Hydro-X

QP24 – COVID-19 Disinfection in Healthcare Settings

Issue 2, April 2020

QP 24 – COVID-19: Surface Disinfection - Healthcare Settings

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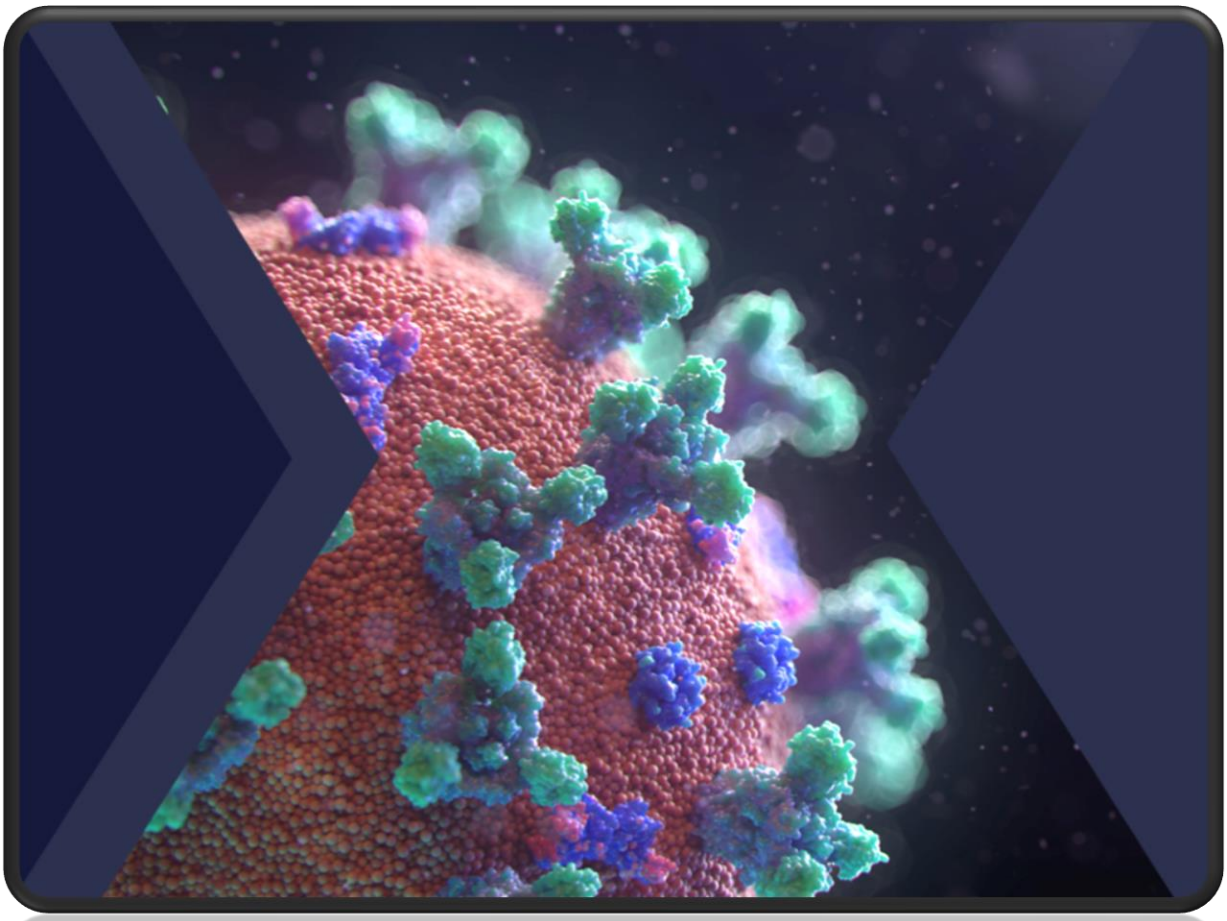

Contents:

The Hydro-X Group of Companies: Compliance House, Manor Drive, Dinnington, S25 3QU
Company Registration - 1818133

Disinfection Process and Methodology

Disinfection process is as per the guidance provided by Public Health England (PHE):

https://www.gov.uk/government/publications/wn-cov-guidance-for-primary-care/wn-cov-interim-guidance-for-primary-care

Environmental Disinfection Following a Possible Case

Once a possible case has been transferred from the primary care premises, the room where the patient was placed should not be used, the room door should remain shut, with windows opened and the air conditioning switched off until it has been disinfected with detergent and disinfectant. Once this process has been completed, the room can be put back in use immediately.

Preparation

The responsible person undertaking the disinfection with detergent and disinfectant should be familiar with these processes and procedures:

- collect all disinfection equipment and clinical waste bags before entering the room
- any cloths and mop heads used must be disposed of as single use items
- before entering the room, perform hand hygiene then put on a disposable plastic apron and gloves

On Entering the Room

- keep the door closed with windows open to improve airflow and ventilation whilst using detergent and disinfection products
- bag all items that have been used for the care of the patient as clinical waste, for example, contents of the waste bin and any consumables that cannot be sanitised with detergent and disinfectant
- remove any fabric curtains or screens and bag as infectious linen
- close any sharps containers wiping the surfaces with either a combined detergent disinfectant solution at a dilution of 1000 parts per million (ppm) available chlorine (av.cl.) or a neutral purpose detergent followed by disinfection (1000 ppm av.cl.)

Disinfection Process

Use disposable cloths or paper roll or disposable mop heads, to disinfect all hard surfaces or floor or chairs or door handles or reusable non-invasive care equipment or sanitary fittings in the room, following one of the 2 options below:

1. use either a combined detergent disinfectant solution at a dilution of 1000 parts per million (ppm) available chlorine (av.cl.)
2. or a neutral purpose detergent followed by disinfection (1000 ppm av.cl.)

- follow manufacturer's instructions for dilution, application and contact times for all detergents and disinfectants
- any cloths and mop heads used must be disposed of as single use items

Disinfection of Reusable Equipment

Disinfect any reusable non-invasive care equipment, such as blood pressure monitors, digital thermometers, glucometers, that are in the room prior to their removal. Disinfect all reusable equipment systematically from the top or furthest away point.

Carpeted Flooring and Soft Furnishings

If carpeted floors or item cannot withstand chlorine-releasing agents, consult the manufacturer's instructions for a suitable alternative to use, following or combined with detergent disinfection.

On Leaving the Room

- discard detergent or disinfectant solutions safely at disposal point
- all waste from suspected contaminated areas should be removed from the room and quarantined until patient test results are known (this may take 48 hours); if the patient is confirmed to have COVID-19 further advice should be sought from the local HPT
- disinfect, dry and store re-usable parts of disinfection equipment, such as mop handles
- remove and discard PPE as clinical waste
- perform hand hygiene

Disinfection of Communal Areas

If a suspected case spent time in a communal area, for example, a waiting area or toilet facilities, then these areas should be disinfected with detergent and disinfectant (as above) as soon as practicably possible, unless there has been a blood or body fluid spill which should be dealt with immediately. Once disinfection and disinfection have been completed, the area can be put back in use.

Areas & Task List
Receptions
Use cloths or paper roll with 1000ppm Hydrocid 337F
Sanitise wipe clean entrance doors and frames
Sanitise wipe clean desk
Empty wastepaper bin and replenish bin liner
Clean and sanitise telephone
Sanitise wipe all doors & frames
Sanitise wipe fixtures and fittings

Mop any hard floor areas
Sanitise wipe over keyboard, mouse and around monitor
All Office, Meeting & Board Room Areas
Use cloths or paper roll with 1000ppm Hydrocid 337F
Empty wastepaper bin and replenish bin liner
Sanitise wipe all surfaces of all furniture (where accessible)
Sanitise wipe all fixtures and fittings at reachable height
Sanitise wipe all ledges and skirtings
Sanitise wipe all doors and frames including handles
sanitise wipe over phones, keyboards, mice and around monitor screen
Sanitise wipe desks where accessible
Passenger Lifts & Goods Lift
Use cloths or paper roll with 1000ppm Hydrocid 337F
Sanitise wipe all doors
Sanitise Wipe clean lift cart walls
Sanitise wipe all glazed surfaces
Sanitise wipe indicator panels
Mop hard flooring to lifts
Lobbies & Corridors
Use cloths or paper roll with 1000ppm Hydrocid 337F
Sanitise wipe all fixtures and fittings at a reachable height
Sanitise wipe all ledges and skirting
Sanitise wipe glass vision panels to doors
Mop all hard floor areas
Staircases
Use cloths or paper roll with 1000ppm Hydrocid 337F
Sanitise wipe all handrails
Sanitise wipe ledges, fixtures & fittings
Mop hard floors
Staff Kitchens/Resource Areas
Use cloths or paper roll with 1000ppm Hydrocid 337F
Empty wastepaper bin and replenish bin liner- wipe clean bin surfaces
Wipe clean & sanitise all work surfaces
Sanitise wipe sink, taps and draining board
Sanitise wipe clean fascia of units and cupboards
Sanitise wipe clean external surfaces of fridges and all equipment
Sanitise wipe clean all fixtures and fittings
Sanitise wipe clean all ledges and skirting
Mop hard floor areas
Wash up cups and cutlery either by hand or via dishwasher if available
Sanitise wipe inside microwave
Sanitise wipe inside of Fridge
Toilets/Showers & Washrooms Areas

Use cloths or paper roll with 1000ppm Hydrocid 337F
Empty wastepaper bin and replenish bin liner- wipe clean bin surfaces
Sanitise wipe clean all sinks and surrounds
Sanitise wipe clean all taps
Sanitise wipe clean & sanitize all vanity units
Sanitise wipe clean all tile splash backs
Sanitise wipe clean all towel cabinets/hand dryers
Sanitise wipe clean and polish all mirrors
Sanitise wipe down all cubicle walls & doors
Clean & sanitize all surfaces to toilets bowls, including handles
Sanitise wipe clean cisterns, and low-level pipe work
Sanitise wipe clean all fixtures and fittings
Sanitise wipe clean all ledges and skirting
Mop hard floor areas
Replenish all consumable items as necessary
Sanitise wipe clean showers

Hydrocid 1F (1000ppm Sodium Hypochlorite with Surfactant) Efficacy

Mode of Action

The use of 0.1% sodium hypochlorite after disinfection with a neutral detergent is suggested for decontamination purposes, although no data on the effectiveness against the SARS-CoV-2 are available due to the new nature of the virus. However, there is evidence of efficacy against other novel Corona viruses as per Table 1 below.

Table 1. Antimicrobial agents effective against different coronaviruses: human coronavirus 229E (HCoV-229E), mouse hepatitis virus (MHV-2 and MHV-N), canine coronavirus (CCV), transmissible gastroenteritis virus (TGEV), and severe acute respiratory syndrome coronavirus (SARS-CoV)[1]

Antimicrobial agent	Concentration	Coronaviruses tested	References
Ethanol	70%	HCoV-229E, MHV-2, MHV-N, CCV, TGEV	[4,6,7]
Sodium hypochlorite	0.1–0.5% 0.05–0.1%	HCoV-229E SARS-CoV	[6] [5]
Povidone-iodine	10% (1% iodine)	HCoV-229E	[6]
Glutaraldehyde	2%	HCoV-229E	[6]
Isopropanol	50%	MHV-2, MHV-N, CCV	[7]
Benzalkonium chloride	0.05%	MHV-2, MHV-N, CCV	[7]
Sodium chlorite	0.23%	MHV-2, MHV-N, CCV	[7]
Formaldehyde	0.7%	MHV-2, MHV-N, CCV	[7]

The use of 0.01-0.21% Sodium Hypochlorite has been shown to provide between 2.3 to >4 log reduction in Canine Corona Virus (CCV) between 30 seconds and 10 minutes.[8]

Microbicidal Activity

Enveloped viruses such as Coronaviruses are the least resistant to inactivation by disinfection. The structure of these viruses includes a lipid envelope, which is easily compromised by most disinfectants. Once the lipid envelope is damaged, the integrity of the virus is compromised, thereby neutralizing its infectivity.

6. Sattar SA, Springthorpe VS, Karim Y, Loro P. Chemical disinfection of non-porous inanimate surfaces experimentally contaminated with four human pathogenic viruses. Epidemiology & Infection. 1989;102(3):493-505.
7. Saknimit M, Inatsuki I, Sugiyama Y, Yagami K. Virucidal efficacy of physico-chemical treatments againstcoronaviruses and parvoviruses of laboratory animals. Experimental animals. 1988;37(3):341-5.
8. G. Kampf, D. Todt, S. Pfaender, E. Steinmann. Persistence of coronaviruses on inanimate surfaces and their inactivation with biocidal agents - 2020

Personal Protective Equipment

As a minimum: operatives will wear the following PPE to ensure their safety during works;

- Steel toe capped boots
- Disposable overalls
- Disposable gloves
- Eye protection
- Disposable face mask
- Disposable over-shoes
- Face Guard

It will be ensured that all staff carrying out these services will have adequate stock of all PPE.

Client Permit Systems and Site-Specific Health and Safety

All operatives attending client sites will undertake full site inductions in line with the client requirements. The client induction will give Hydro-X colleagues guidance on:

- Manual Handling
- Working at height – *Engineers completed competency course (PASMA & IPAF).*
- Slips/trips
- Confined spaces
- Cuts and Lacerations
- Weather Condition - Engineers to record and monitor weather conditions with images.
- Asbestos
- Exposure to bacteria and viruses

Final Report

Upon completion the operatives will generate a final disinfection report with picture evidence and any additional guidance. This report will be provided on the same day to designated client email addresses. The report will cover:

- Areas disinfected and disinfectants / methodologies used
- Operatives
- Pictures
- Time and Date

Hydro-X

Primary Care — Covid-19 Room Disinfection Services

In line with Public Health England (PHE) guidance Hydro-X Group is able to offer disinfection services for primary care rooms and communal areas following possible cases of Covid-19.

This key service ensures the rooms where patients have been can be used immediately following the cleaning process.

The products used by Hydro-X group have a proven efficacy against bacteria and viruses such as Covid-19. All works are carried out in line with the guidance provided by PHE.

Hydro-X produces its own chemicals in the UK at its headquarters in Dinnington (South Yorkshire) with extensive experience in cleaning and disinfection services across primary healthcare premises.

The group has 130 staff across the UK providing UK wide 24 hour a day service.

We are proud to support the NHS

Hydro-X Disinfection

- Whole room disinfection including hard to reach areas
- Flexible service to ensure all rooms / areas can be disinfected
- Effective against bacteria and viruses including Covid-19
- Same day disinfection reporting
- Full UK based chemical production with consistently available stock.

Hydro-X Group

- UK wide engineering and consultancy coverage.
- Full UK chemical manufacturing plant
- Serving the whole of the UK. 130 staff based across the whole county offering full in-house service / solutions
- Next day delivery of chemicals available.
- 24 hours a day service provision

Constructionline · Legionella Control Association · ISOQAR · CHAS

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About Hydro-X Group

8 Regional Location Strategically Located throughout the UK to support our Business Partners

Over 120 Staff – Sales Technical, R&D, Products, Administration and Infield Engineers with “In House Capability”

Committed to Protect your Organisation.

Through innovative technologies and continual investment with reliable product and services that –

- Provide peace of mind concerning your compliance
- Enhance your plant longevity
- Reduce your total cost of operation
- Providing compelling Return on Investment
- Helping us both differentiate from competition

Water Treatment

Cooling Systems

Steam Boilers

Pre-Treatment

H & C Systems

Effluent Treatment

Pre-Commission Cleaning

Filtration and Chemical

Water Hygiene

ACoP L8 Compliance

Water quality

Sampling to UKAS

System Clean & Chlorination

Chlorine Dioxide

Log Books

Same Day Reporting

Risk Assessments

Legal Compliance

Legionella RA

C&G Training

Water Surveys

Reviews

Audits

Closed system Assessments

Engineering

Water Treatment Plant and Equipment

Chemical Cleaning

Tank Installation

Process and Optimisation

Water Reclaim

Pre-Treatment

Air Hygiene

Duct work Cleaning

Kitchen Extract

Fire Dampers

Indoor Air quality

Post Clean Verification

Deep Cleaning