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| Datasets available in the Centre for Victorian Data Linkage’s Integrated Data Resource |

## The Victorian Linkage Map and Integrated Data Resource

The Centre for Victorian Data Linkage (CVDL), located in the Victorian Department of Health (DH) has developed the Victorian Linkage Map (VLM), a system of linked records combining personal identifiers (such as name, gender, and date of birth) from multiple datasets. The VLM enables identification of records, which belong to the same person across the Victorian health and human services datasets.

The CVDL uses linkage identifiers to anonymously identify content and case variables relating to an individual across datasets. Unlike previous project-by-project methods of data linkage, the VLM provides an enduring resource of linked data.

The CVDL then produces the Integrated Data Resource (IDR), a de-identified dataset of individuals’ service history which can be used for research and analysis purposes.

The timeliness and frequency of data available in the VLM and IDR is dependent on data collection procedures in the source organisations. Some Departmental data, such as Child Protection, is almost real-time and supports quarterly updates, while others are assembled as a summary of the year’s activity for submission to the Australian Institute for Health and Welfare (AIHW) for national reporting. Some datasets, such as the Victorian Cancer Registry, experience a significant lag as the relevant secondary data is sourced and compiled by hospitals.

Descriptions of the datasets and their areas of coverage are provided below.

## Description of current datasets available in the IDR

### Victorian Admitted Episode Database

Admitted patient activity is captured in the Victorian Admitted Episodes Dataset (VAED), which provides a comprehensive dataset of the causes, effects, nature of illness and immediate outcome following treatment, and the use of hospital health services in Victoria. The VAED supports health service planning, policy formulation, epidemiological research and public hospital funding under the casemix system. All Victorian public and private hospitals, including rehabilitation centres, extended care facilities and day procedure centres, report a minimum set of data for each admitted patient episode.

The VAED dates available for use in the VLM is listed in **table A** below. The available data includes fields relating to patient demographics including residential location, causes, effects and nature of illness, type of care, diagnosis, procedures, source of funding (public vs private) and month and year of arrival and departure.

### Victorian Emergency Minimum Dataset

The Victorian Emergency Minimum Dataset (VEMD) comprises demographic, administrative and clinical data detailing presentations at Victorian public hospitals with designated emergency departments. The VEMD does not capture emergency department presentations at private hospitals.

The VEMD dates available for use in the VLM is listed in **table A** below. The available data includes fields relating to patient demographics including residential location, diagnosis and procedures, arrival and departure details.

### Non-admitted hospital services

The DH maintains data around the provision of a range of non-admitted services in Victoria to provide equitable funding to public hospitals and support health services in their planning, policy formulation and epidemiological research. The Victorian Integrated Non-Admitted Health (VINAH) dataset comprises data about non-admitted services including the Hospital Admission Risk Program (HARP), Specialist Clinics (Outpatients), Palliative Care (PC), Post-Acute Care (PAC), Subacute Ambulatory Care Services (SACS), Victorian HIV Service (VHS) and the Victorian Respiratory Support Service (VRSS).

The VINAH dates available for use in the VLM is listed in table below. The data items vary between programs, but in general include patient demographics, referral details, medical condition, and service provided.

### Elective surgery waiting list

The Elective Surgery Information System (ESIS) is a patient-level collection of elective surgery waiting list data from approved Victorian public healthcare services. Elective surgery is planned surgery that can be booked in advance as a result of a specialist clinical assessment resulting in placement on an elective surgery waiting list.

The ESIS dates available for use in the VLM is listed in **table A** below. Data items include patient age, elective surgery procedures, date of registration on waiting list, date of admission and patient postcode.

### Victorian Cost Data Collection

The Victorian Cost Data Collection (VCDC) is a dataset reflecting the cost and mix of resources used to deliver patient care. Victorian public hospitals are required to report costs for all operational funded activity and are expected to maintain patient costing systems that monitor service provision to patients and allow for the accurate determination of patient level costs. All Victorian metropolitan and major rural health services are required to submit annual patient level cost data to the VCDC.

The VCDC dates available for use in the VLM is listed in **table A** below, note that the Cost data has been consolidated with the VAED, however it has a time lag in our latest linkage map. Key costing data is available by CCU, Emergency, ICU, Imaging, Medical, Surgery, Medical NON-Surgery, Nursing, Pathology, Pharmacy, Theatre, Allied & Total cost.

### Clinical public mental health services

Specialist mental health services in Victoria are divided into two service delivery types: clinical and non-clinical. Clinical services focus on assessment and treatment of people with a mental condition. These services are called area mental health services and are managed by general health facilities, such as hospitals. There are reporting requirements for Victorian Government public mental health services using the CMI/ODS system. CMI/ODS comprises two systems. The Client Management Interface (CMI) is the local client information system used by each public mental health service. The Operational Data Store (ODS) manages a set of selected data items from each CMI.

When a public mental health service accepts a person’s referral for service delivery or intervention, the person becomes a client of the service and should be registered in the Client Management Interface/Operational Data Store (CMI/ODS) system.

The Clinical public mental health services date available for use in the VLM is listed in **table A** below. Available data includes demographic, clinical status including diagnosis, and service history for each person registered on the CMI/ODS system as receiving public clinical mental health services. Registered and non-registered Mental Health clients are included in this data.

### Mental Health Community Support Services

Mental Health Community Support Services (MHCSS) provide non-clinical mental health services, for example, they support people with psychiatric disability to manage their self-care, improve social and relationship skills and achieve broader quality of life via physical health, maximise participation on community life, housing, education and employment.

Access to Mental Health Community Support Service (MHCSS) programs – Individualised Client Support Packages, Youth Residential Rehabilitation Services, Adult Residential Rehabilitation Services and Supported Accommodation Services – is via the catchment-based intake assessment services.

The Mental Health Community Support Services dates available for use in the VLM is listed in **table A** below. The system includes client demographics, contact hours, bed days, client support units and service types on individuals who receive MHCSS services which is reported to DH from funded sector service providers.

### Alcohol and Drug Services now Victorian Alcohol and Drug Collection

Previously, the main source of data on Alcohol and Drug Services is sourced from the ADIS application which is a reporting platform for agencies funded to provide alcohol and other drug treatment, drink drive assessment and education, and Local Drug Strategy Primary Health Services. Since 2017, the department has migrated the data collection to the Victorian Alcohol and Drug Collection. The Victorian Alcohol and Drug Collection (VADC) dataset comprises demographic, administrative and outcome client-level data of Alcohol and Drug Treatment providers funded by Victorian Government.

The VADC and ADIS dates available for use in the VLM is listed in **table A** below. The data items include demographic, administrative and outcome client-level data of Alcohol and Drug Treatment providers funded by Victorian Government.

### Cancer diagnosis

The Victorian Cancer Registry (VCR) is a population-based cancer registry aiming to provide comprehensive, accurate and timely information for cancer control. All Victorian hospitals, pathology services and prescribed registers, are required to notify details of patients admitted and treated for cancers reportable under the Cancer Act, 1958, as amended. The VCR now holds information on nearly 1 million tumours diagnosed in Victorians over more than 30 years.

The VCR dates available for use in the VLM is listed in **table A** below. Available items include patient demographics including geographic location and tumour details such as site, morphology, grade, behaviour and date of diagnosis.

### Victorian Radiotherapy Minimum Data Set

The Victorian Radiotherapy Minimum Data Set (VRMDS) contains demographic, administrative and clinical data for admitted and non-admitted patients treated in Victorian Radiotherapy facilities in the public and private sector. The VRMDS commenced in 2008-09 as an initiative of the Department of Health in collaboration with the Victorian radiotherapy providers. The purpose of the data collection is to provide the Department with relevant data to inform service planning considerations for radiotherapy facilities, including metrics which inform this, such as utilisation rate analysis against optimal rates.

The VRMDS dates available for use in the VLM is listed in **table A** below. Available data incudes patient level demographics including geographic location and treatment details.

### Community health services

Community health services deliver a range of primary health, human services and community-based support to the Victorian community. These include universal services as well as targeted services for vulnerable population groups such as children, pregnant women, refugee and asylum seekers and those with chronic disease. Community health services receive funding from a range of DH programs for services including health promotion, general counselling, allied health and nursing services.

There are currently 86 Victorian community health services which comprise 31 independently managed registered community health centres and 55 community health centres that are part of larger health services. The Community Health dataset comprises data reported quarterly by Victorian community health providers on their services as funded by the Department.

The Community health services dates available for use in the VLM is listed in **table A** below. The data is a collection of transaction records for each client contact, including client demographics, service type, service hours and service duration.

### Home and Community Care

The Home & Community Care (HACC) Program provides a comprehensive range of basic maintenance and support services for frail aged people, people with a disability and their carers so they can remain living in the community. The program was previously jointly funded by the Australian Government and the State and Territory governments.

On 1 July 2016 the funding and management of Home and Community Care (HACC) program services changed significantly. Access to these services is now based on age. Services for older people (people aged 65 and over and Aboriginal people aged 50 and over) are now funded and managed by the Commonwealth Department of Health through the Commonwealth Home Support Programme (CHSP). The CHSP provides the similar types of services that were provided by the HACC program.

These services include help with housework, personal care, meals, social support and groups activities, nursing care, allied health and home maintenance.

Services for younger people (people aged under 65 and Aboriginal people aged under 50) remain funded and managed by the Victorian Department of Health under the HACC Program for Younger People (HACC PYP).

The HACC data is available in the VLM from July 2005 to June 2017. HACC data for people aged 65 plus and Aboriginal people aged 50 and over is available only until 30 June 2016, prior to transfer of this program to the Commonwealth. Available data items include client demographics, carer details, service usage and need to assistance in particular activities of daily life.

### Public dental health services

The Dental Health Program provides public dental care to eligible Victorians. This includes health care and pensioner concession cardholders and their children, and all children aged 0-12 years. The Department of Health funds Dental Health Services Victoria (DHSV) to deliver both routine and urgent dental care. Services are delivered through the Royal Dental Hospital Melbourne and 79 clinics across Victoria, operated by community health and rural public health services. The Dental Health dataset contains data about the public dental services funded by the Dental Health Services. It does not include information about private dental services.

Public dental services data is available in the Victorian Linkage Map from Jan 2011 to July 2017. Available data items include patient demographics, treatment type, eligibility and treatment history.

### Notifiable infectious diseases

The Health Protection Branch of DH aims to prevent and control the spread of infectious diseases and other conditions in the community and thereby reduce as far as practicable the incidence and prevalence of infectious diseases in Victoria. The accurate and timely monitoring of these diseases through this data collection allows the unit to:

* respond to specific incidents/cases;
* respond to and control outbreaks;
* plan and implement education and prevention strategies.

Under the Public Health and Wellbeing Regulations 2009, the Department of Health is authorised by law to collect information from medical practitioners and pathology services about diagnoses of certain health related conditions in Victoria.

The Public Health Event Surveillance System (PHESS) holds data on notifiable diseases that medical practitioners are required by law to notify. This includes a range of contagious diseases, viral infections and sexually transmitted infections. The collection exists to monitor and control the occurrence of infectious diseases and other specified conditions in Victoria, and helps to prevent further illness.

Notifiable infectious disease dates available for use in the VLM is listed in **table A** below. The data includes patient demographics, dates of notification, infectious disease type. Requests for data relating to COVID-19 will be subject to review by a Department of Health governance group.

### Births

All babies born in Victoria need to be registered with the Registry of Births Death and Marriages within 60 days. The law requires both parents to register a child’s birth, although there are circumstances where just one parent can register the birth including where the father is unknown, the other parent has died or the other parent refuses to sign. The CVDL obtains this data from the Registry of Births Death and Marriages under a Memorandum of Understanding.

The Births dates available for use in the VLM is listed in **table A** below. The available fields are baby’s date of birth (5-year age groups), baby’s sex, mother’s date of birth (5-year age groups), birth order (in case of multiple births).

### Perinatal data

The Consultative Council on Obstetric and Paediatric Mortality and Morbidity (CCOPMM) is responsible for collecting and monitoring data on all Victorian births. Health services are required to report the information set out in the Consultative Council on Obstetric and Paediatric Mortality and Morbidity (CCOPMM) birth report for inclusion in the Victorian Perinatal Data Collection (VPDC). This includes non-hospital births and birth-related events from 20 weeks gestation onwards.

The CCOPMM relies upon the cooperation of obstetricians, neonatologists, paediatricians, midwives, general practitioners and medical records personnel to provide it with the maximum amount of relevant information on each case. A Perinatal Death Certificate and a Confidential Medical Report on Perinatal Death is completed for each stillbirth or neonatal death by the attending physician or pathologist.

The Perinatal dates available for use in the VLM is listed in **table A** below. CCOPMM authorises release of data items required for a specific linkage request. Available data items include: maternal characteristics, obstetric conditions, procedures and outcomes, neonatal morbidity and birth anomalies.

To access the Perinatal data, a separate application is to be submitted to the CCOPMM for approval via the VAHI Data Request Hub at: https://vahi.freshdesk.com/support/home

### Deaths – Victorian Death Index

All deaths in Victoria are registered with the Registry of Births, Deaths and Marriages. Usually, death registration is done by the funeral director. A medical practitioner is responsible for recording the Medical Certificate relating to cause of death. The CVDL obtains Victorian Deaths Index (VDI) data from the Registry of Births Deaths and Marriages under a Memorandum of Understanding.

The VDI dates available for use in the VLM is listed in **table A** below. The available data items include: Date of birth of deceased, date of death, age at death, cause of death, sex of deceased, number of siblings, marital status at death, number and age of children, last residence of deceased. Note that the cause of death data is not coded to ICD-10, and where this is required for the research purposes, the National Cause of Death Unit Record File is the preferred source.

### Deaths – National Cause of Death Unit Record file

The State and Territory Registrars of Births Deaths and Marriage and State Coroners provide data relating to deaths registered in Australia in a given reference year to the Australian Bureau of Statistics. The ABS then codes the cause of death data using ICD-10. The Australian Coordinating Registry in Queensland has been appointed to manage access the National Cause of Death Unit Record File (COD URF) to approved agency or applicant on behalf of Australian Registry of Births, Deaths and Marriages (RBDM) offices (the Data Custodians). The file is updated annually.

The National COD URF is available via CVDL for Victorian data only, dates available for use in the VLM is listed in **table A** below. Due to the time required for the ABS to collect and code data from all state jurisdictions, there is a substantial time lag in data availability. The dataset includes both coronial and registry data. Available data items include age at death, gender, date of death, state/territory of usual residence, underlying cause of death, coroner case flag.

### Child Protection Services

Child Protection (CP) services are provided by DFFH and receive, assess and investigate reports where children may be at risk of significant abuse or neglect within their family. Child Protection services also ensure that appropriate services are provided to protect children from harm. Child protection workers enter details of their intervention in the Client Relationship Information System (CRIS), an online client management and case management system. This includes creation and management of client records, case notes and reports relating to child protection reports, investigation, substantiation, court activity and out of home care placements.

The CP dates available for use in the VLM is listed in **table A** below. However, data prior to the early 2000s was transferred from a previous information system and the available variables and quality is limited. Available variables relate to the demographic details and service history of children reported to the child protection system. This includes details of reports, investigations, court activity and out of home care placements.

### Family Services

Family Services (FS) promote the safety, stability and development of vulnerable children, young people and their families, from birth to 17 years of age, by providing case work service and linking families with relevant support services. These services are provided by agencies funded by Department of Families, Fairness and Housing (DFFH), and include Child FIRST and Integrated Family Services, such as Cradle to Kinder services:

* Child FIRST services is the entry point into family services and undertakes an assessment of family need. The Integrated Reports and Information System (IRIS) records key data about the client and service profile as reported by the agencies.
* Cradle to Kinder (C2K) program is an intensive ante and postnatal support service to provide longer term, intensive family and early parenting support for a group of vulnerable young mothers and their children. The service commences in pregnancy and continues until the child reaches four years of age. The Cradle to Kinder program provides a whole-of-family service in the form of pre-birth support, intensive and longer-term interventions and case work support until the child reaches four years of age.
* Cradle to Kinder builds the capacity of parents to not only provide for their children’s health, safety and development, but to build their own self-reliance and sustainability through access to education, vocational training and employment. The Cradle to Kinder service is provided by funded agencies and the data is reported to the department via the Integrated Reports and Information System (IRIS).

The Family Services – FS and C2K dates available for use in the VLM is listed in **table A** below. Data items include client demographics, referral details, client issues and service activities, case outcome and closure reasons.

### Family Services – Family violence

DFFH funds agencies which provide services to perpetrators and victims/survivors of family violence. The family Violence (FV) data is recorded in the Integrated Reports and Information System (IRIS), and records key information about the client and service profile.

The FS-FV dates available for use in the VLM is listed in **table A** below. Available data includes client demographics, referral details, client issues and service activities, case outcome and closure reasons.

### Family Services - Sexual Assault Services

Sexual Assault (SA) services respond to people who have experience sexual assault, or to perpetrators of sexual assault that has been reported. Services include crisis care responses, counselling, casework, group-work, advocacy and a statewide after-hours telephone crisis service. Sexual Assault Services data is also recorded in the Integrated Reports and Information System (IRIS) similarly to Family Services and Family Violence services

The FS-SA dates available for use in the VLM is listed in **table A** below. Available data includes client demographics, referral details, client issues and service activities, case outcome and closure reasons.

### Disability Services

DFFH provides and funds services for people with intellectual, physical, sensory, cognitive and neurological disabilities. Support falls into two categories. These are short-term supports such as respite services, behaviour supports, case management and therapy and long term supports such as individual support packages and supported accommodation.

The National Disability Insurance Scheme (NDIS) is significantly changing the way that disability services are provided in Victoria. The NDIS is being rolled out in stages from July 2016 to July 2019, and people receiving support from DFFH are moving to the NDIS at different times depending on where they live and the type of support they receive.

Departmental disability services workers record information about departmental clients on the Client Relationship Information System (CRIS). Service providers use a similar package called Client Relationship Information System for Service Providers (CRISSP).

The Disability services dates available for use in the VLM is listed in **table A** below. Available data includes client demographics and service details.

### Disability Services - Early Childhood Intervention Services

Early Childhood Intervention Services (ECIS) support children with a disability or developmental delay from birth to school entry and their families. The overall aim of these services is to provide parents and families with the knowledge, skills and support to meet their child's needs, and to optimise the child's development and ability to participate in family and community life. These services have been provided and funded by the Department of Education and Training but are now progressively transferred to the NDIS between mid-2016 to mid-2019.

The Disability Services - ECIS dates available for use in the VLM is listed in **table A** below. Data items include client demographics and service details.

### Public Housing (applications, waiting list and tenancies)

Public housing is a form of long-term rental housing for vulnerable people on low incomes. The data is from a register of client housing information in the Victorian public system. Social housing refers to affordable housing owned by non-government agencies and is not captured in this collection.

The Public housing dates available for use in the VLM is listed in **table A** below, and includes data about the housing waiting list, applications for public housing and public housing tenancies, including client demographics and family structures.

### Specialist Homelessness Services Collection

The department and funded community service organisations provide housing and support to Victorians most in need. These services include long-term housing programs as well as temporary accommodation and homelessness support.

The homelessness dataset captures information about homelessness services provided for the full range of homelessness issues including crisis, family violence, homelessness risk etc. The DFFH Homelessness data collection mirrors the Specialist Homelessness Services Collection (SHSC) conducted by the Australian Institute of Health and Welfare (AIHW).

The Homelessness dates available for use in the VLM is listed in **table A** below. Data available in the VLM include the 2015-16 and 2016-17 financial years only, and up to October 2020. Prior to this, the data was provided by funded agencies directly to the AIHW. Data items include client demographics and service details.

### National Assessment Program – Literacy and Numeracy

The National Assessment Program – Literacy and Numeracy (NAPLAN) is an annual assessment for students in Years 3, 5, 7 and 9. It has been an everyday part of the school calendar since 2008. NAPLAN tests identify whether all students have the literacy and numeracy skills that provide the critical foundation for their learning, and for their productive and rewarding participation in the community. Students are assessed using common national tests in reading, writing, language conventions (spelling, grammar and punctuation) and numeracy.

The NAPLAN tests broadly reflect important aspects of literacy and numeracy in the Australian Curriculum adopted by each state or territory. The assessments are undertaken nationwide, every year, in the second full week in May.

The NAPLAN dates available for use in the VLM is listed in **table A** below. Data items include assessment of student achievement in literacy and numeracy in years 3, 5, 7, 9. This dataset is sourced from the Victorian Curriculum Assessment Authority (VCAA) and covers public, Catholic and Independent schools.

### Australian Early Development Census

The Australian Early Development Census (AEDC) is a nationwide data collection of early childhood development at the time children commence their first year of full-time school. The AEDC highlights what is working well and what needs to be improved or developed to support children and their families by providing evidence to support health, education and community policy and planning.

The CVDL is an accredited Linkage unit approved to undertake linkage activities using AEDC data. The AEDC dates available for use in the VLM is listed in **table A** below.

#### Table A: Available datasets in the Integrated Data Resource (IDR)

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| --- | --- | --- |
| **Dataset name** | **From:** | **To:** |
| **ADIS/VADC** | Jul-00 | **Nov-20** |
| **Admitted (VAED)** | Jan-00 | **Nov-20** |
| **AEDC** | Jan-09 | Dec-18 |
| **Births** | Jul-93 | **Oct-20** |
| **Cancer Registry (VCR)** | Jan-08 | **Dec-19** |
| **Community health (CMH)**  | Jul-08 | **Sep-20** |
| **Cost data** | Jul-15 | **Jun-19** |
| **DEATH (VDI)** | Jan-94 | **Nov-20** |
| **DEATH Registry Coded (COD URF)** | Jan-37 | **Dec-17** |
| **Disability** | Jul-09 | **Jun-19** |
| **Elective surgery (ESIS)** | Jul-01 | **Nov-20** |
| **Emergency (VEMD)** | Jul-99 | **Nov-20** |
| **Family Services - Child First (IRIS CF)** | Jul-08 | **Nov-20** |
| **Family Services - Child Protection (CRIS CP)** | Jan-92 | **Nov-20** |
| **Family Services - Cradle 2 Kinder (IRIS C2K)** | Jul-08 | **Nov-20** |
| **Family Services - Family Services (IRIS FS)** | Jul-08 | **Nov-20** |
| **Family Services - Family Violence (IRIS FV)** | Jul-08 | **Nov-20** |
| **Family Services - Sexual Assault Support Service (IRIS SASS)** | Jul-08 | **Nov-20** |
| **Home & Community Care (HACC)** | Jul-98 | **Jul-20** |
| **Homelessness** | Jul-15 | **Oct-20** |
| **Housing (HIIP)** | Jul-12 | **Nov-20** |
| **Mental health (CMI/ODS)** | Jan-60 | **Dec-20** |
| **Mental health Community Services (MHCSS)** | Jul-08 | **Jun-20** |
| **NAPLAN** | Apr-08 | **Dec-19** |
| **Non- Admitted (VINAH)** | Jul-07 | **Nov-20** |
| **Perinatal (VPDC)** | Jan-99 | **Dec-18** |
| **Public Health Event (Infectious Disease) PHESS** | Jan-91 | **Nov-20** |
| **Radiotherapy (VRMDS)** | Jan-10 | **Oct-20** |

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In this document, ‘Aboriginal’ refers to both Aboriginal and Torres Strait Islander people. ‘Indigenous’ or ‘Koori/Koorie’ is retained when part of the title of a report, program or quotation.

Available at <https://www2.health.vic.gov.au/cvdl>