



national association of psychiatric intensive care & **low secure** units

# **Managing acute disturbance in the context of COVID-19**

## **2020**

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## NAPICU Guidance

# Managing acute disturbance in the context of COVID-19

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## 1. INTRODUCTION

- 1.1. The current national situation arising from COVID-19 will present challenges for the care and engagement of mental health patients presenting with acute disturbance and who are also a possible infection risk.
- 1.2. Along with our colleagues in general medicine, mental health staff will be determined to provide high quality care to our patients and demonstrate our ability to contribute to the wider national public service effort underway during this challenging period.
- 1.3. As with current practice, it is important that restrictive interventions are kept to the minimum necessary. Also, that managing acute disturbance in the context of infection risk is underpinned by the usual levels of proportionality, balance and compassion, and does not create difficulties that could otherwise have been avoided.
- 1.4. It is important to acknowledge than many of us working in inpatient mental health will already have had experience of supporting patients who may be challenging, and at the same time have medical concerns including infection risk.

## Initial frame work of considerations

- 1.5. As experience increases, the approaches and techniques that are effective for supporting patients experiencing acute disturbance who also present infection risks will improve.
- 1.6. Of particular concern, are those who are experiencing acute disturbance and who also:
  - Represent COVID-19 infection risk to others **or**
  - Are in a high risk group for infection **or**
  - Are in a ward that is 'locked down' or 'self isolating'.

## Legal and ethical considerations

- 1.7. Consistent with national guidance, each provider should set up local ethics committees that are able to consider any restrictive interventions employed for managing COVID-19 infection risks including restriction of leave.
- 1.8. The interventions and management plans that may be required to safely care for this particular group of patients whilst also minimising the risk of spreading the infection could present ethical and legal challenges with respect to professional practice, the Mental Capacity Act and the Mental Health Act.
- 1.9. The following guidance represents an initial description of the issues that may be helpful. Each Provider Organisation will be aware of national policy developments and will have developed local initial procedures and policies which are not superseded by this guidance. This guidance aims to provide a guide to considering some of the ethical, legal and practice issues at a time when legislation is currently being reviewed and drafted.
- 1.10. The following represents an overall framework which is intended to be of assistance in concert with nationally and locally agreed practice.
- 1.11. It is expected that as experience of supporting patients exhibiting acute disturbance who may also represent a COVID-19 infection risk increases, national, local and professional guidance will be further revised, amended and developed.

## NAPICU COVID-19 online platform

- 1.12. A page is available on the NAPICU website to provide a platform for providers of PICU and other related services to share their experience and disseminate experience-based learning amongst the PICU clinical community.
- 1.13. Use the platform to share any experience you have that may be helpful to others with:
  - Supporting a patient presenting acute disturbance and COVID-19 infection risk
  - Isolation or segregation of those patients who have issues associated with COVID-19 infection
  - Managing mental health inpatient scenarios in the context of COVID-19.
- 1.14. Write a summary of up to 300 words and e-mail it to [info@napicu.org.uk](mailto:info@napicu.org.uk).
- 1.15. Summaries will be posted on the NAPICU COVID-19 practice page.

## Hierarchy of response for acutely disturbed patients who may also be an infection risk regarding COVID-19

1.16. Interventions for supporting an acutely disturbed patient should be divided into:

- Primary
- Secondary **and**
- Tertiary interventions.

1.17. This is a similar approach to engaging with patients who do not present an infection risk of COVID-19, although the additional considerations arising from infection risk are the focus of this guidance.

## 2. PRIMARY INTERVENTIONS

### Information

- 2.1. Many patients and staff may be fearful of the COVID-19 situation; such anxieties can be also be very infectious. Caution should be exercised so as not to exacerbate an already difficult situation.
- 2.2. One paper from the experience of a mental health inpatient service in Wuhan China made several recommendations on COVID-19 issues to consider. Please review [Zhu et al. \(2020\)<sup>1</sup>](#) (full reference provided below and linked [here](#)).
- 2.3. Experience from Wuhan and our own hospitals suggests that many mental health inpatients may often be relatively detached from what is happening in the wider community.
- 2.4. This may require effort from staff, to convey the seriousness of the situation requiring action, while at the same time not raising fear or frustration to the extent that create further problems with cooperation and engagement.
- 2.5. On admission, and ideally prior to admission, patients should be asked if they, or anyone they live with, have had COVID-19, or a temperature, or a new and persistent cough. The patient's temperature should be taken.
- 2.6. Patients admitted to the PICU should be engaged in a process of discussion and information sharing about COVID-19 infection risk. The possibility should be addressed

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<sup>1</sup> Zhu, Y., Chen, L., Ji, H., Xi, M., Fang, Y. and Li, Yi (2020) The risk and prevention of novel coronavirus pneumonia infections among inpatients in psychiatric hospitals. *Neuroscience Bulletin*, 36: 299–302. <https://doi.org/10.1007/s12264-020-00476-9>

that a patient who has identified infection risk issues, may need to be subject to isolation, possibly within a PICU environment.

- 2.7. A formal capacity assessment regarding this discussion should be completed and recorded in the patient record.
- 2.8. The locally derived agreed location for engaging with a patient presenting infection risk should be identified and discussed with the patient. A brief description of the associated isolation procedures should be offered with the intention of, so as far as is possible, achieving cooperation or minimal resistance should these procedures be required. This is a procedure similar to developing an ‘advance statement’.
- 2.9. This could include an information leaflet which outlines the main issues including the potential need for personal protective equipment (PPE) to be implemented.
- 2.10. This may also include other infection control measures e.g. provision of personally allocated utensils for dietary and fluid intake consistent with national and local infection control protocols.

## **Local ethics committees**

- 2.11. Consistent with national guidance, each provider should set up local ethics committees that are able to consider any restrictive interventions employed for managing COVID-19 infection risks including restriction of leave.

## **Section 17 leave**

- 2.12. Leave outside needs to balance risks and benefits in-line with government advice and take into account the innate issues of operating an inpatient mental health unit.
- 2.13. Time spent outside, including Section 17 leave should be consistent with national guidance which is issued by the government and can change daily.
- 2.14. Expected procedures for returning from escorted and unescorted leave, for example search and hygiene procedures, should be explained and implemented.
- 2.15. While engaged in Section 17 leave (escorted or unescorted), social distancing, locations that are recommended for visiting, and those that are not recommended (avoiding crowded areas) must be clearly be identified.
- 2.16. Some services may be on the site of District General Hospitals with coffee shop and other canteen facilities that may ordinarily provide a visiting location for mental health inpatients. For the period of the epidemic, these locations should be avoided.

2.17. Where there is doubt, reference should be made to the local ethics committee.

### **Unit based activity programmes**

- 2.18. Unit based activity programmes are useful for minimising disturbance and improving cooperation, which will contribute to infection control management.
- 2.19. Infection control measures should be consistent with national and local guidance.
- 2.20. As access to facilities areas off the unit diminish, resources to provide unit-based activity should be given equal status to other priorities.
- 2.21. Condense use of materials, objects and tools to those that can be wiped clean and disinfected, and those which can be disposed after one use.
- 2.22. Small group-based interventions should be provided in areas large enough to adhere to social distancing requirements, e.g. outside or in large enough rooms that are regularly cleaned.
- 2.23. For patients in self-isolation, provide packs of activities that can be done in their bedrooms, ensuring activities are achievable for each individual's level of ability.

## **3. SECONDARY INTERVENTIONS**

- 3.1. The unit should have a clear method of identification of patients who may present risk if infected either to themselves or to others. This should be based on a robust checklist of symptoms and COVID-19 testing wherever this is possible.
- 3.2. A systematic approach is required to avoid patients being unnecessarily subject to placement or procedures that result in a finite resource being inefficiently deployed.
- 3.3. Suggested methods could include daily monitoring of temperatures and enquiry/observation to ascertain the presence of a cough. Practice in this area will likely rapidly develop. Testing should occur wherever the criteria is met for doing so.
- 3.4. The identification of 'high risk' or vulnerable patients as described by Public Health England is recommended to allow for a graded approach to monitoring physical health and directing management plans.

### **Where infection risks confirmed**

- 3.5. From the point at which infection risks have been confirmed (risk to others or high-risk group if infected) a specific care plan of intervention and engagement, taking into

account the specific mental and behavioural pathology associated with the patient should be devised.

- 3.6. This should include a hierarchy of response as illustrated in Appendix 1.
- 3.7. For those experiencing mental and behavioural disturbance although who are for the time being, generally able to follow direction and cooperate, should be maintained in an area or zone consistent with local procedures for isolation of these presenting infection risk. For PICU patients, this may be designated areas within the unit.

### **Isolation and COVID-19 infection risk secondary intervention**

- 3.8. For those subject to isolation, an assessment should be made of items available to the patient which could improve cooperation and experience of isolation, reducing the potential for disturbance.
- 3.9. This may require re-assessment of the items of concern/restricted items list generally operated by the unit.
- 3.10. Items helpful in meaningfully occupying time should be allocated for the patient's individual use, and not re-introduced to general unit use until cleaning or disposal consistent with infection control recommendations.
- 3.11. Any items that can be disposed of following use should be disposed of within infection control advice.
- 3.12. The care plan supporting isolation should have provision for recognising and dealing with any physical deterioration related to the known course of COVID-19, or for other reasons. Local policies on the management of physical health in confirmed/suspected COVID-19 cases should be followed.

## **4. LEGAL AND ETHICAL CONSIDERATIONS IN RESPECT OF SECONDARY AND TERTIARY INTERVENTION**

- 4.1. This guidance **does not provide authority** for patients presenting risk of infection to others with COVID-19 to segregated or secluded **for this risk alone**. Least restrictive options must be employed wherever possible and risk of infection cannot be completely eradicated.
- 4.2. Just as is the case with our general medical colleagues, some degree of risk is unavoidable. The nationally recommended **ethics committees** will be required to carefully **balance risk with** the use of **restrictive interventions**.

## Local ethics committees

- 4.3. Consistent with national guidance, each provider should set up local ethics committees that are able to consider any restrictive interventions employed for managing COVID-19 infection risks. If in doubt regarding any isolation, segregation or seclusion issue, refer to the local ethics committee.

## Mental Health Act Code of Practice (MHA CoP 2015)

- 4.4. Chapter 26 of the [Mental Health Act Code of Practice \(MHA CoP 2015; Department of Health 2015\)](#)<sup>2</sup> governs the use of restrictive interventions.
- 4.5. Wherever possible, adherence to the Code should be maintained. Only where there is a cogent reason should there be a departure from the Code.

## Potential areas where risk COVID-19 infection could result in a cogent reason to depart from the MHA CoP 2015

- 4.6. Where a cogent reason can be documented to depart from the [MHA CoP](#) this can be acceptable. This should be supported by the local ethics committee.
- 4.7. The application of the [MHA CoP 2015](#) should be considered in the context of [The Coronavirus Act 2020](#) (in particular [Schedule 21](#)) detailing ‘Powers relating to potentially infectious persons’.
- 4.8. This legislation includes powers that provide the Secretary of State and Public Health Consultants to authorise the testing and isolation of persons with suspected or confirmed COVID-19.
- 4.9. Whilst such measures may not be considered commensurate to those with the [MHA CoP 2015](#), they may offer a cogent reason to depart and provide rationale for this.
- 4.10. Where such departures from the [MHA CoP 2015](#) are required, every effort should be made to ensure the principles of the [MHA CoP 2015](#) are followed. This includes that when restrictive measures are required they should be planned, evidence based, lawful, in the patient’s interests, proportionate and dignified ([Department of Health 2015](#)).

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<sup>2</sup> Department of Health (2015) Mental Health Act 1983: Code of practice. <https://www.gov.uk/government/publications/code-of-practice-mental-health-act-1983>

- 4.11. Once it has been appropriately established that the patient represents a significant risk of infection, this can provide the basis for extended isolation for the period of the infection risk.
- 4.12. For a patient representing risk of infection, an individual care plan should be developed with the aim of maintaining cooperation with isolation and diminishing the need for physical intervention or other restrictive practices (as detailed above). All effort should be made to achieve agreement and cooperation.
- 4.13. Where isolation is required solely for infection control reasons this may not represent the need for review and monitoring of seclusion as described in Chapter 26 of the [MHA CoP 2015](#) (Department of Health 2015).
- 4.14. If the patient verbally disagrees with the care plan, although are not actively resisting it, then this may not represent the need for review and monitoring of seclusion as described in Chapter 26 [MHA CoP 2015](#).
- 4.15. Where risk of infection has been robustly established, it should be considered as a cogent reason to depart from the Code's definition of seclusion providing that the patient is willing to cooperate and/or not physically actively resist the care plan of isolation.
- 4.16. If in doubt regarding any isolation, segregation or seclusion issue, refer to the local ethics committee.

## **Mental Capacity Act (MCA)/DoLS**

- 4.17. The Mental Capacity Act ([MCA](#)) is used when an individual lacks the mental capacity to make a specific decision. In regard to COVID-19, this could include decisions relating to their care e.g. the patient does not understand the need to use oxygen therapy to help their breathing. Staff can make a best interest decision on behalf of their patient unless there is a Health and Welfare Attorney or Court Appointed Deputy who can be contacted to make the decision.
- 4.18. In an emergency situation, treat first unless there is awareness of a legitimate advance decision to the contrary. Proportionate restriction or restraint, which does not amount to a 'deprivation of liberty', is permitted under the Mental Capacity Act for the protection of the individual.
- 4.19. The MCA is not used for the protection of others; e.g. if the decision relates to the patient's understanding of the need to remain quarantined for the protection of others, Public Health Law (such as the [The Coronavirus Act 2020](#)) would apply and you can

record in the patient's clinical records that the patient's liberty is restricted for the wider public interest.

- 4.20. Patients suspected of infection with COVID-19 who themselves represent an infection risk should be isolated for a period of 7 days.

## **5. TERTIARY INTERVENTION INFECTION RISK, ACUTE DISTURBANCE AND ACTIVE RESISTANCE**

### **Assessment**

- 5.1. In rare circumstances, it is possible that a person who is positive for COVID-19 and experiencing acute mental and behavioural disturbance, or for other reasons e.g. personality disorder, may recklessly, or in extreme cases deliberately, increase infection risk to others.
- 5.2. In such circumstances it is possible that this may involve actively and persistently physically resisting the isolation care plan.
- 5.3. In these circumstances, such actions could be considered as disturbed behaviour in the context of their mental condition representing a significant risk to others.
- 5.4. This should be considered along with the other risk behaviours that may in themselves also provide the basis for seclusion/segregation and fall under the safeguards detailed in the [MHA CoP 2015](#).

### **Location and review of segregation/seclusion**

- 5.5. For the period of time that the person with COVID-19 presents with behaviour that is a significant risk to others, which could include an infection risk, and lesser restrictive intervention is not possible, then consideration should be given to extended segregation.
- 5.6. While all effort should be made to avoid the need for tertiary interventions, the balance is pushed toward the use of segregation and/or seclusion, where close physical contact such as extended holds are the only alternative.

### **Location of segregation**

- 5.7. Methods of segregation may vary between Provider Organisations depending on the format of Extra Care Areas, seclusion rooms and other facilities for engaging with acute disturbance.

- 5.8. This is largely consistent with existing application of the [MHA CoP 2015](#) with infection risk considered additional risk behaviour. This would also be consistent with those who present behavioural disturbance and risk of infection other than COVID-19, for example, hepatitis.
- 5.9. It is possible that there may be no alternative to using bedrooms or locking off areas of a unit or ward.
- 5.10. For facilities that do not have provision for hatch feeding or other similar methods, then personal protective equipment (PPE) should be used at every point of potential infection.

## **Local ethics committees**

- 5.11. Consistent with national guidance, each provider should set up local ethics committees that are able to consider any restrictive interventions employed for managing COVID-19 infection risks. If in doubt regarding any isolation, segregation or seclusion issue, refer to local ethics committee.

## **Maintenance in segregation**

- 5.12. Specific care plans around diet, fluid intake and activities of daily living should be developed with a particular focus on diminishing opportunities for infection and transmission.
- 5.13. Segregation reviews should take account of risk of infection and avoid close proximity with the staff wherever possible. It is possible, that due to staff shortages, the specific grade and profession of staff recommended by the [MHA CoP 2015](#) to undertake reviews will not be available.
- 5.14. In this case, the review intervals and considerations should take place with staff that are available making all effort to maintain the safeguards of the Code.
- 5.15. As this scenario may represent a departure from the [MHA CoP 2015](#), clear and robust multidisciplinary documentation should be completed to include a rationale, justification and management plan.
- 5.16. It is of the utmost importance that an ethical balance is maintained safeguarding the patient and others. This will require careful thought in difficult circumstances on a case by case basis. Where infection control is a major concern for any segregated patient, account should be taken of the infection period duration during the reviews.

- 5.17. The care plan supporting isolation or segregation should have provision for recognising and dealing with any physical deterioration related to the known course of COVID-19, or for other reasons.

### **Transition from segregation to isolation**

- 5.18. All effort should be made to achieve cooperation and removal of the need for segregation.
- 5.19. This should be considered at the regular reviews required by the [MHA CoP 2015](#).
- 5.20. Disturbed, uncooperative or aggressive behaviour that may also represent an infection risk, should form part of the process of review for the need for extended segregation/seclusion.
- 5.21. As soon as possible, segregation should be discontinued in favour of lesser restrictive isolation where infection risk remains.

### **Medication use for acute disturbance**

- 5.22. The choice of medication would follow your own Trust, NICE or [Joint BAP NAPICU guidance](#) (Patel, Sethi et al. 2018)<sup>3</sup> but require some additional consideration to the specific contra-indications and side effects (see below) that are known with COVID-19 and other infections. Importantly, the current physical health of the patient is a key factor in the choice.
- 5.23. If a patient with suspected or diagnosed COVID-19 is acutely disturbed, and there are no signs of respiratory compromise (decreased or increased respiratory rate), cardiovascular disease or decreased level of consciousness; then medication can be used with caution as the full effects of COVID-19 are still unknown. Consider short-acting medication as a patient's physical health condition may rapidly deteriorate. Ensure the medication for acute disturbance is an effective dose as an ineffective dose may lead to the increased need for additional injections.
- 5.24. Where possible, oral medication is preferred and should be offered as the first choice. Parenteral medication is also more likely to cause dose related side effects such as respiratory depression, postural drop, QTc prolongation and extra-pyramidal side effects (EPS).

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<sup>3</sup> Patel, M.X., Sethi, F. et al. (2018) Joint BAP NAPICU evidence-based consensus guidelines for the clinical management of acute disturbance: de-escalation and rapid tranquillisation. *Journal of Psychiatric Intensive Care*, 14: 89–132. <https://doi.org/10.20299/jpi.2018.008>

- 5.25. COVID-19 is known to affect the respiratory function of patients. Psychotropic medications, especially benzodiazepines, can cause respiratory depression. Benzodiazepines should not be used when a patient has acute pulmonary insufficiency.
- 5.26. Lorazepam would be the preferred benzodiazepine as it has a shorter half-life. Simultaneous injections of olanzapine and benzodiazepines can result in excessive sedation and cardiorespiratory depression so must be given at least an hour apart. Ensure immediate access to flumazenil is available if benzodiazepines are given.
- 5.27. If there is evidence of cardiovascular disease, including a prolonged QTc interval, or no recent electrocardiogram (ECG), avoid intramuscular haloperidol combined with intramuscular promethazine. Consider intramuscular olanzapine or intramuscular lorazepam.
- 5.28. Febrile individuals with a history of seizures may have their seizure threshold altered by some medications. Medical advice should be sought if there is any doubt.
- 5.29. All antipsychotics can cause Neuroleptic Malignant Syndrome (NMS). If NMS occurs, immediately discontinue antipsychotics and other drugs that may contribute to the underlying disorder, monitor and treat symptoms, and treat any concomitant serious medical problems.
- 5.30. Inhaled loxapine is contra-indicated in patients with acute respiratory distress or with active airways disease and with the current use of medications to treat airways disease. Therefore, inhaled loxapine should be avoided in suspected or confirmed cases of COCID-19.
- 5.31. Physical health monitoring, especially respiratory rate and level of consciousness, should be carried out when either oral or parenteral rapid tranquillisation is given.

## **Other COVID-19 medication issues**

- 5.32. At present there is no specific treatment for COVID-19 and treatments are focused on alleviating associated symptoms. The position is being further developed as the effects of COVID-19 become better understood.
- 5.33. There are many different types of treatments in research (lopinavir/ritonavir, remdesivir, favipiravir, chloroquine, hydroxychloroquine, nitazoxanide, ribavirin) but so far, no strong evidence or licensed preparation has emerged. Many of these agents have drug interactions and advice regarding these should be sought from the pharmacy team or from <http://www.covid19-druginteractions.org>.

- 5.34. There is currently no strong evidence that ibuprofen can make COVID-19 worse but until there is more information, give paracetamol to treat the symptoms of coronavirus, unless contra-indicated. If a patient is already taking ibuprofen or another non-steroidal anti-inflammatory (NSAID) review the prescription.
- 5.35. Other treatments are based on treatment of secondary infections or symptoms and may include antibiotics, venous thromboembolism (VTE) therapy, and nebulisers (e.g. salbutamol and/or ipratropium) and/or oxygen.
- 5.36. Be aware of drug interactions in patients prescribed physical health treatments; e.g. clarithromycin can prolong the QTc and should be used with caution with antipsychotics.

### **Physical intervention teams**

- 5.37. Consideration should be given to identifying a physical intervention team who may become more familiar with the use of PPE for those at risk of infection.
- 5.38. Consideration should be given to diminishing the psychiatric emergency response in terms of the number of physical intervention practitioners, and wherever possible this should be focused on the minimum number of people required to manage the situation. This may assist in reducing the spread of infection.
- 5.39. In due course, it may be possible to identify staff who have developed some immunity to COVID-19.

### **Personal protective equipment (PPE) and physical intervention (PI)**

- 5.40. There may be circumstances that, for the time being, acute disturbance representing risks could result in the need for physical intervention to maintain the protection for others.
- 5.41. At this stage, there is limited experience of PPE that is effective for engaging with a patient who may be behaviourally disturbed, resistive or who requires physical intervention.
- 5.42. The availability of PPE remains a national priority.
- 5.43. Infection control advice should be followed with regard to managing PPE following physical intervention with a high-risk patient. Amongst other procedures this may involve leaving work in different clothes to those worn in higher risk activities.

## **Preliminary tests of protective equipment shown to be viable in circumstances where resistance to direction and/or physical intervention is required**

### **Face masks**

- 5.44. Face masks have proved viable in physical intervention (**PI**) scenarios without presenting significant difficulties other than a tendency for the wearer to experience mild discomfort due to raised temperature resulting from the face covering.

### **Eye/spit guards**

- 5.45. Preliminary tests have indicated that these are effective when used in the physical intervention activity. There appears to be minimal condensation resulting in diminished vision.
- 5.46. There can be issues with full face protection being dislodged during episodes of physical intervention which may require the availability of another person to replace headwear for those engaged in implementing holds.

### **Aprons**

- 5.47. Preliminary tests indicate that aprons provide hindrance to those engaged in physical intervention and become easily displaced, ripped off and thereafter providing a slip hazard. At this stage, significant caution should be given to the use of aprons.

### **Scrubs**

- 5.48. Scrubs have shown to be effective during preliminary tests in providing some protection while not representing obstacles to PI. Scrubs are recommended for PI teams.

### **Gloves**

- 5.49. Rubber gloves and elbow length gloves have proved effective during preliminary tests during episodes of PI.
- 5.50. Gloves could represent an increased risk of pinching the skin for those subject to holds resulting from the increased grip that can be achieved from the glove over that that would normally be experienced by the naked hand.
- 5.51. This should be a consideration within physical intervention procedures.

### **Disposable overalls**

- 5.52. These have only been subject to initial testing during physical intervention although should also be considered where available.

## Cleaning and disposal of equipment following physical intervention with a person representing an infection risk

- 5.53. Reusable equipment should be cleaned consistent with infection control procedures after every episode of physical intervention.

## COVID-19 positive and physical intervention

- 5.54. National Guidance for PPE to be used in different care settings is detailed in [Public Health England \(2020\)](#)<sup>4</sup>.
- 5.55. Psychiatric intensive care units and other settings in which patients who are probable or confirmed COVID-19 positive, who also present with aggressive behaviour, are not specifically considered in the PHE guidance above.
- 5.56. Undertaking physical intervention with a person confirmed as COVID-19 positive generates specific risks associated with close proximity/physical contact, potential for shouting/spitting/biting and increased potential for transmission of oral fluids.
- 5.57. Physical intervention with a person who is suspected or confirmed as COVID-19 positive should be considered one of the highest infection risk procedures that will be carried out in the acute mental health in-patient context.
- 5.58. There has been debate regarding the extent to which a person who is COVID-19 positive and shouts, spits, bites or in other ways has the potential to transmit oral fluids, presents a risk that may require PPE similar to that of aerosol generating procedures.
- 5.59. Whilst such debates continue, NAPICU recommends that an approach which offers staff the greatest feasible protection is followed.
- 5.60. There are times when physical intervention is planned. During these times, it is recommended that a specific physical intervention PPE set is available for use by the physical intervention team.
- 5.61. Initial tests have shown that visor type eye protection can become quickly dislodged and can require another person to replace, and that aprons quickly become ripped off thereafter failing to provide any protection and also representing a slip hazard.

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<sup>4</sup> Public Health England (2020) *Recommended PPE for healthcare workers by secondary care inpatient clinical setting, NHS or independent sector.*

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/877728/T1\\_Recommended\\_PPE\\_for\\_healthcare\\_workers\\_by\\_secondary\\_care\\_clinical\\_context\\_poster.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/877728/T1_Recommended_PPE_for_healthcare_workers_by_secondary_care_clinical_context_poster.pdf)

- 5.62. In the physical intervention scenario, the extent to which PPE will remain in place may be equally as important as the infection control specification. This may result in the need for a risk assessed balance between equipment that may provide optimum infection control performance with equipment which is likely to remain in place.
- 5.63. It is also recognised that different organisations may have different availability and specification of equipment. It is therefore important the best use is made of the equipment that is available.

### **PPE shown as viable in physical intervention test scenarios**

- 5.64. Given the pace of recent developments, there has not been the time or the availability of equipment to robustly source and test PPE in the physical intervention and infection control context, although some limited testing has taken place.
- 5.65. This guidance will be further updated as experience and equipment availability improves.
- 5.66. The advice below is provided on the basis of NHS trust qualified physical intervention (PI) trainers replicating, as realistically as possible, aggressive behaviour situations in which physical intervention is required.
- 5.67. A range of available PPE was tested to offer initial insights into their performance characteristics in the physical intervention context. The products were not tested specifically for their infection control performance although some products, e.g. face masks, already have an infection control rating.
- 5.68. The PPE below, used collectively, has shown acceptable performance in test episodes of managing aggressive behaviour using PI trainers (for details of tests undertaken see Appendix 2).

## Recommended physical intervention PPE set

5.69. The following are recommended:

- **Goggle-type eye protection** with adjustable strap and face sealing capacity. There are googles available with a nylon elasticated strap which has shown to be effective in keeping the protection in place. This may provide less than optimal infection control properties and will therefore require specific procedures for cleaning.
- **Face mask with around the head straps.** The highest specification for liquid resistance and filtration available to the unit is recommended.
- **Disposable overalls.** The highest specification overalls available to the unit are recommended.
- **Protective gloves.** The highest specification protective gloves available to the unit are recommended.

5.70. All items should be subject to further infection control guidance for the donning and doffing, disposal and where appropriate the cleaning and storage of reusable equipment.

5.71. Wherever possible, reusable PPE should be allocated for use by a named member staff to reduce the potential for infection from equipment used by more than one staff member.

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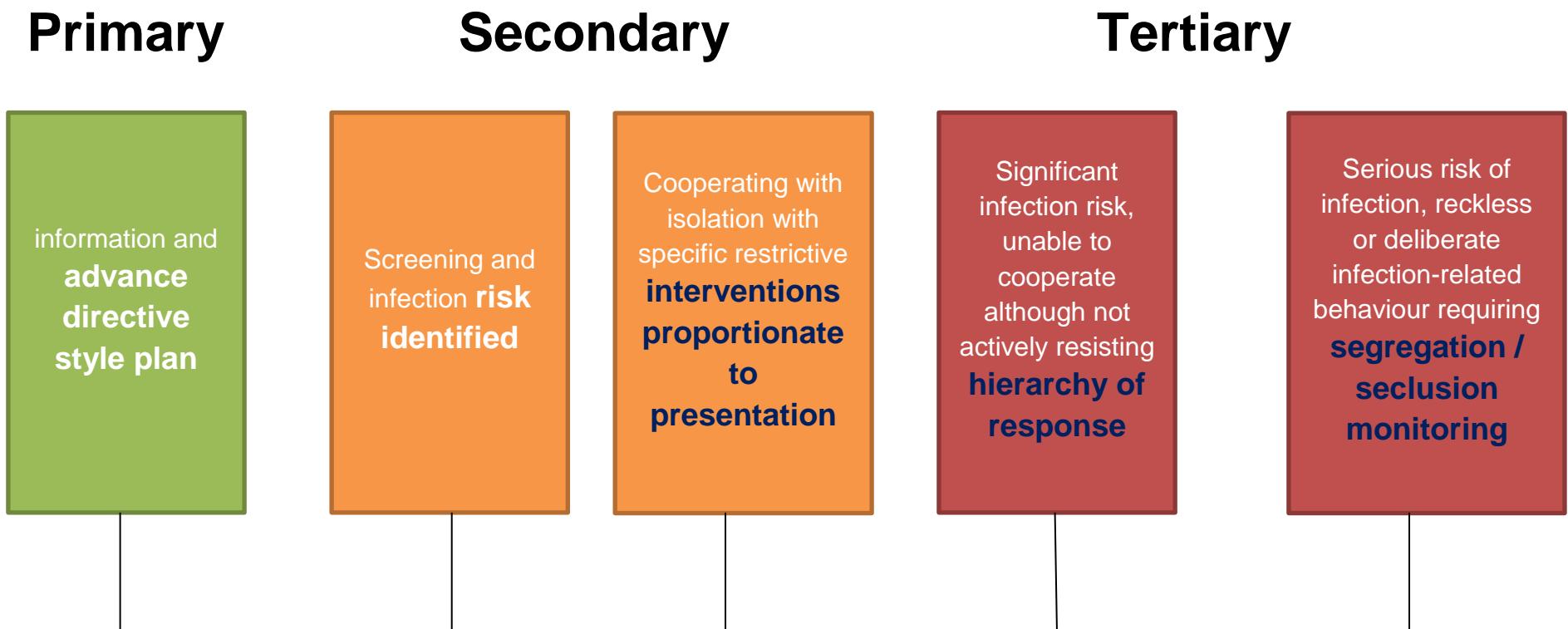
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## Appendix 1: COVID-19 restrictive interventions flow chart



## **Appendix 2: PPE in the context of supporting a disturbed patient who is suspected or may be confirmed COVID-19 positive**

### **Introduction**

Very little quickly accessible information is available regarding how PPE products perform when used in the physical intervention with an aggressive person scenario.

Products that were available to purchase from retailers were tested for viability in the restraint scenario. None of the products were formally tested for infection control properties although were considered to offer at least some protection in the unique challenges represented in physical intervention for managing aggression presented by a COVID-19 positive patient.

These tests are for reference only and cannot be considered optimal in all performance areas. Further local or national advice should be sought where this is available.

### **Testing**

Testing has taken place on a range of PPE in the context of physical intervention for managing aggression with a disturbed patient who is suspected or confirmed COVID-19 positive.

This is in the context of a patient who may be presenting with violence and aggression.

The equipment was tested under restraint conditions using number of PMVA and PBM physical intervention techniques in positions that included:

- Standing containment
- Containment in the Kneeling position
- Supine position
- Prone position
- Moving to and Seated restraint on the safety POD

### **Results**

The following table indicates the test findings.

Tests found that all but one product (UNiFIT mask) are suitable for the proposed use. All items should be subject to further infection control guidance for the donning and doffing, disposal and where appropriate the cleaning and storage of reusable equipment.

Testing was also carried out with staff wearing PPE in the specific context of a suspected or confirmed COVID-19 positive patient who is threatening or actually spitting at staff in close proximity which may include physical restraint. Results indicated in **blue**:

PPE description	Robust enough for PI	Overall fit	Level of protection	Ease of donning / doffing PPE	Suitable Yes / No
1. Krutex veterinary disposable coverall suit	Yes; but may tear if grabbed / pulled with great force. Found to stretch seam at groin but remained intact	Size tested XL.  Good fit with plenty of room to move and to perform a range of physical interventions, sitting standing and moving to/from floor.	Good full body and head coverage due to fitted elasticated hood. Elasticated fit at wrist and ankle.  <i>Note: hands, feet and face are not covered and will require additional PPE for these areas.</i>	Easy and quick to put on, and to remove using infection control procedures.	<b>Yes.</b> It is concluded that it is suitable for use supporting disturbed patients and enables unhindered mobility during the use of physical intervention.  Note: Very warm during restraint
2. Non-latex, powder free examination gloves	Yes. No issue with using the gloves during robust restraint testing.	Good fit and will be dependent on range of size choices being available in the clinical setting.	Generally good level of protection. However, it was noted that during restraint coverall sleeve rode up above the glove exposing skin at the wrist.	Applied and removed with ease following infection control procedures.	In the main this item was suitable. However, there was some gapping at the wrist with coverall riding above the glove line. This could be avoided by applying micropore tape at the junction, although may slow the removal of PPE.
3. UVEX goggles	Yes. Did not dislodge during robust restraint-based testing and was able to withstand and to some extent absorb (due to soft gasket seal) direct impact without breakage.	Fully adjustable. Comfortable, close fit with good seal between the face and gasket. Good over all sightline maintained with minimal hindrance of peripheral vision. Did not dislodge during robust restraint-based testing. Possible to wear over medium sized glasses without issue, but arms caused minimal gapping to seal.	Good level of protection. Will withstand direct impact. No major issues with lens misting.  <i>When also tested for fluid ingress was able to provide good protection. Therefore, will protect eyes if subjected to patient spitting.</i>	Easy to apply / remove. Fit aided by adjustable elasticated strap.	Yes. Robust, comfortable product.  Will need to consider infection control protocols regarding cleaning after use due to material fitting strap. Would advise that each staff member is allocated personal set.  <i>Found to be effective during simulated spit testing.</i>
4. Spireor mask	Yes. Was not found to dislodge even during robust restraint-based testing.	Comfortable fit and seal. When worn in combination with UVEX goggles enabled comfortable secure fit around nose area. Allowed good airflow and unhampered breathing even when exerting during restraint.  <i>Note: the mask was found to move out of position on staff member with short beard.</i>	Provided a good level of protection.  <i>During additional spit testing was found not to allow fluids into the area around the nose and mouth.</i>	Easy and swift applying / removal using infection control procedures	Yes. Mask works well in combination with goggles, and enabled staff to breath freely during restraint.  <i>In addition, found to provide protection against ingress of fluids directed at the face.</i>
5. UNiFIT mask	Yes. Was not found to dislodge even during robust restraint-based testing.	Comfortable fit and seal. When worn in combination with UVEX goggles, enabled a secure fit but due to thickness of padding around nose resulted in a tight, less comfortable fit. During robust restraint testing conditions, airflow was a little reduced.	Provided a good level of protection.  <i>During additional spit testing was found not to allow fluids into the area around the nose and mouth.</i>	Easy and swift applying / removal using infection control procedures.	<b>No.</b> The mask was not fully compatible with the UVEX goggles and airflow was slightly reduced for the wearer when exerting.  <i>In addition, found to provide protection against ingress of fluids directed at the face.</i>

PI, physical intervention; PPE, personal protective equipment