



Government of **Western Australia**  
Department of **Health**

# **WA Data Services**

## **Prioritisation and Costing**

### **Framework**

June 2023



## Version Control and Approval

This document should be considered a 'live document' and will be reviewed regularly and updated as required to:

- Reflect changes to policy and/or procedures
- Incorporate stakeholder feedback
- Determine effectiveness, relevance, and currency

Review and update of this document is coordinated by the Data and Information Systems unit within the Information and System Performance Directorate (ISPD).

| Version | Published date | Approved by                               | Amendment(s)     |
|---------|----------------|---|------------------|
| 1.0     | 08 June 2023   | Director General,<br>Department of Health | Original Version |

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## Background

The Western Australia Data Linkage System (WADLS) was established in 1995 within the WA Department of Health (the Department) and represents Australia's oldest and most renowned data linkage facility. The Department has a proud history of supporting other government agencies, not-for-profit organisations and researchers with data linkage products and services using rigorous, internationally recognised privacy preserving protocols.

This document describes the prioritisation framework and charging model for the delivery of data products and services (including data linkage services) provided by the Department. This framework has been developed to provide clear and transparent guidelines for data users to support access to data linkage products and services.

## Scope

This prioritisation and costing framework is to be applied by relevant Department teams to provide data products and services as outlined in this document. This framework applies to all requests for WA Health system data and is intended to provide all stakeholders with key information regarding the Department's prioritisation and costing approach.

The prioritisation and costing framework applies to the below groups:

- Private consultants (including individuals, companies and similar legal entities)
- Commonwealth departments
- Commonwealth funded organisations
- Other State, Territory and Foreign Governments
- Universities or research institutes
- Non-government organisations
- Public (community groups)
- WA Health system entities
- WA Government agencies
- WA Local Government Authorities

Apart from the direct costs relating to the provision of data in an e-research platform (where applicable), the costing arrangement generally does not apply to persons employed in WA Government agencies or WA Health, which incorporates the following entities:

- The Department
- Child and Adolescent Health Service
- North Metropolitan Health Service
- South Metropolitan Health Service
- East Metropolitan Health Service
- WA Country Health Service
- Health Support Service
- PathWest

Note, there may be circumstances where fees may be charged to WA Government agencies or WA Health clients where the information requested is intended to be used for personal research purposes. An assessment is required on a case-by-case basis to determine if a charge is not appropriate. In such cases, authorised Department staff will need to be satisfied that the information requested will be used for WA Health core business purposes only.



No fee will be charged where a request is subject to a reciprocal data sharing arrangement or collaborative program established through a joint arrangement. Department Managers should exercise discretion if potential exists to damage relationships and consult with the Executive Director, Information and System Performance Directorate for a decision.

## Prioritisation Framework

The Department provides a diverse range of high-quality products and services based on specialised linkage knowledge and technologies. A full description of these services are available on the Data Linkage Services Western Australia website: [Data Linkage Services - Data Linkage WA \(datalinkage-wa.org.au\)](http://Data Linkage Services - Data Linkage WA (datalinkage-wa.org.au)).

Significant resources are required to deliver data products and services with the Department employing a highly skilled team of data engineers, system administrators, request coordinators and project officers to progress requests.

Given the finite resources and need to ensure consistency and transparency in actioning requests for data, the Department has developed a prioritisation framework to support effective allocation of resources for the timely progression of data services. The prioritisation framework will be used by the Department to ensure all applications are assessed consistently with clear criteria used to inform decision making and actively manage demand for data services.

The following considerations will be applied to all data service requests received by the Department:

- Existing data request commitments and the availability of resources to complete the task within a reasonable timeframe. A reasonable timeframe for data delivery is generally considered to be within 6 months of receipt of formal Data Custodian approval for progression of a project, subject to the applicant finalising research governance approvals in a timely manner (where applicable).
- The complexity of the task and whether multiple teams will need to be involved in production of the information requested. Requests for data including datasets external to the Department’s established linked data warehouse will affect the timeliness of data delivery.
- The purpose and source of a request are additional considerations that will affect prioritisation of data requests. For example, data requests from the WA Parliament may be given a higher priority than other routine or project-specific data requests.

| Tier          | Tier Criteria   | Definition  |
|---------------|---|---|
| <b>Tier 1</b> | <ul style="list-style-type: none"> <li>• System priorities</li> <li>• Mandatory health reporting</li> <li>• Legal requirements (legally binding)</li> <li>• Data sharing obligations (non-legally binding)</li> </ul> | <ul style="list-style-type: none"> <li>• System priorities include national and state level strategic Government projects (e.g., <a href="#">reform initiatives to improve access to emergency care</a>, <a href="#">Target 120</a> and <a href="#">PeopleWA</a> programs).</li> <li>• In addition to ongoing system reporting (e.g., national submissions), mandatory health reporting also includes ad-hoc reporting activities such as those established in response to urgent health and community needs.</li> <li>• Legal requirements reflect the Department’s data delivery requirements under legally binding agreements including Notices to Produce from</li> </ul> |



|               |   |  |
|---------------|---|--|
|               |   | <p>the Ombudsman WA and contractual obligations.</p> <ul style="list-style-type: none"> <li>Data sharing obligations reflect the Department's data delivery requirements under the non-legally binding agreements with agencies, including reciprocal data sharing agreements and Memorandums of Understanding with data providers.</li> </ul>   |
| <b>Tier 2</b> | <ul style="list-style-type: none"> <li>Funding and Grants</li> </ul>  | <ul style="list-style-type: none"> <li>Prioritisation of these projects will be considerate of funding and reporting milestones, subject to reasonable timeframes for data delivery.</li> <li>Tier 2 prioritisation must be supported with valid documentation evidencing funding approval (e.g., grant letter) provided at the initiation of the project, or as soon as practicable upon confirmation of funding having been awarded.</li> </ul>  |
| <b>Tier 3</b> | <ul style="list-style-type: none"> <li>All other requests are prioritised on a first-come-first-serve basis depending on the complexity of the requests and availability of resources to support data delivery within a reasonable timeframe (i.e., within 6 months of formal Data Custodian approval)</li> </ul> | <ul style="list-style-type: none"> <li>Complexity of the data request will be assessed based on defined criteria including: <ul style="list-style-type: none"> <li>number of datasets requested</li> <li>requirement for ad-hoc linkage(s)</li> <li>data availability within the established data infrastructure (i.e., Department's linked data warehouse)</li> </ul> </li> <li>Request for data external to the Department's data warehouse will increase the complexity of the project given the dependencies (e.g., multiple teams) in the production of information requested.</li> <li>A need for ad-hoc linkage will increase the complexity of the project, particularly where dataset(s) provided for linkage are of low quality.</li> <li>The prioritisation of projects within Tier 3 will also be subject to resource capacity of the Department.</li> </ul> |

Table 1. Tiers and criteria to support project prioritisation



## Project Assessment Checklist

The Department’s Client Services team will use the following checklist to prioritise projects in adherence to the above criteria.

| Criteria  |                             |                 |
|---|-----------------------------|-----------------|
| <b>Tier 1</b>   | <b>Tick if criteria met</b> | <b>Comments</b> |
| <ul style="list-style-type: none"> <li>• <b>System Priorities</b></li> <li>• <b>Mandatory Health Reporting</b></li> <li>• <b>Legal Requirements</b></li> <li>• <b>Data Sharing Obligations</b></li> </ul>   |                             |                 |
| <b>System Priorities</b>  | <input type="checkbox"/>    |                 |
| National strategic project  | <input type="checkbox"/>    |                 |
| WA Government initiative (e.g., <a href="#">Improved emergency care access</a> , <a href="#">Target 120</a> , <a href="#">PeopleWA</a> )  | <input type="checkbox"/>    |                 |
| <b>Mandatory Health Reporting</b>   | <input type="checkbox"/>    |                 |
| Ad-hoc reporting  | <input type="checkbox"/>    |                 |
| State emergency   | <input type="checkbox"/>    |                 |
| <b>Data Sharing Obligations (non-legally binding)</b>   | <input type="checkbox"/>    |                 |
| Reciprocal data sharing agreement   | <input type="checkbox"/>    |                 |
| Collaborative program established under joint arrangement with Department of Health   | <input type="checkbox"/>    |                 |
| <b>Legal requirements (legally binding)</b>   | <input type="checkbox"/>    |                 |
| Notices to produce  | <input type="checkbox"/>    |                 |
| Legally binding agreement (e.g., contract)  | <input type="checkbox"/>    |                 |
| <b>Tier 2</b>   |                             |                 |
| <b>• Funding and Grants</b>   |                             |                 |
| Australian and WA government competitive grant research and development income <ul style="list-style-type: none"> <li>• Includes funding sourced through the National Health and Medical Research Council, Medical Research Future Fund, Australian Research Council, rural corporations, Commonwealth, State/Territory and Other nationally competitive grants</li> <li>• Includes Future Health Research and Innovation Fund and The Department funded projects (acknowledged as exclusive to WA applicants)</li> </ul> | <input type="checkbox"/>    |                 |
| Other Australian public sector research income <ul style="list-style-type: none"> <li>• Australian public sector grants derived from Commonwealth and/or State and Territory bodies</li> </ul>  | <input type="checkbox"/>    |                 |
| Funds received from private sector, philanthropic and international sources not otherwise captured <ul style="list-style-type: none"> <li>• Includes Australian and international profit organisations, Australian and international not-for-profit</li> </ul>  | <input type="checkbox"/>    |                 |



|  |                          |  |
|--|--------------------------|--|
| organisations, Australian and international philanthropy and international government  |                          |  |
| Cooperative Research Centre (CRC) research and development income <ul style="list-style-type: none"> <li>Includes funds derived from grants to CRCs from all sources</li> </ul>  | <input type="checkbox"/> |  |
| Funding grant letter provided  | <input type="checkbox"/> |  |
| <b>Tier 3</b>  |                          |  |
| <ul style="list-style-type: none"> <li><b>All other requests prioritised based on first come first serve depending on complexity of the project and availability of resources to support data delivery within a reasonable timeframe.</b></li> </ul> |                          |  |
| <b>Low complexity</b>  | <input type="checkbox"/> |  |
| Number of Dataset(s): 1-5  | <input type="checkbox"/> |  |
| Ad-Hoc Linkage: No   | <input type="checkbox"/> |  |
| Data available within Data Warehouse   | <input type="checkbox"/> |  |
| <b>Medium complexity</b>   | <input type="checkbox"/> |  |
| Number of Datasets: 6-9  | <input type="checkbox"/> |  |
| Ad-Hoc Linkage: Yes, high quality data   | <input type="checkbox"/> |  |
| Data not available within Data Warehouse   | <input type="checkbox"/> |  |
| <b>High complexity</b>   | <input type="checkbox"/> |  |
| Number of Datasets: >10  | <input type="checkbox"/> |  |
| Ad-Hoc Linkage: Yes, low quality data  | <input type="checkbox"/> |  |
| Data not available within Data Warehouse   | <input type="checkbox"/> |  |

Table 2. Project assessment checklist

## Expected Level of Service

To provide greater accountability and transparency over data service provision, the Department has developed a guide for the expected levels of service for stakeholders when progressing data requests.

The Department's Data Services Roles and Responsibility document will provide further guidance on the various stages of an application assessment and the various stakeholders involved within each stage.

The Department will provide an estimated timeline for progression of each data request following prioritisation in accordance with the above framework. Note, timelines are provided on an indicative basis only to support project planning and may be subject to change in accordance to below expected levels of service.

- The Department will endeavour to respond within 2 weeks to any general queries from applicants, noting that there may be exceptional circumstances in which further investigations are required.
- Data Custodians will complete review of data request and respond to queries within 4 weeks of submission of completed application draft for in-principle support, noting that there may be exceptional circumstances that warrants expansion of timeframe such as requirement to escalate for further review.
- Following receipt of ethical approvals, Data Custodians will complete review and respond to requests for formal custodian approval within 2 weeks of receipt, noting that there may be





exceptional circumstances that warrants expansion of timeframe such as requirement to escalate for further review.

- Data applicants must provide feedback or response via email to queries and additional information requested by the Department within 2 months. Failure to respond within this reasonable timeframe will result in the project being put on hold. A new timeframe will be provided upon the resumption of the project, depending on the response from data applicants.
- Similarly, where external data required to progress a project is not provided to the Department within 3 months of the data being requested, the project will be put on hold. This will have implications on projects requiring ad-hoc linkage or extraction of data outside of the Department's established linked data warehouse.
- Any changes to timeframes will be actively communicated by the Department.
- The Department will endeavour to deliver data for each project within 6 months of the receipt of formal Data Custodian approval, subject to the applicant finalising research governance approvals in a timely manner (where applicable). The prioritisation framework should ensure achievement of this timeframe.



## Data Services Costing Model

The Department incurs costs to maintain systems, personnel and infrastructure used to provide data services (including data linkage services). To provide services to clients, the Department has revised its charging formula to allocate a fee based on the time and resources required to deliver a data request. This revision passes on the benefits of improvements made to infrastructure and processes providing a simple, clear and transparent model that directly equates time and resources with output.

In recognition of the system-wide benefits of providing data services to generate evidence and inform service planning and policy, the Department is not seeking to recover the full costs of providing data linkage services.

A partial cost recovery of 15% has been implemented, consistent across projects. Furthermore, the Department acknowledges the improvements made to infrastructure and processes since the last costing model review and has capped the cost to deliver projects at **\$50,000**. The institutional cap represents a \$25,000 or 33% reduction in the capped cost of service from that applied with respect to the previous model.

## Charging principles

The Department has applied the following principles to its charges for products and services:

- Consistent charging for access to data products and services will be applied and charging will be comparable across all data requestors.
- Only the direct costs that relate to the resources required to deliver each individual project will be recovered at *partial cost recovery* to offset operating costs.
- The applicant is responsible for requesting an estimate of data service charges and ensuring sufficient funds continue to be available for the duration of the project to facilitate timely invoicing for data services rendered and project close-out.
- The final cost may differ from the initial cost estimate and is subject to review of the actual resources taken to deliver the request.
- The Department will review charges periodically in response to resource shifts and changing government priorities, for example passing on efficiencies through improvements to infrastructure and processes.
- The charging structure for the Department's data service products is well defined and covers the following components: client services coordination, ethical and governance review, linkage (if applicable), study group/case/control selection, extraction of linkage keys (if applicable), provision of kinship data (family connections), geocoding, service level data extraction including quality assurance, and data amendments/updates.
- All direct costs to provision data in an e-research platform will be passed on to the client (including WA Government agencies or WA Health). This charge sits separate to the partial cost recovery and is NOT subject to the \$50,000 cap.

## Charging formula

Extensive review of the time and resources taken by each team to service individual requests was undertaken with several criteria identified that influence a project's complexity. This information has been used to assign a project into a category. A corresponding base charge for each category, reflective of the average number of full time equivalent (FTE) person(s) and hours taken to service an average request has been applied. Additional services or outputs are



costed at an hourly rate, based on the time and resources required to service a request (Table 4).

As mentioned, the Department is not recovering the full costs to deliver a project. The final amount is subject to 15% direct cost recovery. The total cost is calculated using the following formula:

**Total project cost = base charge + additional services x 15% cost recovery + e-research platform direct project workspace costs (if applicable)**

Note: Provision of data in an e-research platform will incur full cost recovery to cover the direct costs assigned to use of the project workspace and will be a separate charge to the total project cost. Indirect costs to maintain platform infrastructure will not be passed on to the applicant.

The base charge is calculated using the criteria in Table 3. The formula recognises that cumulative effort across client services, research ethics and governance office, data linkage and data engineering teams are required to service a request. Effort is costed at an average Public Service Officer (PSO) Level 6 for simplicity however it is recognised that projects will have input from a range of specialists across PSO Levels 4 – 8.

To support the costing for a project, a base charge will be assessed against the criteria in Table 3. Should it meet any of the criteria in a higher category it will be charged at the higher category rate. These criteria are:

**1. The number of datasets requested**

(applies to data that is held within the WA Health Enterprise Linked Data Warehouse).

Rationale: The more datasets requested the greater the time and administrative effort to coordinate approvals from the relevant custodians.

**2. The number of external datasets requested**

(applies to data that is external to the WA Health Enterprise Linked Data Warehouse).

Rationale: The more datasets requested the greater the time and administrative effort to coordinate approvals and source data from the relevant custodians to support data extraction processes.

**3. Ad-hoc linkage required**

Rationale: Should a new dataset be required to be linked, the charging reflects the effort involved to format and standardise the fields to enable the highest linkage rate.

**4. Number of study groups to be selected**

Rationale: The selection of more than 1 study group requires additional time and effort across several teams. Charging reflects the effort to coordinate, create and sense check each study group.



| Criteria  | Low complexity                   | Medium complexity                | High complexity   | Complex                                    |
|---|----------------------------------|----------------------------------|-------------------|--|
| <b>1. No. datasets requested (data held within Data Warehouse)</b>            | 1 – 5                            | 6 - 9                            | 10 - 12           | >12  |
| <b>2. No. datasets requested (data <u>external to the data warehouse</u>)</b> | 0                                | 1-2                              | 3-4               | >4   |
| <b>3. Ad-hoc linkage</b>  | <500 records, high quality data* | >500 records, high quality data* | Low quality data* | Large number of records, low quality data* |
| <b>4. No. of study groups to be selected</b>                                  | 1                                | >1                               | >1                | >1   |
| <b>FTE to service request</b>   | 3                                | 4                                | 5                 | 6  |
| <b>Effort required</b>  | 2 weeks                          | 8 weeks                          | 12 weeks          | 16 weeks+                                  |
| <b>Base hours</b>   | 225 hrs                          | 1,200 hrs                        | 2,250 hrs         | 3,600 hrs                                  |
| <b>Base charge at 15% cost recovery</b>                                       | \$1,923.75                       | \$10,260.00                      | \$19,237.50       | \$30,780.00                                |

Table 3. Base charge for data linkage services

\* Note: The Department is developing a Data Linkage Minimum Dataset Requirements document to support the provision of high-quality data for linkage. Data for linkage will be assessed according to the minimum requirements. Poor quality data will be charged at a higher rate to reflect the time and effort required to format and standardise, where feasible to progress.

Additional services are charged on a partial cost recovery basis up to, but not exceeding the capped cost. Each additional service and its corresponding cost can be found in Table 4.

Please note all unlinked data requests will be categorised within the low complexity base charge. Additional services will be charged on top of the base charge in accordance with Table 4.



| Service                                      | Criteria   | Cost  | Notes   |
|--|--|---|---|
| Control selection                            | Selection of controls to accompany a study group   | \$600<br>(base 10 hours)  | It can take many iterations to undertake complex control selections.  |
| Tier 1 - Family connections/<br>kinship data | Standard nuclear family = mother, father, siblings   | \$350<br>(base 6 hours)   | The Department is changing the provision of family connections to recognise the movement away from the traditional description of a family. |
| Tier 2 - Family connections/<br>kinship data | More complex relationships than primary connection   | \$350<br>(base 6 hours) in addition to the \$350 for Tier 1   | The Department is changing the provision of family connections to recognise the movement away from the traditional description of a family. |
| Geocoding                                    | Data provided for ad-hoc linkage   | \$350<br>(base 6 hours)   |   |
| Filtering                                    |  | \$600<br>(base 10 hours)  |   |
| e-Research platform for data provisioning    |  | Full cost recovery to recover the direct project workspace charges (i.e., cloud consumption) for facilitating access to data in the environment | Indirect charges to maintain the cloud infrastructure will <u>not</u> be passed on to the end user.   |
| Client Services Processing Fees              | For projects that require application processing by ISPD Client Services but does not meet the 'low complexity' criteria | \$600<br>(base 10 hours)  | Only to be used when projects request data external to the Department but does not meet the 'low complexity' criteria                       |



| <b>Data Amendments and Data Repurposing</b> |   |                                       |   |
|---|---|---------------------------------------|---|
| Linkage update                              | New data is provided to be linked or<br>An old linkage is relinked  | 11.25% of total project cost recovery | This represents 75% of the cost which would be assigned if three request were treated as a 'new' project. |
| Addition of new datasets                    |   | 11.25% of total project cost recovery | This represents 75% of the cost which would be assigned if the request were treated as a 'new' project.   |
| Other amendments                            | <p>Include:</p> <ul style="list-style-type: none"> <li>• Changes to design / methodology</li> <li>• Extraction update</li> <li>• Addition of variables within an already requested dataset</li> <li>• Changes to:               <ul style="list-style-type: none"> <li>○ Participant information / consent</li> <li>○ Contact details</li> <li>○ Project timeline</li> <li>○ Project personnel</li> </ul> </li> </ul> | 7.5% of total project cost recovery   | This represents 50% of the cost which would be assigned if the request were treated as a 'new' project.   |
| Data repurposing                            | Use of data from one project for another project  | 7.5% of total project cost recovery   | This represents 50% of the cost which would be assigned if the request were treated as a 'new' project.   |

Table 4. Charges for additional data linkage services including amendments

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