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Date: Attachments: nss iric Information Message IM/2020/024 - NHS Scotland Health & Care COVID-19 remobilisation – Built Environment including physical distancing support diagrams 18 September 2020 16:01:14 20200911 NHSScotland Health & Care COVID Remobilisation incl physical distancing diagrams v1-0.pdf



Incident Reporting & Investigation Centre

nss iric

Reference: Subject: IM/2020/024 NHS Scotland Health & Care COVID-19 remobilisation – Built Environment including physical distancing support diagrams

This information message is sent to draw the attention of Equipment Co-ordinators to information which may be relevant to the safety of equipment and facilities in NHS Boards and Local Authorities. Please find the information below and attached

The Scottish Government COVID-19 Nosocomial Review Group (CNRG) released guidance on NHS Scotland Health & Care COVID-19 Remobilisation – Built Environment including physical distancing diagrams (v1-0) on 11 September 2020.

A pdf copy of this guidance (v1-0) is attached and can also be located on the Health Facilities Scotland (HFS) website <u>here</u>

As the Equipment Co-ordinator for your organisation, we recommend that you assess whether or not to forward this information to managers and staff within your area of responsibility who might benefit from being aware of it.

If you received this message directly from IRIC, email us at <u>nss.iric@nhs.scot</u> or phone 0131 275 7575 quoting the IM reference number. Alternatively, if you have received this message from someone in your own organisation, please direct all enquiries to them and they will liaise with IRIC as required.

Incident Reporting & Investigation Centre (IRIC) Health Facilities Scotland NHS National Services Scotland

Contact us:IRIC EmailHelpline0131 275 7575

https://www.nss.nhs.scot/health-facilities/incidents-and-alerts/report-an-incident/

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FAC406-210 Rev 1

NHS Scotland COVID-19 remobilisation –Built Environment incl. physical distancing support diagrams -11 Sept 20

- Scottish Government <u>www.gov.scot/collections/coronavirus-covid-19-guidance/</u>
- Health Protection Scotland (HPS) www.hps.scot.nhs.uk/a-to-z-of-topics/covid-19/infection-prevention-and-control-ipc-guidance-in-healthcare-settings/
- UK Government <u>www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-control</u>
- National Institute for Health and Care Excellence (NICE) https://www.nice.org.uk/covid-19
- Healthcare Improvement Scotland (HIS) www.healthcareimprovementscotland.org/our work/coronavirus covid-19 ٠
- World Health Organisation (WHO) www.who.int/.../technical-guidance & www.who.int/.../sars-cov-2-implications-for-infection-prevention
- European Agency for Safety & Health at Work (OSHi) https://osha.europa.eu/en
- Health & Safety Executive (HSE) www.hse.gov.uk/coronavirus/social-distancing/index.htm
- Hierarchy of Risk Controls //en.wikipedia.org/wiki/Workplace hazard controls for COVID-19 & www.youtube.com/watch?v=FyBMpdaEaD4 •
- Designing facilities: www.designingbuildings.co.uk/wiki/Coronavirus and the construction industry & www.cibse.org/Coronavirus-(COVID-19)
- NHSScotland NSS supporting info in msTeam: NSS HFS/ARHAI Covid-19 FAQs and Supporting Documentation

"In indoor places and where physical distancing is difficult and where there is a risk of contact within 2m with people who are not members of your household, you are expected to wear a face covering".

"Physical distancing, hand hygiene and respiratory hygiene are the most important and effective things we can all do to prevent the spread of coronavirus. The wearing of face coverings must not be used as an alternative to any of these other precautions".

www.gov.scot/publications/coronavirus-covid-19-phase-3-staying-safe-and-protecting-others/pages/face-coverings/ (24 Aug 2020)

"The extended use of face masks does not remove the need for other key bundles of measures to reduce the risk of transmission of SARS-CoV-2, including social/physical distancing, optimal hand hygiene, frequent surface decontamination, ventilation and other measures where appropriate. Reliance on individual (as opposed to bundles of) measures to reduce the risk of virus transmission is not sufficient."

www.gov.uk/government/publications/.../new-government-recommendations-for-england-nhs-hospital-trusts-and-private-hospital-providers (21 Aug 2020)

"The use of face masks (for staff) or face coverings¹ (England and Scotland) is recommended in addition to social distancing and hand hygiene for staff, patients/individuals and visitors in both clinical and non-clinical areas to further reduce the risk of transmission. (¹You must wear a face covering by law in some public places unless you are exempt...)"

"The IPC principles in this document apply to all health and care settings including acute, diagnostics, independent sector, mental health and learning disabilities, primary care, care homes, care at home, maternity and paediatrics (this list is not exhaustive)."

//assets.publishing.service.gov.uk/government/.../COVID-19 Infection prevention and control guidance FINAL PDF 20082020.pdf (21 Aug 2020)

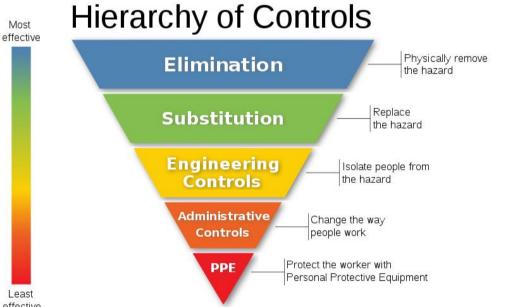
Built Environment: considerations for application of the above COVID Infection Prevention Control (IPC) Guidance (21 Aug 20)

Manage transmission risk by Hierarchy of Risk Control as legislated in Management of Health and Safety at Work Regulations 1999, Regulation 4, Schedule 1.

- <u>Elimination</u>: e.g. clinical consultations via secure telephone or video; staff working from home.
- <u>Substitution</u>: e.g. outdoor / drive-in clinics for testing; move staff to nonpatient facing role;
- Engineering: e.g. single room patient placement; 2m / 6ft social distancing; appropriate ventilation /dilution incl. open windows/ doors; technology to reduce length-of-stay (LoS)/ occupancy/ direct staff contacts;
- Administration: e.g. processes to reduce LoS etc incl opening times; improved cleaning incl fallow times after AGPs; pathways and signage
- Personal Protection: e.g. face covering; hand hygiene; cough hygiene; PPE

People have differing levels of susceptibility and severity; 3 risk groups defined

- <u>Standard</u> (or Lower)- no evidence of additional risk



- Higher- an increased risk e.g. age, obesity, diabetes, pregnancy, ethnicity
- <u>Highest</u>- e.g. cystic fibrosis, renal dialysis, severely immune compromised

Care Zones: UK COVID High; Medium; and Low risk in Care pathways and

Hierarchy of Risk Controls graphic //commons.wikimedia.org/index.curid=90190143 (original version: NIOSH Vector version: Michael Pittman)

Standard infection prevention control precautions (SICPs) - all pathways. Diagrams support all 3 care zones/ pathways. IPC AGPs guidance to take precedence

Social distancing is not an isolated factor for COVID transmission control. It is one of many compounding factors to be managed in-concert. These include:

Placement x Social distancing (Proximity x Direction) x Contact time x Ventilation dilution x Vocal projection x Hand hygiene x Face covering x Surface cleaning

Assumptions: mouth, nose & eyes are a COVID transmission key source and receiver. Diagrams show ergonomic Head zone: 0.5m dia circle/person. Plus assume

- Health & care patients to wear face coverings whilst inside, unless exempt, or for agreed task e.g. sleep, rest, washing, drinking, eating, whilst socially distant.
- Health & care facility visitors minimised and to wear face coverings whilst inside, unless exempt; www.gov.scot/.../covid-19-hospital-visiting-guidance/. •
- Check Ventilation maintained & operated appropriately, e.g. if Mechanical, clean and confirm at correct airflow, if Natural ventilation check windows, trickle vents etc are operable and utilised. By law, all occupied space must have operable ventilation (Health & Safety at Work Act etc); COVID re-emphasised this.
- Environmental psychology- deploy intuitive layouts & signs, but be aware risky behaviours can be encouraged by over-familiarity/ engineering overreliance

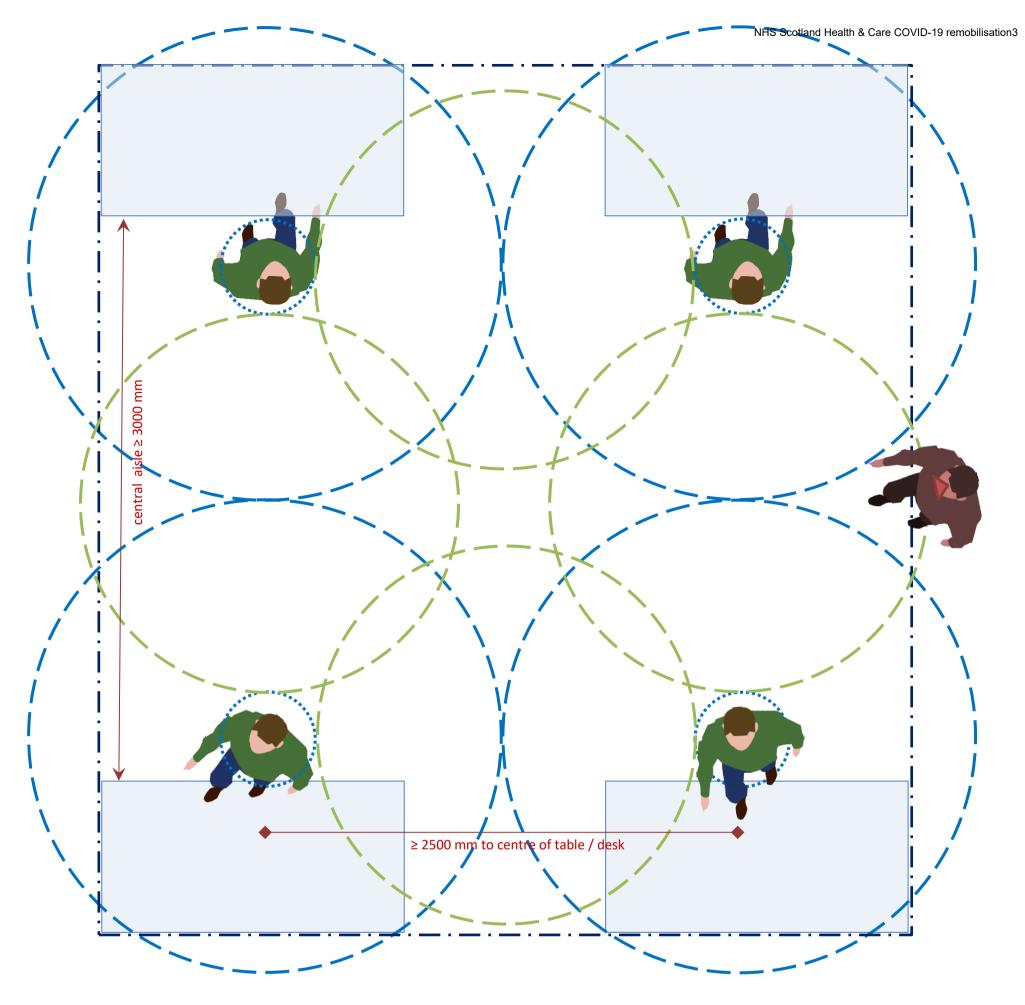
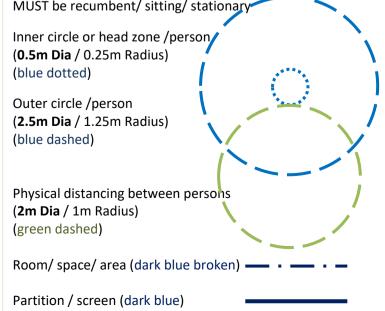


Fig 1A - Corner desk/ table layout:

KEY: Social Spacing:

Any Person in health & care facility (red) TWUST wear a Face Covering unless exempt

A Person exempt for agreed purpose (green) e.g. sleep, rest, washing, drinking, eating, and



Assumes ANY person likely to move within **<2m/ 6ft** of another person wears a Face Covering Area Calculation of blue outer circle: ∏ R² = 3.14 x 1.25 x 1.25 = min **~5 m²** / person Room/ space: circa **20 m²** / **4** people (shown 4.5 x 4.4 m & shaded 1.6 x 0.75 m desk /table) [central aisle **≥3m** shown; to allow non-face-cover movement ≥ 5.5m i.e. min = **~7 m²** / person] Layout 1A, with persons facing away, is preferred for Social distancing i.e. Proximity x Direction

Diagram 1A: Corner desk/ table layout



KEY: Social Spacing:

Any Person in health & care facility (red) MUST wear a Face Covering unless exempt



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Assumes ANY person likely to move within <2m/ 6ft of another person wears a Face Covering
Area Calculation for 1 person: ~2.9 x ~2.2 m = min ~6 m² / person
Room/ space: circa 24 m² / 4 people (shown 6.0 x 4.0 m & shaded 1.6 x 0.75 m desk /table)
[central aisle ~2.6m shown; to allow pon-face-cover movement ≥ 5.1m i.e. min = ~10 m² / person]

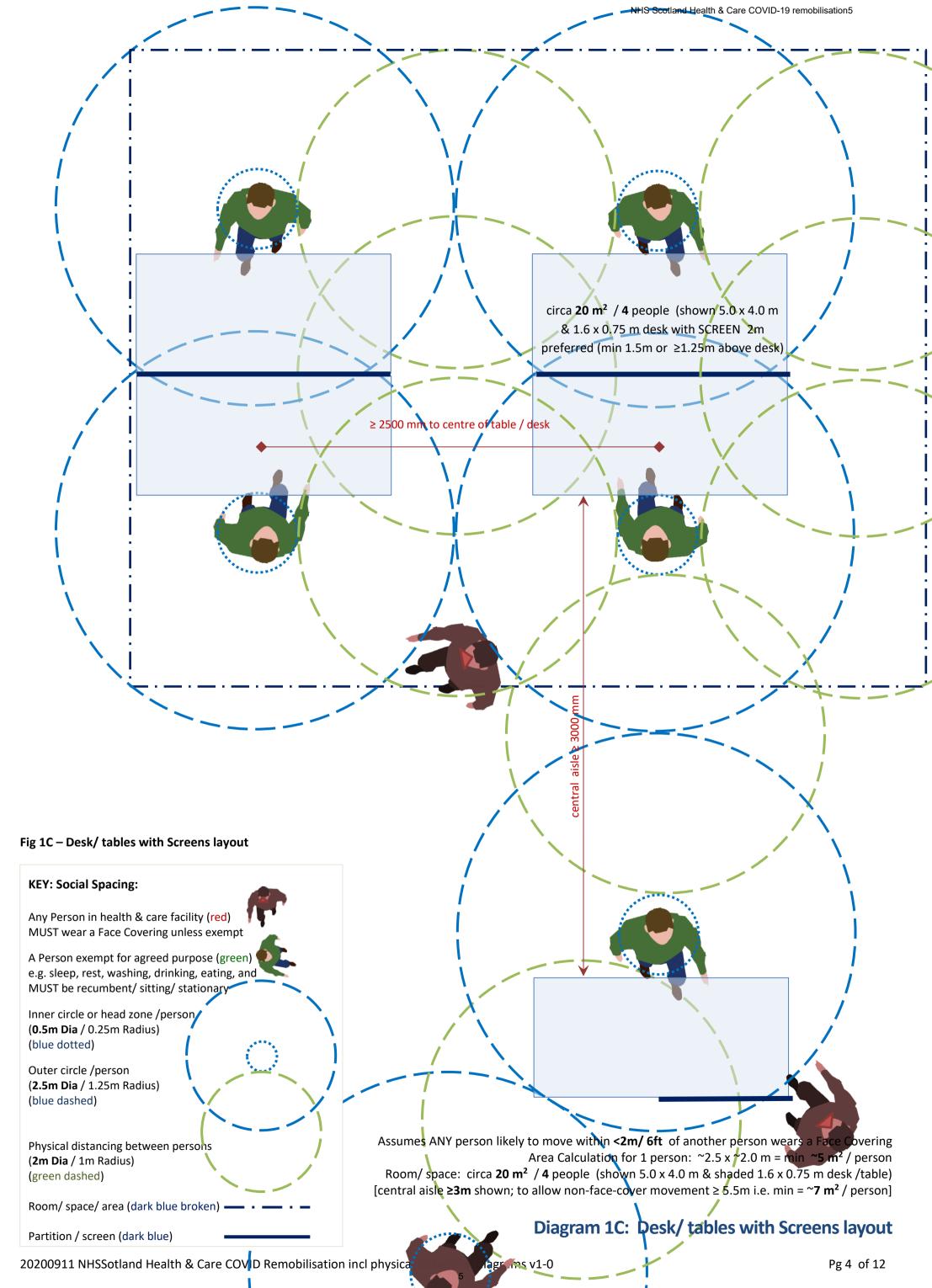
Diagram 1B: Central desk/ table layout

NHS Scotland Health & Care COVID-19 remobilisation4

~ 3000 mm to centre of table / desk

Pg 3 of 12

2600 mm



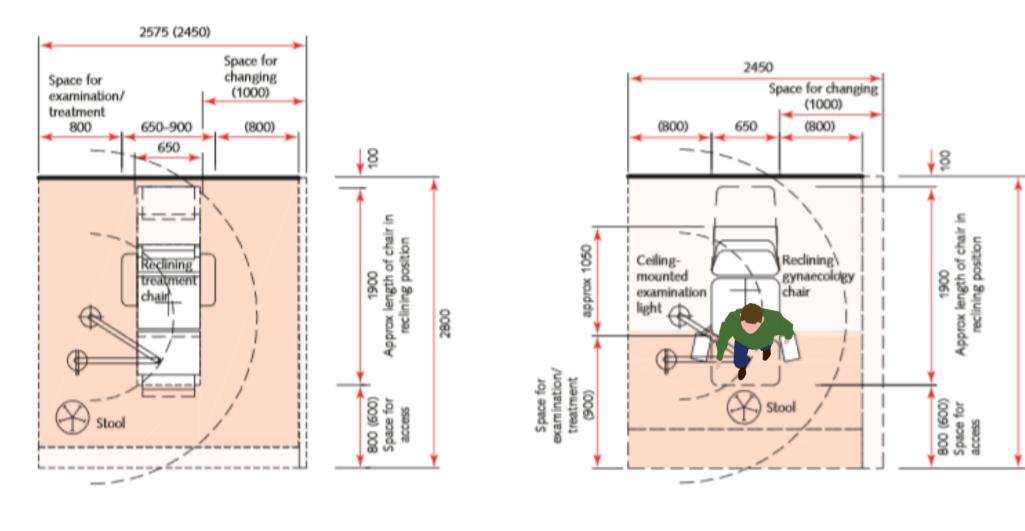
NHS Scotland HBN 00-03: Treatment couch / chair bay layout

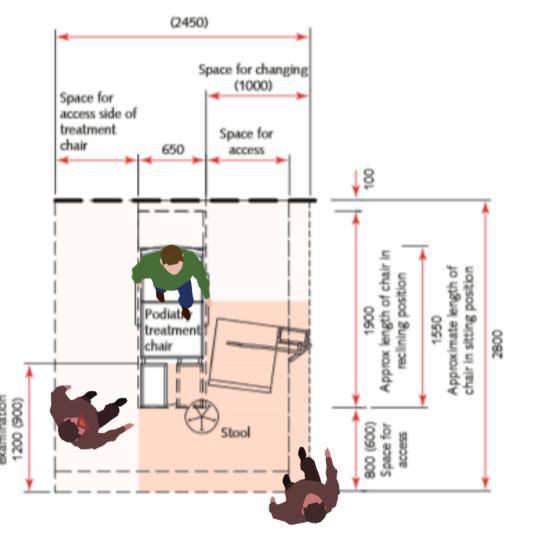
HBN 00-03 states 2.575m preferred, or 2.45m width, each with 2.8m depth. Width is based on a 0.8m space for access either side of chair / couch. Assume say **0.5m dia** for head position allowance on centre line of chair/ couch and starting 0.25m from wall;

- a 2.575m width bay, allows \geq **2.075m** physical distancing to adjacent patient (i.e. \geq 2m and 6ft)
- a 2.45m width bay, allows ≥**1.95m** physical distancing to adjacent patient (i.e. ≥ 6ft or 1.8m)
- a 2.25m width bay, allows ≥1.95m physical distancing to adjacent patient (i.e. ≥ 6ft or 1.8m)
- a 2.8m depth bay plus say a 1.5m aisle, allows 5.5m physical distancing to patient across aisle; (a 2.6 depth & 1.2m aisle, allows 4.8m distancing)

Extract of Fig 45 is from Core guidance - Clinical and clinical support spaces (HBN 00-03)

Figure 45 Space requirements for double-sided access to a variety of treatment chairs





KEY: Social Spacing:

Any Person in health & care facility (red) MUST wear a Face Covering unless exempt

A Person exempt for agreed purpose (green) e.g. sleep, rest, washing, drinking, eating, and



Inner circle or head zone /person (**0.5m Dia** / 0.25m Radius) (blue dotted)

Outer circle /person (**2.5m Dia** / 1.25m Radius) (blue dashed)

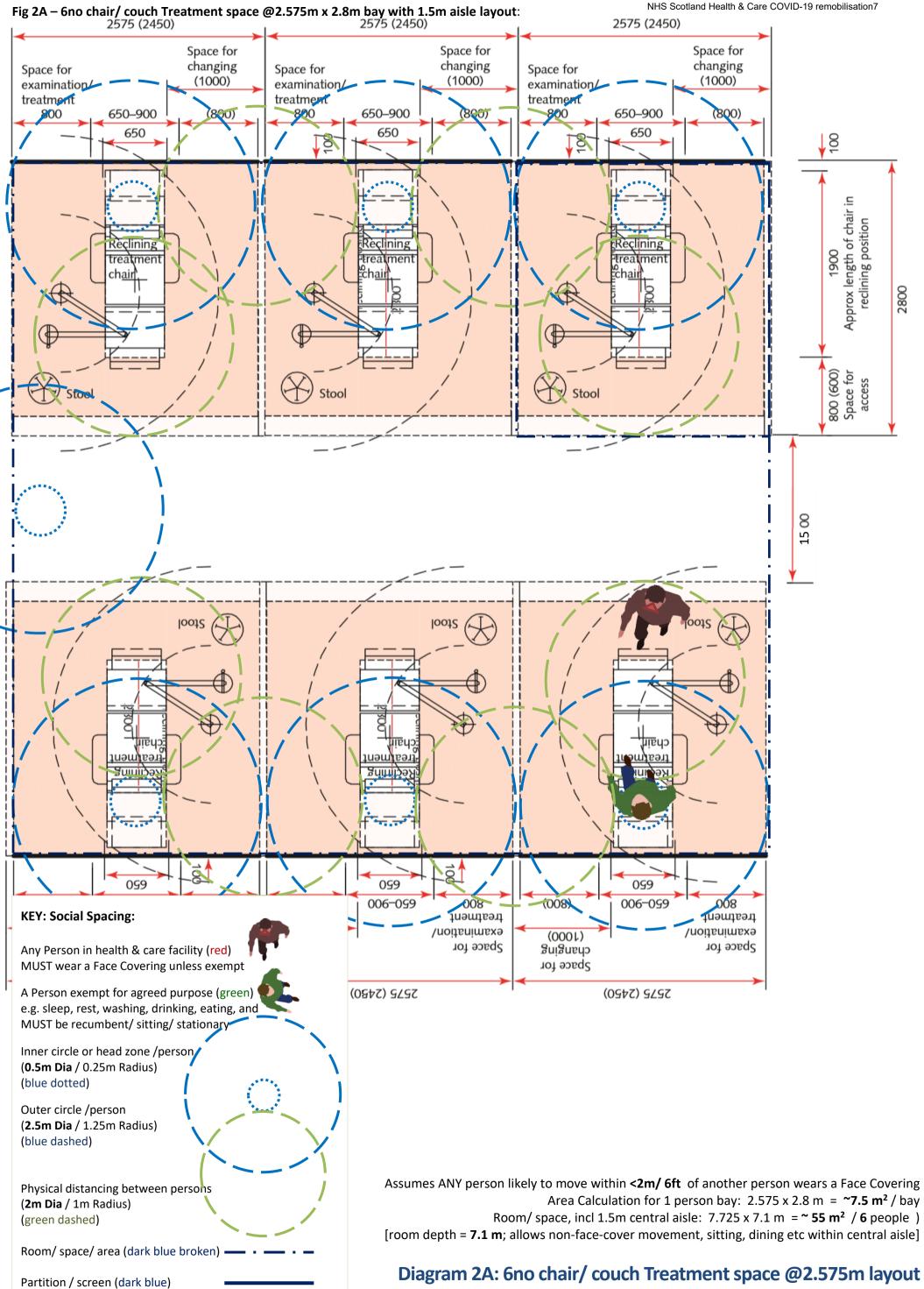
Physical distancing between persons (**2m Dia** / 1m Radius) (green dashed)

Room/ space/ area (dark blue broken) — • — •

Partition / screen (dark blue)

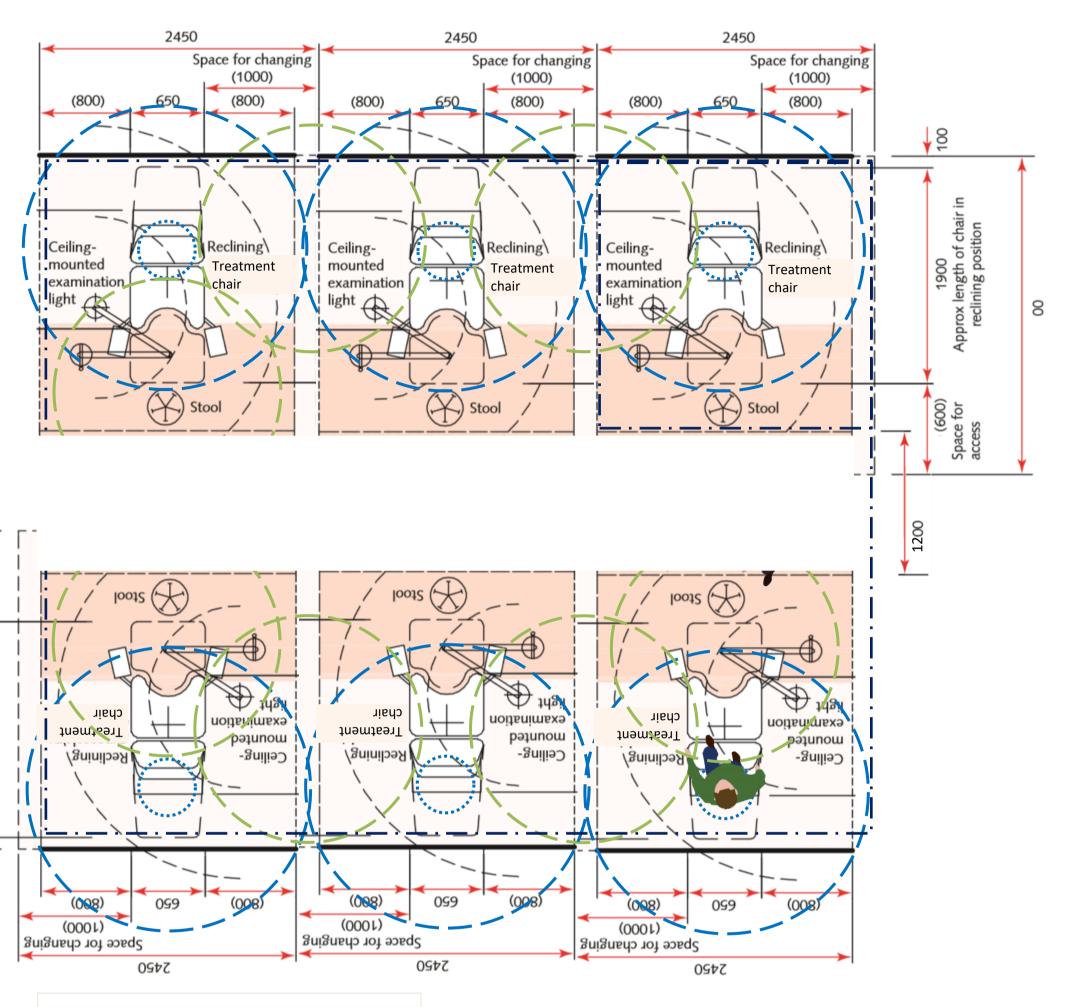
Assumes ANY person likely to move within <**2m/ 6ft** of another person wears a Face Covering Area Calculation for 1 person bay: 2.575 (or 2.4) x 2.8 (or 2.6) m = ~**6.5 – 7.5 m**² / bay Room/ space, incl ≥ 1.2m central aisle: ~**47 - 55 m**² / **6** patient [the larger sizes allow non-face-cover movement within central aisle; IF depth = > **6 m**]

Diagram 2: HBN 00-03 Treatment couch/ chair layout



Area Calculation for 1 person bay: $2.575 \times 2.8 \text{ m} = \mathbf{7.5 m}^2 / \text{bay}$ Room/ space, incl 1.5m central aisle: $7.725 \times 7.1 \text{ m} = ~55 \text{ m}^2 / 6 \text{ people}$ [room depth = 7.1 m; allows non-face-cover movement, sitting, dining etc within central aisle]

Diagram 2A: 6no chair/ couch Treatment space @2.575m layout

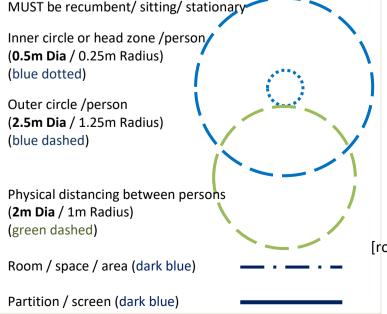


KEY: Social Spacing:

Any Person in health & care facility (red) MUST wear a Face Covering unless exempt

A Person exempt for agreed purpose (green)

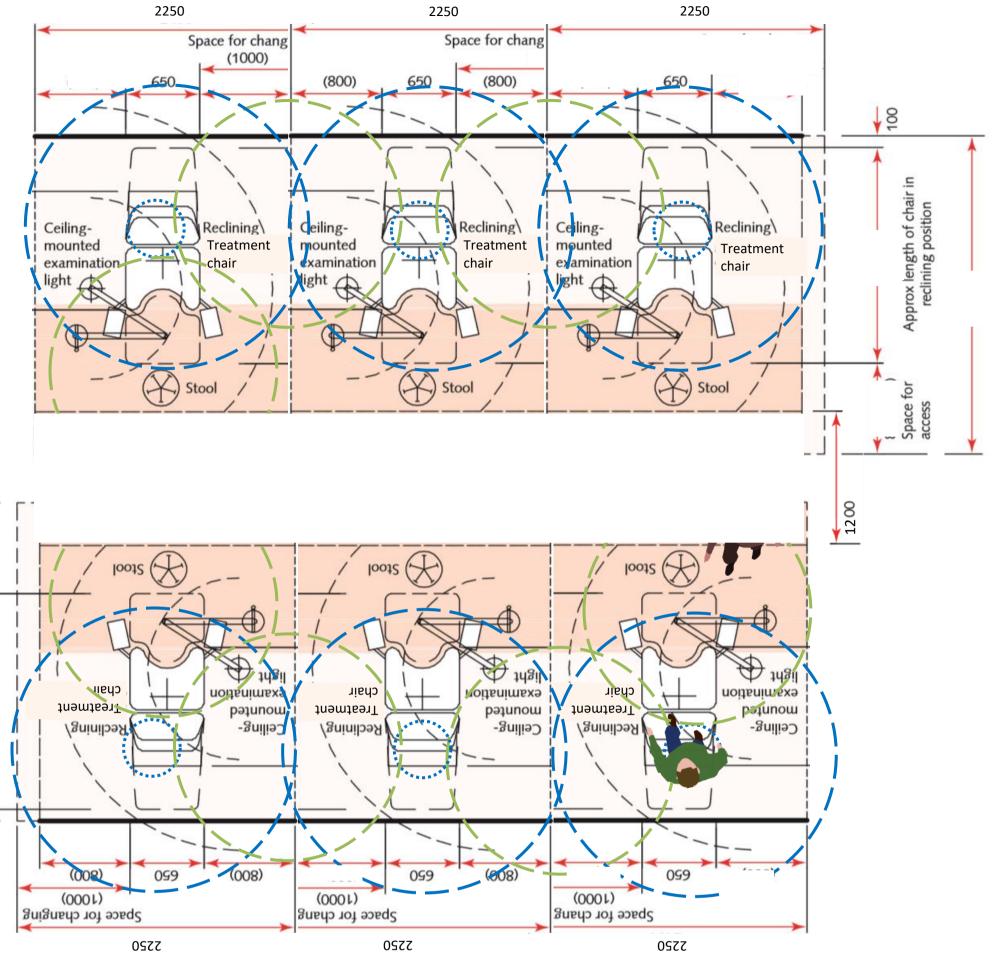
d) empt green)



Assumes ANY person likely to move within **<2m/ 6ft** of another person wears a Face Covering Area Calculation for 1 person bay: 2.45 x 2.6 m = **~6.5 m² / bay** Room/ space, incl ≥ 1.2m central aisle: 7.35 x 6.4 m = **~47 m² / 6** people [room depth = **6.4 m**; MAY allow non-face-cover movement etc in aisle, dependant on head positions]

Diagram 2B: 6no chair Treatment space @2.45m layout

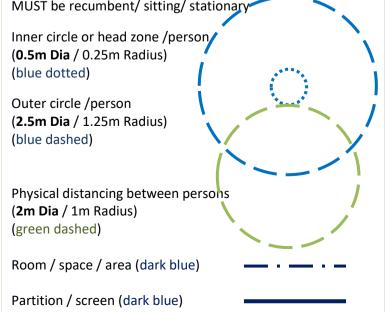
Fig 2C – 6no chair Treatment space @2.25m x 2.4m bay with 1.2m aisle layout:



KEY: Social Spacing:

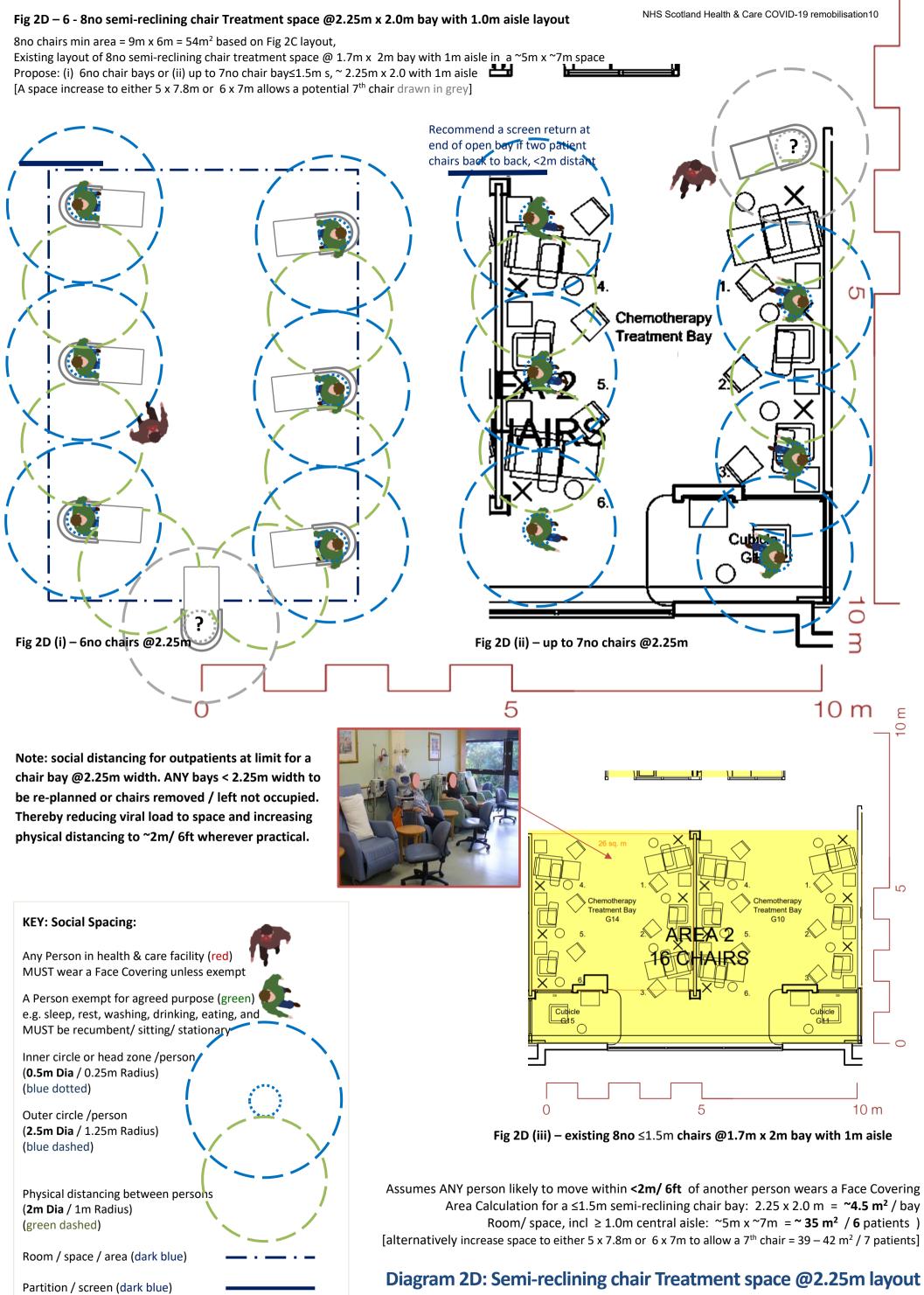
Any Person in health & care facility (red) MUST wear a Face Covering unless exempt

A Person exempt for agreed purpose (green) e.g. sleep, rest, washing, drinking, eating, and



Assumes ANY person likely to move within <**2m/ 6ft** of another person wears a Face Covering Area Calculation for 1 person bay: 2.25 x 2.4 m = **~5.5 m² / bay** Room/ space, incl ≥ 1.2m central aisle: 6.75 x 6.0 m = **~ 41 m² / 6** people [room depth = **6.0 m**; will NOT allow any non-face-cover movement etc in aisle] [note: recliner chair NOT fully recumbent as depth is reduced to 1.7m]

Diagram 2C: 6no chair/ couch Treatment space @2.25m layout



Area Calculation for a \leq 1.5m semi-reclining chair bay: 2.25 x 2.0 m = **~4.5 m²** / bay Room/space, incl \geq 1.0m central aisle: ~5m x ~7m = ~ 35 m² / 6 patients) [alternatively increase space to either 5 x 7.8m or $6 \times 7m$ to allow a 7th chair = $39 - 42 \text{ m}^2 / 7$ patients]

20200911 NHSSotland Health & Care COVID Remobilisation incl physical distancing diagrams v1-0

Pg 9 of 12

NHS Scotland HBN 00-03: Multi bed bay bedroom layout

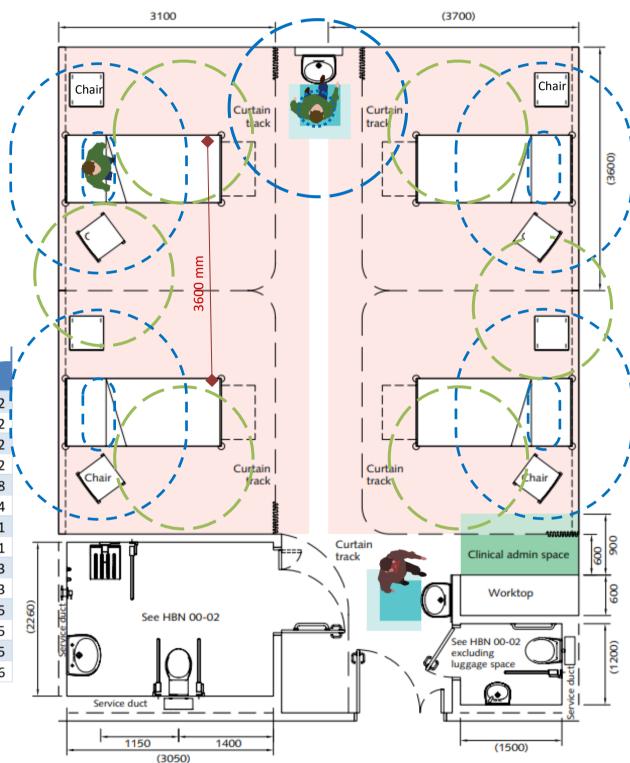
HBN 00-03 states 3.6m preferred width bay with 3.1m to curtain and 3.7m total depth. Central aisle is ≥1.2m between curtains. Dimensions are based on ergonomic requirements for equipment e.g. wheelchair/ hoist access, & ensuring legal compliance e.g. Equality & Manual Handling

Assume say 0.5m x 0.9m ellipse for patient head zone allowance on centre line of bed and starting 0.25m from wall; plus a 0.5m dia circle if sitting/ standing

- a 3.6m width bay, allows ≥2.7m physical distancing to adjacent patient (i.e. ≥ 2m and 6ft)
- a 2.7m width bay, allows **1.8 2.0m** physical distancing to adjacent patient (i.e. ≥ 6ft or 1.8m)
- a 2.4m width bay, allows 1.65 1.8m physical distancing to adjacent patient (i.e. ≤ 6ft or 1.8m), consider 1m screening e.g. locker or bed curtain
- a 3.1m depth bay plus say a 1.2m aisle, allows 5.9m physical distancing to patient across aisle; (a 2.75m depth bay with 0.8m aisle, allows 4.8m)

Fig 3 below is figure 2 multi-bed extract from Core guidance - Clinical and clinical support spaces (HBN 00-03); also in Adult in-patient facilities (SHPN 04-01)

Figure 2 Multi-bed room layout



Date		(m)	(m)	(sq.m.)
2013	HBN 00-03	3.6	3.7	13.32
2010	CEL(2010)27	3.6	3.7	13.32
2010	SHPN 04-01	3.6	3.7	13.32
2009	HBN 04-01	3.6	3.7	13.32
2008	CEL(2008)48	3.4	3.7	12.58
2002	HFN 30	3.6	2.9	10.44
2000	SHPN 04	2.9	2.9	8.41
1997	HBN 04 vol 1	2.9	2.9	8.41
1996	SHPN 40 Vol5	2.7	2.9	7.83
1995	HBN 40 vol 2	2.7	2.9	7.83
1992	SHPN 4	2.5	2.9	7.25
1990	HBN 4	2.5	2.9	7.25
1986	HBN 40 vol 1	2.5	2.9	7.25
1961	HBN 4	2.4	2.9	6.96

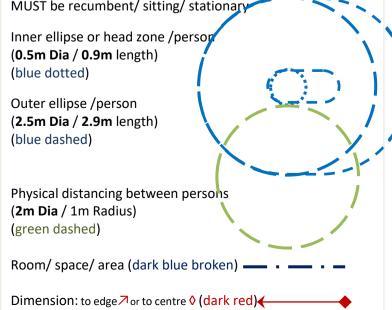
KEY: Social Spacing:

Any Person in health & care facility (red) MUST wear a Face Covering unless exempt

A Person exempt for agreed purpose (green) e.g. sleep, rest, washing, drinking, eating, and

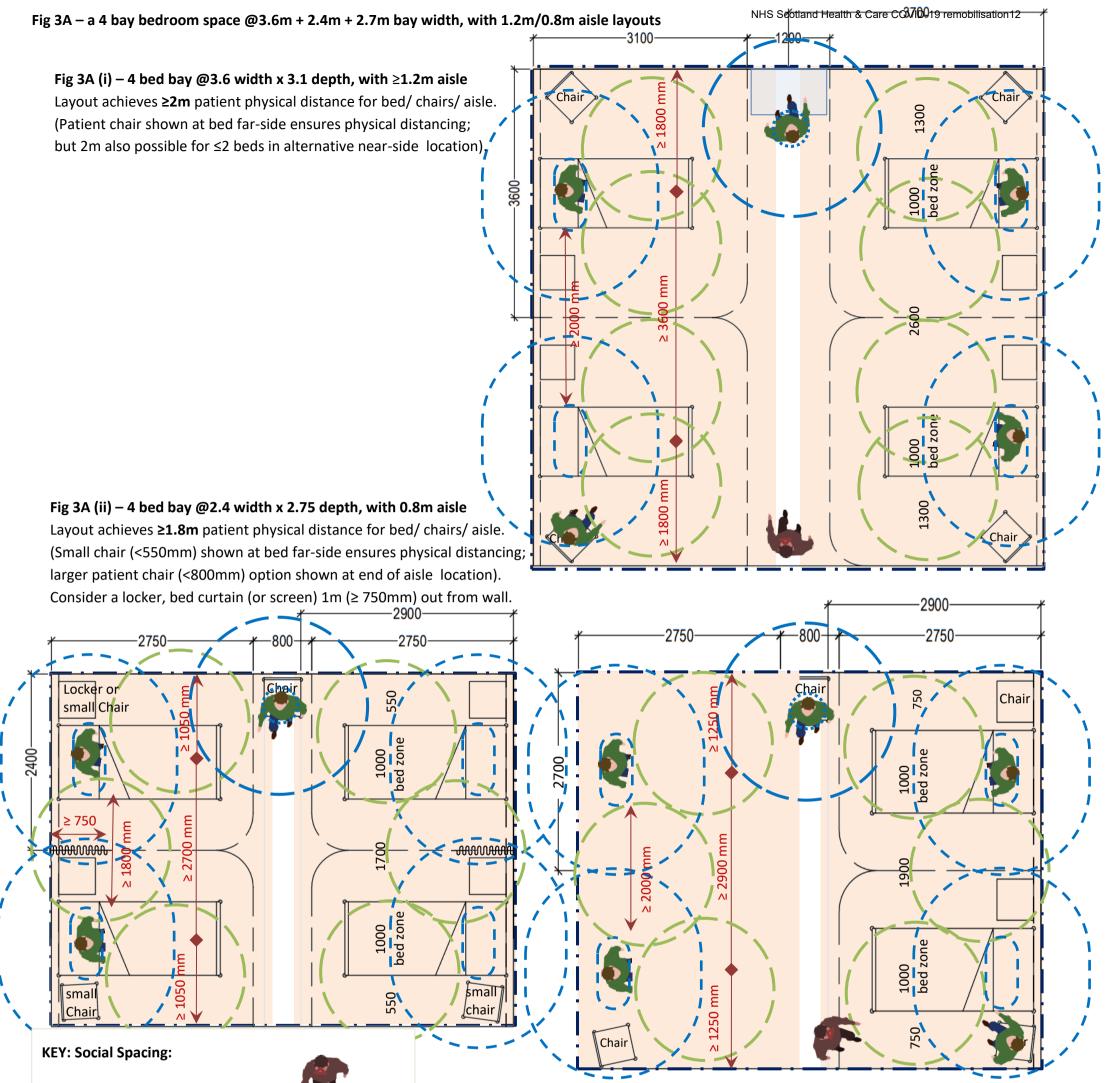


Fig 3 - HBN 00-03: 4 bay bedroom space @3.6m x 3.1m bay with ≥1.2m aisle layout



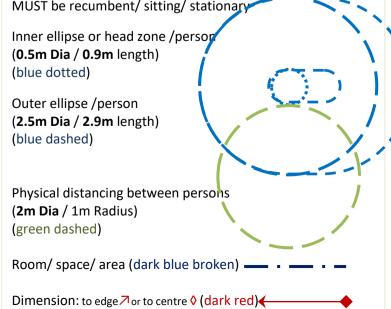
Assumes ANY person likely to move within <**2m/ 6ft** of another person wears a Face Covering Area Calculation for 1 bed bay: $3.6 \times 3.1 \text{ m} \ge 11 \text{ m}^2 / \text{ bay}$ Room/ space, incl $\ge 1.2\text{m}$ central aisle $\ge 53 \text{ m}^2 / 4$ patient [Room should allow non-face-cover movement within central aisle; as room depth = > 6 m]

Diagram 3: HBN 00-03 a Multi bed bay bedroom layout



Any Person in health & care facility (red) MUST wear a Face Covering unless exempt

A Person exempt for agreed purpose (green) e.g. sleep, rest, washing, drinking, eating, and Fig 3A (iii) – 4 bed bay @2.7 width x 2.75 depth, with 0.8m aisle Layout achieves ≥2.0m patient physical distance for bed/ chairs/ aisle. (Patient chair shown at bed far-side ensures physical distancing; option for



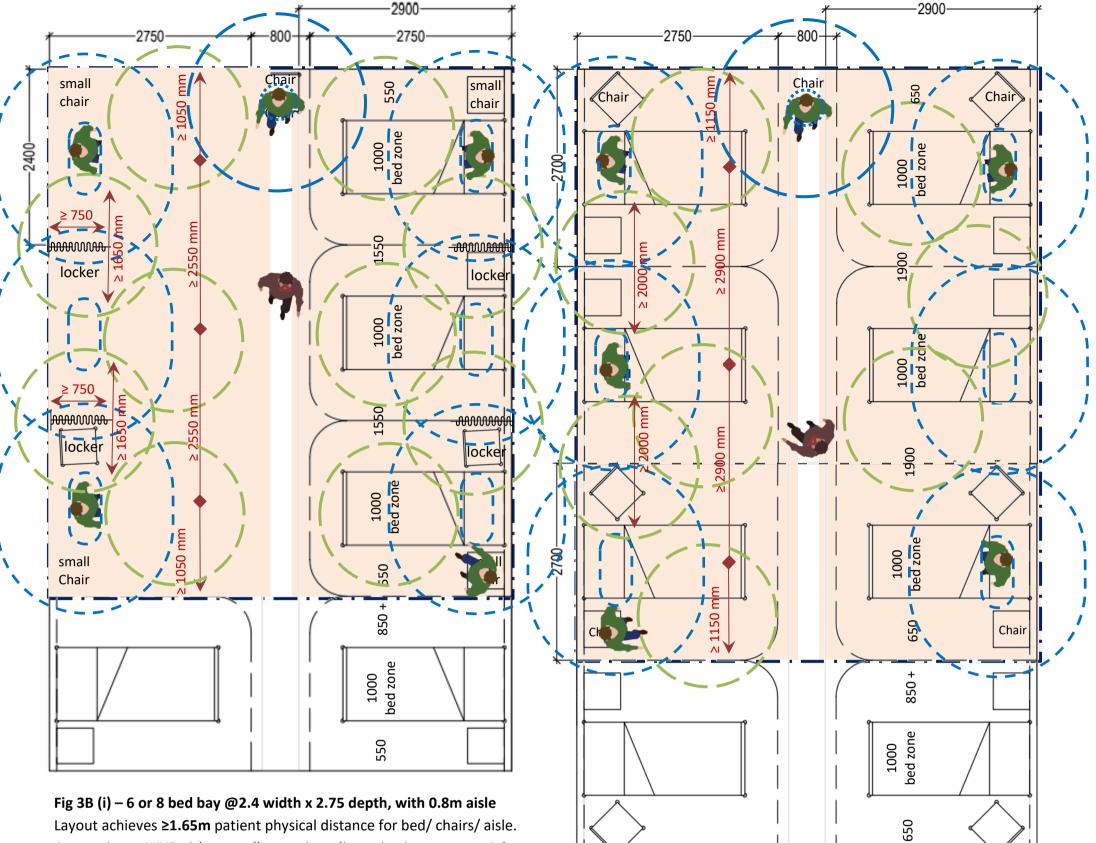
a patient chair/ dining at end of aisle is shown, but near-side not an option).

Assumes ANY person likely to move within <2m/ 6ft of another person wears a Face Covering Area Calculation for 1 bed bay: @2.7m = 7.4 m², or @2.4m = 6.6 m² / bay Room/ space, incl \geq 0.8m central aisle: @2.7m = 34 m², or @2.4m = 30 m² / 4 patient [Room should allow non-face-cover movement within central aisle; as room depth = > 6 m]

Diagram 3A: a 4 bay bedroom space @3.6m + 2.7m +2.4m layouts

Fig 3B – a 6 or 8 bay bedroom space @ 2.4m + 2.7m bay width, with 0.8m aisle layouts

NHS Scotland Health & Care COVID-19 remobilisation13



Layout achieves \geq **1.65m** patient physical distance for bed/ chairs/ aisle. An ensuite or WHB aisle may allow patient distancing increase to \geq 1.8m. (Small chair (<550mm) shown at bed perimeter, but none at centre beds. Larger patient chair (<800mm) option shown at end of aisle location). Consider a locker, bed curtain (or screen) 1m (\geq 750mm) out from wall. For 6 or 8 bed room @2.4m bays, consider reducing or not occupying by 1, or 2 beds, to reduce room total viral load, and to increase distancing.

Fig 3B (ii) – 6 or 8 bed bay @2.7 width x 2.75 depth, with 0.8m aisle Layout achieves ≥2.0m patient physical distance for bed/ chairs/ aisle. An ensuite or WHB aisle may allow an increase to patient distancing. (Patient chair shown at bed far-side ensures physical distancing; option for a patient chair/ dining at end of aisle is shown, but none for centre beds.

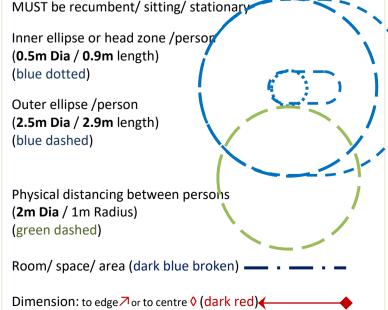
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Note: social distancing for bedroom at limit for a BED bay @2.4m width.



ANY BED bays < 2.4m width to be re-planned or beds removed / not occupied, to reduce viral load and achieve physical distancing of ~2m/6ft. (for couch/ chair bays, i.e. head zone: 0.5m Dia, see Diagrams in pages 5 - 9)

Assumes ANY person likely to move within <**2m/ 6ft** of another person wears a Face Covering Area Calculation for 1 bed bay: @2.7m = **7.4** m², or @2.4m = **6.6** m² / bay Room space, incl ≥ 0.8m central aisle: @2.7m = **51** m², or @2.4m = **45** m² / **6** patient [Room should allow non-face-cover movement within central aisle; as room depth = > **6** m]

Diagram 3B: a 6 or 8 bay bedroom space @2.4m + 2.7m layout