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BACKGROUND

The OrganMatch application is an Amazon Web Services (AWS) cloud based web application with continual mirroring and managed with the highest level of security and stability. OrganMatch Laboratory Portal is a platinum application (see Appendix 1) and has a 24/7 priority in the event of an outage to immediately rectify any issues.

The infrastructure and system set up in AWS will ensure that there is always a back-up copy of the database in real time. However there are two scenarios where access to the application could be compromised and these are listed below with alternative recommended processes to provide business continuity.

INTERNET ACCESS OUTAGE

Problem	Solution
If a site does not have access to the internet then there is no access to OrganMatch.	OrganMatch is accessible via Lifeblood's Citrix solution.

ORGANMATCH DATABASE IS CORRUPTED

Problem	Solution
The OM application itself is corrupted and not able to be recovered for a period of time / days.	OrganMatch Laboratory Portal is a platinum application and there would be immediate work on recovery of the system from back-ups within 4 hours. However significant database corruption requiring more than 24hrs to fix will necessitate an **alternative business process** to be implemented.

ALTERNATIVE BUSINESS PROCESS – MANUAL WORKAROUND

DECEASED ORGAN DONORS

There can be no situation where an outage can stop utilisation of a deceased donor organ. The solution below is to find suitable recipients using manual processes. However, OrganMatch programmed allocation algorithms for kidneys cannot be replicated manually. As the primary aim is to ensure all donated organ are transplanted to a suitable recipient, the following manual workaround would need to be followed for allocation.

RENAL ALLOCATION

Algorithms are not able to be generated off system or manually.

The laboratories would need to move to a manual donor state based renal allocation list using wait time data and blood group to assess compatible recipients based on *recent organ allocation lists* which would list potential recipients based on waiting time and sensitisation.

Alternatively, a regular report by recipient wait times and blood group could be generated monthly and stored as a contingency should a manual allocation process be required.

Laboratory systems and testing platforms software should have all test data to be able to proceed with a manual data assessment of compatibility. For example, a report from the HLA Fusion or HLA Match-It applications could be generated summarising the results.

RECOMMENDED PROCESS:

A list of blood group compatible recipients, in waiting time order to be generated by the lab.

It is highly recommended that the above list of recipients should be a selection of low-risk patients.

Low risk patients would include:

- Patients with no or very low levels of sensitisation . This should include patients with no HLA antibodies present.
- No previous transplants

The above recommendation is to reduce the risks associated with manual assignment of donor specific antibodies (DSA) by the laboratory staff. Variation to this recommended process introduces additonal risks.

THORACIC AND ABDOMINAL (NON RENAL)

Patient names would need to be provided by the transplant unit accepting the offer. Suitable recipients need to be assessed manually for a virtual crossmatch.

Note: SA provides hearts and lungs for interstate transplantation and would need to have any potential recipient HLA immunology supplied for virtual crossmatching.

Names for matching would need to be provided by the transplant units.

Recipient monthly waiting lists would need to be generated and stored or emailed to the on-call group of each lab every month.

Waiting list report would identify potential recipients the acceptable antigen list could be used to filter patients for a virtual crossmatch.

LIVING DONOR TRANSPLANTS

These could continue with testing and crossmatching as all data will be held in the lab system and a manual direct comparison could be done to assess compatibility. Only final stage crossmatches would be affected by any system outage and would need to be manually reviewed and reported via the lab system.

AUSTRALIAN AND NEW ZEALAND PAIRED KIDNEY EXCHANGE (ANZKX)

No ANZKX runs could be performed with an OrganMatch outage and would need to wait until OrganMatch is back online.

POST TRANSPLANT TESTING

Any requirement for post-transplant testing could continue using existing sample ID or previous test data in the lab information system or previous worksheet information.

TESTING THE BUSINESS CONTINUITY PLAN

During planned OrganMatch outages, the Business Continuity plan will be tested. This will be coordinated through the National OrganMatch office (NOMO). All state laboratories must participate annually in the test plan. Results will be reported annually to OrganMatch Operational Governance Committee.

SUMMARY

The primary aim of this BCP is to ensure that no donor organs are at risk of not being used. These processes should only be implemented in an extreme event.

The laboratories will need to implement monthly reports for BCP and stored off system to facilitate a manual workaround including:

- **TWL patient waiting list by unit**
- **Acceptable antigens by patient**

APPENDIX 1: LIFEBLOOD SYSTEM SUPPORT CATEGORY

Service Type	Support Coverage	Availability	Priority	Incident Management Engagement	Initial acknowledgement and Updates	Restoration or Resolution Targets
Platinum	24x7 or Business Hours	99.9%	P1	Major Incident Management	30 minutes (24x7)	4 hours (24x7)
			P2	Major Incident Management	1 hour (24x7)	8 hours (24x7)
			P3	Incident Management	1 day (business hours)	3 Business Days
Gold	24x7 or Business Hours	99.5%	**P1 not applicable for a Gold Service**			
			P2	Major Incident Management	1 hour (24x7)	8 hours (24x7)
			P3	Incident Management	1 day (business hours)	3 Business Days
Silver	Business Hours Only	98.0%	**P1 not applicable for a Silver Service**			
			P2	Major Incident Management	1 hour (business hours)	8 x Business Hours
			P3	Incident Management	1 day (business hours)	3 x Business Days
			P4	Incident Management	3 days (business hours)	5 x Business Days
Brone	Business Hours Only	N/A	**P1 & P2 not applicable for a Bronze Service**			
			P3	Incident Management	1 day (business hours)	3 x Business Days
			P4	Incident Management	3 days (business hours)	5 x Business Days
Service Request (Standard)	Business Hours Only	N/A	SR/P5	Request Management	3 days (business hours)	5 x Business Days
Custom Request	Business Hours Only	N/A	CR	Request Management	By Negotiation Only	By Negotiation Only

CHANGE HISTORY

Version number	Effective date	Summary of change
1	May 2019	1st version for go live
2	May 2021	Updated to OrganMatch branding
3	August 2023	Updated to remove tray series and crossmatch requirements
4	January 2024	Updated to include recommended patient group for Kidney allocation

ELECTRONIC SIGNATURE

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