6. Improving patient flow: Optimising transit lounge use

A Timely Emergency Care Collaborative how-to guide for health services OFFICIAL



Department of Health



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ISBN 978-1-76131-737-8 (online/PDF/Word)

Available at Emergency care https://www.health.vic.gov.au/patient-care/emergency-care

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Introduction

The Timely Emergency Care Collaborative (TECC) aimed to reduce delays for patients needing emergency care in Victoria through improving hospital-wide patient flow.

The project involved 14 teams from hospitals across Victoria, as well as a team from Ambulance Victoria. The Victorian Department of Health delivered the project in partnership with the Institute for Healthcare Improvement.

The project ran from December 2022 until the end of June 2024. Almost every team showed significant improvements in the timeliness of emergency care, as measured by emergency department lengths of stay.

The project set out with a change theory of how to improve hospital-wide patient flow. This change theory was developed by drawing on international evidence, local and international expert input and the ideas of the participating teams.

Through the results of testing and the insights from participating teams, the change ideas that were found to be most impactful (feasible to implement, demonstrated improvement) were identified as 'high-impact change ideas'. These ideas have been written up as a series of 'how-to guides'.

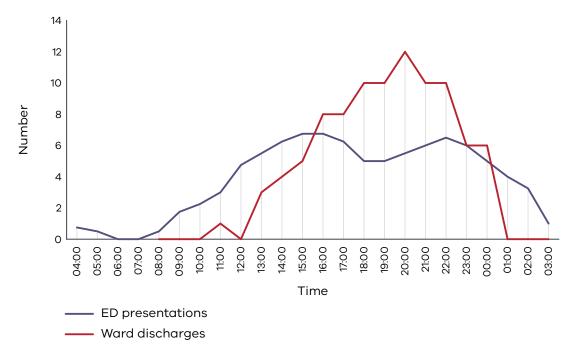
This guide is one of a series outlining each of these high-impact change ideas. All guides are available from <u>Emergency care</u> https://www.health.vic.gov.au/patient-care/ emergency-care> or by contacting <u>TEC2@health.vic.gov.au</u>. A summary of the overall change theory from the TECC can also be found on the <u>Emergency care</u> webpage ">https://www.health.vic.gov

The change theory and learnings from the TECC project continue to inform other departmental projects including the Timely Emergency Care (TEC) 2 Program.

Problem this change idea addresses

Presentations to emergency departments (EDs) typically follow a predictable pattern. Decisions to admit patients then follow, ideally within 4 hours of a patient presenting. However, discharges of patients from inpatient wards tend to be low in the morning and increase across the day peaking in the late afternoon (Figure 6.1).

Figure 6.1: Typical pattern of emergency department presentations versus ward discharges



Discharges don't match the emergency demand. Even if the number of discharges is the same as the number of admissions, the mismatch between when beds become available. This mismatch leads to pressure on the ED. The response is either to then leave the pressure to grow in the ED (and on the hospital ramp for patients arriving by ambulance) or to mitigate the problem by admitting patients to wherever there is an available bed. This results in patients being transferred to the wrong specialty or care group or ward, leading to:

- clinical teams doing 'safari' ward rounds (where rounding teams go all over hospital)
- patients being seen less frequently
- day-to-day care being provided by staff trained in different specialties.

The consequences of this affect the entire hospital (and beyond), leading to:

- longer inpatient stays
- poor care and outcomes
- staff feeling 'unsafe' (operating outside their area of expertise and knowledge)
- staff frustration and low morale.

Addressing the mismatch between admission demand and inpatient discharges is a core change concept for improving hospital-wide patient flow. Key to this is shifting the time of discharge to earlier in the day.

Overview of the change idea

Increasing discharges earlier in the day relies on a series of multidisciplinary team activities to streamline discharge decision making and communication. These key activities, used collectively, improve patient flow at both the ward and system levels. Recommended activities include:

- implementing afternoon discharge planning huddles
- involving patients and carers in planning and preparing for discharge
- optimising daily ward rounds to prioritise patients for discharge
- providing alternatives to a ward bed for patients who are ready for discharge and are waiting for transport (for example, transit lounges).

This chapter focuses on the last of these change ideas - Optimising transit lounge use.

Using a transit lounge to improve hospital-wide flow

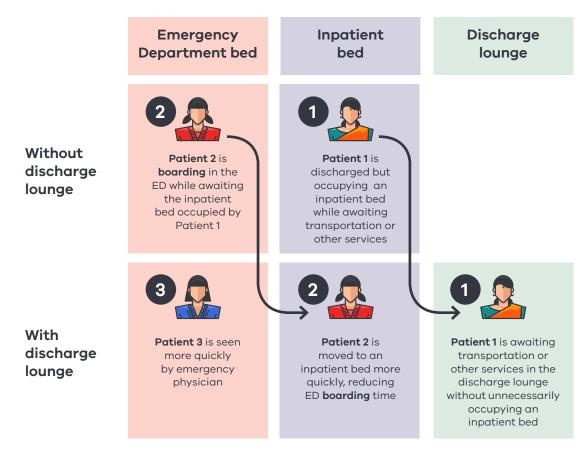
The effectiveness of transit (discharge) lounges in improving hospital patient flow is widely advocated across the US, UK and Australia, with patient flow improvements achieved and published by multiple centres (<u>Appendix 61</u>).

Transit lounges are primarily used to support the outward flow of patients on the day of discharge. Discharging patients from hospital requires coordinating multiple tasks to safely connect patients with ongoing community care. At the time of discharge, most patients are medically well and can be safely accommodated without close observation.

Transit lounges can accommodate patients while the non-clinical discharge tasks are being completed. This may also extend to final clinical tasks such as the final dose of antibiotics or other infusions. By completing these low-acuity tasks in the transit lounge, an acute medical or surgical bed can be vacated earlier, allowing the earlier admission of patients awaiting an inpatient bed in the ED.

The impact of using a transit lounge on patient flow is shown in Figure 6.2.

Figure 6.2: The impact of using a transit lounge on patient flow



Establishing a new transit lounge

1. Identify a suitable location for the transit lounge

The ideal location for a transit lounge is close to a hospital exit with easy vehicle access for patient transport. However, this is not always an option, so identify a location that best balances the requirements for both patients and staff. Consider the distance from the wards and to the hospital exit/transport, the 'attractiveness' of the space (a key deterrent for using a transit lounge is if both staff and patients see it as an undesirable place for a patient to be) and can be set up with the appropriate equipment and furnishings (refer below).

2. Decide the level of care to be provided

At discharge, most patients do not need clinical support and are waiting for pharmacy, allied health or transport before leaving hospital. This is an ideal cohort for a transit lounge.

3. Define admission criteria

Develop criteria to identify suitable patients. These criteria should align with your intended level of care and aim to be broadly inclusive with specific exclusion criteria to ensure safe and efficient flow. Aim to embed an expectation that all eligible patients will be discharged via the transit lounge. An example of admission criteria is provided in Figure 6.3.

Figure 6.3: Example of admission criteria from St Georges Healthcare, NHS



Note: TTO refers to discharge medications.

4. Develop a model of care

The model of care should define the elements outlined in Table 6.1.

Table 6.1: Elements of a transit lounge model of care

| Element | Description |
|----------------------------|--|
| Hours of operation | Align opening hours to support the goal of early morning discharges, which should be expected between 8:00 am and midday. Ideally, hours should extend to the early evening to enhance flow and support earlier capacity from afternoon discharges. |
| Staffing | Consider role types, number and seniority. |
| Equipment | Determine what is needed to support patient care (routine and emergency) and discharge tasks. As most patients need minimal care, aim to accommodate patients in comfortable chairs rather than beds with some form of entertainment (such as TV and magazines) to improve their wait. |
| Processes | Define referral and discharge processes, communication procedures and logistics. |
| | Your model of care should support both 'push' (referrals initiated by the ward) and 'pull' (referrals initiated by the transit lounge) to improve flow. The latter can involve the transit lounge team attending morning huddles or ward round meetings to identify patients who may be suitable for the lounge. |
| Roles and responsibilities | These should be defined for transit lounge staff as well as other staff who are involved (for example, ward nurses, pharmacists, transport). |

5. Recruit staff and acquire all equipment necessary to support your model of care

6. Build staff and system capability

- *Training*: Ensure leadership and operational staff get adequate training to implement your intended model of care. This includes clinical and logistic staff to meet care and transportation needs.
- *System*: Ensure your paperwork (or electronic medical record) is suitably designed to support your transit lounge process.

7. Develop and implement a communication strategy

- Identify key stakeholders including ward nurse unit managers, senior and junior medical staff, pharmacists, patients and carers and develop communication plans for each group that support the principle of all eligible patients being discharged via the transit lounge.
- For patients: Develop patient information in the form of brochures and signage.
- For staff: Communicate the value and wider impact of using a transit lounge (Figure 6.2) and provide information about the criteria and how patients will be appropriately supported in the lounge.
- Integrate identification of suitability into discharge planning documentation.

- Increase the intensity of promotion as the launch date approaches.
- 'Gamification' can encourage transit lounge use with friendly competition between wards. This approach also builds in ongoing communication about the transit lounge as results are shared and celebrated.

8. Furnish and prepare the lounge for opening

Consider using a theme or something fun to encourage staff and patients to embrace the transit lounge.

Increase use of an existing transit lounge

If you have an existing lounge, consider how it is operating and whether there is opportunity for improving its use. Factors that may impact lounge use include:

- changing needs of the patient population
- eligibility criteria
- capacity of the physical environment, equipment or staffing
- decreased awareness due to staff turnover or absence of standard processes for referral.

The following steps can be used to evaluate and improve transit lounge use.

1. Optimise efficiency and patient turnover

If your transit lounge is operating at capacity, review processes to identify any opportunities to reduce the time a patient needs to spend in the lounge. Observations and process mapping of tasks (for example, final medications, discharge paperwork, transport arrangements) may identify areas for improvement.

2. Expand eligibility criteria

Consider expanding the scope of eligibility for the transit lounge. This will increase volume but may mean changes to equipment and staffing. Common patient cohorts that can be considered are:

- patients requiring final IV antibiotics or infusions before discharge
- patients requiring placement of long-term IV access (for example, PICC lines)
- low-dependence nursing home patients awaiting ambulance transport.

Figure 6.4 outlines examples of the different eligibility criteria and scope of transit lounges typically seen.

| Patient eligibility | Completely self-sufficient | | Some medical needs (e.g. using O₂) | |
|---------------------------|--|----------|---|---|
| Patient identification | Screening performed by unit ("push" to lounge) | | Screening performed by centralised team ("pull" from floor) | |
| Hours | Activated only as needed | | Standard daily hours of operation | |
| | No staffing | Volur | nteer | PCT or RN |
| Staffing | | Part-tim | e Flo sha | Full-time |
| Clinical services | No or limited servicesRN discharge consultations, prescription durable medical equipment delivery, etc | | | |
| Other services | No or limited Scheduling follow-up appointments, services arranging transportation, etc. | | | |
| Space | Shared space (e.g. day surgery lobby) | | Dedicated/enclosed space | |
| Amenities | No or limited amenities (e.g. snacks) | | Meals; parking/meal vouchers for family | |
| | Many US hospitals | | М | lany UK hospitals |
| | Narrower eligibility criteria Fewer clinical services | | | eligibility criteria e clinical services |

Figure 6.4: The scope of transit lounges typically seen in the US and UK

3. Increase referrals

Track transit lounge use to see if all eligible patients are being referred to the lounge. A snapshot audit of recent discharges can help. If there is a gap in referrals, work out the cause and determine the best approach. Causes might include the following:

- Lack of awareness: Increase promotion, targeting lower referring units; 'gamify' referrals so there is competition between wards and recognition for increased referrals.
- **Incompatibility of the service**: Review the eligibility criteria and model of care. Adapt it to meet the needs of the patient population.
- Hesitance to refer: Understand the reasons for reluctance to refer to the lounge:
 - Is it not seen as a patient-friendly environment? Get feedback from patients and staff about their experience of the lounge and identify opportunities for improvement.
 - Is it felt to be 'unsafe'? A common view is that patients are safer on the ward than in a transit lounge. Understand the concerns and find opportunities to increase confidence in the service. These might include running tours, outlining the staffing models and sharing data about the experiences and safe discharges of patients.

To support patient flow, adopt and promote the principle that all eligible patients are referred to the transit lounge.

How to test this change idea

The Plan-Do-Study-Act (PDSA) framework offers guidance for testing these change ideas. This framework uses rapid cycle tests to quickly learn and adapt change ideas. As confidence in the idea increases, cycles can be longer and tested under different conditions. The guidance below focuses on the first testing cycle. Plan extra test cycles ahead of time so there is continuous testing and adaptation of the idea until it is ready for permanent implementation.

For more information about PDSAs refer to the Institute for Healthcare Improvement website https://www.ihi.org/how-improve-model-improvement-testing-changes.

Before testing

Understand your current state

If you already have a transit lounge, it can be helpful to understand your current use and the perceptions and experience of staff and patients about the lounge before planning to test changes. Some suggested ways to do this are:

- Conduct data analysis: Review data from the past few weeks to determine overall lounge use (occupancy and throughput of patients) and appropriateness of referrals (compare eligible patient discharges with the number that were referred to the lounge).
- Observe current processes including discharge planning (to understand where decisions are made to refer someone to the lounge), the referral process, patient transition to the lounge and tasks completed while a patient is in the lounge. Process mapping and time stamp data can be used to find areas for improvement.
- Speak with patients, carers and staff to understand experiences and perceptions about the lounge.

Design your test of change

Refer to other chapters for guidance on how to prepare for a new lounge or identify and plan an opportunity for improving an existing lounge.

Decide when to begin testing

Allow time to promote the change (a new lounge or a change using an existing lounge). Remember to involve patients and carers in developing any communication materials for them.

Plan

Plan how long to run your new test

Each day should be considered its own 'test of change'. Any changes made to the lounge (or after setting up a new lounge) should be reviewed daily for opportunities to refine and improve how it is working. It can be helpful to think of each day as a new PDSA cycle. After a few weeks, complete a more detailed review of the approach. By then, the team will have enough data to understand whether the change is leading to an improvement.

Plan for data collection

Establish a plan for collecting data before testing begins. Recommended measures to consider are outlined in the next section.

Define clear operational definitions for measures. Outline who will be responsible for collecting (or extracting) data and how often. Work out how the data will be analysed and by whom.

It is important to also plan to regularly get feedback from patients and staff.

For patients, a simple survey can be left in the lounge for them to complete. However, surveys are not always an effective tool, so planning to ask patients a few questions about their experience while in the lounge can be useful in getting early insight into opportunities for improvement.

For staff, a huddle at the end of the transit lounge 'day' to get feedback from those who work in the lounge can be effective. Attending ward huddles and seeking feedback from referring staff will also provide an opportunity to rapidly identify opportunities for improvement.

Do

Start testing

Run the test of change according to your plan.

Collect data and feedback

Ensure data is collected according to your data collection plan.

Capture feedback from staff, patients and carers through the full testing cycle (for example, a few weeks).

Study

At the end of each day, identify any changes that can be made immediately to improve the transit lounge or associated processes.

At the end of the full testing cycle, gather the team to review the data and feedback. Identify what is working well and opportunities for improvement. Develop ideas for any adjustments that could be made to improve transit lounge use and experience.

Act

Decide whether to continue testing and if any adjustments should be made to the transit lounge model. Begin the next PDSA cycle accordingly.

Note that the intent should always be to continue testing unless:

- the model was determined to be inappropriate (unsafe, unsustainable or no confidence that it would lead to improvement), or
- an alternative approach has been identified that may better address the problem, or
- the model has been tested long enough that it is ready to transition into permanence (implemented as the new standard way of working).

Once the new transit lounge model is felt to be working well, ensure ongoing monitoring approaches are in place to track sustainability.

How to measure if the change is leading to improvement

The following measures could help you understand if the new or updated transit lounge model is improving bed capacity on the wards. Many of these measures may need to be collected manually for a short period while testing and refining the transit lounge model. Outcome measure 1 and balancing measure 1 should be monitored continuously.

For more information on measurement for improvement, refer to the <u>Institute</u> for <u>Healthcare Improvement website</u> https://www.ihi.org/how-improve-model-improvement-establishing-measures>.

| Measure | Metric | Operational definition | Why use this measure |
|----------------------|---|--|---|
| Outcome measure 1 | Mean time of patient admission | As per metric | The aim of increasing transit lounge use is to release beds for new patients to be admitted. If the transit lounge is operating well, the time of admission should shift to earlier in the day as beds are released earlier. |
| Outcome measure 2 | Time patients leave the ward | As per metric | This is a direct measure of the intended outcome of the transit lounge (for patients to leave the ward earlier). |
| Process measure 1 | Transit lounge referrals | Number of referrals to the transit lounge | Assesses demand for the transit lounge. |
| Process measure 2 | Percentage of eligible patients referred to the transit lounge | As per metric | Determines if staff are identifying and referring all eligible patients. |
| Process measure 3 | Transit lounge throughput | Number of patients using the transit lounge per day | Assesses lounge use. If the number of referrals is higher than the throughput then opportunities to increase capacity or optimise use of the lounge should be considered. |
| Balance measure 1 | Mean time patients spend in the transit lounge | As per metric | A potential unintended consequence of an attractive transit lounge can be patients not being in a hurry to leave! |
| Balance measure 2 | Patient experience | Recommend using a Likert (1–5) survey scale | Increased use may have a negative impact on patient experience. |
| Balance measure 3 | Readmissions | Readmissions within 28 days of discharge from the transit lounge | Ensure discharge via the transit lounge is not having a negative impact on discharge quality. |

Appendix 6.1: Supporting evidence

Franklin et al. (2020) completed a meta-analysis to determine the effectiveness of the inpatient discharge lounge in mitigating ED overcrowding. This article featured 10 peer-reviewed articles and 17 grey-literature articles that measured the effectiveness of discharge lounges. All included papers were single-site descriptive case studies. Of the reviewed articles, 2 reported quantitative improvement in patient flow (Table 6.2).

Table 6.2: Published papers reporting quantitative improvements in patient flow as a result of using a transit lounge

Publication: Pollart, 2018

| Metric | Pre | Post |
|---|----------|----------|
| Time from ordering a discharge to patient departure from their bed (all patients) | 254 mins | 158 mins |
| Time from ordering a discharge to patient departure from their bed (transit lounge–eligible patients) | N/R | 105 mins |

Publication: Hernandez, 2014

| Metric | Pre | Post |
|---|----------|---------|
| Time from ordering a discharge to patient departure from their bed (all patients) | 136 mins | 83 mins |
| Time from ordering a discharge to patient departure from their bed (transit lounge–eligible patients) | 126 mins | 84 mins |
| Discharges before noon | 33% | 42% |
| ED stays over 6 hours | 25% | 16% |

Woods et al. (2020) showed improved patient flow and decreased hospital overcrowding in a large public tertiary care hospital in the US by improving the efficiency of inpatient discharge lounges (<u>Figure 6.5</u>). Key changes that were implemented were:

- **Education** to ensure ward staff were aware of the availability and capability of the lounge. Visual prompts were also installed to encourage staff to consider the lounge for all discharges.
- **Proactive 'pull'** of patients from the wards by the transit lounge staff with discharge tasks completed in the lounge.

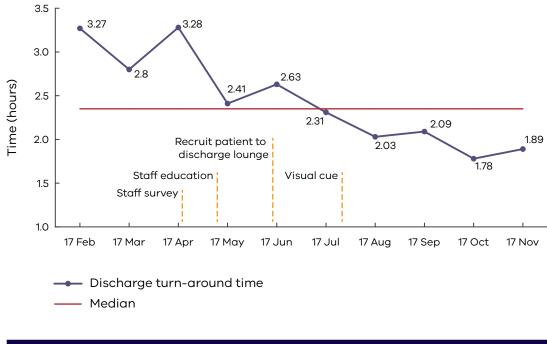


Figure 6.5: Impact of improved discharge lounge efficiency on patient flow in a large tertiary hospital

| Measure | Pre | Post |
|-----------------|------------|------------|
| Lounge use | 18% | 36% |
| Turnaround time | 3.27 hours | 1.89 hours |

Source: Woods et al. 2020

Case study: Eastern Health, Box Hill

| Organisation | Eastern Health, Box Hill |
|--------------|---|
| Service type | Tertiary metropolitan health service |
| Problem | Transit lounge was not being used to its full potential, leading to beds on the ward being occupied by patients who were ready for discharge and delays in emergency patients being transferred to a ward. |
| Change idea | Make transit lounge the default destination for discharges. |
| Changes | Refreshed exclusion/inclusion transit lounge criteria, allowing lower functional level/higher complexity patients (Appendix 6.2). Communication with patients and families about the transit lounge on admission and subsequently during nursing care and medical rounding (Appendix 6.3). Identified all confirmed and predicted discharges at the afternoon ward huddle the day before. |
| | Pre-booked all confirmed and predicted discharges for the transit lounge. Enhanced nursing and transit lounge communication using MS |
| | Teams and patient flow manager. |
| Measures | Outcome measure (see <u>Chart 1</u>): |
| | Early discharges Discharges on the test ward by 10:00 am increased from an average of 6.8 to 8.75 (29% increase) |
| | Process measure (see <u>Chart 2</u>): |
| | Use • Percentage of patients from the test ward discharged via the transit lounge increased from an average of 45% to 62% |
| Key enablers | Foundational transit lounge work completed during the first test of change included refreshed exclusion/inclusion criteria (allowing low functional level/higher complexity patients), active promotion of transit lounge across hospital, and transit lounge nursing staff 'pulling' patients from wards daily. Designated patient service attendant to transit lounge to support increased and timely transfer of patients. Engaged medical, nursing and transit lounge teams. Complemented by other change ideas occurring such as 3:00 pm ward huddle. |

Contact: Improvement team, Improvement@easternhealth.org.au

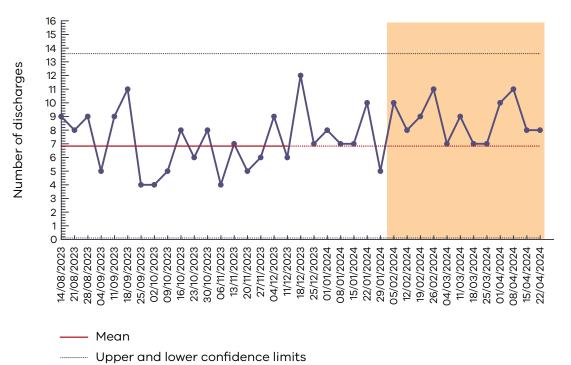
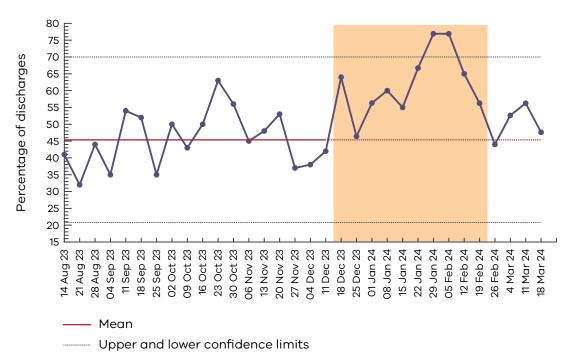


Chart 1: Discharges by 10 am - Ward 6.2 - Individuals chart





Appendix 6.2: Transit lounge admission criteria

Organisation: Eastern Health, Box Hill

Box Hill Hospital Transit Lounge Admission Criteria

Utilisation of transit lounge facilitates timely access to beds for incoming admissions, both emergency and elective. All patients requiring discharge must be considered for Transit lounge.

Patients that meet the below criteria should be discharged via transit lounge:

- Discharging patients awaiting pick up/medications expected to be of >20 minutes' duration are to be transferred to Transit lounge.
- Where patient transport is booked, pick up will be coordinated through transit lounge.
- Patient must be medically stable and be transferred with the current history and completed Intra-hospital transfer tool (EH401500). All documents for external transfer must also be completed prior to patient transfer to transit lounge, for example discharge summaries, medications and Inter-Hospital Transfer tool (EH275800).

Transit Lounge Accepts

- Bed/Trolley bound patients space available
- Incontinent Patients
- Patients that require IV antibiotics/iron infusion prior to discharge
- Patients awaiting HITH/PAC final assessment
- Diarrhoeal Illness i.e. Gastro or active Clostridium difficile infection subject to single room in TL availability
- Covid positive patients subject to single room availability
- Please contact Transit Lounge on the extension numbers below to confirm capacity as site limitations apply.

Exclusion Criteria

- Severely agitated and confused*
- Any illness requiring Airborne transmission based precautions i.e. TB, Chickenpox, Measles. For Covid, see IPAC considerations section.
- Bariatric Patients requiring hoist transfers

*Box Hill Transit Lounge can accept low risk BOC patients. Please contact Transit Lounge team prior.

Hours of Operation: BHH 0800—1700 Accepting patients from 0800 to 1630

Please call Transit Lounge on 53570 / 53818 to discuss your patient/book a space/ coordinate transfer

On PFM please have the transfer destination request set the BHH Transit Lounge

IPAC Considerations

Patients requiring transit lounge **can be accepted** for the following conditions <u>providing</u> requirements can be met.

Please contact your sites Transit Lounge before transferring any patient with infectious precautions.

Contact Precautions:

Multi-Resistant Organisms i.e MRSA, VRE, CPE other resistant organisms.

- Patient is managed in own cubicle/patient zone
- If the patient has wounds that are infected/colonized they are contained and covered
- A general clean of area is undertaken once patient has been transferred

Diarrhoeal Illness i.e. Gastro or active Clostridium difficile infection

- Single room in BHH transit lounge must be available.
- Ward must discuss with TL team prior

Droplet Precautions:

Influenza

- The patient has had a minimum 3 days of treatment dose of Tamiflu
- The patient can be separated by at least 1 meter from other patients and where possible curtains drawn between cubicle/patient zones
- The patient must remain in their cubicle/patient zone
- The patient is able to practice good cough etiquette i.e. Cover cough/sneeze, dispose of tissues into rubbish receptacle followed by hand hygiene with Alcohol based rub
- Staff must wear a surgical mask if going within 1 meter of the patient
- Staff and Volunteers must adhere to strict hand hygiene before and after touching the patient
- A general clean of area is undertaken once patient has been transferred

Covid positive

- Single room in BHH transit lounge must be available with air scrubber inside and out
- Ward must discuss with TL team prior
- Staff must be in the required PPE

Patients with the following conditions cannot be accepted:

• Any illness requiring Airborne transmission based precautions i.e. TB, Chickenpox, Measles

Appendix 6.3: Poster for consumers

Organisation: Eastern Health, Box Hill



Acknowledgement

The Department of Health thanks Eastern Health, who have contributed their improvement strategies and data to show the impact of transit lounges in the Victorian context.

Chapter references and further reading

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