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<table>
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<th>DETAILS</th>
<th>AMENDED BY</th>
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<td>Number of machines; Update of Appendix 4, Memorandum of Understanding; Update of Appendix 9</td>
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No Longer Applicable - Rescinded 8 October 2019
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1. Introduction

The Western Australian (WA) State Renal Dialysis Business Continuity Plan (BCP) has been developed by the Disaster Preparedness and Management Unit (DPMU) in response to previous dialysis unit failures in WA.

In September 2007 and March 2008, incidents of equipment malfunction at renal dialysis centres within the State, impacted on the provision of dialysis at two centres. This necessitated the transfer of patients and staff to other dialysis units within the state. Management of these incidents consumed significant resources, time and inconvenience to patients, and highlighted the need for examination of the State’s preparedness for future dialysis hardware failure anywhere in WA.

Following consultation with clinical stakeholders after the above mentioned incidents, it was agreed that a State Renal Dialysis BCP was required to manage future incidents of equipment failure.

The DPMU was tasked with undertaking an audit of renal dialysis critical infrastructure throughout the State, as preparatory work for the development of the business continuity plan.

2. Need for business continuity planning

Renal dialysis patients require dialysis multiple times a week and are unable to wait for treatment. The build up of waste products in the blood can very quickly cause damage to the body’s organs and result in serious complications or even death (further background information can be found in appendix 1). Therefore, to ensure continuity in the event of a failure, alternative dialysis arrangements need to be formalised.

With increasing number of dialysis patients, the adoption of a uniform approach to continuity planning is necessary. This will facilitate both timely and coordinated patient care and treatment, and importantly minimise disruption and stress to patients and staff.

In accordance with the Emergency Management Act 2005 and Public Sector Commissioner’s Circular (Risk Management and Business Continuity Planning, Number: 2009/19, Issue Date: 08/05/2006), BCPs should be completed to ensure best practice in response to risk management. The objective of business continuity is to mitigate against some of the agency’s risks and minimise significant disruption to dialysis services.

Business continuity planning also facilitates the provision of early assistance from the Department of Health (WA Health), in the event of an emergency that service providers are unable to manage alone.
3. Risk management

Risk management is an important element of patient safety and internal control. Unforeseen failures of dialysis services can cause significant costs to patients, staff and the health service.

Using the Australian Standards for risk management (AS/NZS 4360: 2004), equipment failure was identified as a risk from the above mentioned incidents. To analyse the risks, an infrastructure audit was completed and, for most units, especially rural dialysis centres, access to spare parts or spare machines was not immediately available. Additionally, service technicians and spare parts, if required, could take some time to arrive.

Dialysis services within the state are almost at full capacity and consequently there is little ability to cope with any dialysis failures that could potentially occur. Business continuity plans for service providers are essential to minimise cost to patients, health service and staff, along with minimising the impact of any future incidents.

4. Prevention strategies

4.1 Responsibility for prevention

Responsibility for developing and maintaining prevention strategies lies with each renal dialysis facility.

Area Health Services contracting to renal dialysis facilities should also ensure that the facility has appropriate prevention strategies in place.

4.2 Prevention strategies

Renal dialysis facilities are required to undertake the following preventative strategies:

- Add equipment failure to their facilities local risk register and complete a Risk Treatment Plan.
- Consider purchasing a maintenance agreement for dialysis machines and water treatment units with the equipment providers. The maintenance agreement should include monthly servicing and remote monitoring.
- Assess the replacement of the water treatment unit every 8 to 10 years.
- Develop a water testing schedule and monitor the water system alarms and alarm history. Any problems should be reported to the maintenance technician.
- Each facility should consider purchasing critical spare parts (detailed in appendix 2). Please note that purchasing of the spare parts does not replace the need for a technician. Possessing the spares may facilitate the repair process as there will be no wait time to obtain the parts.

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5. Preparedness

The majority of dialysis units are running at capacity during business hours. Therefore, appropriate plans and procedures need to be put in place in the event a unit is not functioning. For example, utilisation of after hours capacity at alternative dialysis facilities may be required.

5.1 Responsibility for Preparedness

Responsibility for preparedness strategies lies with each renal dialysis facility.

Health services contracting to renal dialysis facilities should also ensure that the facility has appropriate preparedness strategies in place.

5.2 Planning and Arrangements

Dialysis centres need to ensure preparedness in the event of equipment failure. Preparedness activities include:

- Development of BCP for each dialysis unit, which particularly addresses equipment or water treatment system failure.
- Establishment of a Memorandum of Understanding (MOU) with an alternate facility.
- Each dialysis service provider will be required to complete a MOU to formalise agreements between dialysis service providers for equipment or water treatment system failures. Dialysis unit managers should complete the following:
  - Discuss MOU implications with the contract manager (if required).
  - Negotiate with the nearest centre of the same or greater capacity, and develop a MOU for use of that facility in the event of equipment or water treatment system failure [larger dialysis units may require more than one MOU for their unit]. Public dialysis units can develop a MOU with private dialysis providers and vice versa.
  - Forward a completed copy if the MOU to DPMU@health.wa.gov.au.
  - Review the MOU every 2 years, or as required.
- A checklist of issues to consider for inclusion when negotiating a MOU has been included in appendix 3.
- All staff should receive training in the event of equipment or water failure. Staff should be familiar with procedures in the event of a failure and know where all emergency information is kept. Training should be repeated regularly to ensure all staff are prepared (at least yearly).

5.3 Additional Considerations

Ensure that the dialysis unit has arrangements in place with machine/ water treatment system providers, to provide technical staff and/ or replacement machines. 24/7 contact numbers for these companies are required. Ensure that the dialysis unit/ health facility has redundancy plans for electricity, water supply or infrastructure failure.
5.4 Resources

To assist individual dialysis centres develop their BCPs, WA Health has developed the following templates to mitigate the risk of equipment or water treatment failure and reduce the impact should such failures occur:

5.4.1. Emergency Information Sheet (Appendix 4):
This sheet is provided to assist dialysis providers locate facilities with capacity to assist in the event of a failure. The information allows service providers to have all the relevant information, including the number of dialysis machines and an emergency contact number, to effectively deal with the situation.

Dialysis units must update any changes to their facilities information yearly or as required, to maintain the accuracy of the information. The updated information should be provided to DPMU@health.wa.gov.au. DPMU will disseminate the updated information to all dialysis units.

5.4.2. Response Plan for Emergency Dialysis (Appendices 5, 6 and 7):
Different response plans have been developed to manage events in metropolitan units and regional units, within WACHS and private country units. The need for separate plans is to better address the unique challenges faced by regional dialysis units, such as:

- Distance from other dialysis units;
- Patient demographics (higher risk population);
- Difficulty in transferring patients to other facilities; and
- Ability to access spare parts and technicians quickly.

The response plans are based on the Strategic Plan for Emergency Dialysis, endorsed by WA Statewide Emergency Plan Working Party, and the Baxter Healthcare and Diaverum emergency plan. All the plans outline the steps to be taken in the event of equipment failure at a dialysis facility.

5.4.3. Dialysis Unit Situation Report Template (Appendix 8):
When requesting help from the Regional Health Disaster Coordinator (RHDC) or DPMU, please complete the Situation Report template in appendix 8.

The situation report will be used for planning and assisting dialysis units if required. For the duration of the failure updates will be required, to keep track of any changes in the situation that may occur requiring attention. The information will be kept confidential and should be sent to either the RHDC (each facility in the country should obtain their regions RHDC’s contact details) and/ or DPMU.

5.4.4. Memorandum of Understanding Template (Appendix 9):
The MOU template is to assist service providers to formalise agreements between dialysis service providers for infrastructure failures.
6. Response

6.1 Responsibility for Response
Responsibility for response lies with:
- Dialysis unit with the failure (all severity levels);
- Alternate dialysis facility (if patients have been transferred); and/or
- DPMU (severity level 3, if a State response is required).

6.2 Notification
A graduated response system is to be used for any equipment or water treatment system failures. The response is broken down into the following three severity levels, depending on the duration of the failure:

**Severity Level 1:** Less than 24 hours
The equipment or water treatment system failure can be fixed within 24 hours. Failures at this stage are dealt with at a local level, unless a patient requires dialysis immediately.

**Severity Level 2:** Greater than 24 hours – Less than 72 hours
The failure can be fixed within 24 to 72 hours. Failures are dealt with at a regional level, or by referring to the unit’s MOU.

**Severity Level 3:** Greater than 72 hours
The failure cannot be fixed within 72 hours. Renal units should contact DPMU for a long-term plan via the On-Call Duty Officer 24/7 paging service on (08) 9328 0553.

6.3 Metropolitan Response and Notification
The following articulates the levels of response and notification at each stage, for incidents within the metropolitan area. Further details can be found in the Metropolitan Emergency Response Plan for Dialysis (appendix 5).

The duty Nurse Manager should assess the situation as per Table 1 and Table 2, and activate the appropriate severity level response.

<table>
<thead>
<tr>
<th>Duration of Failure</th>
<th>Severity Level</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 24 hrs</td>
<td>1</td>
<td>Only evacuate patients requiring immediate dialysis</td>
</tr>
<tr>
<td>24 – 72 hrs</td>
<td>2</td>
<td>Refer to MOU and contact the alternate facility to arrange emergency dialysis.</td>
</tr>
<tr>
<td>Greater than 72 hrs</td>
<td>3</td>
<td>Refer to DPMU for long term plan</td>
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</table>

Table 1 Duration of failure guidelines
### Patient Acuity

<table>
<thead>
<tr>
<th>Patient Acuity</th>
<th>Response</th>
</tr>
</thead>
</table>
| Urgent         | Require treatment within 24 hrs.  
Only send to alternate facility if the failure cannot be fixed within 24 hrs. |
| At Risk        | Require treatment within 24 – 72 hrs.  
If the failure can be fixed, within 24hrs, no further action needs to be taken. If it cannot be fixed within 24hrs, refer to MOU and contact the alternate facility to arrange emergency dialysis. |
| Delayed        | Can go without treatment for greater than 72 hrs.  
If the failure can be fixed within 72 hrs, no emergency action needs to be taken for patients. If the failure is not able to be fixed within 72 hours, refer to DPMU for long term plan. |

**Table 2 Acuity of patient guidelines**

**Severity Level 1:**

Duty nurse manager to report the failure to the dialysis centre manager, who in turn contacts the following to alert them to the situation:

- Director of Nursing (DON) and/ or Medical Administrator. DON/ Medical Administrator should inform other relevant consultants.
- Technician for the dialysis machines or water treatment system.
- DPMU via On Call Duty Officer (OCDO) on (08) 9328 0553.
- Staff
- Patients

**Severity Level 2:**

Actions as per severity level 1 and if the facility cannot be fixed within 24 hours and patients need to be transferred to an alternate centre, the following must be completed:

- Staff roster developed and agreed upon by both dialysis unit managers.
- Ensure adequate consumable supplies are available to complete dialysis.
- Organise local transport for patients that require it.
- Notify patients of the new treatment time.

If the failure is resolved within 72 hours, patients and staff should return to their normal facility.

**Severity Level 3:**

Actions as per severity level 2 and;

- If the failure is not resolved within 24 to 72 hours, DON or centre manager should refer to DPMU for a long-term plan via the OCDO page on (08) 9328 0553.
6.4 WACHS Response and Notification

The following articulates the level of response and notification at each stage, for incidents within a WA Country Health Service (WACHS) area. Further details can be found in the WACHS Dialysis Emergency Response Plan (appendix 6).

The following steps should be taken upon discovery of an internal failure of equipment or water:

- Dialysis unit senior nurse to notify:
  - Hospital senior nurse
  - Technician for the dialysis machines or water treatment system
  - Staff
- Activate the notification cascade, as shown in appendix 6.
- Senior nurse should assess the duration of the failure using Table 1.
- If it can be fixed within 24 hours refer to severity level 1, if it can’t be fixed within 24 hours, refer to severity level 2.

**Severity Level 1:**

- Activate local Business Continuity Plan
- Dialysis unit senior nurse to contact patients and triage as per Table 2.
- After 12 hours senior nurse should get an update on repairs (able to fix in 24 hours):
  - Yes - Continue with severity level 1
  - No - Refer to severity level 2
- Failure fixed within 24 hours:
  - Yes - Return to normal operations
  - No - Refer to severity level 2

**Severity Level 2:**

- Can the failure be fixed within 24 to 48 hours?
- Dialysis unit senior nurse should consider the following:
  - Consider the number of facilities required to manage the number of patients.
  - Refer to your MOU for alternate facilities.
  - Contact alternate facilities.
- Dialysis unit senior nurse should notify:
  - Staff
  - Patients
- Dialysis unit nurse should triage patients as per Table 2.
- Dialysis unit senior nurse to:
  - Prioritise patients and allocate to alternate facility based on patient needs.
  - Obtain patient details and information for transport and accommodation.
  - Organise transport and accommodation.
  - Develop staff roster, agreed upon by both dialysis unit managers.
- Fixed within 24 to 72 hours:
  - Yes - Return to normal operations.
  - No - Refer to severity level 3.
Severity Level 3:

- If the failure can’t be resolved within 24 to 72 hours, contact the On Call Duty Officer on (08) 9328 0553.

6.5 Private Regional Units Response and Notification

The following articulates the level of response and notification at each stage, for incidents within a private dialysis facility in a regional area. Further details can be found in the Private Regional Dialysis Unit Emergency Response Plan (appendix 7).

The following steps should be taken upon discovery of an internal failure of equipment or water:

- Dialysis unit senior nurse to notify:
  - Line Manager
  - Technician for the dialysis machines or water treatment system.

Severity Level 1:

- Line Manager should notify the following:
  - CEO of facility
  - Renal GP
  - Renal Physician
  - Staff
  - Patients
  - Any other relevant individuals
- Line Manager refers to WACHS Emergency Response Plan for further directions (appendix 6).

Severity Level 2:

If the failure can’t be dealt with by the service provider within 24 hours and regional assistance is required the following steps should be taken:

- Line Manager notifies the RHDC via the local regional hospital switchboard.
- Line Manager completes the Dialysis Unit Situation Report (appendix 8) and returns it to the RHDC.
- RHDC activates the Notification Cascade (appendix 6).
- Line Manager and RHDC refer to the WACHS Emergency Response Plan for further directions (appendix 6).

Severity Level 3:

If State assistance is required, refer to WACHS Emergency Response Plan for further details.
6.6 Dialysis Unit Situation Report

Any dialysis unit requiring regional or State assistance should periodically complete the Dialysis Unit Situation Report (appendix 8) upon requesting help and forward the report to the RHDC and the Disaster Preparedness and Management Unit.

For the duration of the failure, dialysis units will be required to provide regular and timely situation reports to update the situation status. These will cease upon return to normal operations.

The information provided will assist in planning arrangements for the dialysis unit as well as providing up to date status reports on the progress of the unit and patients. All information provided will be kept confidential and only used for planning.

7. Recovery

7.1 Responsibility for Recovery

Responsibility for recovery lies with:

- Dialysis unit with the failure (all severity levels)
- Alternate dialysis facility (if patients have been transferred)
- DPMU (severity level 3, if a state response is required)

7.2 Stand Down and Post-Incident Analysis

Following the incident, once normal operations at the facility with the failure have been restored, the following should be completed:

- Patients and staff should be advised by the facility manager of return to normal operations at their facility. Patients and staff should then return to their normal facility.
- Affected dialysis unit nurse manager is responsible for ensuring all medical records related to relocated patients are transferred back to the patient’s normal facility.
- Advise those who were notified of the incident that the incident has now been resolved.
- Staff debriefing: All staff involved, at all sites, should attend a post incident analysis and review.
- For all severity level 3 incidents, send a copy of the Post Incident Analysis to DPMU.
- The dialysis unit manager should complete a revision of the BCP and prevention plan, based on the incident debrief.
- If an update to the MOU is required, this should also be completed by the units and notification and copies should be provided to DPMU.
- Cost recovery arrangements to replenish stock should be arranged according to the MOU.
Appendix 1 – Chronic Kidney Disease

1. Background

Chronic Kidney Disease (CKD) has become an increasing health issue in Western Australia (WA), with the number of dialysis patients increasing by 47.7 percent in the metropolitan area and 27.7 percent in rural areas from 1999 to 2005. The number of patients treated with dialysis increased from 423 to 625 from 1999 to 2005 in the metropolitan area and from 173 to 227 over the same period for rural areas. In the metropolitan area, South Metropolitan Area Health Service (SMAHS) experienced the largest growth (100%), followed by the North Metropolitan Area Health Service (NMAHS) (52%). In the regions, the Kimberley had the largest growth over the period (91%), followed by the South West (82%).

In WA and Australia, more male patients than females required dialysis. In WA and Australia, 59 percent and 60 percent of dialysis patients were male, respectively.

In 2006, the Indigenous population represented 3.5 percent of WA’s total population. However, 22% of patients in WA with End Stage Kidney Disease (ESKD) were Indigenous, which was higher than the 11% average for Indigenous Australians nationally. Indigenous patients receiving dialysis represent a disproportionately large number of ESKD dialysis patients, especially in rural areas of WA. Indigenous Australians have a greater risk of kidney damage, and Indigenous cases of treated ESKD are 5 times greater than would be expected from the national prevalence rate.

2. Incidence

In WA, the incidence rate of ESKD increased by 139 percent from 1990 to 2005, which was greater than the national average increase of 89 percent. The incidence increased from 49 patients per million population in 1990 to 117 patients per million population in 2005. From the Hospital Morbidity Data System (IMR), there were an estimated 3064 new cases of chronic renal failure and 319 new cases of dialysis in WA throughout 2007/08. This was an increase of 7.5% and 11.1% of new cases of chronic renal failure and dialysis from 2004/05.

Table 3 shows the estimated number of new cases of chronic renal failure and dialysis by area health service in 2004/05 and 2007/08. The incidence from the Hospital Morbidity Data is only an estimate; it only includes those who have been to a WA hospital in that year.

<table>
<thead>
<tr>
<th></th>
<th>North Metropolitan AHS</th>
<th>South Metropolitan AHS</th>
<th>WA Country Health Service</th>
<th>Unknown</th>
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<td></td>
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<tr>
<td>2004/05</td>
<td>814</td>
<td>790</td>
<td>364</td>
<td>3</td>
<td>1,971</td>
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<td>2007/08</td>
<td>929</td>
<td>894</td>
<td>424</td>
<td>1</td>
<td>2,248</td>
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<td>52</td>
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<td>287</td>
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<td>2007/08</td>
<td>125</td>
<td>118</td>
<td>76</td>
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<td>319</td>
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Table 3 Estimated incidence of kidney disease by area health service (IMR)
3. Prevalence

The prevalence of renal dialysis increased in WA from 222 patients receiving dialysis in 1990, to 848 patients in 2005. The increase during this period in WA was 281 percent, compared to 191 percent nationally for the same period\(^1\). In 2007/08, the Hospital Data System (IMR), estimated a total of 5573 patients with chronic renal failure, and 945 patients undergoing dialysis in WA. The number of patients with chronic renal failure and dialysis increased from 2004/05, by 15.8% and 13.6% respectively.

Table 4 shows the estimated number of patients admitted into WA hospitals, with chronic renal failure and dialysis by area health service.

<table>
<thead>
<tr>
<th>Area Health Service</th>
<th>North Metropolitan AHS</th>
<th>South Metropolitan AHS</th>
<th>WA Country Health Service</th>
<th>Unknown</th>
<th>North Metropolitan AHS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic Renal failure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004/05</td>
<td>2,004</td>
<td>1,810</td>
<td>997</td>
<td>2</td>
<td>4,813</td>
</tr>
<tr>
<td>2007/08</td>
<td>2,303</td>
<td>2,008</td>
<td>1,259</td>
<td>3</td>
<td>5,573</td>
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<tr>
<td>Dialysis</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>2004/05</td>
<td>460</td>
<td>345</td>
<td>179</td>
<td>0</td>
<td>984</td>
</tr>
<tr>
<td>2007/08</td>
<td>453</td>
<td>380</td>
<td>244</td>
<td>0</td>
<td>1,077</td>
</tr>
</tbody>
</table>

Table 4 Estimated prevalence of kidney disease by area health service (IMR)

4. What is Kidney Disease?

Chronic Kidney Disease (CKD) is an irreversible, gradual decline in kidney function over time and is the most common cause of kidney damage requiring dialysis or transplant\(^5\). Kidney failure can be acute or chronic. When kidneys fail suddenly, it is acute and in most cases the damage is reversible.

There are 5 stages of CKD, with the final stage being End Stage Kidney Disease (ESKD). This occurs when renal function has irreversibly deteriorated by greater than 85 percent below normal\(^6\). At this stage, the kidneys are no longer able to remove waste and control fluid in the body\(^3\). The major causes of ESKD in 2006 are shown in Table 5 below.

<table>
<thead>
<tr>
<th>Cause</th>
<th>% Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetic Nephropathy</td>
<td>34</td>
</tr>
<tr>
<td>Glomerulonephritis</td>
<td>25</td>
</tr>
<tr>
<td>Hypertension</td>
<td>15</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>11</td>
</tr>
<tr>
<td>Polycystic Kidney Disease</td>
<td>6</td>
</tr>
</tbody>
</table>

Table 5 Causes of ESKD in WA (2006)
5. Treatment of ESKD

Treating ESKD is difficult, as there are currently only two treatments available; kidney transplantation or renal dialysis. Once the disease has progressed to this stage, treatment is generally by dialysis for the majority of individuals, as only 25% of patients are able to receive a kidney transplant, and few of those actually receive a transplant.¹

6. What is Renal Dialysis?

Dialysis involves artificially removing toxins from the blood, by diffusing the blood over a semi-permeable membrane, as a functional kidney would normally do. For those who reach End Stage Kidney Disease (ESKD), dialysis is required to replace the loss of kidney function.

There are two types of dialysis that can be done, haemodialysis and peritoneal dialysis. This contingency plan only relates to in-centre haemodialysis and satellite haemodialysis services.

Dialysis is performed 3 to 5 times a week, for between 3 and 5 hours each session, depending on the condition of the patient. The dialysis machine acts as an artificial kidney by removing toxins and extra fluids from the blood. The blood is pumped from the body and into a filter called the dialyser. The dialyser balances fluids, minerals and chemicals in the blood and removes the waste, before returning the blood into the body.⁷

7. Current Dialysis Services

In WA, there are currently 23 dialysis units, comprised of: 20 satellite dialysis units and 3 in-centre dialysis units. Of the satellite units, 14 are private units. Current dialysis services locations are shown in appendix 4.

8. Epidemiology of CKD

In WA, the demand for renal dialysis services has increased significantly over recent years. This increase in demand is expected to continue as the incidence in ESKD increases, particularly amongst the Aboriginal population.¹

The growth in demand for services has resulted in an increase of 8 to 10 percent per year in allocation of health funds.¹ Treatment of ESKD requires specialised and expensive treatments and in 2006, the estimated cost of dialysis was $45 million for 850 patients, with per patient cost of $51,000.⁹
9. References


Appendix 2: Critical Spares List

The following list is of recommended spares to expedite the repair process:

**Osmoflow Water Treatment Units**

<table>
<thead>
<tr>
<th>Product Information</th>
<th>Approximate Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salt for Softener 25kg bag P00247</td>
<td>$15+GST</td>
</tr>
<tr>
<td>1 micron Cartridge filter (20&quot; big blue) OSMO-BB-1 P00163</td>
<td>$80+GST</td>
</tr>
<tr>
<td>5 micron Cartridge filter (20&quot; big blue) OSMO-BB-5 P00164</td>
<td>$80+GST</td>
</tr>
<tr>
<td>Feed Conductivity Probe P-K=0.1TBLRRT10(not meter) P00152</td>
<td>$550+GST</td>
</tr>
<tr>
<td>Loop Recirculation Pump CHIE 4-60 Mechanical Seal and o-ring Part# 985857 P00172</td>
<td>$300+GST</td>
</tr>
<tr>
<td>Solenoid valve seal kit (various for various plant models) approx</td>
<td>$300+GST</td>
</tr>
<tr>
<td>0.2 micron cartridge filter (where fitted) Part# DP09PP002DC P00364</td>
<td>$260+GST</td>
</tr>
</tbody>
</table>

No Longer Applicable - Rescinded 8 October 2019
Appendix 3: Checklist for Consideration

This checklist is to be used by sites when assessing alternate facilities:

- Capacity of alternate facility (i.e. number of chairs)
- Availability for emergency use (i.e. hours)
- Distance from dialysis facility
- Capacity of machines
- Staff availability
- Transport arrangements (if required)
- Accommodation (if required)
- Consumables required
- Contract manager has been consulted (if under contract)
- Requirement for Patient Assisted Travel Scheme (PATS) for patients required to travel (WACHS patients only)

No Longer Applicable - Rescinded 8 October 2019
# Appendix 4 – Emergency Information Sheet

<table>
<thead>
<tr>
<th>Name of Service</th>
<th>Service Type</th>
<th>Location</th>
<th>Operating Hours</th>
<th>Types of Machines</th>
<th>Number of machines</th>
<th>Number of portable Reverse Osmosis Machines</th>
<th>Emergency Capacity Hours</th>
<th>Public / Private</th>
<th>After Hours Emergency Contact</th>
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<tr>
<td>Fremantle Hospital Renal Unit</td>
<td>Tertiary</td>
<td>Fremantle</td>
<td>Mon – Sat 0700 - 2130</td>
<td>Fresenius 5008</td>
<td>14</td>
<td>Mon – Sat 2100-0700 Sun 0000 – 2400</td>
<td>12</td>
<td>Public</td>
<td>Page On-Call Nurse via FHHS Switch (08) 9431 3333</td>
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<tr>
<td>(08) 9431 3600</td>
<td>In Centre</td>
<td>Alma Street Fremantle WA 6969</td>
<td></td>
<td></td>
<td>(2 spare)</td>
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<tr>
<td>G65 Dialysis Unit</td>
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<td>Nedlands</td>
<td>Mon - Fri 0700 - 2130 Sat/Sun 0700 - 15.30</td>
<td>Fresenius 4008</td>
<td>22</td>
<td>Mon - Fri 2130 - 0630 Sat/Sun 1530 - 0630</td>
<td>19</td>
<td>Public</td>
<td>Ingrid Holmes - G65 Nurse Manager 08 9346 4261</td>
</tr>
<tr>
<td>Sir Charles Gairdner Hospital (08) 9346 2799</td>
<td>In Centre</td>
<td>Hospital Avenue Nedlands WA 6009</td>
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<tr>
<td>Royal Perth Hospital</td>
<td>Tertiary</td>
<td>Perth</td>
<td>Mon/Wed/Fri 0630-2300 Tue/Thu 0630 - 2130 Sat 0630 - 1900 Sun 0700 - 1530</td>
<td>Fresenius 5009</td>
<td>16</td>
<td>Mon/Wed/Fri 2230 - 0630 Tues/Thurs 2100 - 06:30 Sat 1830 - 0700 Sun 1500 - 0630</td>
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<td>Clinical Nurse Manager 9224 3474 or 9224 2244 page 2634</td>
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<tr>
<td>(08) 9224 2244</td>
<td>In Centre</td>
<td>Wellington Street Perth WA 6000</td>
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<td>Subiaco</td>
<td>Mon/ Wed/ Thurs/ Fri 0700 - 1500</td>
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<td>Paula Dempsey (CNS) 9340 7006 or Ann Stynes (Nursing Director) (08) 9340 8222</td>
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<td>(08) 9340 7006</td>
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<td>Roberts Road Subiaco WA 6008</td>
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<td>Business hours Renal CNM, 9531 8410 page 119. Out of hours 9531 8000 page 100.</td>
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<td>Mon/Wed/Fri 0630 - 2200 Tue/Thu 0630 - 1600 Sat 0630 - 12:30</td>
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*No Longer Applicable - Rescinded 8 October 2019*
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<th>Types of Machines</th>
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<th>Public / Private</th>
<th>After Hours Emergency Contact</th>
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<td>Kimberley Satellite Dialysis Centre</td>
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<td>Broome Lot 640 Anne St Broome WA 6725</td>
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<td>(08) 9194 3280</td>
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<td>0431 874 067 Manager or 0428 211 686 KRS Manager</td>
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<td>Derby Dialysis Unit</td>
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<td>Derby 4 Stanley St Derby WA 6728</td>
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<td>(08) 9166 4400</td>
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<td>0487 614 458 Manager or 0428 211 686 KRS Manager</td>
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<td>0417 082 234 Manager or 0428 211 686 KRS Manager</td>
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<td>(08) 9166 4400</td>
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<td>South Hedland</td>
<td>Mon/Wed/Fri 0700 - 2030 Tue/Thu/Sat 0700 - 1530</td>
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<td>Mon/Wed/Fri 2100 – 0600 Tue/Thu/Sat 1600 – 0600 Sun-all day</td>
<td>0459 217 039 Dialysis Manager or 9174 1434 HHC AHNM</td>
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<td>(08) 9174 1286</td>
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<td>2 - 34 Colebatch Way South Hedland WA 6722</td>
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<td>(08) 9175 7991</td>
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<td>Lot 35 Jigalong WA 6753</td>
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<td>(08) 9175 7027 Jigalong Clinic During Respite Time only.</td>
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<td>Mon - Fri 2000 - 0600 Sat/Sun 1500 - 0600</td>
<td>Maria Malacari (08) 9956 2462 or Renal Unit (08) 9956 2320</td>
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<td>(08) 9956 2320</td>
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<td>51-85 Shenton St Geraldton, WA 6530</td>
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<td>0427 087 147 Hospital Coordinator</td>
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<tr>
<td>(08) 9080 5720</td>
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<td>Piccadilly Street Kalgoorlie WA 6430</td>
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<td>Satellite</td>
<td>Albany Hospital Satellite Dialysis Unit</td>
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No Longer Applicable - Rescinded 8 October 2019
Appendix 5: Metropolitan Emergency Response Plan for Dialysis

Criteria: To provide haemodialysis to chronic and acute patients when an emergency occurs through loss of utilities.

Code: Yellow for Internal Emergency

Action Plan:

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<th>Internal Emergency</th>
<th>Water failure</th>
<th>Equipment failure</th>
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Notify Dialysis Centre Manager

- Dialysis Unit Manager contacts:
  - Contact Nursing Director + Medical Administrator
  - Technician (Dialysis machine)
  - Department of Health via On Call Duty Officer page (08) 9328 0000
  - Staff
  - Patients
  - DON contacts HOD (other consultants)

Duty Nurse Manager

- Assess duration of failure
  - 24 – 72 hrs: Refer to MOU with alternate facility and arrange...
  - >72 hrs: Refer to DOH for long-term plan.

- Assess acuity of patients in categories:
  - Urgent (Require treatment within 24hrs)
  - At risk (Require treatment within 24 – 72 hrs): If can be fixed within 24hrs no need to send to alternate facility. If not fixed look at MOU and make alternate arrangements.
  - Delayed (can go without treatment for greater than 72hrs)

Treatment Plan

- Staff roster to be agreed between evacuated and referred unit.
- Adequate consumable supplies (MOU with facility suppliers suggested)
- Organise local transport for patients in need (MOU with community transport suggested)
- Notify patients of treatment times.
- Dialyse patients within facilities capabilities

Nursing Director refer to DOH for long-term plan

Based on Strategic Plan endorsed by WA State-wide Emergency Plan Working Group Party and Strategic Plan by Kate North and Lynn Brown
Appendix 6: WACHS Emergency Response Plan for Dialysis & Notification Cascade

Failure:
- Equipment
- Water treatment system

Dialysis Unit Senior Nurse to notify:
- Hospital Senior Nurse
- Staff
- Technician _________ (Dialysis machine) _________ (Water treatment)

Activate Notification Cascade

Can the failure be fixed within 24 hours?

YES

Activate Local BCP

Dialysis Unit Srn Nurse to contact patients and triage:
- Urgent (within 24 hours)
- At Risk (24 – 72 hours)
- Delayed (>72 hours)

After 12 hours: Dialysis unit Srn nurse to get update on repair progress

Can the failure be fixed within 24 hours?

YES NO

Fixed within 24 hours?

YES NO

Return to normal operations

Can the failure be fixed within 24 – 72 hours?

YES

Consider the number of facilities required to manage the number of patients
- Refer to your MOU for alternate facilities
- Contact alternate facilities

NO

Refer to DOH for long term plan via OCDO page (9328 0553)

Dialysis Unit Srn Nurse to notify:
- Staff
- Patients

Dialysis Unit Srn Nurse to triage patients:
- Urgent (within 24 hours)
- At Risk (24 – 72 hours)
- Delayed (>72 hours)

Dialysis Unit Srn Nurse to:
- Prioritise patients and allocate to alternate facility based on patient needs
- Obtain patient details and information for transport and accommodation
- Organise patient and staff transport and accommodation

Fixed within 24 - 72 hours?

YES NO
WACHS Notification Cascade

Please note, in the diagram below in the event of the Regional Health Disaster Coordinator being unavailable, either the Medical Director, Director of Nursing or Operations Manager can assume this role.

No Longer Applicable - Rescinded 8 October 2019
Appendix 7: Private Regional Dialysis Unit
Emergency Response Plan

If the failure cannot be dealt with by the service provider and requires regional assistance the following process should occur.

Line Manager notifies the Regional Health Disaster Coordinator via local regional hospital switchboard.

Line Manager to complete Situation Report (appendix 8)
Regional Health Disaster Coordinator activates the Notification Cascade (appendix 6)

Line manager refers to WACHS Emergency Response Plan (appendix 6) for further directions.

Line Manager should refer to WACHS Emergency Response Plan (appendix 6) for further directions.
Appendix 8: Dialysis Unit Situation Report Template

Dialysis Unit Situation Report

Please complete the following information in the event of a dialysis equipment or water treatment system failure, requiring regional assistance. Upon completion, please forward to the Regional Health Disaster Coordinator and the Disaster Preparedness & Management Unit, Department of Health.

General Information
Current Date: ___________________________ Time (24 hour clock): ___________________________
Date of failure: ___________________________ Time of Failure: ___________________________
Current Situation:
_________________________________________________________________________________
_________________________________________________________________________________
Date / Time anticipated fix: ___________________________

Dialysis Unit Information
Dialysis unit name: ___________________________
Dialysis Unit Location: ___________________________
Dialysis unit staff No: ___________________________

Technical Information
No. of dialysis chairs (total): ___________________________
No. of chairs not functioning: ___________________________
No. and type of machines:
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
Delivering a Healthy WA

Type of water treatment system:

________________________________________________________________________

________________________________________________________________________

Consumables in stock:

________________________________________________________________________

________________________________________________________________________

Patient Information

Current total patient load: ________________________________________________

Daily patient load: _______________________________________________________

Please complete the following table:

<table>
<thead>
<tr>
<th>Patient Acuity</th>
<th>Definition</th>
<th>No. of Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urgent</td>
<td>Require treatment within 24 hrs.</td>
<td></td>
</tr>
<tr>
<td>At Risk</td>
<td>Require treatment within 24 – 72 hrs.</td>
<td></td>
</tr>
<tr>
<td>Delayed</td>
<td>Can go without treatment for greater than 72 hrs.</td>
<td></td>
</tr>
</tbody>
</table>

Please return to:

1) Regional Health Disaster Coordinator

________________________________________________________________________

2) Disaster Preparedness & Management Unit

Fax: 9222 2304

Email: sheoc@health.wa.gov.au
MEMORANDUM OF UNDERSTANDING

Between the

SERVICE PROVIDER / AGENCY 1

And

SERVICE PROVIDER / AGENCY 2

1. Parties

This document outlines the proposed roles and responsibilities of, and interaction between, (Service Provider / Agency Name 1), as represented by the Nursing Manager, and the (Service Provider / Agency Name 2) Dialysis Unit, as represented by the Nurse Manager in dialysis continuity planning, in regards to dialysis unit failures.

2. Background

In September 2007 and March 2008 two incidents of equipment malfunction at dialysis centres within state impacted on the provision of dialysis at those centres and necessitated the transfer of patients and staff to other dialysis units for treatment. Management of these failure incidents consumed significant resources and time, and highlighted the need for examination of the State’s preparedness for dialysis hardware failure anywhere in WA in the future.

Meetings with stakeholders, following the above mentioned incidents, agreed that a State Dialysis contingency Plan was required to manage future incidences of equipment failure.

This MOU is one of the contingency planning strategies taken to address the identified risk.

3. Purpose

To articulate the responsibilities of (Service Provider / Agency Name 1), and (Service Provider / Agency Name 2) Dialysis Unit during a dialysis facility failure.
4. Principals

The parties shall abide by the following principals;

4.1 Preparedness

The parties shall promote and demonstrate a level of preparedness suitable for their organisation. Levels of preparedness should include:

- A designated individual to develop and maintain plans and procedures. This requires a commitment to coordinate the development of plans that will address the evolving needs of the dialysis service with regards to emergency management.
- A commitment to coordinate meetings of appropriate personnel so that they are aware of what is planned/needed, and also what is expected of them.
- A commitment of those significant personnel to participate in and organise appropriate education.
- A suitable area from where the emergency / disaster can be managed, usually known as a “Command or Operations” Centre. This area must have suitable communication tools with multiple redundancy capabilities built into the system, such as PABX and direct Telstra lines, radio communication with multiple facilities and direct lines to external agencies. Mobile phones can be considered as part of the strategy but should not be relied upon during an emergency, as the networks can become extremely congested very quickly.
- The provision of emergency assistance to dialyse patients in the event of equipment malfunction or disaster event.

4.2 Response

The response will undoubtedly reflect the level of preparedness undertaken. However, in general, the response phase requires activities that:

- Provide emergency dialysis for patients;
- Help reduce further damage and help speed recovery activities;
- Ensure the costs incurred in dialysing of patients at alternate facility will be covered by the facility requiring assistance;
- Wherever practicable, the facility requiring assistance is to provide consumables and staff (desirable: >2 years haemodialysis experience if practicable) if providing direct clinical support to facilitating unit;
- In the case where the host unit uses a different brand of dialysis machine, a member of staff from that unit will be required to provide support to the visiting dialysis personnel as negotiated;
- If providing non-direct clinical support, staff member will be required to liaise and communicate between all parties involved i.e. patients, relatives, Department of Health, transport, tertiary centre and satellite units involved.

The effectiveness of the person in that response coordination role will depend upon their involvement in all stages of the preparedness plans. If they are totally familiar with the plan, they will know the key individual responsibilities within the plans and how to utilise the communication tools within the operations centre which will contribute to efficient management of the emergency situation and result in a positive outcome for staff and patients.
The parties should seek to promote the continued development of a functional alliance between (Service Provider / Agency Name 1) and (Service Provider / Agency Name 2) Dialysis Unit in the ongoing development and management of dialysis services.

5. Mutual Interest of Parties

a) General

The parties agree to jointly participate in developing the appropriate procedure, policies and processes, if required, for an effective response.

b) Responsibilities of the Parties

The parties agree to execute the following responsibilities in accordance with the principals and purpose of this memorandum of understanding as set forth in sections 3 and 4.

(Service Provider / Agency Name 1)

The Nurse Manager is responsible for the following:

- Contact (Service Provider / Agency Name 2) Satellite Dialysis Unit to notify of patients who require dialysis.
- Provide client dialysis prescriptions relevant to treatment.
- Notify Nephrologists.
- Offer staff to support increased workload if appropriate (consider ability to work at accommodating unit given current insurance requirements, whether non clinical support required, and staff familiarity with dialysis machines).
- Notify patient of appointment time and place.
- Determine transport issues and notify appropriate agency and/or provide taxi vouchers.
- Notify (Service Provider / Agency Name 2) Satellite Dialysis Unit when normal services are due to resume

(Service Provider / Agency Name 2) Satellite Dialysis Unit

The Dialysis Unit Manager is responsible for the following:

- Determine appointment and notify (Service Provider / Agency Name 1).
- Provide feedback re dialysis data following treatments.
- Notify (Service Provider / Agency Name 1) if staff support will be required.

6. Non Binding Agreement

The parties agree that the provisions of the Memorandum of Understanding are neither legally binding nor enforceable by either party.
Signed: __________________________

Full Name: __________________________

(Service Provider / Agency Name 1),

Date: __________________________

Signed: __________________________

Full Name: __________________________

(Service Provider / Agency Name 2),

Date: __________________________

Signed: __________________________

Full Name: __________________________

Witness: __________________________

Date: __________________________