# Victoria State Government Department of Health and Human ServicesGovernance and use of National Health Service Directory data

DH Standard

July 2020

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# Version control and reviews

### Developers: This table identifies the developer and subject matter expert of this document:

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| Version | Issue Date | Name | Role/Comments  |
| 0.3 | 30/12/19 | Health Sector Standards and Advisory. | Updated to include FHIR API and widget access |
| 0.2 | 13/08/18 | Health Sector Standards and Advisory. | Re-design & redevelopment of contents into a new template, with new sections and general updates. |
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| Version | Date | Name | Action |
| --- | --- | --- | --- |
| 0.4 | 14/07/20 | Healthdirect Australia | Industry review. |
| 0.4 | 30/04/20 | Digital Health Design and Standards Reference Group (DHDSR) | Final review and minor updates |
| 0.3 | Oct. 2018 | Sector Design Standards Reference Group (SDSRG) | Review and feedback |
| 0.2 | Sep. 2018 | Health Sector Standards and Advisory (HSSA) | Review and update |

### Referenced artefacts/publications: This table identifies the artefacts/publications referenced or considered in this document:

| Document Name | Owner /Author | Comments |
| --- | --- | --- |
| DHHS-VIC\_MFN HL7 Specifications | HTS | Functional specifications for PCMS, Cerner and Unified MFN |

**Endorsements and approvals:** This document is endorsed and approved for publication as follows:

| Version | Date | Authorized Officer and role | Action |
| --- | --- | --- | --- |
| 0.4 | 18/06/20 | Digital Health Design and Standards Reference Group. | Endorsed at meeting of 18/06/20 |
| 0.4 | 18/06/20 | **Zoltan Kokai** (DHDSR Chair), Executive Director, Information Technology and Capital Projects, Eastern Health. | Endorsed. |
| FINAL | 03/07/20 | **Neville Board**, Chief Digital Health Officer, Digital Health branch, Department of Health & Human Services | Endorsed. |

# Standard Overview

The National Health Service Directory (NHSD) is a consolidated and comprehensive national directory of health services and practitioners who provide them.

This standard document defines the governance and use of National Health Service Directory through the Data lifecycle management. The Data lifecycle management describe the process of populating NHSD data in health applications by different users.

The standard also covers the governance for the roles and responsibilities of stakeholders in relation to the delivery of discharge summaries, and electronic identifiers (i.e. EID) management in NHSD.

This standard will help ensure health services use NHSD as the primary source for health service and practitioner information for the purposes of distributing discharge summaries to general practitioners and specialists and for identifying eReferral recipients.

# Introduction

## Background

The National Health Services Directory (NHSD) is the national source of health and related services information in Australia. The NHSD is operated by Healthdirect Australia. Healthdirect Australia was established in August 2006 under a Council of Australian Governments (COAG) agreement to improve access to trusted health information for the people of Australia.

The NHSD is a comprehensive directory of health care providers. The NHSD is funded to deliver solutions for the following use cases:

1. Consumer: Find organisations, services and practitioners
2. Provider: referrals, discharge summaries
3. Jurisdiction: data for reporting, analysis, mapping and planning

This enables unique identification of each health care provider involved in a patient’s or clients care and improves the completeness and accuracy of health services information to support clinical decision making, patient administration, and provider search billing and finance functions *(NOTE: NHSD is not to be used as a substitute for the Medicare billing process).* Typical information maintained by NHSD includes service addresses, availability and billing information (e.g. bulk billed) and specialty information as well as contact information to facilitate trusted communications between providers, services and health care consumers.

A number of digital health standards make use of NHSD data. It is mandatory for health services to use the NHSD as the primary source for practitioner information for the purposes of distributing discharge summaries to general practitioners and specialists and for identifying eReferral recipients.

The increased dependency on the NHSD’s accuracy has highlighted the need for transparency around the governance of its data and population in health applications. Health organisations are particularly reliant on the validity of Electronic Identifiers (EIDs). EIDs are essential for the delivery of discharge summaries via an Electronic Messaging Service (EMS), such as Health Link, Argus and/or ReferralNet. Whilst the EMS providers are the assigning authorities for these identifiers, the NHSD is the data source for this information for health organisations.

The digital health branch has developed this good governance guide for the roles and responsibilities of stakeholders in relation to the delivery of discharge summaries and EID management in the NHSD. (For more information on the digital health branch refer to appendix A).

This standard is focused on the current uses of the NHSD within Victoria for the distribution of general practitioner and specialist details into key health service applications that generate discharge summary documents for distribution to general practitioners and specialists.

## Purpose

The purpose of this standard is to support Victorian Health Services in their implementation and use of NHSD data to support better digital health integration across the Victorian health system. Essentially, this document defines:

* governance and use of the National Health Service Directory data.
* use of the NHSD as the primary source for health care provider information for the purposes of distributing discharge summaries to general practitioners and specialists and for identifying eReferral recipients.
* governance guidance for the roles and responsibilities of stakeholders in relation to the delivery of discharge summaries and the management of Electronic identifiers in NHSD.
* processes for health services to access NHSD data and maintain the accuracy of data within the NHSD.

## Assumptions

The NHSD will be the source of Electronic Identifiers used for sending discharge summaries.

The NHSD is the endorsed source for health care provider information (general practitioner and specialist information) for health organisations in Victoria by Digital Health branch of DHHS.

## Scope

### In Scope

This standard outline:

* Information flow process for:
	+ Population of data in NHSD
	+ Population of NHSD data in health applications
	+ Distribution of electronic discharge summaries
	+ High level overview of key elements in NHSD data
* Roles and responsibilities to manage data in NHSD
* Points of failure for discharge summary delivery
* Other methods to access NHSD data

### Out of Scope

* Management of internal provider and service directories

##  Audience/Stakeholders

This includes:

* Health Services that are currently referencing NHSD information, and will reference this information in the future
* Health Technology Solutions
* Digital Health branch
* Healthdirect Australia (NHSD)
* Electronic Messaging Service Providers

# NHSD data lifecycle management

## Information flow diagrams

|  |  |  |
| --- | --- | --- |
| Figure 1: Population of NHSD  |   | Figure 2: Population of NHSD data in Health Applications |
| Practice and practitioners are encouraged to create records in the NHSD. Ongoing maintenance of this record relies on continual communication of any changes including by the practice or practitioner, or the EMS Provider, to the NHSD.An electronic identifier for a practice with an electronic messaging service will be updated in the NHSD by the EMS Provider where it will be distributed to health organisations and used for sending electronic records to the practice. |  | Data from the NHSD is published for use by the health sector. HTS has developed an HL7 MFN^M02 message to insert/update/delete records based on extracted data from the NHSD. This information is standards based and used by health vendors and health organisations to update healthcare applications with NHSD content.  |
| Figure 3: Distribution of electronic discharge summaries |  | Figure 4: High level overview of all elements |
| Health applications capable of producing electronic discharge summaries can use electronic identifiers obtained from the NHSD to send to practitioners via their electronic messaging service providers. Where the sending organisation uses a different EMS provider to the receiving organisation, the sending organisation EMS provider should route the DS to the receiving organisation EMS provider for delivery to the endpoint. |  | The above figure depicts the high level overview of key elements in NHSD data and the distribution of electronic discharge summaries. |

## Roles and Responsibilities of key stakeholders

Figure 5: Roles and Responsibilities



## Stakeholder avenues of engagement

Each stakeholder illustrated in Figure 5 above has a role and responsibility for ensuring the data in the NHSD is accurate and issues are actioned or reported in a timely manner. The NHSD is considered the source data for population of EIDs in various systems including clinical systems that produce discharge summaries.

### Health Practice/ General Practitioners

* Notify nominated EMS of practice or practitioners changes
* Notify NHSD of practice, practitioner and or practitioner service changes

### Electronic Messaging Service (EMS) Provider

* Notify NHSD of EID changes/alterations, new and inactivated EIDs
* Upload changes/alterations, new and inactivated EIDs from the NHSD as required.
* Provide access to monitoring tools
* Provide support service for health services in relation to EMS

### NHSD (Healthdirect)

* Provide the extract to the HTS for MFN transformation and distribution daily
* Make available a bulk data exchange process to access changes/alterations, new and inactivated EIDs
* Update the NHSD with EID changes as supplied by the EMS Provider
* Investigate notifications from health services and/or HTS when an EID or associated provider or service data is identified as incorrect in the NHSD
* If required, contact practices, services and practitioners for regular verification of the currency of their details
* Enable application programming interface (API) access for practice and practitioner information when requested by a health service as an alternative or in addition to the MFN solution (Sect 3.3)

### Health Technology Solutions (DHHS)

* Transform NHSD extracts into MFN messages daily
* Validate and filter corrupt records in the NHSD data
* Report data and extract issues to NHSD
* Monitor MFN delivery errors
* Manage and respond to issues raised in relation to MFN messaging
* Aid in the facilitation of data correction in NHSD where appropriate
* Manage and respond to issues raised in Infra for discharge summary HL7 defects

### Health organisations

* Monitor log files and utilise monitoring tools to identify failed discharge summary delivery
* Action errors in discharge summary deliveries and report incorrect EIDs to EMS providers
* Implement the hospital policy for alternate delivery method upon failure (e.g. fax)
* Report incorrect EIDs and services/practitioner information to the NHSD for correction: <https://about.healthdirect.gov.au/review-your-nhsd-listing>
* Engage the EMS provider support service if further assistance is required or for delivery failures outside of incorrect EID or discharge summary HL7 validation failure
* Report issues in the API or MFN data to appropriate service (NHSD (API) or HTS (MFN))

## Update of Victorian public health service (VPHS) systems with NHSD data (Master File Notification)

To facilitate the transition to NHSD and provide participating VPHS a trusted source of provider information to their clinical, patient administration and billing systems (*(NOTE: NHSD is not to be used as a substitute for the Medicare billing process)*, HTS has developed and supports a **Master File Notification** (MFN) process to send a broadcast HL7 message to the participating VPHS so as to update their systems with information available via the NHSD.

This broadcast provides daily changed information to practice and practitioner details for General Practitioners (GPs) and Specialists. The objective is to assist VPHS to keep their databases accurate with less effort and cost.

Figure 6: NHSD update in VPHS systems.



## Points of failure for discharge summary delivery

Figure 7:Points of failure for discharge summaries.



Figure 7 illustrates possible points of failure that may result in failed discharge summary messages. The above diagram does not include technical failure points such as breaks in connectivity.

1. The practice or GP does not advise their EMS provider or the NHSD about changes such as the closure of a practice or the departure of a practitioner. NOTE: notification of this issue is provided by EMS delivery failure messaging to the Agency Integration Engine (AIE).
2. There is a breakdown in the process of EIDs being updated / maintained in the NHSD:
* the roles and responsibilities for ensuring the accuracy of EIDs in the NHSD reside with the EMS provider and NHSD.
* Notify the NHSD if there are issues with the EID
1. There is an issue in the Extract/MFN message creation or API:
* Extract/MFN message creation is monitored by the HTS and actioned as required.
* API issues are monitored by the health service and issues reported to NHSD as required
1. Monitoring the delivery of discharge summaries by health organisations. Discharge summary messages may fail for several reasons. Health organisations should monitor log files and action as below:
* Incorrect EID - should be reported to the NHSD
* Issue with the discharge summary format or content
* Delivery errors – contact should be made with the EMS provider as the fault may reside with the recipient

# Other methods to access NHSD data

In November 2019, the Victorian Human Services Directory (HSD) website and the <http://manage.nhsd.com.au/> website was shut down. NHSD data can now be accessed via several alternative channels:

## NHSD health provider organisation and service information

Information about health organisations such as services available, location and contact details at:

* Better Health Channel website - <https://www.betterhealth.vic.gov.au/>
* Healthdirect Australia website - <https://www.healthdirect.gov.au/australian-health-services>
* NHSD Service Finder Widget - https://about.healthdirect.gov.au/nhsd
* Healthdirect Healthmap - <https://healthmap.com.au/>

## NHSD data extracts/reports information

Victorian public hospitals and health services users can extract NHSD organisation and service information at any time via the Healthdirect Healthmap. To do so, users will first need to register for an account using their health service email address.

## API Access

**NHSD FHIR API**: The NHSD has adopted the Fast Healthcare Interoperability Resources (FHIR) Standard and developed an API which complies with this standard to enable access to NHSD data.

**NHSD Consumer API**: This API is available to developers of consumer-facing applications. Data can be returned via the NHSD Consumer API in .json format for easy integration with applications.

**Widgets**: Built using responsive design principles and easily customisable, the NHSD service finder widget supports system integrations where technical resources are limited. Widgets use a simple line of code that can easily be deployed to any webpage or mobile app.

To access an API or widget, please complete the [NHSD integration request form](https://help.nhsd.com.au/plugins/servlet/desk/portal/2/create/67) at:

<https://about.healthdirect.gov.au/using-the-nhsd>

## NHSD data extracts

Bulk practitioner data access requests and ad-hoc data access requests should be directed to the HTS in the first instance.

# Technical Notes

## General

* Clinic Addresses: All the address lines are compressed into XAD-1. This affects STF-11 and ZPR-5
* Teleconference numbers for clinics: are not provided.
* Addresses: align with <https://data.gov.au/data/dataset/geocoded-national-address-file-g-naf>. This standard does not allow HealthDirect to provide (hypen’s) in addresses. For example, 18-20 Collins Street will be displayed as 18 20 Collins Street or as 18 Collins Street.
* Victorian bounded date: there are 83 postcodes that have been excluded from the new MFN process (from February 2020). Primarily in the following areas: Wagga Wagga, Tumut, Berri, Narrandera & Finley.

## Providers:

* Individual provider phone numbers are not provided (STF-10)
* Individual providers email addresses are not provided (STF-10)

## Providers at Clinics:

* Specialities align to the SNOMED-CT-AU codeset, which are mapped by the department to the Victorian PAS and EMR specialties.
* Preferred contact method (i.e. Fax, email, post) is not available (STF-16).

# Appendix A – Digital Health branch

The Digital Health branch is led by the Chief Digital Health Officer. As a branch in the Health and Wellbeing division, Digital Health collaborates closely with a wide range of stakeholders across the department, sector agencies and other jurisdictions to perform the following functions:

* Provides engagement, standards, policy advice, planning and assurance functions across the health sector in the areas of digital health
* Is responsible for the system management required to operationalise health sector reform
* Provides outward-facing whole of health sector leadership in digital health enablement as well as commissioning of digital health and ICT functions
* Maintain a close working relationship with other branches of the division which has the levers, relationships and responsibilities across the health system to ensure digital projects are properly governed, resourced, and ensure all risks are well managed.
* Guides health ICT initiatives towards an interoperable future eHealth environment using well-established standards, best practice guides, methodologies and principles.

Digital Health utilises the people, process and technology components, with a strong emphasis on transformational change elements when implanting new health systems and workflow processes.

Digital Health focus on four areas:

1. Digital Health strategy, policy and architecture standards for the Victorian health sector
2. Commissioning of digital health functions within Victorian public health services.
3. Sponsoring digital health programs to implement sector-wide health information sharing platforms including those at a national level (to which Victoria contributes) as well as sector-enabling capabilities sponsored by DHHS.
4. Health service system management function including sector assurance (e.g. major program, operations and cybersecurity).

Digital health program areas include:

* Health Sector Standards and Advisory which provide information on emerging health technologies, feasibility, architecture, design and integration.
* Sector Assurance which provides assurance on all approved health service projects funded or co-funded by the government to ensure health services operate safely, securely and cost-effectively.
* Sector Governance and Reporting which provides governance and reporting on the system manager function and the overall digital health branch function.
* Health Sector Planning which provide planning and pipeline management for the health sector, managing concept proposals, business bases, funding bids and subsequently funding allocation and funding agreements.
* Research and Innovation which works in partnership with academia and industry to identify and implement health informatics and digital-enabled solutions for greater efficiency, productivity and quality and safety outcomes. The team also oversees the benefit realisation portfolio and the advanced use of healthcare data to support early intervention, system management and better patient outcomes.

Health Sector Standards and Advisory (HSSA) is committed to open, independent and best practice view of healthcare Information and Communication Technology (ICT), application solution principles. HSSA can provide recommendations to the overarching enterprise application design and associated services to integrate healthcare applications. Below are some of HSSA activities:

* Deliver guides and advice around interoperability across healthcare applications
* Define messaging standards for Victorian health applications
* Facilitate a higher level of integration knowledge and associated quality processes in the Victorian health sector
* Align innovation, efficiencies and effective use of ICT within health to encourage and drive standards-based approaches that encourage a high level of interoperability

**For further clarification on this standard, the Digital Health branch can be contacted on** **digitalhealth@dhhs.vic.gov.au** **or as per the contact details available on the DHHS Digital Health’s website.**

# Appendix B – Terms and Definitions

|  |  |
| --- | --- |
| **Term** | **Description** |
| API | Application Programming Interface |
| AIE | Agency Integration Engine |
| DHHS | Victorian Department of Health & Human Services |
| DH | Digital Health |
| DS | Discharge Summary |
| EMS | Electronic Messaging Service |
| EID | Electronic Identifier |
| GP | General Practitioner |
| HL7 | Health Level 7, a widely accepted standard to support exchange of medical information, both administrative or clinical |
| Health Organisation | Includes and is not limited to Health Services & Alliances, Hospitals, Community Centres |
| HSD | Human Services Directory: Legacy National Health Service Directory |
| HS | Health Services |
| HSSA | Health Sector Standards and Advisory |
| HTS | Health Technology Solutions |
| ICT | Information & Communication Technology |
| NHSD | National Health Services Directory |
| PAS | Patient Administration System – a system used for the recording of patient and provider information to support management and coordination of service provision.  |
| MFN | Master File Notification – HL7 message type used to relay NHSD information to Health Applications. |
| VPHS or Health Service Agency | Victorian Public Health Sector - One of the 85 Victorian Public Health Services offering healthcare across the state |