COVID-19
ADDENDUM
Key Standards for Environmental Cleanliness

Contents List

1. Introduction

It is recognised by Welsh Government through the Nosocomial Transmission Group (NTG) (led by the office of the Chief Medical Officer) that there is an urgent need to have assurance that environmental cleaning is being managed in accordance with current UK guidance for COVID-19 in order to prevent and minimise nosocomial transmission of COVID-19 as services move towards a return to business as usual. Published guidance is based on current evidence base in relation to how the infection is transmitted, how long it survives and how to remove and kill the virus in the environment. It is important to have clear standards across Wales for cleaning in healthcare settings so that there is a common approach that organisations can adopt.

This document sets out a series of recommended standards and principles for all NHS Wales organisations to apply within their own settings and to assist staff involved in environmental cleaning and decontamination. While the focus is on ensuring acute and community hospital settings are safe environments to provide care, the standards are generally applicable to all healthcare and ancillary support service settings.

2. Standards

Standard 1 – Policies and Pathways – there should be robust polices in place that details the cleaning plans for different patient pathways during pandemic	**Key Notes**
This includes: a) *Existing risk based cleaning protocols by area/ward/dept. are in place that adhere to existing National Cleaning Standards for the NHS (2009)* b) *Specific cleaning protocols have been agreed to respond to and manage high, medium, low risk patient pathways for COVID-19* c) *Having specific protocols to address non clinical areas* d) *increased frequency of cleaning / disinfection is incorporated into the environmental decontamination schedules for all areas,*	*Organisations need to be able to react in a timely manner to update documents, policy and procedures as new evidence and guidance becomes available* *https://www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-control* *Includes clinical offices, shared areas like canteens rest rooms, waiting area where staff, patients or visitors congregate.* *See Standard 2* *It is acknowledged that a local risk based approach cleaning frequency may be appropriate in the non-acute / Community hospital settings depending on patient pathway*

e) *Infection prevention and control policies to support best practice e.g. Standard Infection Control Precautions (SICP) and Personal Protective Equipment (PPE) for cleaning staff* f) *Guidance highlights the need to keep care environments clutter free, with all shared non-essential items removed from reception, consulting and waiting areas.* g) *Clear protocols for clinical staff on decontamination of care equipment and medical devices in accordance with local policy and manufacturers 'Instructions For Use' in the high, medium, low risk patient pathways*	*https://phw.nhs.wales/services-and-teams/harp/infection-prevention-and-control/nipcm/* *Any toys present in COVID-19 or Non COVID-19 areas should be cleanable / washable and of a non-porous nature. If this is not possible, the toys should be removed from use or local policy adhered to for decontamination.* *Also includes books and magazines or difficult to clean items and soft furnishings*
Standard 2 – Cleaning frequency – The frequency of cleaning all environments must be increased	**Key Notes**
This includes: a. *The frequency of cleaning for single rooms, cohort areas and clinical rooms must be risk assessed* b. *Organisations have a set of frequencies in place outside of COVID-19-19 requirements* c. *Increased frequency where there may be higher environmental contamination rates* d. *Rooms/areas where PPE is removed must be decontaminated, ideally timed to coincide with periods immediately after PPE removal by groups of staff (also see Appendix 1).*	*There is evidence for other coronaviruses of the potential for widespread contamination of patient rooms or environments, so effective cleaning and decontamination is essential.* *While the UK guidance states a minimum frequency of twice daily this will need to be increased based on the patient pathway (see Appendix 1 for recommended frequencies)* *In the management of other risks and Healthcare Associated Infections (HCAI)* *Where Aerosol Generating Procedures (AGP's) are being performed, increased incidence/outbreaks frequency will need to increase* *Donning and doffing zones at end of shifts*

e. *Surfaces such as medical equipment, door/toilet handles and locker tops, patient call bells, over bed tables and bed rails must be cleaned according to frequencies set out in Appendix 1 and when known to be contaminated with secretions, excretions or body fluids;* f. *Touch points in public areas such as lifts and corridor handrails;* g. *Electronic equipment, including mobile phones, desk phones and other communication devices, tablets, desktops, and keyboards (particularly where these are used by many people), should be decontaminated according to frequencies set out in Appendix 1*	*There is a need to document these frequencies are being achieved* https://phw.nhs.wales/services-and-teams/harp/infection-prevention-and-control/guidance/standards-for-infection-prevention-control-in-the-use-of-mobile-devices-md-in-healthcare/
Standard 3-: Cleaning Agents – Decontamination of equipment and the care environment must be performed using products that are effective in removing/killing the virus	**Key Notes**
This includes: a. *Only using cleaning and disinfecting agents and materials supplied by employers* b. *A combined detergent/ disinfectant solution at a dilution of 1,000 parts per million available chlorine (ppm available chlorine (av.cl.)); **or*** c. *A general purpose neutral detergent in a solution of warm water followed by a disinfectant solution of 1,000ppm av.cl **or*** d. *Any alternative cleaning agents/disinfectants to be used must conform to EN standard 14476 for virucidal activity.* e. *70% alcohol or product as specified by manufacturer should be used to decontaminate electronic equipment* f. *Cleaning agents must be prepared and used according to the manufacturers' instructions and recommended product 'contact times' must be followed*	*Includes wipes or non-chlorine products but only on the advice of the Infection Prevention & Control (IP&C) team* *Including mobile phones, desk phones and other communication devices, tablets, desktops, and keyboards* *https://phw.nhs.wales/services-and-teams/harp/infection-prevention-and-control/guidance/standards-for-infection-prevention-control-in-the-use-of-mobile-devices-md-in-healthcare* *Users should be aware of the contact time stated for the disinfectant they are using, not just for COVID-19-19 but a range of healthcare associated infections. Longer contact times are generally impractical in a healthcare environment.*

g. *Any use of alternative or validated novel technologies are used as an adjunct to manual cleaning / disinfection*	*See Standard 7 for Technological Solutions*
Standard 4 - Cleaning equipment- sufficient and suitable cleaning equipment must be available to undertake all cleaning duties	**Key Notes**
This includes: a. *Dedicated or disposable equipment (such as mop heads, cloths) must be used for environmental decontamination.* b. *Reusable equipment (such as mop handles, buckets) must be thoroughly decontaminated after use* c. *Communal cleaning trollies should not enter isolation rooms.* d. *Cleaning trollies should be stocked with minimal stock before use* e. *Ensure reusable items and trollies are decontaminated and stored correctly between use* f. *Re-usable cleaning cloth systems must be used according to manufacturer instructions and decontaminated correctly*	*Cleaning materials should not be shared across clinical areas / departments where possible* *Dry mopping and dusting is not permitted in COVID-19 areas* *Decontamination should be in line with the organisation's IP&C approved procedures.* *Materials such as cloths etc. should be stored dry* *Nor shared between patient pathway areas* *To include mop handles, buckets etc.* *Regular inspection of equipment should be undertaken to ensure it is in good condition and working order* *Single use disposable materials are recommended in COVID-19 areas but where cloths are being reused (e.g. microfibre) there must be adherence to manufacturer instructions For Use (IFU) and reprocessing (laundry services) in accordance with WHTM 01-04.*

Standard 5 - Training and Education – all staff who undertake environmental cleaning tasks have the skills and knowledge to perform their tasks safely and effectively.	**Key Notes**
This includes: a) *Current mandatory training in Infection prevention and control.*	
b) *Staff are trained and undergo COVID-19 competency assessment in SICP and TBP (including the appropriate use of PPE) prior to working in any clinical environment, according to pathway and by task*	*https://www.gov.uk/government/collections/coronavirus-COVID-19-19-personal-protective-equipment-ppe* *Includes the correct method of donning/doffing of PPE and safe use while worn* *New staff induction, refresher training*
c) *Hand hygiene audits of cleaning staff are undertaken monthly*	*These audits to be undertaken at ward / departmental level*
d) *All staff are taught the principles of cleaning and disinfection along with specific cleaning methods*	*Working high to low, top to bottom, furthest point to nearest point,*
e) *Safe use of cleaning agents, materials and equipment and their disposal*	*For example in relation to use of chemicals and COSHH awareness*
Standard 6 – Staffing and Supplies - adequate resources have been allocated to ensure these standards can be achieved	**Key Notes**
This includes: a. *Cleaning staff are allocated to specific area(s) and not be moved between COVID-19 and non-COVID-19 pathways, except in exceptional circumstances*	*It is acknowledged that in some facilities, staff resources may be limited and it is recommended that this is managed and mitigated through risk assessment of available resources*
b. *Organisations need to have the ability to act and react rapidly to urgent requests for cleaning support.*	*Consider the establishment of response teams within acute settings that can react quickly to focus on high risk settings and high impact public areas.*
c. *Adequate supplies of cleaning agents, materials and equipment are assessed daily and stock maintained*	

d. *Bank and agency staff are used in same areas (ideally non-Covid-19 zones) and movement is minimised* e. *Adequate staffing is maintained to ensure that the standards are delivered and meet demand resulting from increased cleaning frequencies.* f. *Adequate supervision* g. *Assessment of individuals staff risk is documented before working in COVID--19 areas* h. *Robust support of other services to maintain and increase staffing levels*	*Organisations should have arrangements in place to be able to react to the need to increase staffing levels for staff with responsibility for cleaning at short notice.* *This includes adequate and timely support from other departments with responsibility for and involved in the recruitment process e.g. HR, enablement team, occupational health*
Standard 7 - Technological Solutions: the use of technology to support and augment traditional cleaning methodologies	**Key Notes**
This includes a. *Use of new technological solutions such as UVC-light (Ultra-Violet) and Hydrogen Peroxide Vapour (HPV)in COVID-19 areas as an adjunct to other methods* b. *Recognising that a manual clean and preparation of the area is required prior to use of UVC-light or HPV* c. *Ensuring staff using such technologies adhere to protocols for safe use* d. *Employing as part of the organisational cleaning protocol in managing other HCAI*	*Routine use is not indicated for COVID-19 and should be in addition or an adjunct to those described in the standards https://www.who.int/publications/i/item/cleaning-and-disinfection-of-environmental-surfaces-inthe-context-of-COVID--19* *The estate must be compatible for the use of such technologies. Turnaround times need to be factored in when used so that bed capacity is not impacted during pandemic phases and patients are not unnecessarily moved to accommodate use as this may contribute to spread* *It is important to maintain safe operation and Health and Safety requirements especially where temporary staff are employed during COVID-19-19 to ensure staff and patient safety* *Normal use would include following discharge, during incidents or outbreaks of infection or as part of a rolling programme of*

	environmental decontamination where it is feasible to do so as organisations move to business as usual
Standard 8 – Audit Compliance - Robust audit and monitoring processes are in place to ensure the cleaning standards are effective	**Key Notes**
This includes: a. *Having protocols in place to identify that cleaning measures are achieving compliance with local and national standards.* b. *Current audit monitoring tool should include an additional generic element specifying Cleaning Schedules.* c. *There is audit sign off across all patient pathways for wards/departments* d. *Existing audit processes within low risk pathways are continued and reported and actioned* e. *Ensure protocols and procedures are in place to provide monthly reports on compliance, highlighting areas of non-compliance via an exception report.* f. *Prior to audit an increased reporting system needs to be in place in order to capture compliance in cohort areas.* g. *Considering the use of more objective indicators in monitoring cleaning efficacy in addition to visual inspection*	*This will identify the cleaning schedule sign-off for domestic / nursing / estates services.* *This will identify the cleaning schedule sign-off for domestic / nursing / estates services.* *Utilising the approach within a recognised environmental cleaning audit tool (such as Credits 4 Cleaning or Synbiotix)* *To be signed off by ward/dept. managers in order to reduce footfall in high risk pathways* *The sign-off can be achieved by introducing cleaning schedules that encompass cleans for both nursing and cleaning services.* *Adhering to current guidance in accordance with the National Standards for cleaning in NHS Wales* *Adhering to current guidance in accordance with the National Standards for cleaning in NHS Wales* *In order to provide compliance reports - clear reporting measures need to be introduced where audits are being signed off via clinical staff (clause b.) The audits signed off via cleaning schedules will not be included in the environmental audit reporting tool, Health Boards will need an additional report for these areas.* *As a tool to check cleaning effectiveness e.g. ATP swabs, fluorescent markers to supplement visual inspection*

Standard 9 – Responsibility & Accountability: There are clear lines of accountability within the organisation to ensure these standards are implemented and monitored	**Key Notes**
This includes: a. *Board level responsibility for oversight of environmental cleanliness during pandemic* b. *There is a designated lead for environmental cleanliness across all sites from Facilities and Estates and IP&C link* c. *A rapid and robust process in place to report, escalate and address non-compliance with the standards* d. *A cleaning responsibility matrix highlighting service responsibilities of all staff reflecting wards and departments*	*The Executive Nurse has overall responsibility for prevention of HCAI or should designate a deputy in their absence* *To ensure all elements of cleaning are designated to appropriate staff so that items are not left off schedules*

3. References

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Appendices

Appendix 1 - Cleaning Frequencies Matrix (Standard 2)

	High-Risk COVID-19 Pathway Section 9: SICPs & TBPs	Medium Risk COVID-19 Pathway Section 8: SICPs & TBPs	Low Risk COVID-19 Pathway Section 6: SICPs
	Any care facility where: a) untriaged individuals present for assessment or treatment (symptoms unknown) OR b) confirmed SARS-CoV-2 (COVID-19) positive individuals are cared for OR c) symptomatic or suspected COVID-19 individuals including those with a history of contact with a COVID-19 case, who have been triaged/clinically assessed and are waiting test results OR d) symptomatic individuals who decline testing	Any care facility where triaged/ clinically assessed individuals are asymptomatic and are: a) waiting a SARS-CoV-2 (COVID-19) test result and have no known recent COVID-19 contact OR b) where testing is not required or feasible on asymptomatic individuals and infectious status is unknown OR c) asymptomatic individuals who decline testing in any care facility	a) Any care facility where triaged/clinically assessed individuals no symptoms, no known recent COVID-19 contact, who have isolated/shielded AND have a negative SARS-CoV-2 (COVID-19) test within 72 hours of treatment and, for planned admissions, have self-isolated from the point of the test OR b) patients who have recovered from COVID-19 and had at least three consecutive days without fever or respiratory symptoms and a negative COVID-19 test OR c) patients or individuals in any care facility where testing is undertaken regularly (remain negative)

	High Risk Pathway - Daily frequency	Medium Risk Pathway - Daily frequency	Low Risk Pathway - Daily frequency
Occupied Emergency / Assessment Areas	4 times	3 times	Twice
Inpatient rooms / cohort – occupied	3 times	3 times	Twice
Private Patient bathrooms/ toilets	Twice	Twice	Twice
Inpatient rooms – unoccupied (terminal cleaning)	When vacated and then twice daily	When vacated and then twice daily	When vacated

	High Risk Pathway - Daily frequency	Medium Risk Pathway - Daily frequency	Low Risk Pathway - Daily frequency
Occupied inpatient areas	3 times	3 times	Twice
Shared patient bathrooms/ toilets	4 times	3 times	Twice
Unoccupied inpatient areas	Twice	Once	Once
Outpatient / ambulatory care rooms	Between patients	Between patients	Twice
Frequently used hallways and corridors	Twice	Twice	Twice
Frequently touched areas in hallways and corridors	4 times	4 times	Twice
Hallways and corridors that are not frequently used	Once	Once	Once
Outpatient / ambulatory care rooms	Between patients	Between patients	Between patients

Appendix 2

Cleaning and Disinfection Key Points COVID-19

1. Cleaning and disinfection is required to destroy COVID-19 virus in the environment.
   Some cleaning processes may achieve cleaning and disinfection simultaneously, such as wiping or mopping surfaces with a combined *detergent/ disinfectant solution* containing a soap or surfactant e.g. combined chlorine/detergent. Pre cleaning with detergent is required to remove any visible or non-visible soiling prior to disinfection before the use of any products that disinfect only. Pre cleaning is required prior to technological solutions like HPV and for UVC. Failure to pre clean can significantly reduce the effectiveness of the disinfectant. The frequency of cleaning will be assessed based on the patient pathway for COVID-19 (see Appendix 1)

2. **Type of Disinfectant required**
   Any liquid surface disinfectant used in healthcare must have been verified by testing according to the British & European standards to support bactericidal and virucidal claims against SARS-CoV-2 virus that causes COVID-19 (which is an enveloped virus) and other HCAI pathogens e.g. Cdiff, MDRO enveloped & non-enveloped viruses, bacteria, yeast & fungi and so:
   - BS EN 14485 defines the trials and testing process required, with liquid formulations required to pass
   - BS EN 13727 and EN1276 assesses bacterial activity
   - BS EN 14476 disinfectants can have full virucidal activity; limited virucidal activity & enveloped virus only.

   Any product formulation considered for disinfection must demonstrate that it is effective in laboratory testing for enveloped viruses (ideally tested against the SARS-CoV-2). It also needs to be effective in managing other HCAI pathogens so efficacy against both bacteria and viruses is required. Where an alternative to chlorine at 1000ppm is used then it must be with agreement and advice of an IP&C lead for the organisation. Technological solutions like UVC/HPV will also need validated testing to indicate they achieve the same result.

3. **Coverage and contact time**
   All delivery systems e.g. wiping, mopping, soaking, UVC or HPV must have full contact with surfaces being disinfected and must have the contact time with the disinfectant (as specified by manufacturers' IFU) that achieves destruction of the COVID-19 virus or other HCAI pathogen. Both contact and coverage are essential

4. Direction of cleaning

To minimise recontamination of an area and transfer of COVID-19 and other microorganisms, clean from

- top to bottom
- clean to dirty areas
- furthest point to nearest point
- low risk to high risk pathways

Staff need to be trained in manual cleaning processes to prevent recontamination of surfaces e.g. clean large and flat surfaces using an 'S' shape motion

5. COSHH and Chemical safety

Material Safety Data Sheet (MSDS) will detail the hazardous components, the concentration and hazard codes (H-codes). These concentration H-codes should be used to risk assess use of PPE for the chemical in addition to those for COVID-19 care. Chemicals should never be mixed or come into contact with other chemicals. The dilution instructions must be followed carefully to achieve the correct concentration and this must not be exceeded as increasing the concentration does not necessarily improve its effectiveness. Skin irritancy is a common side effect of nearly all formulations, and as a result the HSE (Health & Safety Executive) advises skin contact with any formulation should be avoided.

6. Material types & effects

Different surfaces presents different challenges for all HCAI pathogens due to their geometrically complex surfaces and can be challenging to ensure good contact with disinfectant. Impervious intact surfaces allow for cleaning and so absorbent surfaces such as fabrics should not be in clinical areas or in COVID-19 pathways e.g. soft toys, fabric chairs etc. as they cannot be adequately decontaminated and might be damaged by the disinfectant method. Systems reliant on UVC light need to account for reflectivity, those using heat consider thermal conductivity.

9. Monitoring and maintenance of standards

Once a decontamination process has been successfully implemented, on-going monitoring should be put in place to ensure the process continues to be implemented effectively. Inspection of the surfaces should be conducted to ensure the process is not causing damage by repeat exposure.