SESLHD PROCEDURE COVER SHEET

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EXECUTIVE SPONSOR or EXECUTIVE CLINICAL SPONSOR	Clinical Stream Director, Critical Care and Emergency Medicine
AUTHOR	Clinical Stream Manager, Cardiac/Respiratory and Critical Care
POSITION RESPONSIBLE FOR THE DOCUMENT	Suzanne Schacht Clinical Stream Manager, Cardiac/Respiratory and Critical Care Suzanne.schacht@health.nsw.gov.au
FUNCTIONAL GROUP(S)	Disaster Management
KEY TERMS	Seasonal influenza, Intensive Care Unit, Pandemic
SUMMARY	Describes the Critical Care Services key operational processes related to escalation, triage, alternative models of care, staff training and support, communication and coordination.

1. POLICY STATEMENT

As per [NSW Health Policy Directive PD2010_028 - Influenza Pandemic – Providing Critical Care,](#) South Eastern Sydney Local Health District (SESLHD), winter bed strategy for critical care services includes an escalation plan and management of patients with suspected and/or confirmed influenza. The purpose of the procedure is to provide direction to the delivery of critical care services during an influenza pandemic. The escalation plan will enable critical care services to surge effectively during an influenza pandemic when demand for intensive care services exceeds normal supply.

Associated Policies and Guidelines
- [NSW Health Influenza Pandemic Plan - PD2016_016](#)
- NSW Health Guideline GL2018_008 - Mass Vaccination clinics during an Influenza pandemic
- [NSW Health Policy Directive PD2020_017 - Occupational Assessment, Screening and Vaccination Against Specified Infectious Diseases](#)

Agency for Clinical Innovation:
- NSW adult intensive care services pandemic response planning
- Adult intensive care workforce report in COVID-19 pandemic
- ECMO during COVID-19
- Renal replacement therapy in the ICU during COVID-19 pandemic
- Intrahospital transfer of COVID positive and suspected COVID positive

https://aci.health.nsw.gov.au/covid-19/communities-of-practice

COVID-19 & Infection Control Resources:

Clinical Excellence Commission Resources COVID-19:
- COVID-19 Infection-19 Infection prevention and control manual
- Respiratory protection program
- Health worker safety

https://www.cec.health.nsw.gov.au/keep-patients-safe/COVID-19/COVID-19-IPAC-manual

2. BACKGROUND

Each winter, there is an increase in utilisation of critical care services related to influenza-like illness. As critical care capacity and ventilation devices are both a finite resource this procedure describes the key operational processes aimed at achieving an effective and equitable response to the need for intensive care services.

3.   **CRITICAL CARE ESCALATION PLAN**
     SESLHD adult critical care influenza escalation plan is based on NSW Health policy Directive PD2010_028 - Influenza Pandemic – Providing Critical Care. In addition to the LHD escalation plan:

- As part of the facility emergency /disaster management committee planning and infection control preparations, each healthcare facility controller is to ensure the facility is prepared for an increase in healthcare service demand as a result of influenza.

- Each facility will develop a local critical care influenza escalation plan to ensure that critical care services are able to surge effectively and that equitable access is maintained. To ensure currency the facility critical care influenza escalation plan should be updated on an annual basis, preferably by March every year (in preparation for the demand for critical care beds associated with influenza / winter).

- As part of the plan each facility must prepare an inventory of physical bed capacity and an inventory of equipment to inform the local and district response. Key information to revise annually in the facility escalation plan is listed in APPENDIX A.

- Each healthcare facility controller, in conjunction with the Director of Intensive Care is to liaise and report to the Director of Clinical Services on critical care utilisation and as required liaise with SESLHD Health Services Functional Area Coordinator (HSFAC) and NSW Ministry of Health in relation to deployment or reallocation of health care resources.

4.   **RESPONSIBILITIES**
4.1 **Intensive Care Services will:**

- Monitor critical care service demand and advise Healthcare Facility Executive on need to implement the local influenza escalation plan. The trigger being either an increase surge in intensive care activity or an increase in influenza like cases.

- Provide advice on skills and competencies required for deployed workforce as per the SESLHD escalation plan.

- Consult with NSW Ministry of Health / NSW Intensive Care Services Network (during a mass pandemic where intensive care demand overwhelms capacity) and develop alternative models of care and advise Director of Operations and Facility Controller.

- Activate alternative model of care as directed by Director of Operations and Facility Controller.

- Appoint a critical care coordinator to collate information and provide reports to the Facility Controller, Director of Operations, LHD HSFAC and NSW Ministry of Health.

4.2 **Facility General Managers and Facility Controllers will:**

- Ensure each facility's Critical Care Influenza escalation plan is annually revised.
- Activate healthcare facility Critical Care Influenza Escalation plan
- Liaise with Facility Patient Flow Manager about bed management in particular prioritising ward transfer for any intensive care patient cleared for ward transfer

- Monitor and provide updates to the Director of Nursing and Midwifery on resource utilisation and surge activity as per the critical care influenza escalation plan.
- Develop strategies to redeploy resources to maintain essential services and meet pandemic services requirements.
- Receive advice from Director of Nursing and Midwifery (according to escalation phase) re authorising opening additional beds, redeployment of additional staff, deferring elective surgery.
- Liaise with Private Health care facilities.

Note: The responsibilities described will change when NSW HEALTHPLAN is activated. Following activation of HEALTHPLAN, all NSW Health and other health service resources including personnel will be available to the State Health Services Functional Area Coordinator (HSFAC) for the purposes of this plan. As intensive care units resources are currently managed on a state-wide basis via the Aero-medical Retrieval Service, the State Medical Commander is expected to undertake this responsibility under the direction of the State HSFAC.

5.   DEFINITIONS

Patient Flow Portal: NSW web based information system which provides an overview of ICU bed availability across NSW including intensive care bed status, estimated date of discharge, requests for ward transfer, nursing dependency and mechanical ventilation status.

Healthcare Facility Controller: Nominated position at a healthcare facility level responsible for emergency management planning and operations. The Healthcare Facility Controller is the initial point of contact within a healthcare facility for an emergency and notifies the healthcare facility Executives and LHD HSFAC of any emergencies that may require a LHD coordination or support.

HEALTH PLAN: is the NSW Health Services Functional Area Supporting Plan (NSW HEALTHPLAN) to support the NSW State Emergency Management Plan (EMPLAN).

Health Services Functional Area Coordinator (HSFAC): An appointed position at Local Health District level that has the delegated authority of the LHD Chief Executive to coordinate and commit LHD resources for the response to, and recovery from, an emergency. The LHD HSFAC is the initial point of contact within a Local Health District for an emergency and notifies the State HSFAC of any emergency that may require State-level coordination or support under the NSW HEALTHPLAN.

Local Health Districts (LHD): established under the Health Administration Act 1982 to provide health services to the residents within their geographical boundaries. A Local Health District is responsible for the administration of NSW Health's policies and responsibilities within those geographical boundaries.

Surge Capacity: The maximum patient load that a hospital or medical system can handle. During a health emergency, hospitals must convert quickly from their current care capacity to surge capacity. Surge capacity is managed through a re-prioritisation of health care needs to provide essential services to mass casualties or increased presentations in

a pandemic e.g. cancellation of elective surgery, diversion of patients with minor complaints or early discharge of hospitalised patients.

6.   PROCEDURE

6.1   SESLHD Intensive Care Services Influenza Escalation Plan

- Severe influenza pandemics will have a substantial impact on intensive care resources (PD2010_028 Influenza pandemic – providing critical care). The following Plan provides an escalation process based on a phased increase in demand for intensive care bed, workforce and equipment.

- The surge levels correspond to strategies that should be considered to meet an increase in demand.

SESLHD Intensive Care Services Escalation Plan

Surge Level	Strategy	Responsibility	Escalation of Issues	Notes
1.Pre-Surge ICU occupancy close to 100% of funded bed capacity	**Normal**			
Communication and Coordination	Usual communication & escalation processes to ensure effective critical care bed usage	Facility IC Director/NM & Patient Flow Manager		MOH 2018 – Infectious disease alerts http://www.health.nsw.gov.au/Infectious/alerts/Pages/default.aspx
Creating ICU Capacity	All funded ICU/HDU beds are operational Exit blocked patient/s are prioritised for ward transfer	Facility IC Director and NM/NUMs and Facility patient flow manger.	Facility Executive	Patient Flow Portal: ICU bed status is updated as changes occur or at least every 4 hours.
Workforce Protection	Annual Influenza vaccination program Refer to Facility Critical Care Influenza Escalation plan for the process of managing and treating clinical and non clinical ICU staff with symptoms of influenza.	Facility IC Director and NM/NUM		NSW Health Policy Directive PD2020_017 - Occupational Assessment, Screening and Vaccination Against Specified Infectious Diseases
Workforce	Identify staff with critical care skills or experience who could be deployed to ICU/HDU (i.e. staff with previous critical care experience / RNs who have rotated through critical care)	DON in conjunction with ICU NM/NUM		
Critical Care Inventory	Identify /develop a facility inventory of bed spaces that could accommodate a ventilated intubated patient (i.e. recovery, peri-operative)	DON in conjunction with Facility Equipment Officers and/or Intensive Care Equipment Managers		NSW Health Policy Directive PD2010_028 - Influenza Pandemic - Providing Critical Care

Surge Level	Strategy	Responsibility	Escalation of Issues	Notes
	Develop and maintain a facility inventory of essential critical care equipment	Intensive Care Equipment Managers		
Education Resources	Develop fast track critical care core learning resource for supplementary non-ICU trained staff deployed to ICU.	ICU Educators	ICU NM/NUM	ICU learning resource to include: • ABCDEFG • Hypoxia & O2 therapy • Mechanical ventilation • Hemodynamic monitoring • Arrhythmia interpretation • Standard Infection Prevention Precautions
Infection Control	Clinical staff and support staff to be competent in donning and removing PPE	ICU Educators and Infection Prevention and Control staff		NSW Health Policy Directive PD2017_013 - Infection Prevention and Control Policy
	Fit checking of P2 masks for all staff required to wear PPE. Maintain register of all staff trained in the above.	Facility IC Director and NM/NUM		
	In preparation for winter ensure all critical care staff are vaccinated for influenza	Facility IC Director and NM/NUM		NSW Health Policy Directive PD2020_017 - Occupational Assessment, Screening and Vaccination Against Specified Infectious Diseases
Waste Management and Cleaning	Usual cleaning arrangements appropriate to critical care environments.	Environmental Cleaning Mangers and ICU NM/NUMs		Cleaning protocol should include frequency and method of environmental decontamination
Security	Normal arrangements			

Surge Level	Strategy	Responsibility	Escalation of Issues	Notes
2. Surge 5-10% over funded ICU Bed base	**Minor Surge**			
Communication and Coordination	Provision of influenza status updates outlining issues and facility response to critical care bed demand.	GM / ICU Director		NSW Health Influenza preparedness website / Influenza alert & recent incidents
	Increase in frequency of Public Health Reporting Emergency Department Surveillance data i.e. Emergency Department daily flu presentations	Biopreparedness Epidemiologist Public Health Unit		
Creating Intensive Care Bed Capacity	Open additional non-commissioned ICU bed spaces Commence early discharge of patients to home care where appropriate Liaise with private health facilities to put cooperative service agreements on alert	Director of Clinical Services in conjunction with ICU Director ICU Director/On duty Intensivist MOH/Chief Executive/ General Managers		NSW Health Policy Directive PD2010_028 - Influenza Pandemic - Providing Critical Care
Workforce Protection	ICU staff absenteeism monitored by line manager	DON In consultation with ICU NM/NUM		
Increasing Workforce	Increase nursing workforce to meet demand.	DON		1 x additional ICU bed per week equates to14x 12 hr nursing shifts
Inventory	Ensure availability of ventilator and other consumables to meet demand in activity.	ICU Director & ICU Equipment Manager		

Surge Level	Strategy	Responsibility	Escalation of Issues	Notes
Workforce Education	Continue education sessions for supplementary nursing staff identified for deployment to ICU. Continue education for cleaning and support staff.	ICU Educators	ICU NM/NUM	
Infection Control	Isolate influenza patients if possible or cohort infectious patients. Avoid nebulisation of medications in infectious patients	ICU Director and NM/HDU & Infection Prevention & Control staff		
Waste Management and cleaning	Increase cleaning and waste collection schedules	ICU NM and Environmental Cleaning Managers		
Security	Review normal requirements, plan to increase service when required			
3. Surge 11-20% over funded ICU bed base	**Moderate**			
Communication	Increase communication strategies. Regular staff briefings.	General Managers		
Creating ICU Bed Capacity	Where clinically appropriate defer complex elective surgery requiring post op ICU/HDU management.	ICU Director, Surgeons, facility Executive	LHD Executive SESLHD HSFAC	Estimated planned ICU activity equates to 30% of all ICU activity (NSW Health/Health Information Exchange 2007/08).
	Progressively convert HDU beds to ICU beds	ICU Director/NM		
	Activate Facility Surge Plan to convert non ICU areas (capable of managing ventilated patients) to satellite ICUs i.e. recovery, peri-operative and respiratory units).	ICU Director and NM/NUM, Facility Executive		

Surge Level	Strategy	Responsibility	Escalation of Issues	Notes
	Consider private sector for non-deferrable surgical patients	Directors of Clinical Services Facility Surge Plan		
Workforce Protection	Assessment and triage/admission of front line clinical staff with symptoms of influenza	Designated medical admissions officer		MOH protocols
Increasing Workforce	Deploy nursing staff from peri-operative areas Continue fast track education sessions for non ICU trained staff	Facility Surge Plan DONs in conjunction with NUMs from affected clinical areas with input from ICU.	Directors of Operations	14x (12 hour) shifts per week required for each HDU bed converted to an ICU bed. *Staffing to be sourced from existing Excess staff in anaesthetics, operating theatres, recovery, casual pool, ICU staff who have relinquished annual leave, staff deployed from non-essential services with reduced activity, extra hours & overtime.*
Inventory	Deploy ventilators from other clinical areas. Identify any shortfall in ventilators. Ensure sufficient quantity of ventilator consumables stocked.	ICU Director and ICU Equipment Manager	Healthcare Facility Controller SESLHD HSFAC	**NB** Transport Oxylog ventilators **not** suitable for patients with respiratory failure.
Education	Continue education for non-ICU trained/experienced staff. Continue education of ICU cleaning and support staff	ICU Educators	ICU NM/NUM	
Infection Prevention and Control	On-going application of infection prevention and control procedures. Plan strategies to cohort infectious and non-infectious patients within satellite ICUs	ICU Director, facility Executive, Infection Prevention and Control staff		
Waste Management and Cleaning	Increase cleaning schedules and waste collection frequency. Priority given to ICU for Environmental cleaning	Environmental Cleaning Managers and ICU NM/NUMs		

Surge Level	Strategy	Responsibility	Escalation of Issues	Notes
Security	Review normal requirements, plan to increase service when required			
4. Major Surge 21-50% over funded ICU bed base	**Facilities are at Max Capacity**			
Communication	Daily staff briefings	General Managers		
Creating ICU Bed Capacity	Utilise all clinical areas that could be converted for management of ICU patients such as recovery and peri operative units	DON in conjunction with NUMs from affected clinical areas with input from ICU manager		
	Defer clinically appropriate elective surgery and other elective procedures	ICU Director, Surgeons, facility Executive		
Workforce Protection	Ensure strict adherence with infection prevention precautions	Infection Prevention and Control staff		
Increasing Workforce	Deploy all available nursing staff to satellite ICU areas	DON		
Inventory	Escalate the number of projected equipment shortfalls.	ICU Director & ICU Equipment Manager	Healthcare Facility Controller SESLHD HSFAC	
Education	On-going as required	ICU Educators	ICU NM	
Infection Control	On-going application of infection control procedures	ICU Director, NM/NUMs, Infection Prevention and Control staff		
Waste	Cleaning and waste collection	Environmental		

Surge Level	Strategy	Responsibility	Escalation of Issues	Notes
Management and Cleaning	frequency to increase.	Cleaning Managers and ICU NM/NUMs		
Security	Review normal requirements, plan to increase service if required			
5. Large Scale Surge Emergency > 50%	**Exceed Capacity**			
All Available Resources are in Use	Implement Three Tier Triage only on directive from NSW Health / SESLHD CE 1) Allocation 2) Withdrawal 3) Dispute resolution process	1) Referring speciality i.e. ED or ward in consultation with ICU clinicians 2) ICU Consultant and 1 other medical officer 3) LHD or State TBA		NSW Health Policy Directive PD2010_028 - Influenza Pandemic – Providing Critical Care
Workforce Protection	Continue strict adherence with infection prevention precautions	Infection Prevention and Control staff / ICU Educators		
Nursing Workforce	Deploy all available nursing staff to satellite ICU areas Staffing at baseline profile as per NSW Health PD 2010_028 Influenza Pandemic – Providing Critical Care Adjustment models of care and rostering to maintain best possible skill ratio	SESLHD Executive SESLHD HSFAC ICU with support from DON		
Inventory	Monitor stock level. Prepare to adjust usual standards in relation to frequency of changing ventilator circuits	Intensive Care Equipment Nurse Managers/ NUM		
Education	Continue as required			

Surge Level	Strategy	Responsibility	Escalation of Issues	Notes
Infection Control	On-going application of infection control procedures	ICU Director, NM/NUMs, Infection Prevention and Control staff		
Waste Management and Cleaning	Cleaning and waste collection frequency to increase.	Environmental Cleaning Managers and ICU NM/NUMs		
Security	Security presence at access points and ICU	Facility Plan		

6.2   Extra Corporeal Membrane Oxygenation (ECMO)
NSW Health Policy Directive PD2010_028 - Influenza Pandemic – Providing Critical Care describes the indications for ECMO referral.

6.3   Treatment for Patients with an Influenza-like illness
NSW Health Policy Directive PD2010_028 - Influenza Pandemic – Providing Critical Care has treatment guidelines for patients with influenza-like illness in ICU.

6.4   Infection Control
NSW Health Policy Directive PD2010_028 - Influenza Pandemic – Providing Critical Care describes infection control requirements related to management of patients with an influenza-like illness.

NHMRC: Australian Guidelines for the Prevention and Control of Infection in Health Care – 2010 (Section B2.4).

6.5   Laboratory Testing
NSW Health Policy Directive PD2010_028 - Influenza Pandemic – Providing Critical Care describes laboratory testing for patients with an influenza-like illness.

All ICU patients with suspected influenza to have nasal/pharyngeal swabs collected AND lower respiratory tract specimens, if possible, for testing by PCR.

All ventilated patients to have respiratory tract specimens for resistance testing, collected between days 7-10 and weekly, if still ventilated and with clinical evidence of treatment failure.

For patient with an influenza like illness who have a negative PCR test, to have serological test.

7. APPENDIX A

The following key information should be incorporated into the facility critical care surge plan and updated annually:

Inventory of Critical Care Capacity & Equipment - SESLHD

Site – Public Facilities	POWH	RHW	SGH ICU 1	SGH ICU 2	TSH
Unit Description	ICU/HDU	HDU	ICU	HDU	ICU/HDU
Number of Commissioned ICU /HDU Beds					
Total Bed Capacity of Unit					
Total Number of Isolation Rooms					
Number of Negative Pressure Isolation Rooms					
Total Number of standard invasive ventilation devices					
Total number of non-ICU ventilation devices e.g. transport ventilators					
Total number of non-ICU ventilation devices e.g. anaesthetic machines					
Total number of additional potential bed spaces in the facility that are equipped to provide safe ventilation (exclude ICU / HDU). List location and corresponding bed number					
List of nursing staff employed in the facility with critical care experience that could be deployed to care for a ventilated patient					

Additional Resources:
- NSW Health Winter Flu Campaign posters resources for Hospitals and Health Care Facilities
- Collecting Nose and Throat Swabs for Testing – Collection resources
- NSW Health Policy Directive PD2017_013 - Infection Prevention and Control Policy
- NSW Health Infection Control Resources (PPE advice, posters, facility entrance signage)

- Australian Department of Health - Immunise Australia – <u>Influenza immunisation resources</u>
- Australian Department of Health – <u>A Practical Guide to assist in the Prevention and Management of Influenza Outbreaks in Residential Care Facilities</u>
- <u>NSW Health Public Health Unit Influenza Control Guidelines</u>
- <u>NSW Health Policy Directive PD2010_028 - Influenza Pandemic – Providing Critical Care</u>

8. AUDIT

Critical Care Coordinator to maintain and monitor data base nominated by NSW Health e.g. FluICU, ANZIC Research Centre database.

9. REFERENCES

<u>NSW Health Policy Directive PD2010_028 - Influenza Pandemic – Providing Critical Care</u>
<u>NSW Health Policy Directive PD2017_013 - Infection Prevention and Control Policy</u>

10. REVISION AND APPROVAL HISTORY

Date	Revision No.	Author and Approval
24/05/2010	Draft	Draft procedure developed and based on NSW Health Guidelines for the provision of Critical Care in Response to Influenza Pandemic and draft SESIH Intensive Care Influenza Pandemic Surge Plan - circulated to Program Coordinator Intensive Care Services and Clinical Stream Manager Critical Care and Emergency to review and provided comments
02/06/2010	Draft	Draft procedure revised to incorporate new NSW Health policy directives and guidelines – circulated to Area ICU Executives and Nursing Committees to review and provide comments
30/07/2010	Draft	Draft procedure place on SESIAHS intranet for comment
1/12/10	0	Endorsed by Area Patient Safety & Clinical Quality Committee Noted by Area Clinical Council
14/3/2013	0.1	Procedure reformatted using the SESLHD and sent to District Pace Manager / ICU Program Manager
15/4/2013	0.2	District Pace Manager / ICU Program Manager circulated procedure to SESLHD ICU NUMs and Directors for review and comment.
9/5/2013	0.2	Procedure placed on SESLHD intranet for broader consultation
15/8/2013	1	Approved by SESLHD Disaster Management Committee
October 2015	2	Review by Clinical Stream Manager Cardiac/Respiratory and Intensive Care and endorsed by Executive Sponsor
May 2018	3	Minor review relating to number of ICU beds, ventilators which have been adjusted to reflect annual changes – endorsed by Executive Sponsor.
June 2018	3	Processed by Executive Services prior to publishing.
January 2022	4	Minor review to update references and include links to ACI and CEC guidelines. Approved by Executive Sponsor.