

Inpatient wards – How to minimise risk in mental health inpatient settings during the COVID-19 pandemic.

Please note all questions within each section are linked to each other and should be read in conjunction.

Below each question are the weblinks to the sources of evidence to support the guidance recommendation.

This guidance should be read in association with [the most up to date advice on PPE](#) (personal protective equipment; see also [this video](#) for guide for mental health staff) and on [reducing the risk of transmission in hospital settings](#).

Please note there is increasing evidence of significant asymptomatic transmission of COVID-19 (see [this NEJM publication](#) and [this WHO document](#) for further details). Therefore, staff should assume that even asymptomatic patients are capable of transmitting COVID-19 and take appropriate precautions if COVID-19 testing is not immediately available.

Clinical question	Guidance
<p>How do we manage possible COVID-19 infection on the ward?</p> <p>[link1] [link2] [link3] [link21]</p>	<ul style="list-style-type: none"> The most common symptoms are fever and persistent dry cough. From 18 May 2020, PHE have also included the symptom of a loss of, or change in, normal sense of taste or smell (anosmia) in isolation or in combination with any other symptoms. Most people will experience mild to moderate symptoms, while a smaller number will have symptoms that need to be managed in a general healthcare setting. Managing infection on a ward should mirror the steps taken in the wider community both in trying to prevent spread and the management of any infections. Wards should exercise the principles of social distancing across the ward community. This means minimal contact and an advised distance of two metres. The need to limit contact between individuals should be clearly communicated to patients and staff. <p>(Note that the advised distance may change as infection risks are reassessed: please refer to local and national policies for the most up to date advice (see an example here and here).</p> <p>Following guidance issued by NHS England (27 April 2020) all admissions to hospital should be screened for COVID-19. This includes completing a swab and isolating symptomatic patients. The requirement to isolate relates only to symptomatic patients and those confirmed COVID-19 positive; asymptomatic patients who are awaiting the results of a swab will be advised to self-isolate and follow social distancing guidance until results are obtained (further details here).</p>
<p>How do we isolate suspected/confirmed cases?</p> <p>[link1]</p>	<p>General advice</p> <ul style="list-style-type: none"> While it will not be possible to turn mental health wards into full isolation units, it will be necessary to take appropriate steps to isolate patients with mild symptoms on the ward.

[\[link2\]](#)

- If symptoms do not resolve after 7 days, or the patient deteriorates, there will need to be a **review of their safety on the ward**.
- Each local area will need to develop a **local agreement** on the management of severe cases which will include **transfer to a general healthcare environment**. Teams should **provide support and advice** to general healthcare colleagues in these situations and **continue to monitor** the patient's progress with a view to returning them to the ward should they improve.

For all inpatients

- **Wards that provide single rooms with en-suite facilities** should encourage patients to remain in their rooms as much as possible. This is contrary to the normal running of a ward, and staff and patients are encouraged to find creative ways to adjust to this. As with mobile phones, this may require rules and restrictions to be relaxed, such as allowing patients to eat, make phone calls or watch television in their rooms.
- **Wards that have single rooms without toilet or showering facilities** will need to proactively plan to manage personal hygiene. While this may require the use of commodes or planned bath and showers, these plans should consider the routine cleaning of the equipment that is needed and may require supervision. All such plans should be clearly communicated to patients.
- **Wards that have dormitory accommodation** should make specific plans for the management of infection control in these areas. If a patient in these areas were to display symptoms, they will need to be moved to a private area. Local services should identify provisional plans for this eventuality.

When a patient does display symptoms of COVID-19

- They should be **managed in a private room under local infection control guidance**. If this is not possible for any reason, this should be reported immediately to senior management and this should be treated as an emergency.
- **Family and carers should be informed as soon as possible** if any patient displays symptoms and is placed in isolation on the ward. Any person who has visited the patient 7 days prior to the onset of symptoms should also be informed and **advised to self-isolate** in keeping with current national guidance.

Guidance for providers

To follow the PHE guidance on self-isolation, patients with COVID-19 will require **single-room accommodation and access to their own bathroom**. This will require a flexible approach to accommodation and reconfiguration of the estate, potentially across a group of providers, including the independent sector, in a provider collaborative or local geographical footprint.

Providers should consider:

- how **additional, single-room accommodation** for patients with the COVID-19 virus could be provided in **partnership with the independent sector** (which may offer a higher proportion of single-room accommodation)
- whether **modifying any available capacity within the adult secure estate** is possible, to accommodate voluntary patients.

Therefore, providers are expected to:

- **analyse and map** the current inpatient estate.
- **identify key gaps, risks and pressures**.
- **develop a number of contingency plans** to match likely scenarios, in partnership with other inpatient providers locally.
- consider at this stage whether **any beds previously scheduled for closure** – e.g. as part of reconfiguration and repatriation through provider collaborative approaches – **could be retained**, or what opportunities there are to **reactivate** mothballed wards.

(During the pandemic, consider **repurposing of clinical areas, including clinical research areas**, for services with more urgent clinical need – for example the [NIHR Oxford cognitive health Clinical Research Facility](#) has been repurposed [as recommended by the NIHR](#)).

How do we deal with visiting/visitors?

[\[link1\]](#) On the 5th June 2020, [NHS England](#) lifted the **national suspension on visiting** imposed under previous guidance. This is now **subject to local discretion by trusts and other NHS bodies**, and so please confer with local guidance.

[\[link2\]](#)

[\[link4\]](#)

Practical considerations to support visiting (e.g. number of visitors, PPE, virtual visits) are available [here](#).

How do we keep a sense of community on the ward?

[\[link1\]](#)

[\[link2\]](#)

General advice

- We cannot expect “business as usual” at this time. Each ward will have to find a way to focus on physical safety and infection control as the main priority. Key to managing this will be ward **cohesion, communication and adapting as a community within local services**.

Advice on activities

- **All activities that bring people into close contact will need to stop altogether or be adjusted to meet national guidance.** Ward groups, ward rounds, mealtimes and visiting times should all be reviewed to allow for as little contact as possible. It is anticipated that much of this routine will be postponed on wards for the foreseeable future.
- **However, removing all ward activities is likely to be counterproductive.** People who are restricted can become bored and agitated and require restraint or other restrictive practices.
- **Wards should consider adapting communal activities to reduce duration, unnecessary attendance and increase personal space.** Activities such as mindfulness/relaxation groups, dancing/exercise, karaoke and 1:1 meetings can all be done whilst maintaining the recommended two metre distance. Any such activity will have benefits in keeping up staff and patient morale and increase ward cohesion.
- **Each ward community should work on ensuring communication between staff and patients is as good as possible** through notice boards, written communication, smaller group or individual meetings and even text and digital messaging within the ward. As stated, meetings can still be carried out provided personal contact is avoided and adequate distancing is maintained. Latest government and national guidance should be **easily available to all** and the whole ward encouraged to stay informed of the situation as it develops. Staff should be **clear about rules that are being imposed from national advice** and that must be followed by all. Staff should always also model this advice.
- **Patients are active agents on wards and should be included as much as possible in assisting in the restructuring of activities and ward routines.** Many can and should advise on what they need to stay informed and be included in decision making.
- **It is anticipated that there will be high levels of anxiety** in the present situation. Good mental healthcare staff are highly skilled in the management of anxiety, both their own and other peoples. It is important to remain confident in your ability and ensure that **principles of mutual support and team cohesion remain a cornerstone of your care**.

How do we provide routine care?

[\[link1\]](#)

[\[link2\]](#)

The provision of **specialist services** such as occupational therapy, psychology or pharmacology is **secondary to maintaining their physical health in the present situation**.

However, given the nature of wards, patients will still require **basic mental healthcare**:

- The basic principles of care should be to provide **at least minimum care** to each patient according to their needs.
- For many patients this will mean being given the **same information as the general public** and assisted in following the advice given. Much of what has been discussed re. communication and access to networks is to alleviate any deterioration in mental health. We

cannot shield patients from the anxiety presently experienced in society, but we can make every effort to **include them in planning and management** of the situation.

- Patients' **ongoing mental healthcare will need to be reassessed**. Again, wards should consider carrying out care meetings via phone or video depending on the resources available. This should include any ongoing 1:1 psychological therapy.
- **If a patient displays COVID-19 symptoms, their physical healthcare takes priority**. This may require a postponement of any therapies and a re-evaluation of medications in line with advice from Pharmacy departments. As far as possible therapy should be continued via phone when patients are in isolation.
- It is not possible to provide guidance for every complication in individual treatment, but ward **staff should be assisted by the wider MDT in the management of issues** as they arise. Each patient should have a **minimum of a weekly MDT review**. If they display symptoms there should be a **daily review of their care**.
- In the present situation staff and visitors will not be able to escort patients for **smoking** or so called "fresh air breaks". This will need sensitive communication to patients and should be backed up with written information or posters. As COVID-19 attacks the lungs, patients who smoke should be encouraged to give up smoking as a priority at this time.

What about leave from the ward?

[\[link1\]](#)

[\[link2\]](#)

[\[link5\]](#)

General advice

- Any decisions about leave will need to be taken **based on latest government advice at the time** and **analysis of benefits and risks** for that individual patient's recovery.
- Patient leave from the ward, either escorted or unescorted, will require **additional risk assessment** depending on patients' exposure to symptoms.
- Where possible, leave and time off the ward should be maintained. If it is not possible this should be clearly communicated to the patient including the process for review.

Section 17 leave

- Section 17 escorted leave arrangements **will depend upon the location of the hospital and a localised risk assessment**. Escorted leave should be individual and follow the guidelines of social distancing (i.e. staff are advised to only escort one patient at a time and to maintain a two-metre distance). Some hospitals may want to limit all leave to 30 minutes to the local area only so that patients can get fresh air and time off the ward, but with limited chance of social interactions.
- 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.
- 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.
- Time spent outside, including Section 17 leave should be **consistent with national guidance** which is issued by the government and can change daily.
- Expected procedures for returning from escorted and unescorted leave, for example search and hygiene procedures, should be **explained and implemented**.
- 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**.
- 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**.
- Where there is doubt, reference should be made to the local ethics committee.

Are there any special concerns with managing acutely disturbed patients who may be COVID-19 positive?

[\[link5\]](#)

General measures

- Many patients and staff may be fearful of COVID-19; such anxieties can also be very infectious. **Caution should be exercised so as not to exacerbate an already difficult situation.**
- Experience from Wuhan and UK hospitals suggests that **many mental health inpatients may often be relatively detached** from what is happening in the wider community.
- 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 creates further problems with cooperation and engagement.
- 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**.
- Patients should be engaged in **discussion and information sharing** about COVID-19 infection risk. The possibility should be addressed that a patient who has identified infection risk issues, **may need to be subject to isolation**.
- A formal **capacity assessment** regarding this discussion should be **completed and recorded in the patient record**.
- 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'.
- This could include **an information leaflet** which outlines the main issues including the potential need for personal protective equipment (PPE) to be implemented.
- 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.

- Unit based **activity programmes** are useful for minimising disturbance and improving cooperation which will contribute to infection control management.
- **Infection control measures** should be consistent with national and local guidance.
- As access to facilities areas off the unit diminish, resources to provide **unit-based** activity should be given equal status to other priorities.
- Condense the use of materials, objects and tools to those that can be wiped clean and disinfected, and those which can be disposed after one use.
- 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.
- 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.

Secondary interventions

- 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.
- A **systematic approach** to avoid patients being unnecessarily subject to placement or procedures that result in a finite resource being inefficiently deployed.
- Methods could include **daily monitoring** of temperatures and enquiry/observation to ascertain the presence of a cough. **Testing** should occur wherever the criteria is met for doing so.

- **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.
- If 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.
- This should include a **hierarchy of response** (see link for details).
- For those who are generally able to follow direction and cooperate, should be maintained in an area or zone consistent with local procedures.
- 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.
- This may require **re-assessment** of the items of concern/restricted items list generally operated by the unit.
- 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.
- Any items that can be **disposed** of following use should be disposed of within infection control advice.
- 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.

It is important to try non-pharmacological first, as per NICE guidelines. However, if medication is necessary:

Medication for acute disturbance

- Follow Trust, [NICE](#) or [Joint BAP NAPICU guidance](#) but give some additional consideration to the **specific contra-indications and side effects that are known with COVID-19** and other infections. Importantly, the **current physical health of the patient** is a key factor in the choice.
- 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.
- 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).
- **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.
- **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.
- 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.
- **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.
- **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.

- **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.
- **Physical health monitoring**, especially respiratory rate and level of consciousness, should be carried out when either oral or parenteral rapid tranquillisation is given.

Physical intervention to deliver medication will need to be considered carefully. National Guidance for PPE to be used in different care settings is detailed in [Public Health England](#) (2020).

Advice on members of the team, planned approaches and protective equipment shown to be viable in circumstances where resistance to direction and/or physical intervention is required are contained in [this document](#) (pages 13-17).

Are there legal/ethical considerations to consider?

[\[link5\]](#)

Specific aspects of the following guidance **apply to England and Wales** (please refer to other country-specific guidance if needed):

- **Least restrictive** options must be employed wherever possible and risk of infection cannot be completely eradicated.
- Some degree of risk is unavoidable. The nationally recommended **ethics committees** will be required to carefully balance risk with the use of restrictive interventions.
- 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.
- Chapter 26 of the [Mental Health Act Code of Practice](#) governs the use of restrictive interventions.
- Wherever possible, **adherence to the Code should be maintained**. Only where there is a cogent reason should there be a departure from the Code.
- 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'. Schedule 8 covers temporary modifications to the MHA. Further details are contained [here](#).

Potential areas where risk of COVID-19 infection could result in a cogent reason to depart from the MHA CoP 2015 are detailed in the [linked publication](#) (pages 7-8) and the [associated legal advice note](#).

The Mental Capacity Act (MCA) is used when an individual lacks the mental capacity to make a specific decision, e.g. for COVID-19, an example would be not understanding the need to use oxygen therapy to help 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)

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 MCA for the protection of the individual, but not for the protection of others** (e.g. if patient does not understand need for isolation to protect others, Public Health Law (such as the [The Coronavirus Act 2020](#)) would apply and be recorded in the patient's clinical records.

PHE have issued [guidance on the use of the MCA and deprivation of liberty safeguards \(DoLS\) during the COVID-19 pandemic](#) with guidance in a [flowchart for clinicians](#).

For Scotland, please refer to the guidance provided by the [Scottish Government](#).

What about out of area placements?

[\[link1\]](#)

[\[link2\]](#)

- Service capacity is likely to be impacted by the pandemic and, in some cases, **this may result in the need for out-of-area placements:** for instance, through use of additional independent sector capacity.
- **Efforts to care for all people locally should continue.** However, the advice remains that patient safety is paramount and that when an acutely unwell person requires inpatient admission, it is safer to admit the person to an out-of-area (including independent sector) bed until they can be cared for locally, than to turn the person away and not admit them at all.

Should we create 'cohorted' wards?

[\[link6\]](#)

[\[link7\]](#)

Providers should consider

- Whether it is possible to **reconfigure** the inpatient estate to create 'cohorted' wards **to reduce the risk of contagion among specific, vulnerable groups.** (These include but are not limited to older adults with frailty, patients with a BMI of 40 and over, pregnant women, patients with an eating disorder, and patients with physical co-morbidities as outlined in Public Health England's guidance on vulnerable groups).
- Enhanced physical monitoring and measures to support infection control, such as no visitors allowed, on these cohorted wards.
- Whether wards are able to provide **flexibility in the management of acuity** – for example, by bringing high dependency unit capacity onto a ward if required to prevent vulnerable patients being transferred between wards.
- Whether **usual restrictions on ward types can be relaxed:** for example, where ward type is based on age, sex or diagnostic group on a case-by-case basis. A record of decision-making and ethical considerations should be kept.
- Where **enhanced mental healthcare** may be needed to mitigate the impacts of isolation, and the use of **digital technology** to retain social connections.

For example, **adult secure services** will need to draw up detailed plans and consider how best to cohort patients while maintaining security and safety of patients, staff and the public. This may involve identifying at the outset a **specific ward where patients with confirmed illness may be isolated** and **another area for those suspected** to have the illness, as well as easy and timely access to **adequate PPE.**

Providers must plan for COVID-19 patients at all inpatient settings:

- Identify areas where COVID-19 patients **requiring urgent admission** could be most effectively isolated and cared for (for example single rooms, en-suite, or mental health wards on acute sites).
- **Case by case reviews** will be required where any patient is unable to follow advice on containment and isolation.
- Staff should undergo **refresher training** on physical health care, vital signs and the deteriorating patient, so they are clear about triggers for transfer to acute inpatient care if indicated.

Is there any special advice for Older Adult inpatient wards?

[\[link1\]](#)

[\[link22\]](#)

- Older people with suspected or actual infection and their relatives may find being in an intensive care environment and/or being cared for by staff taking precautionary measures extremely **anxiety-provoking or distressing.** Consider what can be done to make the environment less threatening and more familiar and reduce the number of investigations, if possible.
- Try to ensure that care staff are aware of **non-pharmacological** ways to address distressed behaviour.
- Older people will often be at **increased risk of delirium.** Staff should be encouraged to consider **risk reduction strategies** early on (e.g. nutrition, hydration, constipation and pain, etc).
- Review your procedures and plans for inpatient units.
- Ensure that **oxygen cylinders are available** and that the physical knowledge and skills of staff are as updated as possible.
- Check care plans reflect any updated **lasting power of attorney documentation and advance directives.**

Guidance on supporting patients of all ages who are unwell with coronavirus in mental health, learning disability, autism, dementia and specialist inpatient facilities is available [here](#).

Health Innovation Network and the Academic Health Science Network for South London provided a useful list of online activities for older adults that range from tablet activities to media and livestreams.

How do we manage delirium in suspected/confirmed cases of COVID-19 infection?

[\[link8\]](#)

General advice

Delirium is important in the context of COVID-19, because (a) delirium may be a symptom at presentation and/or during management, and (b) the behavioural changes commonly seen in delirium, particularly agitation, may make management including delivery of care and reducing the risk of cross-infection more challenging.

Summary of recommendations (further detail in the provided link)

- Enhanced implementation of **screening** for delirium in at risk groups and also **regular assessment** for delirium using a recommended tool (e.g. [the 4AT](#)).
- Reduce the risk by **avoiding or reducing known precipitants** e.g. regular orientation, avoid constipation, treat pain, identify and treat superadded infections early, maintain oxygenation, avoid urinary retention and medication review.
- For behavioural disturbance, **look for and treat direct causes** (e.g. pain, urinary retention, constipation, etc). if ineffective or more rapid control is required, it may be necessary to **move to pharmacological management earlier** than would normally be considered. In these circumstances, recommend the [SIGN guidance](#), but in more urgent situations refer to the [NICE Guidance on Violence and Aggression](#).
- If treatment using the [NICE rapid tranquillisation interventions](#), **monitor for side effects, vital signs, hydration level and** consciousness at least every hour until there are no further concerns. Be mindful of use of benzodiazepine in respiratory depression. In older adults note the BNF maximum dosage for haloperidol is 5mg in 24 hrs. Guideline suggests a more conservative approach with maximum 2mg in 24 hours in the first instance. If higher dosages required, please seek specialist advice.
- Take usual **caution with use of medication in older people**, and especially certain medications in people with Parkinson's disease or dementia with Lewy bodies (e.g. antipsychotic medication).
- Delirium may cause distress to staff, families and the patient. **Provide information** using locally available resources, or using [booklets](#).

This guidance should be used in parallel with the legal framework for the Mental Capacity Act.

Should we prescribe vitamin D supplements to inpatients?

[\[link9\]](#)

[\[link18\]](#)

[\[link19\]](#)

[\[link20\]](#)

Consider vitamin D supplementation for inpatients and outpatients.

In general:

Observational studies have suggested that **vitamin D deficiency may be linked to extraskelatal illnesses, including psychiatric disorders and respiratory illness**. RCT evidence, however, has not consistently shown a benefit in vitamin D supplementation for these disorders.

More recently, **systematic reviews have suggested that vitamin D supplementation may reduce the risk of developing respiratory infection (number needed to benefit NNB=33)**, however there is as yet no evidence confirming the efficacy of vitamin D in the treatment or prevention of COVID-19.

Public Health England and the Scottish government recommend that everyone should consider taking 10 micrograms of vitamin D a day to keep healthy. This is especially relevant for those who may not be getting enough vitamin D from sunlight if they are indoors most of the day. The dose of vitamin D recommended by PHE (10 micrograms or 400IU) is suitable for **prevention** of vitamin D deficiency only.

A rapid review by CEBM (The Centre for Evidence-Based Medicine) found **no clinical evidence** relating to vitamin D deficiency predisposing to COVID-19 or studies of supplementation for preventing or treating COVID-19 (search date up to 4th of April 2020, clinicaltrials.gov searched up to on 23rd April). The review found **some (limited) evidence that daily vitamin D3 supplementation may prevent other acute respiratory infections**, particularly in people with low/very low vitamin D status.

The Royal College of Physicians, British Dietetic Association and Society for Endocrinology have issued a joint statement (26 May 2020) which concludes that there is currently no evidence for recommending high doses for the general population.

The statement supports the advice of Public Health England that **everyone should consider taking 10 micrograms (400 IU) of vitamin D a day** to keep their bones and muscles healthy.

This advice is **particularly important for people from a BAME background** (the higher the amount of melanin in the skin the less it absorbs UV radiation, which converts vitamin D into its active form).

People with proven vitamin D deficiency, or specific medical conditions such as malabsorption or kidney failure, **may need higher doses or specific vitamin D preparations to ensure they have adequate levels of vitamin D.**

There is no evidence that vitamin D reduces the risk of developing COVID-19 or modifies its clinical course. This is supported by the recent rapid evidence review by CEBH and by [this review](#).

For inpatients:

Clinicians should **consider continuing general vitamin D supplementation (as described above) during inpatient stays.**

Note: 10 micrograms (400 IU) is a preventative dose only. **Higher doses are required to treat vitamin D deficiency.**

Patients who have not taken vitamin D supplementation and who have been staying indoors due to the COVID-19 pandemic, may be deficient in vitamin D.

Upon admission, clinicians should consider testing for vitamin D deficiency (depending on local service arrangements). **Established deficiency must be treated using a treatment dose.** See [UKMI guidance](#) and [NICE guidance](#) for further advice on dosing.

What about VTE prophylaxis?

[\[link10\]](#)

[\[link11\]](#)

[\[link12\]](#)

[\[link13\]](#)

[\[link14\]](#)

[\[link15\]](#)

There is **no specific guidance on prevention of venous thromboembolism (VTE) in psychiatric inpatients in the context of COVID-19.**

However, emerging evidence has suggested an **increased prevalence of venous thromboembolic events in patients with COVID-19, especially in patients with more severe disease** (see below for further details).

In addition, NICE has **general guidance on assessing risk and prevention of VTE in psychiatric inpatients:**

[link16](#)

[link17](#)

Clinicians should ensure that all psychiatric inpatients have an up to date VTE risk assessment:

- **As soon as possible after admission** to hospital or by the time of the first consultant review.
- **Using a tool** published by a national UK body, professional network or peer-reviewed journal. The most commonly used risk assessment tool for hospital patients is the [Department of Health VTE risk assessment tool](#).
- **Reassess** all people admitted to an acute psychiatric ward for risk of VTE and bleeding **at the point of consultant review or if their clinical condition changes**.

If a patient develops symptoms of COVID-19, clinicians should reassess their risk of VTE, taking into account additional risk factors such as the severity of illness, dehydration and reduced mobility. Follow local and national guidance for pharmacological management of VTE risk. See below for current NICE guidance on pharmacological management of VTE risk in psychiatric inpatients:

- Consider **pharmacological VTE prophylaxis with LMWH** (low molecular weight heparin) for people admitted to an acute psychiatric ward **whose risk of VTE outweighs their risk of bleeding**.
- Consider pharmacological **VTE prophylaxis with fondaparinux sodium** if LMWH is **contraindicated** for people admitted to an acute psychiatric ward whose risk of VTE outweighs their risk of bleeding.
- Continue pharmacological VTE prophylaxis for people admitted to an acute psychiatric ward **until the person is no longer at increased risk of VTE**.

In addition, in the assessment of VTE risk, consider the following factors:

- Embolism and thrombosis are **known side effects of antipsychotics**.
- **Smoking, obesity and inpatient hospitalisation** are also risk factors for VTE.

For those patients **already maintained on anticoagulant medication** follow [advice from NHS England on managing this during the COVID-19 pandemic](#).

VTE and COVID-19 infection:

Follow advice from:

1. The British Thoracic Society ([Guidance on Venous Thromboembolic Disease in patients with COVID-19](#)):
 - The British Thoracic Society has released guidance regarding thromboprophylaxis in severely ill patients with COVID-19.
 - There is **evidence of increased prevalence of venous thromboembolic events in COVID-19, especially in patients with more severe disease**.
 - Patients with a higher risk of VTE **may benefit from an intermediate dose LMWH instead of a standard prophylactic dose**. However due to the lack of evidence it is not possible to advocate any particular approach and it is suggested that **local protocols for risk stratification in COVID-19 patients are developed**.
2. Thrombosis UK ([guidance on COVID-19](#)):
 - The risk of VTE must be assessed in all patients admitted to hospital, and prevention should be given to all high-risk patients according to international guidance on thromboprophylaxis in medical patients.

- Consider the possibility of pulmonary thromboembolism (PTE) in patients with sudden onset of oxygenation deterioration, respiratory distress, reduced blood pressure.
 - Consider switching to LMWH in patients taking direct oral anticoagulants (DOACs) or vitamin K antagonist (e.g. warfarin) for stroke prevention in atrial fibrillation or previous VTE.
 - Confer with expert haematology advice if needed.
3. American Society of Hematology:
- The incidence of VTE in COVID-19 patients is not established.
 - **Those with more severe disease (especially with additional risk factors** e.g. older, male, obesity, cancer, history of VTE, comorbid diseases, ICU care) have a higher risk of VTE.
 - There are **no studies** on VTE rate in **outpatients or in patients on non-ICU hospital wards**.
 - **All hospitalized patients with COVID-19 should receive pharmacologic thromboprophylaxis** with LMWH or fondaparinux unless the risk of bleeding exceeds the risk of thrombosis.
 - **Dose adjustment for obesity** may be used per institutional guidance.
 - In patients with a history of heparin-induced thrombocytopenia, use fondaparinux.
 - In patients where anticoagulants are contraindicated or unavailable, use **mechanical thromboprophylaxis** (e.g. pneumatic compression devices).
 - Combined pharmacologic and mechanical prophylaxis **is not generally recommended**.
 - It is not clear whether critically ill COVID-19 patients should receive therapeutic-intensity anticoagulation in the absence of confirmed or suspected VTE.
 - Patients hospitalized for acute medical illness are at increased risk for VTE for up to 90 days after discharge. This finding should apply to COVID-19 patients, though data are not yet available, therefore **consider extended thromboprophylaxis after discharge**.
 - Any decision to use post-discharge thromboprophylaxis **should consider the individual patient's VTE risk factors, including reduced mobility and bleeding risk as well as feasibility**.
 - **Aspirin** has been studied for VTE prophylaxis in low-risk patients after orthopaedic surgery and **could be considered for COVID-19 VTE prophylaxis post-discharge if needed**.
4. Recent reports (see [an example](#)) suggest that **assessing VTE and bleeding risks regularly in the context of COVID-19 is essential**, and that **patients with COVID-19 with a high risk of VTE have poorer outcomes than patients with a low risk**.
5. **Follow local guidance** (see [this example](#) from Oxford University Hospitals).