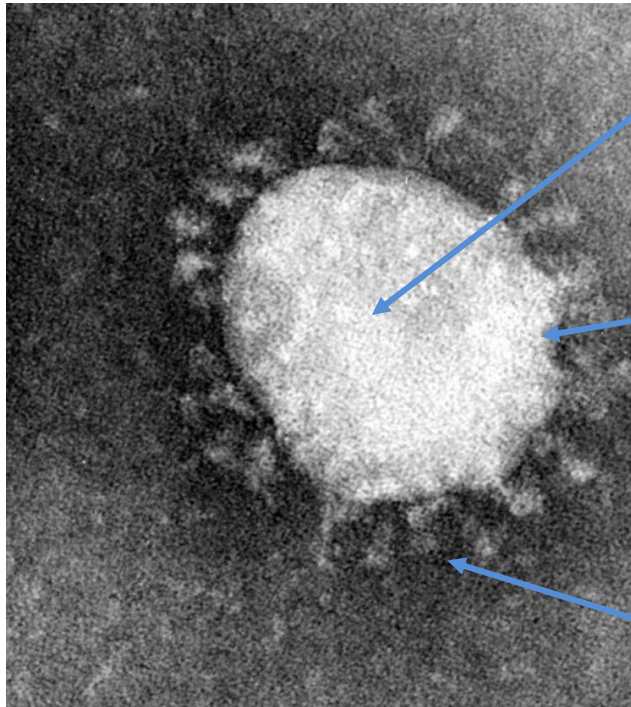
Coronaviruses

Viruses are obligate intracellular parasites – they need a host's cells to replicate



Coronaviruses

Viruses are obligate intracellular parasites – they need a host's cells to replicate



RNA genome inside lipid envelope

Having an RNA genome means these viruses can mutate and evolve quickly.

Lipid envelope

Derived from the host cell. Essential for infectivity but fragile. Means coronaviruses are generally short lived in the environment and relatively susceptible to soap and alcohol based disinfectants.

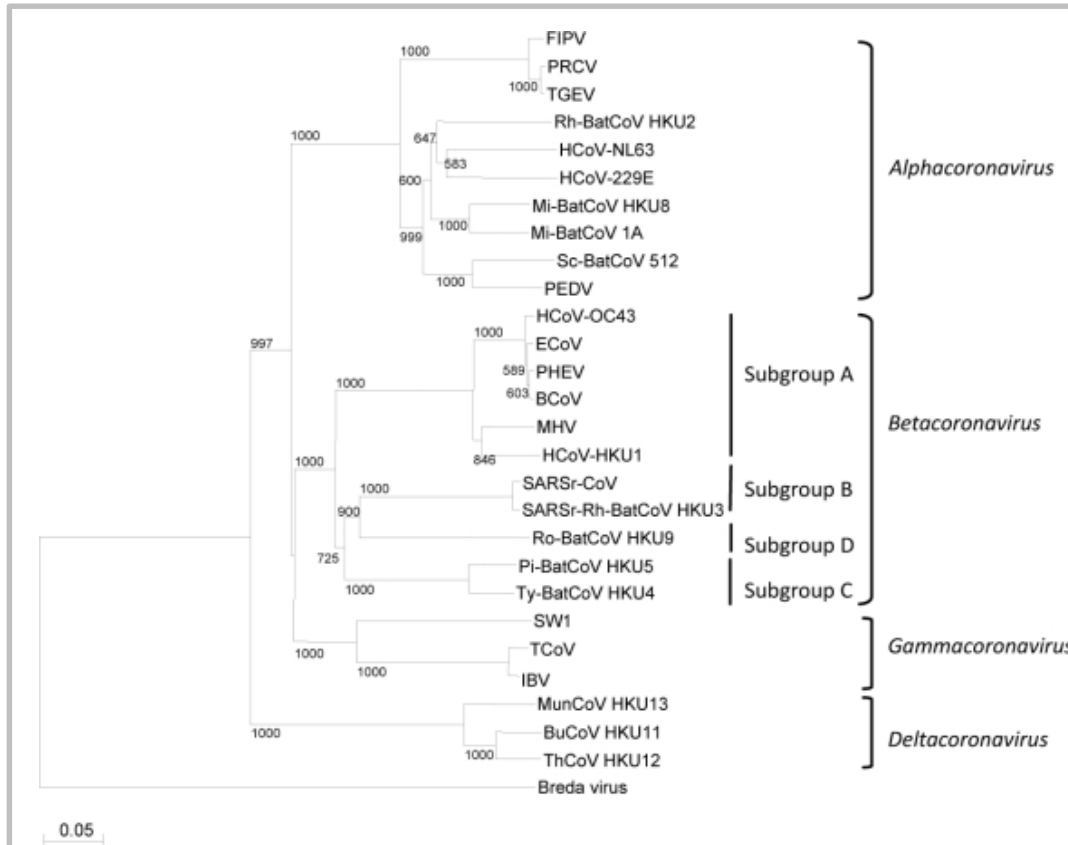


Surface proteins

Give the virus a crown-like (or corona) appearance – hence the name coronavirus.

Coronaviruses

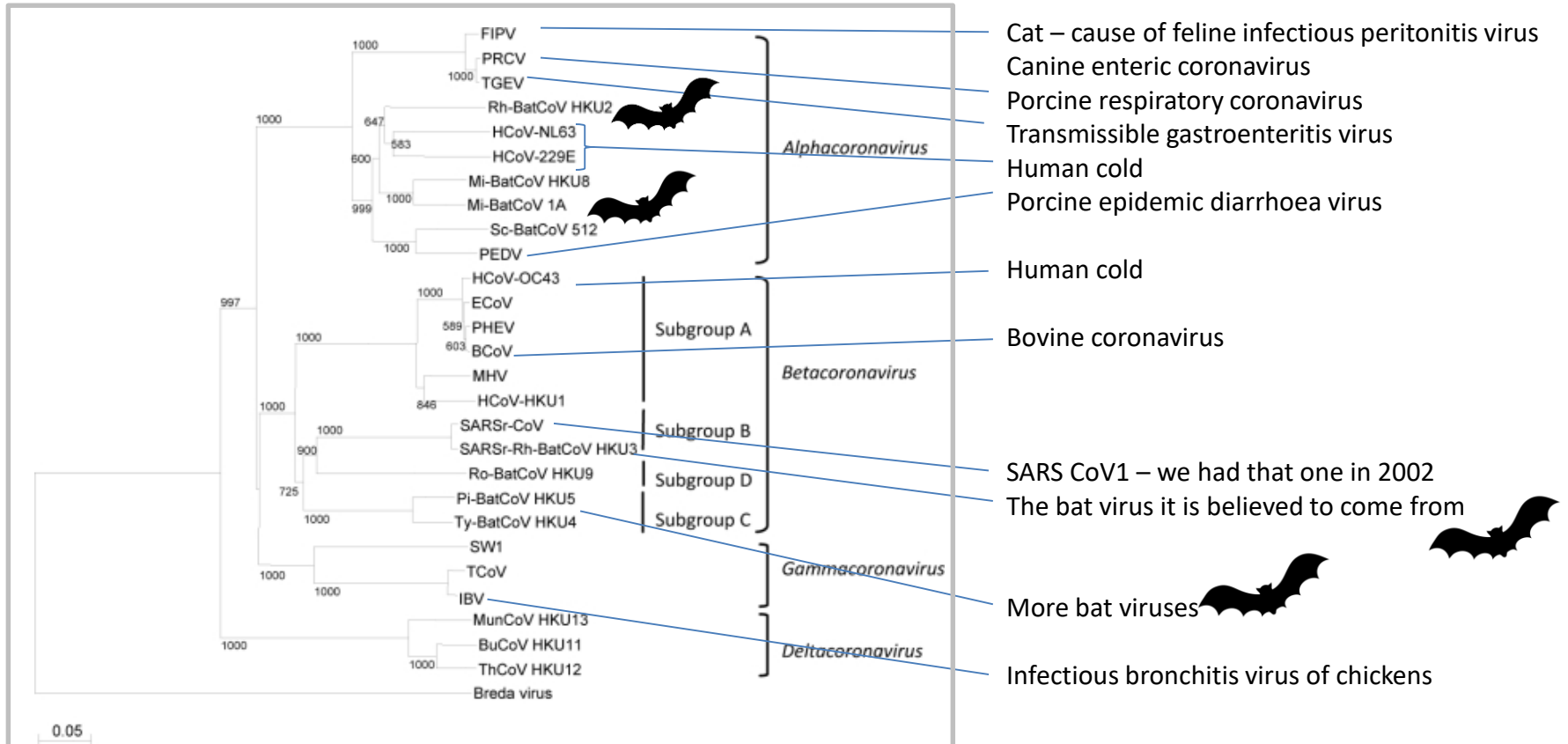
There are many well known coronaviruses that cause important diseases of man and animals.



Viruses. 2010 Aug; 2(8): 1804–1820.

Coronaviruses

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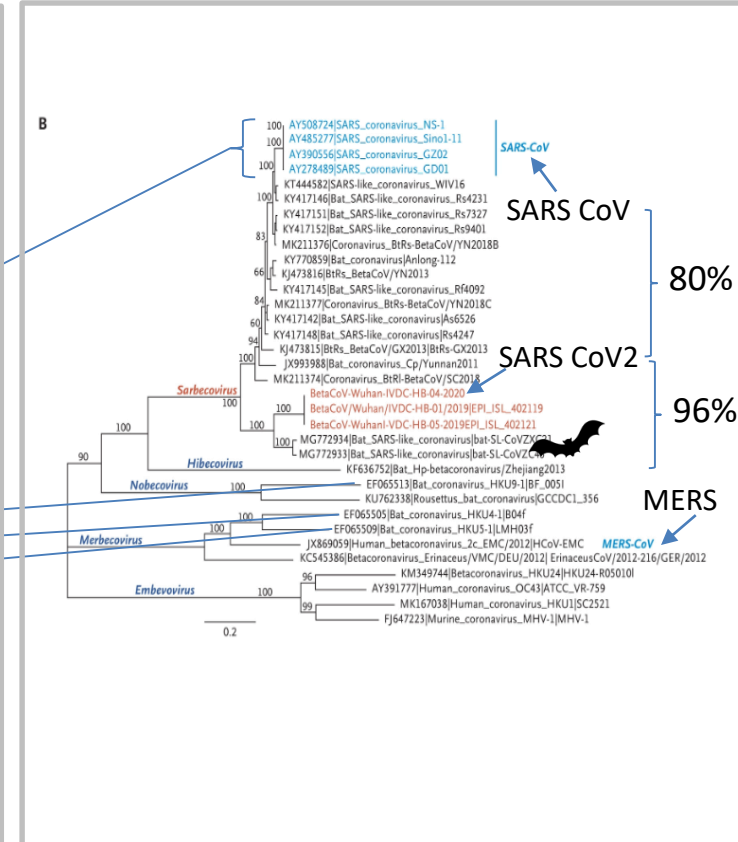
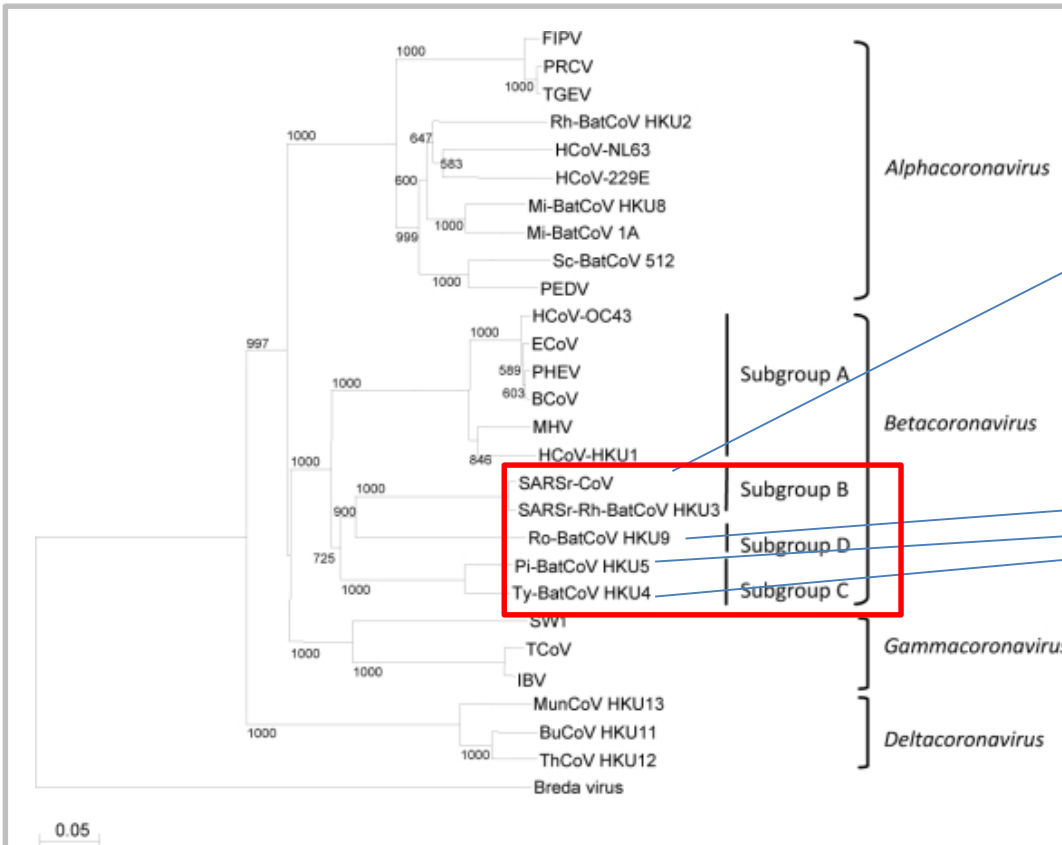
Viruses. 2010 Aug; 2(8): 1804–1820.

Coronaviruses

There are many well known coronaviruses that cause important diseases of man and animals.

A Novel Coronavirus from Patients with Pneumonia in China, 2019

Na Zhu, Ph.D., Dingyu Zhang, M.D., Wenling Wang, Ph.D., Xingwang Li, M.D., Bo Yang, M.S., Jingdong Song, Ph.D., Xiang Zhao, Ph.D., Baoying Huang, Ph.D., Weifeng Shi, Ph.D., Roujian Lu, M.D., Peihua Niu, Ph.D., Faxian Zhan, Ph.D., Xuejun Ma, Ph.D., Dayan Wang, Ph.D., Wenbo Xu, M.D., Guizhen Wu, M.D., George F. Gao, D.Phil., and Wenjie Tan, M.D., Ph.D., for the China Novel Coronavirus Investigating and Research Team



Viruses. 2010 Aug; 2(8): 1804–1820.

SARS-CoV2 and animals

There are two reasons to think about pets and covid 19

1 – INFECTION.

Whilst as a scientist it is very hard to say this will never happen, current evidence says the risk is absolutely tiny.

Only one dog has tested positive (in Hong Kong). It was not sick, and it did not develop antibodies. This suggests the dog may not actually have been infected.

Reduce handling of all fomites including animals.
Consider what cases to postpone eg see vaccine guidelines

<https://wsava.org/wp-content/uploads/2020/03/Advice-for-Veterinarians-about-Routine-Prophylactic-Vaccination-during-COVID-19.pdf>

Wear gloves when handling potential fomites including animals.

2 – CONTAMINATION.

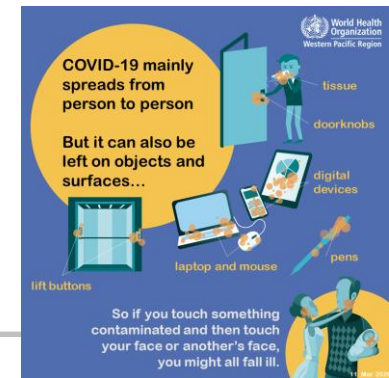
Animals with contact with infected people will get virus on them, in the same way a phone or a door handle would. They can therefore be **FOMITES**.

This virus could infect other people (indirect transmission).

Make sure you know if pets are coming from a house with suspect COVID-19.

If an animal has to be seen from such a home, strict separation, disinfection, biosecurity.

<https://www.bsava.com/adviceforCOVID19>



Coronaviruses – take home

- Rapidly mutating
- Envelope means we focus on hand washing
- Lets be specific if we talk about animal coronaviruses
 - eg not just “coronavirus in cats” but “feline enteric coronavirus”
- Bats as an important reservoir of coronavirus diversity



Infection control in the face of the COVID-19 pandemic

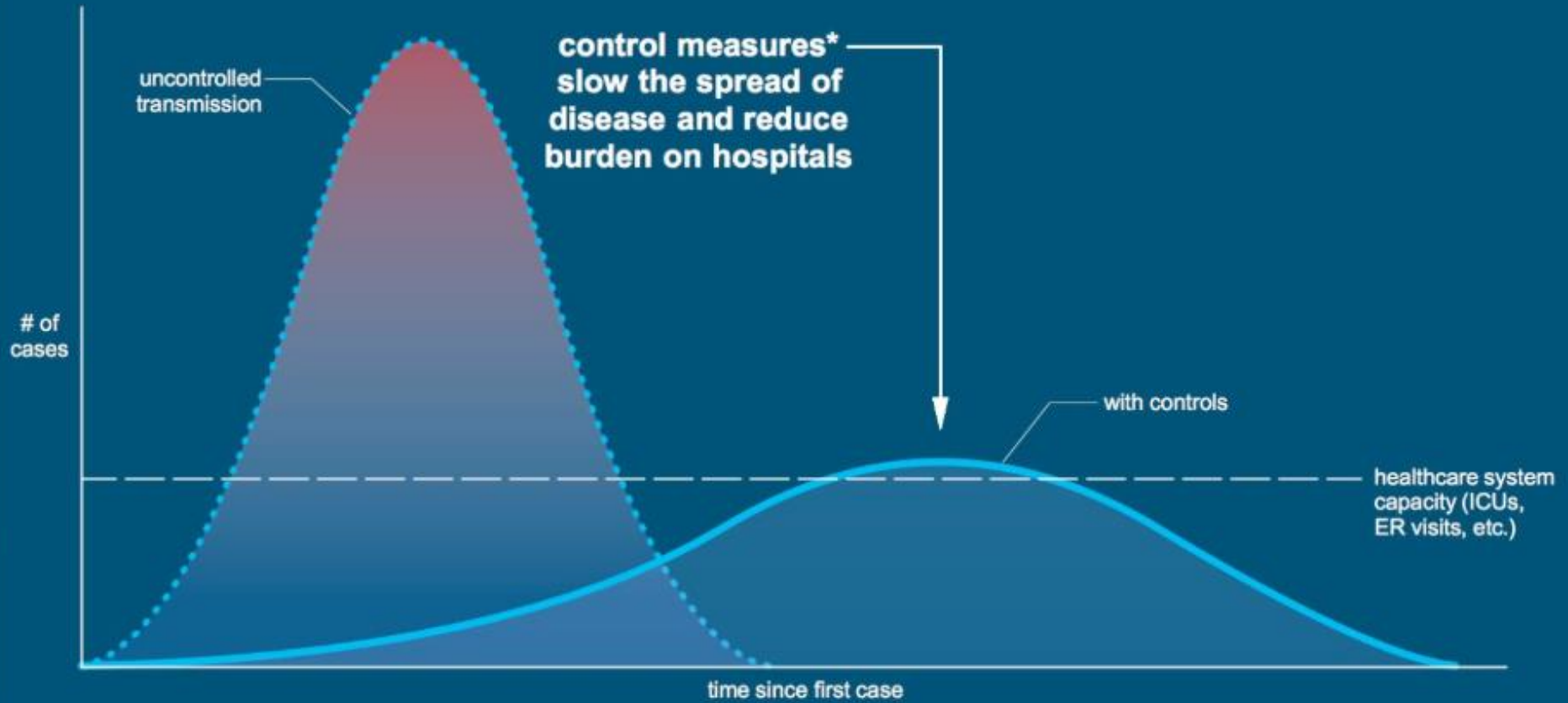
Dr Tim Nuttall BVSc BSc CertVD PhDCBiol MRSB MRCVS

Royal (Dick) School of Veterinary Studies– University of Edinburgh

RCVS Knowledge Infection Control Advisor

Bella Moss Clinical Advisor

LOWER AND DELAY THE EPIDEMIC PEAK

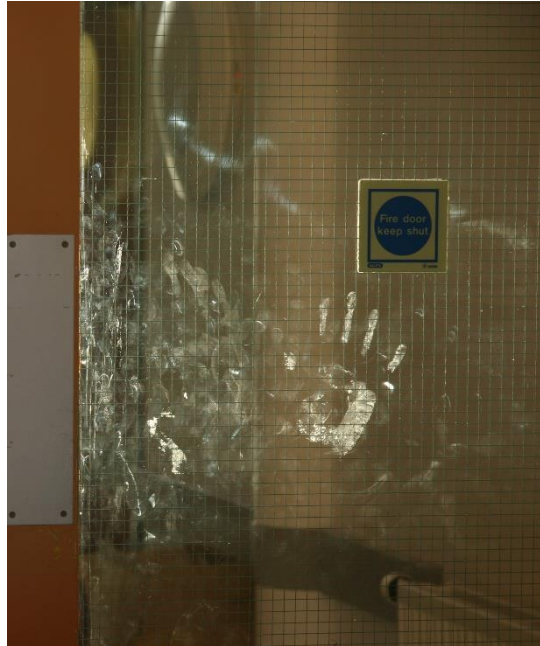


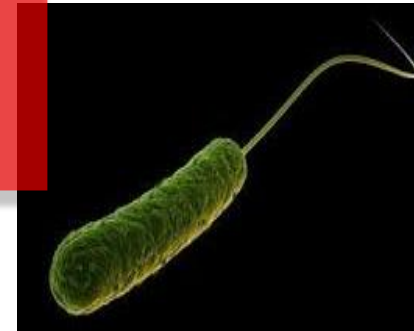
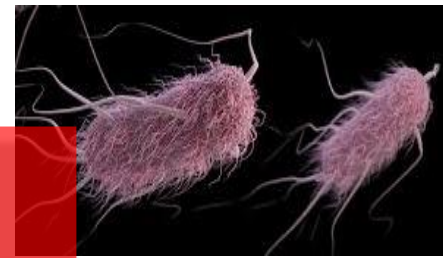
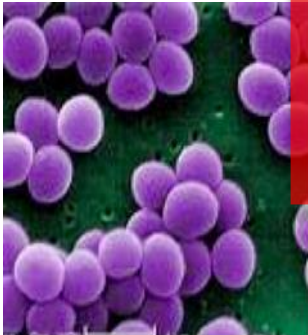
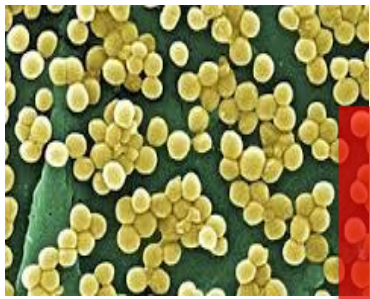
* control measures may include handwashing, teleworking, limiting large gatherings, minimizing travel, etc.

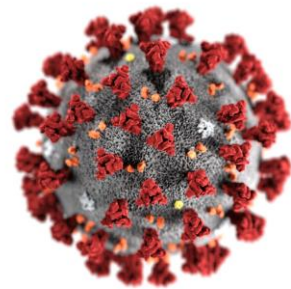
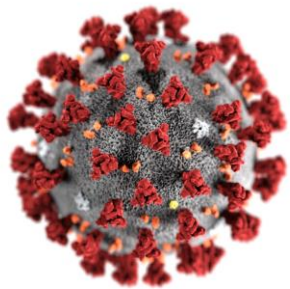
CC BY 2.0 Esther Kim @K_thos
Carl T. Bergstrom @CT_Bergstrom



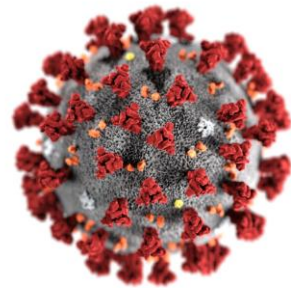
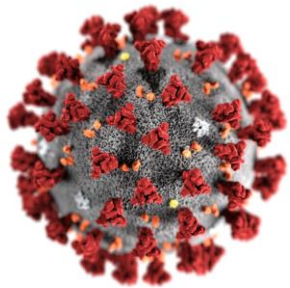
RCVS
KNOWLEDGE



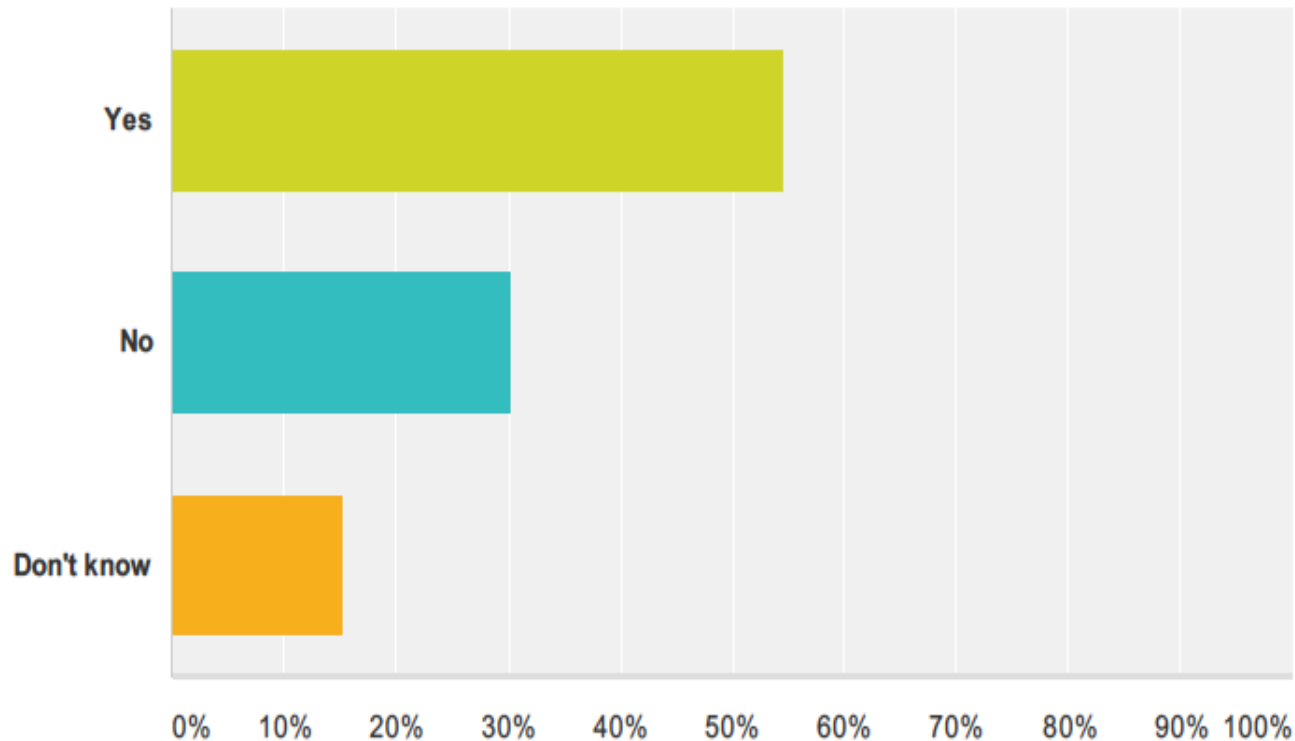




wiseGEEK



Does your practice have written protocols for infection control in place?



Ana Mateus and others; Bella Moss Foundation & Royal Veterinary College 2014

Covid-19

Controlling contamination in vet practice

- Practices should have written policies
 - Infection control
 - Hand washing
 - Cleaning and disinfection
 - Social distancing
 - Admitting & seeing patients



World Health
Organization

Public Service
Announcement

Google



DO THE FIVE

Help stop coronavirus

- 1 HANDS** Wash them often
- 2 ELBOW** Cough into it
- 3 FACE** Don't touch it
- 4 FEET** Stay more than 3ft (1m) apart
- 5 FEEL** sick? Stay home

General public health information

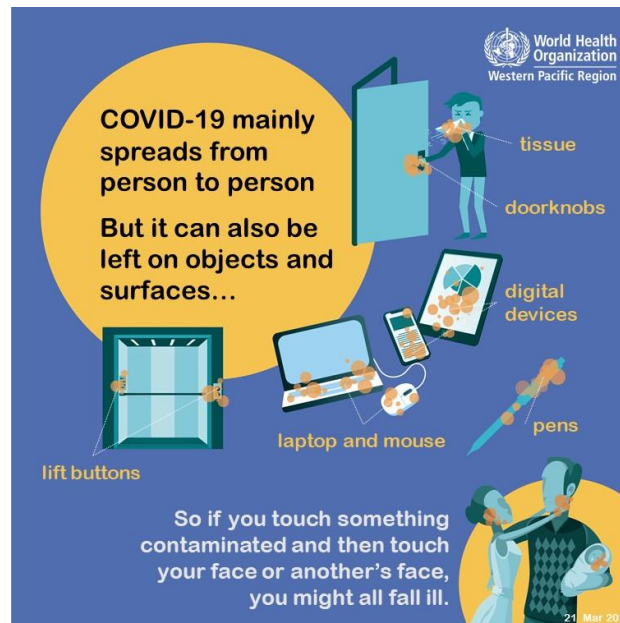
Infection control teams

- Concentrate on immediate actions for safe working
- Establish infection control rules and guidelines
 - Simple & clear
- Induction and refresher training
 - Record & monitor
- Immediate audit
 - Record & monitor tasks & procedures



Simple infographics

- Practice, waiting room & website use
- Provide tissues & foot operated bins



Hand washing

- The single most effective measure you can take
- Army recruits that washed 5 times daily = 40% reduction in respiratory virus infections
- Moisturise your hands frequently



The poster features a dark background with a close-up of a hand being washed under a stream of water from a faucet. The water is depicted as a bright, glowing blue stream. In the top left corner is the HM Government logo, and in the top right corner is the NHS logo. The main title 'Coronavirus' is in large, bold, blue letters, followed by 'Wash your hands more often for 20 seconds' in white. Below this, a list of instructions is provided: 'Use soap and water or a hand sanitiser when you:' followed by three bullet points: '• Get home or into work', '• Blow your nose, sneeze or cough', and '• Eat or handle food'. At the bottom left, there is a line of text: 'For more information and the Government's Action Plan go to nhs.uk/coronavirus'. In the bottom right corner, there is a small white box with the text 'CORONAVIRUS' and 'PROTECT YOURSELF & OTHERS'.

HM Government

NHS

Coronavirus

Wash your hands more often for 20 seconds

Use soap and water or a hand sanitiser when you:

- Get home or into work
- Blow your nose, sneeze or cough
- Eat or handle food

For more information and the Government's Action Plan go to nhs.uk/coronavirus

CORONAVIRUS
PROTECT YOURSELF & OTHERS

YOUR 5 Moments for hand hygiene



Expand to all staff & all activities including non-clinical areas

Hand Washing Technique with Soap and Water



Wet hands with water



Apply enough soap to cover all hand surfaces



Rub hands palm to palm



Rub back of each hand with the palm of the other hand with fingers interlaced



Rub palm to palm with fingers interlaced



Rub with back of fingers to opposing palms with fingers interlocking and vice versa



Rub each thumb clasped in opposite hand using a rotational movement



Rub tips of fingers in opposite palm in a circular motion



Rub each wrist with the opposite hand using a rotational movement



Rinse hands with water



Use elbow to turn off tap



Dry thoroughly with disposable paper towel



Hand washing should take 40-60 seconds

** Steps 3 to 9
require a minimum
of 5 repetitions



qrs.ly/cp4u5t7

Hand Rub Technique with Alcohol Gel



Apply sufficient alcohol gel to a cupped hand to cover all surfaces



Rub hands palm to palm



Rub back of each hand with the palm of the other hand with fingers interlaced



Rub palm to palm with fingers interlaced



Rub with back of fingers to opposing palms with fingers interlocking and vice versa



Rub each thumb clasped in opposite hand using a rotational movement



Rub tips of fingers in opposite palm in a circular motion



Rub each wrist with the opposite hand using a rotational movement



Allow hands to air dry

** Steps 2 to 8
require a minimum
of 3 repetitions



qrs.ly/zg4tbjg

Avoid anything that interferes with effective hand washing

- Bare below elbows
- Hands and fingers should be bare
- Nails should be short and clean
- Waterproof dressings if required



When to wear gloves

- Not a substitute for hand washing!
- Any hand touch risk
- Contagious and/or AMR organisms
- Non-healing and other wounds
- Clean or aseptic procedures
- Barrier nursing
- Change gloves!



Quality Improvement Campaign

Equipment, pockets, stethoscopes, fob watches, phones, tablets etc.

- Must be visibly clean
- Clean and disinfect between cases & visits



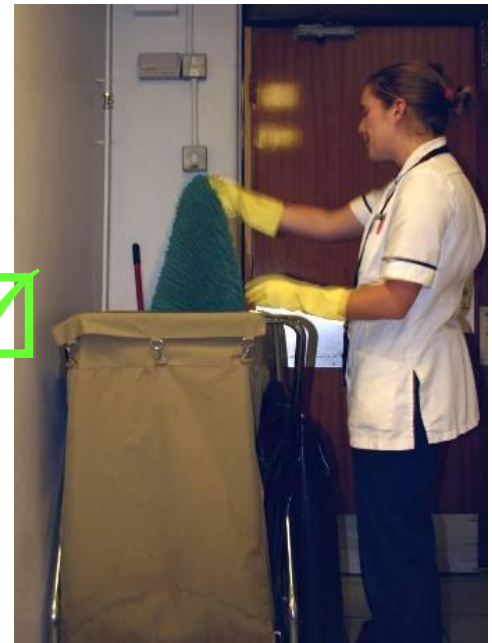
Leads, harnesses, muzzles and baskets

- Clean lead, harness or muzzle at admission
 - Should remain with the animal
 - Clean or dispose of after use
- Do not take in any equipment
- Move animals into a practice basket as soon as possible



Strict cleaning protocols

- Appropriate written protocols
 - Think microbiological cleanliness
 - Visual cleanliness is misleading
- Identify rooms and equipment that need cleaning
 - Use check lists
 - Handles, light switches, keypad entry, drinks & water dispensers, telephones, calculators, toilet flushes, photocopiers and printers.
- Close off unused areas/rooms
- Disinfectants are not a substitute for cleaning



Make cleaning easier & more effective

- Remove unnecessary clutter
- Remove material that you can't clean
 - Fabric chairs, displays, magazines, paper & toys
- Easy clean keyboards
- Concentrate on hand touch sites
 - Handles, switches, keypads, drinks & water dispensers, telephones, calculators, toilet flushes, photocopiers & printers



Uniforms & protective clothing

- Clean & simple
- Change, clean & disinfect after use
 - Disposable covers if necessary
- Sequester soiled and clean clothing
- Wear only in-clinic or on-site
- Also consider for non-clinical staff



Controlling contamination

- Maintain social distancing
- Appointments only & remote reception
 - Check for owner or in-contact illness
 - Not ill \neq not infected!
- Phone & email consultations
 - Reduce visits
 - Minimise time with clients
- Minimise paper & pens
 - One pen/client
 - Record verbal consent
 - Online consent forms



Controlling contamination

- Admit from the car or waiting room
 - Limit entry & access to premises
 - Ensure areas are spacious & well ventilated
- Only go into essential areas of farms & stables etc.
- One client per consultation
- Wear gloves
- Disinfect hand touch sites immediately after use
 - Includes vehicles



Controlling contamination

- Handling animals & equipment
 - Gloves, hand washing & hand touch sites
 - Consider aprons, face & eye protection for fluid, splash & aerosol risk
- Practical social distancing
 - Ventilation & air changes
 - Masks?
- Essential staff only
 - Risk assess
 - Non-overlapping teams
 - Sequester staff



Controlling contamination

- Wipe down samples and drugs
 - Pick-up points
 - Drop-off with social distancing
- Email or phone discharge & instructions
- Email prescriptions
- Increased use of PPE
 - Check supply & waste disposal arrangements



Other support

- Client education & support
 - Email & phone
 - Website
 - Webinars or narrated presentations
 - Links to trustworthy sites
- Vulnerable clients
 - Phone & email contact
 - Drug & food deliveries
 - Risk assess home visits
- Links to mental health support sites



vetlife
Support for the
veterinary community

Vetlife 24/7 Helpline
0303 040 2551

Anonymous email via website www.vetlife.org.uk

Find out more about the independent and confidential help that Vetlife provides to everyone in the veterinary community at www.vetlife.org.uk

helpline	health support	financial support
<ul style="list-style-type: none">• Available 24/7, 365• Confidential, non-judgmental listening service• Contact via phone* or email	<ul style="list-style-type: none">• For mental health and wellbeing• Teams of experienced professionals• Referrals made through Vetlife Helpline	<ul style="list-style-type: none">• Emergency financial assistance and monthly grants• Professional benefits advice• Access to free CPD

*Normal helpline rate applies.

Vetlife is a trading name of the Veterinary Support Fund which is a Charitable Company Limited by Guarantee. Company Registration Number: 1131013. England and Wales. Charity Registration Number: 285725.

Facebook: VetlifeVBF Twitter: @VetlifeVBF

Health

Coronavirus: How to protect your mental health

By Kirstie Brewer
BBC News

16 March 2020

Coronavirus pandemic



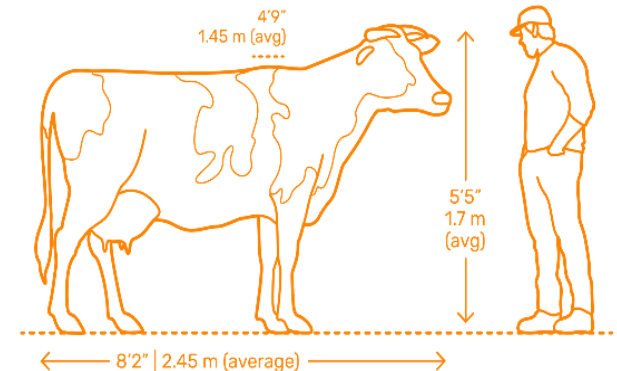
Reuters - Bergamo, Italy, 19th March 2020

Biosecurity on the Farm:

Protecting human health

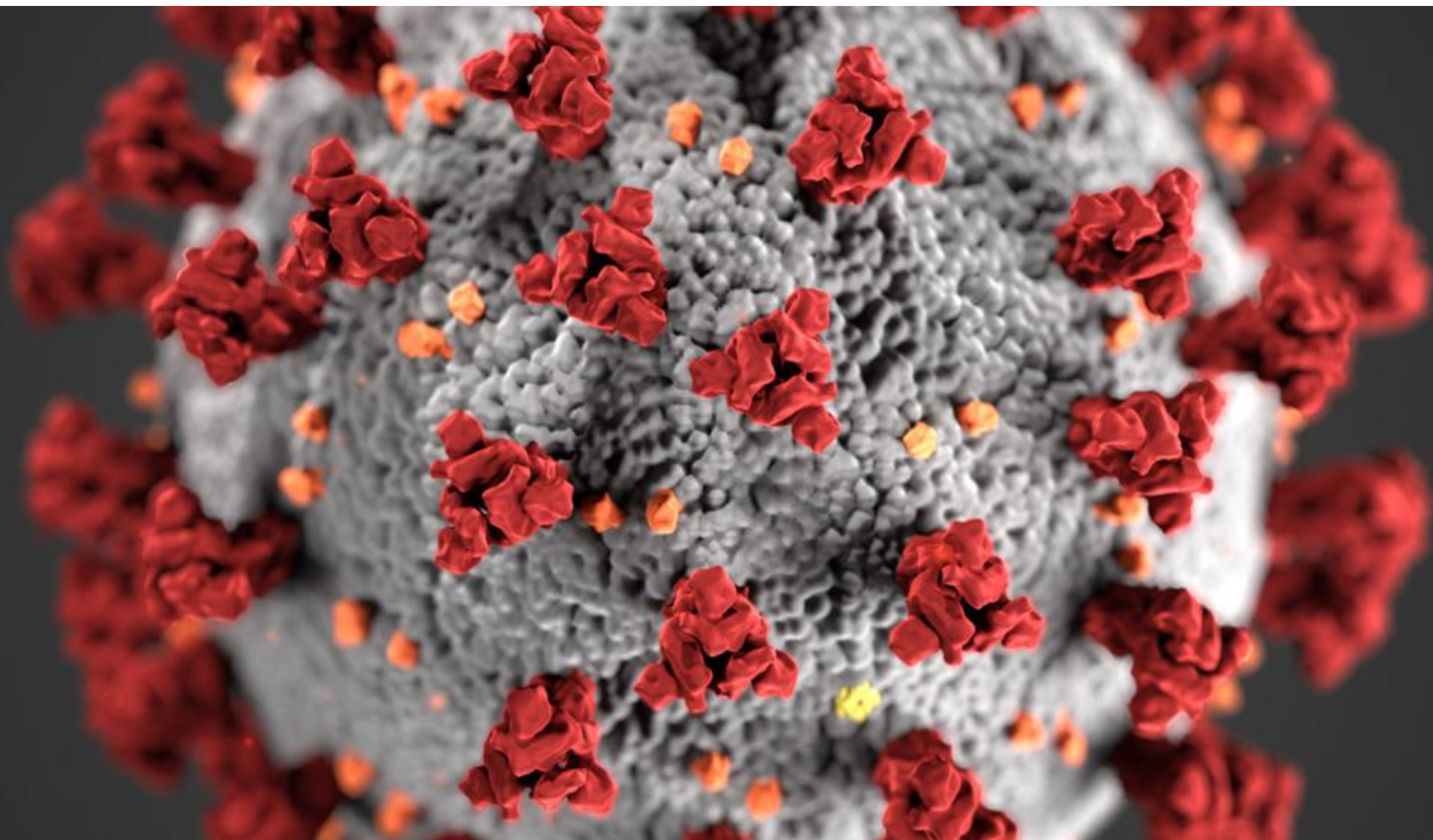


- SOCIALLY DISTANCE: At least 2m (a cow length)
- Only have client present if absolutely necessary: If essential, limit to **one** and ensure they wear gloves
- Wear gloves (change regularly), do not touch your face
- Before leaving the farm ensure that you disinfect any areas that you may have touched/come into contact with and could act as a fomite in the event you are infected with Covid-19 but not yet displaying symptoms
- Fully disinfect all PPE and equipment at the end of the visit and wash your hands thoroughly



For further resources:

www.rcvsknowledge.org/covid-19





Thank you

Coming soon

Part 2: Infection control and biosecurity

More resources at www.rcvsknowledge.org/covid-19