

Health information sharing legislative reform

Consultation paper

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Executive summary

The Department of Health and Human Services (the department) is seeking feedback on proposed amendments to legislation through targeted consultations hosted on Engage Victoria.

Feedback is requested on the design of proposed amendments to authorise the department to share clinical information between public hospitals and health services for the patient care, while respecting a patient's rights to privacy and confidentiality.

This input will contribute to refining the proposed design of the legislation, and identifying potential risks and issues to be addressed, including matters such as confidentiality, privacy safeguards and medico-legal protections.

Background

The ability for treating practitioners to securely share health information is best practice for patient care. It provides clinicians with a fuller picture of a person's treatment history. Secure sharing of clinical information enables patients to move between services and receive treatment over an extended period in a way that is coordinated and safe.

In the Victorian public healthcare system, however, a patient's health information can be spread across different health services, in separate computer systems and in paper records. This means that vital health information sharing only occurs on an ad hoc basis.

The lack of a robust technology to support the sharing of, and secure access, to health information across public hospitals and health services in Victoria has a range of impacts. These include:

- a lack of data integration across public hospitals and health services affects patient safety and quality. Tests and investigations may be repeated, or treatment may be delayed while the clinician verifies a patient's medical history
- an inability to identify and share digital health information on patient journeys across the system means services are fragmented and not person-centred: working together to share decisions and plan care is difficult when a patient's previous medical history is not readily available at the point of care. This is particularly so for vulnerable and disadvantaged populations. For many of these people, communication and collaboration with their clinical staff can be difficult
- limited health information sharing across the sector means duplication, re-work and inefficiencies. Clinicians have to spend time sourcing information from other health services, and then collating so that it can be used to treat the patient in front of them.

These challenges were highlighted in *Targeting zero: supporting the Victorian hospital system to eliminate avoidable harm and strengthen quality of care*.

Digitisation of health information and investments in electronic medical record systems means clinicians in our public hospitals and health services have more access to health information from those systems at the time they treat the patient. This is essential to improving the safety and quality of health care, developing healthier communities and lowering the cost of health care.

The clinical information sharing solution

In response, the Department of Health and Human Services ('the department') is developing a clinical information sharing solution. It will allow the health information stored within the digital systems of each participating public hospital and health service to be collated and held in a central location by the

department. It can then be securely shared with other public hospitals and health services, when required to further treatment of a patient.

Clinical information sharing means that a clinician who views a patient's information in their hospital system will be notified that other Victorian public hospitals and health services also hold clinical information on that patient.

The CIS solution will strengthen the quality and continuity of care in Victoria. For the first time, public hospitals and health services will be given secure access to health information via a single digital interface. This will reduce the burden, risk and potential for errors associated with manual gathering of health information from different health services.

The CIS solution will also open strengthen population and preventive health. It will enable the application of precision medicine for patients and their families. Predictive analytics will better support personalised care, digital epidemiology, and pathogen surveillance and response.

Appendix 1 contains further information on how clinical information sharing will operate.

Health information sharing legislative reform

To complement and authorise the implementation of the CIS solution, changes are required to the *Health Records Act 2001* (Vic) and s. 141 of the *Health Services Act 1988* (Vic).

Today, legislation permits the collection, sharing and use of health information through electronic records systems in or between public hospitals and denominational hospitals for the treatment of patients.

To enable clinical information sharing, however, legislation not must only allow for health information to be collected by public hospitals and health services. It must also allow health information to be securely collected and shared by the department with all public hospitals and health services, for the purposes of patient care, without the requirement for consent.

This is because it is often impractical and sometimes challenging to obtain the consent of the patient for a clinician to access information about a patient's medical condition. It can be particularly difficult in emergency situations when treatment is required to prevent death, serious damage to the patient's health, or significant pain or distress. Moreover, the feasibility of acquiring consent retrospectively from patients to share their previous health information with other Victorian public hospitals and health services is limited.

Future changes will allow the department, and an expanded number of public hospital and health services, to be authorised under the Act to collect, use and disclose health information electronically, for patient care.

The proposed legislation will also streamline the process for public hospitals and health services to share electronic health information. This will make details of their patient's previous care and treatment available to the treating clinician. It also improves data safeguards across Victorian public hospitals and health services, protecting patient privacy and securing their sensitive data.

The proposed changes to the legislation will allow for the health information in public health service systems to be collated and held in a central location by the department, on a safe and secure platform. It can then be shared with public health services, when needed for treatment and care. To enable this secure clinical information sharing, the legislation would not include a lever for patients to opt in or out.

This will allow Victorian public hospitals and health services access to the complete and near-real time, well-organised health information that is essential for high-quality and safe treatment. It will provide continuity of patient care across different services and provide subsequent clinicians with an understanding of a patient's condition. This underpins appropriate investigations and treatments and provides a method of communicating with patients and clinicians on current and future care plans.

To support patient choice and control as part of enhancing clinical information sharing, it is planned to develop a 'patient portal'. The portal allows a patient to view the health care information that Victorian public hospitals and health services hold about them in centralised location.

The proposed legislation will build on the investment and commitments made to date by the Victorian Government to create a connected health services system. It focuses on each person and their individual care needs, and on building digital capability within each public health service.

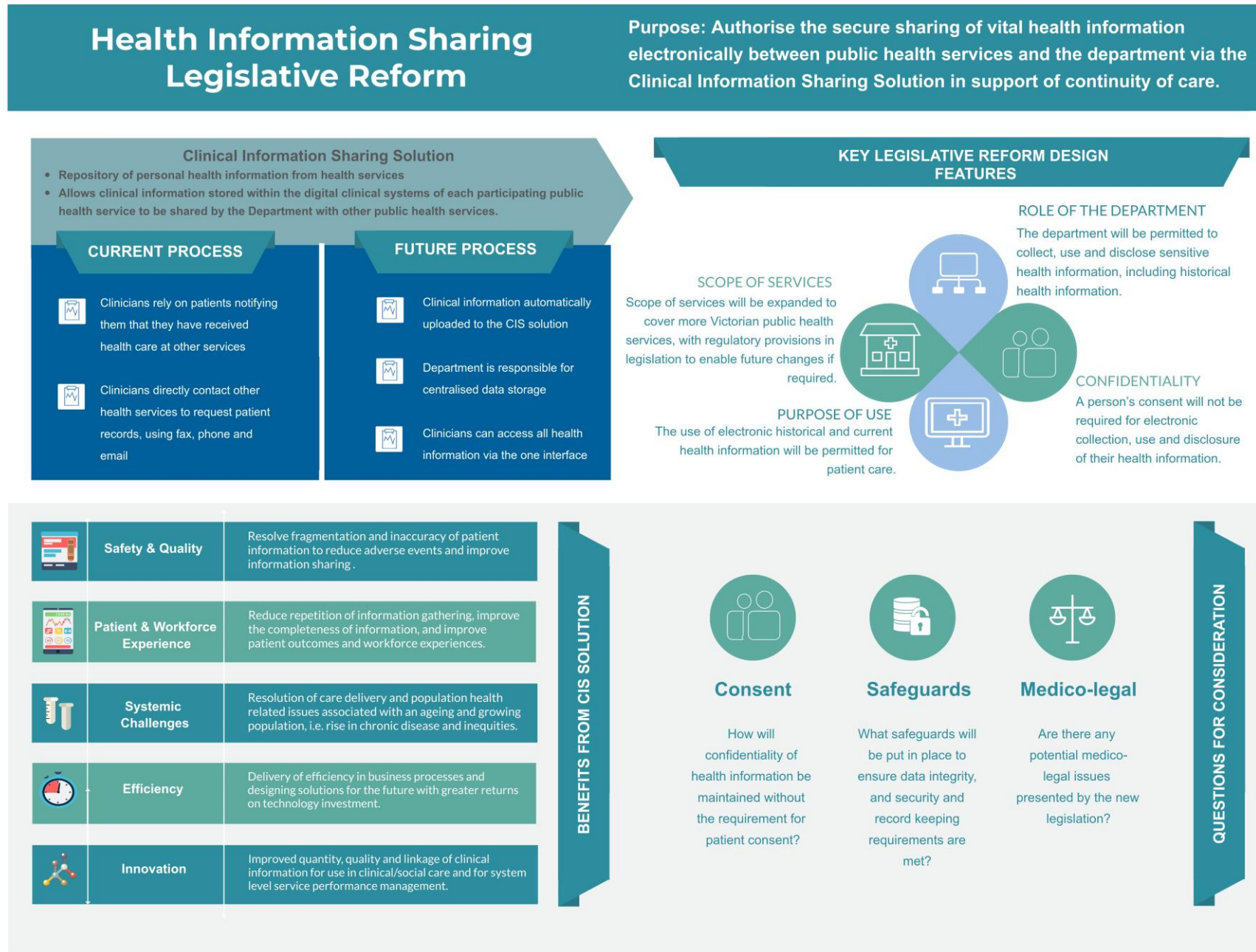
The legislation is designed to move the paradigm from one that restricts access to critical health information, to one that authorises sharing and release between public hospitals and health services. Appropriate safeguards will be in place, maintaining the integrity of the data system and building trust with patients that their health information is used appropriately to provide care.

The proposed legislation will cover all Victorian public hospitals and health services established under the Health Services Act (Schedules 1, 1A, 2, 3, 5), as listed in Appendix 2.

An advisory group is chaired by Michael Gorton AM, and comprises sector, government, legal and patient and consumer representatives. It has been tasked with providing direction on health information sharing policy and legislation in support of the reform process (Appendix 3).

Figure 1 shows an overview of the legislative reform.

Figure 1: Health information sharing legislative reform overview



Introduction

Targeting zero

Targeting zero recommended as electronic patient record that enables interchange of information between hospitals to improve safety and quality in the Victorian health system.

In 2015, the Minister for Health commissioned *Targeting zero: supporting the Victorian hospital system to eliminate avoidable harm to patients and strengthen quality of care*, the report of the Review of Hospital Safety and Quality Assurance in Victoria led by Dr Stephen Duckett (*Targeting zero*).

Targeting zero provided a detailed and extensive analysis of quality and safety supports and oversight across the Victorian hospital system. It made 179 recommendations aimed at delivering better protections and improved outcomes for patients.

Targeting zero called for improvements in the sharing of health information across and between health services to enable management and use of health information for the provision of patient care and service improvement.

A significant finding of the review was that the events that prompted the review occurred in the context of catastrophic failures in health information sharing across the health system. It specifically noted that:

1. health information was not shared across the Victorian health system in any consolidated format, and
2. the capability to share information electronically across health services did not exist at the time of the report.

Recommendation 4.13.2 of *Targeting zero* specifically stated that the 'department should adopt a goal of ensuring that, by 2021, all major hospitals have a fully electronic health record that enables interchange of information with other hospitals.

The clinical information sharing solution

Overview

Secure sharing of health information electronically will allow health information stored within one public health service's clinical systems to be connected and shared with other public hospitals and health services.

In order to achieve the Victorian Government's vision of the best health, wellbeing and safety for all Victorians through the delivery of integrated person-centred care, there needs to be improved access to and sharing of health information across the care continuum.ⁱ

To respond to this need, the department is developing the clinical information sharing (CIS) solution. This electronic health information sharing solution will enable Victorian public hospitals and health services to exchange information about the patients they are caring for. The solution will securely share health information between Victorian public hospitals and health services in an operational context. This means that a public health service viewing a patient's record during an admission at one public health service will be able to see health information about that person's diagnoses, treatments, medications and other information collected at other public hospitals and health services. The solution will implement agreed health informatics standards and ensure the consistency and conformity of all health information sent and stored. It will also link to summary health information stored in the national My Health Record system. Appendix 4 provides more information on how the CIS solution complements My Health Record.

Access to the CIS solution will only be available to clinicians working in Victorian public hospitals and health services, through their existing health information systems. The department will take stringent steps to protect patient data within the system from inappropriate or unauthorised access. Only authorised hospital staff will have access to a patient's health information. There will be rigorous and proactive auditing of access to the clinical information solution, and active monitoring to alert to any suspicious behaviour.

Description of the clinical information sharing solution

The clinical information sharing solution will act as a repository of health information from public hospitals and health services. It will enable this information to be appropriately shared with other public hospitals and health services.

The solution will store data within a solution held by the Department of Health and Human Services and make health information immediately available to the clinician on request via the local public hospital and health service electronic medical record.

This repository will also harmonise the data, remove duplications and ensure everyday differences in clinical terminology are managed appropriately. For example, the system will recognise that while 'ICD-10-AM code J45' and 'SNOMED code 195967001' might look different, both codes represent 'asthma' for health professionals.

The solution will also facilitate access to the summary information held in a patient's My Health Record. This includes information across the broader health ecosystem (Victorian and national), including general practices, private hospitals and diagnostic services, medical specialists, and clinical information from other states and territories.

Healthcare information that the clinical information sharing solution will include:

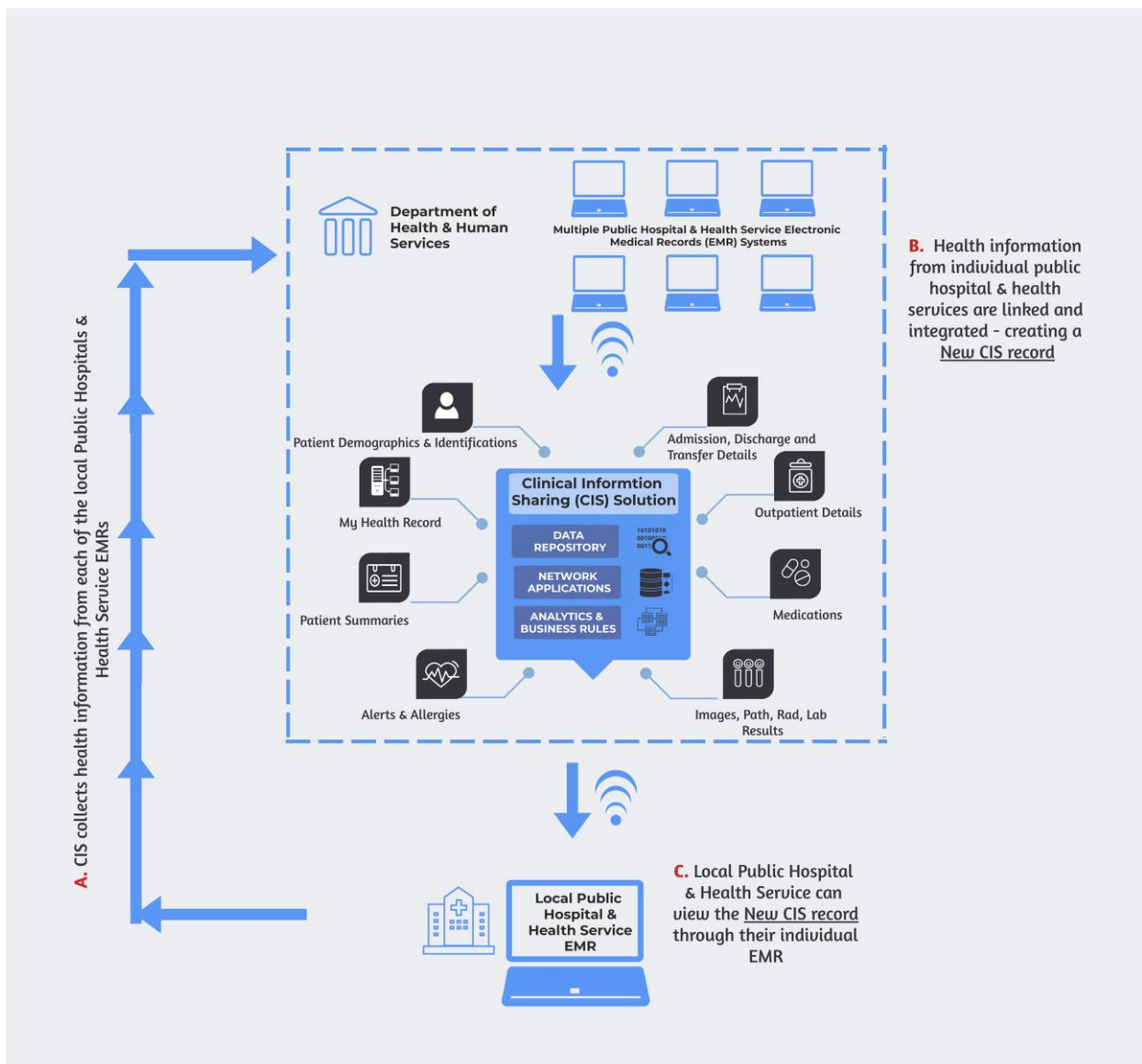
- patient demographic details
- inpatient, emergency and outpatient attendance details
- future outpatient bookings

- pathology results
- imaging reports, and links to image storage
- discharge summaries, emergency department summaries, theatre summaries
- medications summary details (on discharge)
- alerts and allergies
- correspondence

Appendix 1 provides further information on how the solution will operate.

Figure 2 shows the flow of health information through the clinical information sharing solution.

Figure 2: Clinical information solution information flow



Benefits

There are significant benefits to be realised through enabling legislation that supports the scope and design of the clinical information sharing solution.

Should the reform proceed, the government will be able to progress with the CIS solution. It will be integral to strengthening the quality of care in Victoria, including:

- improved patient safety and decreased avoidable patient harm
- improved client service integration, care handover and more person-centred care
- enhanced systems, planning and innovation through improved data quality.

Appendix 5 provides case studies to demonstrate the practical use of clinical information sharing solution in a hospital setting.

Improved patient safety and decreased avoidable patient harm

Risks to patient quality and safety arise when there is fragmented information across the patient’s care journey. In 2017–18 there were more than 103,000 adverse patient separations in Victorian hospitals. 38 per cent of these related to adverse effects of drugs, medications or biological substances.ⁱⁱ

The failure to correctly identify patients across health services, match their information, and accurately share that information can lead to negative outcomes for patients. These include unintended injury, infections, falls and problems with medications and medical devices.

Implementing the CIS solution, linked to electronic medical record systems in Victorian public hospitals, would lead to greater quality and safety for patients shown in Table 1.

Table 1: Benefits of clinical information sharing

Clinical benefits	Patient benefits
<ul style="list-style-type: none"> • Reducing medical errors that result from paper-based systems. Clinical information sharing can improve service efficiency, through greater clinical accuracy in terms of auditable health information that is accessible at the right time, in the right place, by the right person.^{iii,iv} <p>For example, a recent My Health Record survey found that 25 per cent of healthcare providers using the system prevented a medicine error.^v</p>	<ul style="list-style-type: none"> • Improving quality and safety of care for patients in public hospitals and health services. Clinical information sharing provides more complete and accurate health information. That will support a reduction in the risks of providing a wrong diagnosis, delays in treatment, and injuries.
<ul style="list-style-type: none"> • Improved clinical decision-making and collaboration. Improved quality, exchange and availability of data across public hospitals and health services will lead to better informed decisions by public hospitals and health services.^{vi} <p>For example, a study found that for 57 per cent of patient visits, clinicians believed missing information was outside their clinical system.^{vii}</p>	<ul style="list-style-type: none"> • Higher quality of patient care^{viii}. Clinical information sharing can reduce the length of hospital stays^{ix}, unplanned re-admissions, negative drug effects^x, and better link with non-hospital care.

Improved client service integration, care handover and person-centred care

A critical prerequisite for patient-centred approaches is the ability to identify an individual and their information in each health service they have attended. This gives an ability to share and collate that information accurately.

A health information sharing solution will provide a reliable clinical history for use at the point of care, which will enable the benefits shown in Table 2.

Table 2: Service and patient benefits

Service benefits	Patient benefits
<ul style="list-style-type: none"> Integrated and coordinated health care, which relies on the ability to extend outside of public hospitals into broader public health services 	<ul style="list-style-type: none"> Improved patient-centred experience through a reduction in repeat requests for information. These include requests for details on an individual's health history, physical exams and tests, such as blood tests, imaging tests, and biopsies.
<ul style="list-style-type: none"> Improved patient-centred experience through a reduction in repeat requests for information. These include requests for details on an individual's health history, physical exams, and tests, such as blood tests, imaging tests, and biopsies. 	<ul style="list-style-type: none"> Greater equity of access and service coverage for vulnerable clients. Clinical information sharing provides a more complete picture of their diverse service needs. It opens up new ways for clinicians to support clients through more integrated, person-centred service responses.

Enhanced systems, planning and innovation through improved data quality.

The department currently links some hospital patient data using local identifiers and demographic information, which enables monthly processing of retrospective data for reporting and analysis. Table 3 shows how the CIS solution would improve the quantity and quality of provided data and enhance linkage and sharing of health information.

Table 3: Benefits of enhanced healthcare planning

System benefits	Patient benefits
<ul style="list-style-type: none"> Identification of trends in patient outcomes,^{xi} including identifying deficiencies of care sooner.^{xii} 	<ul style="list-style-type: none"> Better patient care by identifying early where there are problems in care and treatments. This contributes to increased adherence to treatment regimens.
<ul style="list-style-type: none"> Identification of systemic improvement opportunities.^{xiii} 	<ul style="list-style-type: none"> Greater opportunities for public hospitals and health services to develop better ways to meet patients' service expectations and needs.
<ul style="list-style-type: none"> Stronger system-level service performance management.^{xiv} 	<ul style="list-style-type: none"> Greater transparency on the level of safety and quality of care provided to patients. Clinical information sharing provides more evidence on the health outcomes for patients.
<ul style="list-style-type: none"> Better informed long-term system planning.^{xv} 	<ul style="list-style-type: none"> Money invested in public hospitals and health services is better targeted towards the future healthcare needs of the Victoria population. This includes delivering care that meets the needs of vulnerable and hard-to-reach populations. Clinical information sharing can provide greater access to the right services in the right location at the right time.
<ul style="list-style-type: none"> Innovation in fields such as prevention,^{xvi} precision and personalised medicine, and predictive analytics. These support 	<ul style="list-style-type: none"> Provision of more personalised care and treatment for patients earlier. Clinical information sharing alerts clinicians to signs of an identified problem, or risk factors or vulnerabilities. This

System benefits	Patient benefits
personalised care, ^{xvii} digital epidemiology and pathogen surveillance and response. ^{xviii}	helps prevent chronic or underlying health problems.

Other jurisdictions

The CIS solution will introduce a health information exchange to the Victorian health system. Many other national and international jurisdictions already have integrated electronic health information as part of their practice.

Queensland

Queensland Health has an integrated solution available to view patient information called The Viewer. The Viewer is a read-only application that integrates electronic healthcare information from all Queensland Health facilities and services. Queensland Health clinicians can use The Viewer to see patient healthcare information. Queensland general practitioners have access to health information within the Viewer via the Health Provider Portal (HPP).

New South Wales

HealthNet is a NSW Health state-wide health information sharing platform that:

- Shares a subset of patient/consumer clinical information across NSW Local Health Districts (LHDs) and Speciality Health Networks, which provides 24/7 access via a NSW Health eMR to an aggregated view of patient summary information originating from other LHDs
- Sends electronic discharge summaries to a patient/consumer's nominated General Practitioner (GP) via secure messaging
- Shares patient/consumer information with their MHR.

HealthNet is accessed by NSW Health clinicians via a link in a patient/consumer's local medical record in a NSW Health eMR

Health information sharing legislative reform

Need for legislative reform

To deliver integrated electronic health information across public hospitals and health services in Victoria, minor changes are needed in current health privacy and health services legislation.

Laws related to the sharing of health information in Victoria are outlined in the Health Records Act and s. 141 of the Health Services Act. They focus on protecting the privacy and confidentiality of an individual's health information.

Current legislation permits the collection, sharing and use of health information through electronic records systems in or between public hospitals and denominational hospitals for the treatment of patients at any time. To enable the CIS solution however, it is necessary for the legislation to allow for health information to be collected by public hospitals and health services. In addition, the legislation needs to allow the department to securely share health information with all public hospitals and health services for the purposes of patient care.

Design of legislative reform

Minor changes to the Health Records Act and s. 141 of the Health Services Act are necessary to address confidentiality requirements and expand the scope of services authorised to share health information.

The legislative reform will authorise the department and public hospitals and health services to collect, use and disclose sensitive identified health information between and across public hospitals and health services for patient care purposes.

This would apply retrospectively to allow the collection, use or disclosure of health information collected on a patient at a public hospital or health service in the past. It enables pre-loaded and real-time data feeds to deliver updated public hospital and health service data to the CIS solution.

Key design features of the legislative reform include:

1. inclusion of the department in information sharing. The department would have the authority to securely share current and historical health information between and across public hospitals and health services electronically and will not require patient consent
2. ability to include additional public hospitals and health services. The proposed legislation will initially cover current Victorian health services that are established under the Health Services Act (Schedules 1, 1A, 2, 3, 5) as listed in Appendix 2. This includes:
 - public hospitals
 - multipurpose services
 - denominational hospitals
 - metropolitan hospitals
 - public health services.

It is intended that the legislative reform would include a provision enabling additional health services to be brought into scope in the future via regulations (for example, prison health services, independent community services and ambulance services). The department will establish these new regulations for the Governor in Council to prescribe a person or body as a clinical information sharing entity

3. managing confidentiality across public hospitals and health services and the department. In-scope public hospitals and health services and the department will be authorised to collect, use and disclose health information about a person including when a person may be identified without requiring patient consent or the provision of a specific lever for patients to opt-in or out. Operational safeguards will be put in place to govern the patient confidentiality (refer to Appendix 6).
4. defining the purpose of use. Through retrospective legislative reform, in-scope public hospitals and health services and the department will be authorised to collect, use and disclose current and historical health information electronically. This would allow information to be shared for specified circumstances including the care of patients such as identification, diagnosis, prognosis, or treatment (providing, coordinating, or managing health care and related services) of patients.

These changes will enable more public hospitals and health services and the department to share accurate and timely health information about patients' health histories, health statuses and treatment. They will create significant improvements in clinical communication and continuity of care, enable safer health care outcomes and prevent avoidable harm for the people trusting us with their health information.

See Appendix 7 for further information on national and international jurisdiction examples.

Consultation

While this consultation paper introduces initial design thinking for legislative reform, further work is required to get the design right. The Government considers it prudent to rigorously test the proposed reform elements with relevant stakeholders. This will help to ensure that the detailed design of the reform reflects and achieves the needs of Victorian patients and clinicians.

Outlined below are specific considerations that may impact the effectiveness of legislative reform to enable expanded health information sharing.

We seek your feedback on the questions posed in this section.

Consent: How will confidentiality of health information be maintained without the requirement for patient consent?

Expanding the number of public hospitals and health services which (via the department) can securely share sensitive identified electronic health information for patient care will provide significant patient health and safety benefits.

The principle of patient control is a cornerstone of health privacy and data protection regimes in Victoria. Laws provide for consent, necessity, limitations, security and other protections for patient health information. These laws are designed to protect privacy and promote patient autonomy, while also ensuring safe and effective service delivery, and the continued improvement of health services.

Exemptions are appropriate when there are substantial safety and quality benefits by disclosing health information that are in the patient's interest. Current legislation reflects this perspective and allows public hospitals and denominational hospitals to share health information through electronic records systems for the treatment of patients at any time. Proposed legislation will extend the scope of entities that can share health information electronically to include the department and other public hospitals and health services shown in Appendix 1.

Under proposed legislation, patients will continue to have the right to know what information is held about them and will be provided with access to their information through a dedicated Patient Portal and notification function as part of the CIS solution, supporting some degree of choice and control.

New governance and regulatory arrangements, policy and operational guidelines will also be issued for public hospitals and health services to support privacy and confidentiality of patients' health information. Appendix 6 summarises governance and operational safeguards that will be put in place to govern the patient confidentiality and privacy.

Safeguards: What safeguards will be put in place to ensure data integrity, security and record keeping requirements are met?

The CIS solution will offer stronger safeguards for the management of health information, as permitted through the new legislation. It will offer a step change in the level of security, data integrity and accountability available in clinical practice.

The Health Privacy Principles (HPPs) set out in the Health Records Act encourage data quality, security and transparency. They require public hospitals and health services to make sure that health information they collect, use, hold or disclose is accurate, complete, up to date and relevant to its functions or activities.

As highlighted, a range of safeguards and penalties against unnecessary or excessive health information sharing will be put in place to protect the security of health information accessed through the CIS solution. This will be essential to developing, enhancing and underpinning the therapeutic relationship

and securing the necessary trust and openness that characterises the ongoing communication between public hospitals and health services and their patients.

Data integrity

As data custodian, the department will have responsibility to ensure the integrity of the CIS solution's data. The department operates in a highly regulated environment and is the custodian of a significant amount of sensitive and valuable information, including personal and health information. As such, the department implements a strong policy framework to maintain data integrity that the CIS solution would be subject to. This includes but is not limited to the:

- *Data access and release policy* – to ensure that access to and release of data is controlled and authorised and that all custodians are aware of their responsibilities and understand the processes enabling the exercise of those responsibilities
- *Information asset governance policy* – which outlines the stewardship, custodianship and administration of information assets
- *Data quality policy* – to ensure that the department meets its obligations with regards to its data quality.

Data accuracy and consistency of data over its life cycle

The clinical information sharing (CIS) solution will utilise the unique patient identification capability to ensure that medical records and digital information shared between health services are correctly matched and linked together. In doing so, additional fields or terms may be added to CIS records in order to support search functionality. To account for the risk of errors that may result from such a process, the CIS solution does not alter any original entries from within a local public hospital or health service electronic medical record (EMR).

The CIS solution will also enable health services to gather more context on the information by:

- noting the health services that produced the record – both to provide a contact for follow up information, and for the treating clinician to be aware of the qualifications of the person who created the record (for example, clinical vs data administration staff)
- participating in a feedback loop with other diagnosing health services for further information and confirmation (for example, where the information in the system does not seem sufficient for a diagnosis, the treating clinician can request that the diagnosing clinician explain the diagnosis). Through the Patient Portal and notification function, patients would also see information on their diagnosis, supporting some degree of choice and control.

Data security

The department is committed to data security, as required in the *Privacy and Data Protection Act 2014* and through the Victorian Protective Data Security Framework administered by Office of the Victorian Information Commissioner. The department will ensure that the CIS solution provides protection from outside threats, protection from inappropriate access by other persons, and compliance with privacy laws and courts of law.

The CIS solution will incorporate a security identity and access management capability to control who has access to patients' health information. It limits the kinds of sensitive health information that would be shared or be seen, reducing the risk of unauthorised access and retrospectively auditing for breaches.

Solution features will:

- give the ability to control access to an entire record, or elements within the record based on predefined criteria, such as vulnerable patients experiencing family violence
- adopt the ASD ISM^{ix} as the standard to manage cyber and information security

- support role-based security.

Record keeping requirements

Public hospitals and health services have an obligation to maintain accurate records. Any information that is available and relied upon by a health service in providing health care should form part of the patient record.

The CIS solution will enable health services to fulfil this obligation by automatically recording each external record that has been accessed through the CIS solution. It will do this by auditing health services to relevant records and information, after which they would be deemed to be part of a patient's record at that health service.

Medico-legal: Does the new legislation present any potential medical legal issues?

Liability implications for public hospitals and health services

Public hospitals and health services will have the same liability obligations as prior to legislative change. They will be entrusted to make a professional judgement on the benefits of consulting health information records held by other public hospitals and health services (previously done via direct contact), balanced with the time required.

There may be a perception that changes to the Health Records Act and the Health Services Act, to expand the number of entities that securely share health information, could result in an increased risk of medico-legal proceedings for public hospitals and health services.

In the course of treating a patient, public hospitals and health services are not legally required to consider a patient's prior medical record. Public hospitals and health services can choose to investigate whether a patient has undergone treatment or testing at other health services and can pursue patient records from these services in accordance with their professional standards and practice. However, they are not required to do so by law.

Additional health information made available through the new legislation will be regarded in the same way as investigating treatment or test records from other public hospitals and health services. Public hospitals and health services will not be obliged to proactively search for or view additional records.

Liability implications for the Department of Health and Human Services

Liability implications for the department related specifically to the CIS solution have also been considered. For example, through regular audits, departmental data stewards will work with Victorian public hospitals and health services to ensure that information held by the CIS solution is accurate and up to date. Where there is unauthorised sharing of information or a data breach that could alter or delete patients' personal data, penalties will apply, and there will be strong governance in the use of the CIS solution to ensure the risk of adverse consequences and errors is minimised.

Liability implications for users of the CIS solution

The existing penalties for breaches of the confidentiality provisions in s. 141 of the Health Services Act are intended to be applied to any breaches involving the use of the CIS solution.

Questions

Consent: How will confidentiality of health information be maintained without the requirement for patient consent?

1. To what extent do you agree with the purpose and high-level design features for the proposed legislative reform? Please provide relevant statements in support of your view.
2. What are your perspectives on the proposed entities (the department and public hospitals and health services) and uses (purpose of use) that are to be included in the legislation amendment?
3. What may be some of the critical success factors to maintain public trust in the legislative changes in the absence of patient consent?
4. Are there additional opportunities created by the legislation reform to support better patient and health system outcomes?

Safeguards: What safeguards will be put in place to ensure data integrity, security and record keeping requirements are met?

1. Are there additional safeguards necessary to protect patient privacy through the legislative changes?
2. Will the proposed legislative reform create any risks, and what (if any) mitigations may be put in place in response?
3. How might the department communicate the legislative changes to patients in a way that maintains trust between health providers, patients and the department?
4. Are the sanctions and financial penalties sufficiently prohibitive for breaches that relate to the proposed amendment to the legislation?
5. How might the department reduce any risk that patients may withhold information from their public hospitals and health services because of fears their privacy will be breached?
6. The CIS technical specifications emphasise data security, data integrity and record keeping. What additional operational considerations could be put in place to ensure only high-quality health information is available within the CIS solution? (Selected audience only.)

Medico-legal: Are there any potential medical legal issues presented by the new legislation?

1. Are there potential medico-legal implications (in clinical practice, and for the department) related to the introduction of the health information sharing legislative changes? Are there additional legislative amendments required to overcome these issues? And what should be communicated to clinicians about these? (Selected audience only.)

The department will consider your responses and will provide a summary to the Minister for Health in progressing the next stages of this legislative reform.

Appendix 1 Clinical information sharing solution

What is a clinical information sharing solution?

The clinical information sharing (CIS) solution is the technology that will enable the sharing of curated health data. This technology will allow health information stored within the health information systems of each participating public hospital and health service to be securely collated in a central location.

Who will operate the clinical information sharing solution?

The department will operate and oversee the management of the clinical information sharing solution. It will collect and handle the personal information from participating public hospitals and health services, to allow it to be shared with other public hospitals and health services when required to support further treatment of a patient.

What information will it collect?

The CIS solution will initially include core clinical information collected by a public hospital and health service when delivering care to a patient in an acute setting:

- demographic data including details of emergency contacts
- attendance information including hospital inpatient, emergency and outpatient attendance details (attended and planned)
- medications: prescribed, ordered and dispensed
- allergies and adverse reactions
- patient attendance summaries: discharge summary, ED attendance note, OP attendance note
- pathology and diagnostic imaging orders and results
- clinical observations such as height, weight and blood pressure
- advance care directives, advance care plans and resuscitation plans
- access to the My Health Record.

Over time, the clinical information available from the CIS solution may include items such as treatment pathways and referrals, care plans and health assessments, other physiological measurements, screening results, procedure history, family and social history, lifestyle factors and event summaries. It will also interface with a future image sharing solution (ISS) to provide the additional breadth of health information.

How will a clinician access the CIS solution?

The technology will integrate with a hospital's existing health information system, such as its electronic medical record or patient administration system.

When a clinician is viewing a patient's information in these hospital systems, they will be notified that there is available clinical information on their current patient from other Victorian public hospitals and health services.

The technology will integrate with the department's unique patient identification (UPI), in order to retrieve and present the correct health record for a patient.

In stage 1, clinicians working outside of Victorian public hospitals and health services will not have access to the CIS solution. Access will only be provided to clinicians via existing hospital systems.

The My Health Record system will continue to provide access to relevant health information about a patient for general practitioners and specialists who do not work in a Victorian public hospital or health service, and for the private hospital sector.

However, the proposed legislative changes will seek to grant enabling powers to the Minister for Health to include other health service providers in the scope of the changes to the enabling Acts. Work can then commence on providing the appropriate access to the CIS for non-public health service providers after the CIS solution is operational in Victorian public hospitals and health services.

How will security and privacy be maintained in the CIS solution?

Access to the CIS solution will only be available to those clinicians working in Victorian public hospitals and health services, and only through those health services' health information systems.

The department will be taking effective steps to protect patient data within the system from in appropriate or unauthorised access. This includes:

1. role-based access control (RBAC). To ensure that only authorised staff access a patient's health information, the CIS solution will adopt different types of access to the system depending on the clinician's role within an organisation
2. audits and access controls. Rigorous and proactive auditing of access to the CIS solution will be undertaken including enhanced monitoring to alert to any suspicious behaviour.

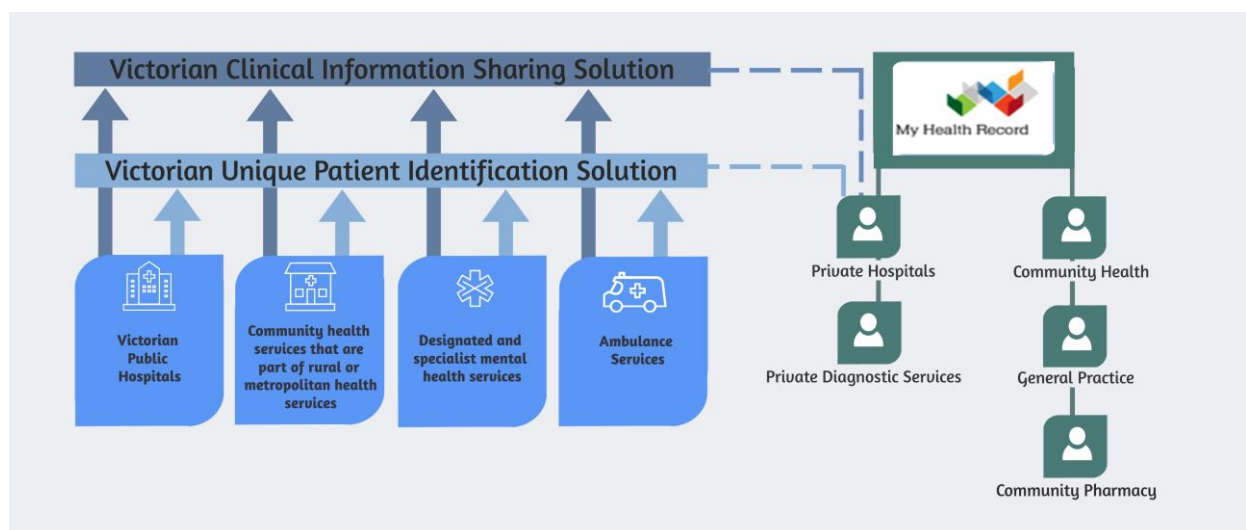
In addition, the proposed clinical information sharing oversight committee will endorse access protocols for the various of types of health information and the staff roles in health services that are authorised to access health information and in what circumstances.

The existing penalties for breaches of the confidentiality provisions in s. 141 of the Health Services Act are intended to be applied to any breaches involving the use of the CIS solution.

How will the CIS solution be implemented?

The roadmap for health information sharing is for a **connected system** that leverages investments made in EMRs at a service, state and federal level to improve the flow of information in the health system.

Figure 3: Information flow in the health system



The focus of the initial build of the solution will be on aggregating and exchanging information from public hospital systems to support acute service delivery. However, the solution will be expected to accommodate information from non-hospitals systems, including those that support primary and

community health such as GP systems, mental health systems, client and case management solutions and paramedic response systems (ambulance services).

Appendix 2: In-scope Victorian public hospitals and health services

The legislative reform will apply to the schedules indicated below, from the Health Services Act (Vic) 1988. The legislation will apply to the public hospitals and health services currently listed under each schedule (also shown below), and any future public hospitals and health services added to each schedule.

Schedules 4 and 6 are not in scope. This excludes privately operated hospitals and women's health services.

Schedule 1: Public hospitals

- Alexandra District Health
- Bairnsdale Regional Health Service
- Bass Coast Health
- Beaufort and Skipton Health Service
- Beechworth Health Service
- Benalla Health
- Boort District Health
- Casterton Memorial Hospital
- Castlemaine Health
- Central Gippsland Health Service
- Central Highlands Rural Health
- Cohuna District Hospital
- Colac Area Health
- Djerriwarrh Health Services
- East Grampians Health Service
- East Wimmera Health Service
- Echuca Regional Health
- Edenhope and District Memorial Hospital
- Gippsland Southern Health Service
- Great Ocean Road Health
- Heathcote Health
- Hesse Rural Health Service
- Heywood Rural Health
- Inglewood and Districts Health Service
- Kerang District Health
- Kilmore and District Hospital, The
- Kooweerup Regional Health Service
- Kyabram District Health Service
- Maldon Hospital
- Mansfield District Hospital
- Maryborough District Health Service
- Mildura Base Public Hospital

- Moyne Health Services
- Northeast Health Wangaratta
- NCN Health
- Omeo District Health
- Portland District Health
- Queen Elizabeth Centre, The
- Rochester and Elmore District Health Service
- Rural Northwest Health
- Seymour Health
- South Gippsland Hospital
- South West Healthcare
- Stawell Regional Health
- Swan Hill District Health
- Tallangatta Health Service
- Terang and Mortlake Health Service
- Tweddle Child and Family Health Service
- West Gippsland Healthcare Group
- West Wimmera Health Service
- Western District Health Service
- Wimmera Health Care Group
- Yarram and District Health Service
- Yarrawonga Health
- Yea and District Memorial Hospital

Schedule 1A: Multipurpose services

- Alpine Health
- Corryong Health
- Mallee Track Health and Community Service
- Orbost Regional Health
- Otway Health
- Robinvale District Health Services
- Timboon and District Healthcare Service
- Schedule 2—Denominational hospitals
- Calvary Health Care Bethlehem Limited
- Mercy Hospitals Victoria Limited
- St Vincent’s Hospital (Melbourne) Limited

Schedule 3—Metropolitan hospitals

- Austin and Repatriation Medical Centre
- Dental Health Services Victoria
- Inner and Eastern Health Care Network
- North Western Health Care Network
- Peninsula Health Care Network
- Southern Health Care Network
- Women’s and Children’s Health Care Network

Schedule 5—Public health services

- Albury Wodonga Health
- Alfred Health
- Austin Health
- Ballarat Health Services
- Barwon Health
- Bendigo Health
- Dental Health Services Victoria
- Eastern Health
- Goulburn Valley Health
- Latrobe Regional Hospital
- Melbourne Health
- Monash Health
- Northern Health
- Peninsula Health
- Peter MacCallum Cancer Institute
- The Royal Children’s Hospital
- The Royal Victorian Eye and Ear Hospital
- The Royal Women’s Hospital
- Western Health

Appendix 3: Health Information Sharing Legislative Reform Advisory Group

The HIS Legislative Reform Advisory Group will be responsible for providing strategic advice to the Victorian Government and the Department of Health and Human Services on clinical information sharing reform options, through the Department of Health and Human Services Executive Board.

The group will provide constructive advice to the department as it forms its policy position, while also supporting the department as it engages with various stakeholders on the nature, scope, scale and impact of the proposed legislative reform options.

Members of the advisory group are listed below:

Members

- Michael Gorton AM (Chair), Principal, Russell Kennedy Lawyers
- Professor George Braitberg, Executive Director Strategy, Quality and Improvement, Melbourne Health
- Professor Harvey Newnham, Director of General Medicine, Alfred Health and board member, Better Care Victoria
- Dr Jill Tomlinson, Surgeon and Federal Councillor, Australian Medical Association
- Louise McKinlay, Director Centre of Patient Safety and Experience, Safer Care Victoria
- Nicole McCartney, Chief Aboriginal Health Adviser, Department of Health and Human Services
- Neville Board, Chief Digital Health Officer, Department of Health and Human Services
- Ryan Heath, Director, Commissioning, Performance & Regulation, Department of Health and Human Services
- Sean Morrison, Director, Legal Services Unit, Department of Health and Human Services
- Sophy Athan, Chair, Health Issues Centre

Appendix 4: Victorian clinical information sharing solution and My Health Record

My Health Record (MHR) is national. Victoria's clinical information sharing (CIS) solution will be state-based and public sector only.

My Health Record (MHR) is a national system that can be accessed by patients and by health services. The CIS solution will enable the sharing of relevant electronic medical records (EMR) information to treating health services across Victorian public hospitals and health services.

MHR is summary information; the CIS solution will be detailed

MHR is a repository of a specific and restricted set of a patient's summary health information for the purposes of clinical care.¹ The CIS solution will be part of the health services current EMR and related systems, sharing more detailed health information across in-scope Victorian public hospitals and health services.

MHR is patient controlled; the CIS solution will be health-service controlled

MHR is patient controlled and requires the patient's consent as to what medical information is loaded onto their record. Around 10% of Victorians chose not to have a My Health Record created. For others, some health information may be restricted by the patient. The CIS solution will enable health services across the in-scope public hospitals and health services to access all the patient's clinical data that is relevant for continuity and quality of health care.

¹ MHR is available to Victorian medical health services as an additional source of health information that displays private diagnostic information, general health services and specialist summary information and a summary of health information across other jurisdictions in Australia.

Appendix 5: Clinical information sharing case studies

Concerning symptoms

Laura, a 19-year-old university student studying in the city, wakes up in the middle of the night with sudden pain in her lower abdomen along with vomiting. Her roommate drives her to the city public hospital emergency department (ED). The ED doctor takes Laura's history. Laura says that she is healthy and has only been in hospital previously to have her tonsils out as child. Laura states she is not on any medications.

The ED doctor notes Laura has a fever of 37.4°C and suspects she may have either acute appendicitis or a urinary tract infection (UTI) based on abdominal examination. The doctor proceeds with investigations for both these conditions, including an ultrasound. During her stay, Laura's pain subsides significantly. Following discussion with the ED doctor, Laura decides to go home and await a call from the ED when her results are back.

Several days later, Laura is visiting her cousin back in her hometown. She again experiences the same symptoms of severe abdominal pain and vomiting. An ambulance takes her to the nearest rural hospital. Laura's cousin notes in passing that Laura had recently been seen at a hospital in the city but isn't sure which one or what for.

Laura is distressed with her pain and can't communicate about her treatment in the city public hospital. The doctor in the rural ED asks the clerk to ring around the three large city hospitals, to see if they have a record of Laura's care and treatment. In the meantime, the doctor orders the same tests as those undertaken a few days ago at the city public hospital.

The ED clerk advises that they need to fax over requests to access any information they require. The doctor completes the paperwork to request the information, which is faxed to the three hospitals. One hospital responds an hour later to advise that they have located information on Laura, and they'll fax it over shortly.

The current tests and investigations reveal that Laura has a urinary tract infection (UTI). The infecting organism is *E. coli*. The ED doctor starts antibiotic treatment. A few hours later, the faxed results from the other hospital arrive. This included her urinalysis that indicated showed Laura had a UTI, but that the calls to her to follow up the result were unsuccessful.

Laura received the appropriate care and treatment and eventually recovered in the public rural hospital. However, she had to have repeat tests before her treatment could be initiated. The emergency department spent valuable time attempting to locate and source her prior medical history.

Medications

Florence Medication is an 84-year-old lady with hypertension and rheumatoid arthritis. She lives at home on her own. She has been feeling unwell with symptoms of urinary frequency and painful urination for a few days. Her general practitioner diagnoses Florence with a urinary tract infection (UTI) and prescribes trimethoprim 300 mg daily for three days.

On Sunday, the home care worker is very concerned that Florence has deteriorated and is nauseous and confused. She calls an ambulance and Florence is taken to emergency.

Florence remembered to take the trimethoprim with her but due to her confusion, she cannot recall her other regular medications.

The emergency department clinician accesses the clinical information sharing solution to determine more information about her medication history, suspecting a potential drug interaction with methotrexate.

The emergency department clinician reviewed Florence's information on the CIS solution. He noted that methotrexate was one of the drugs dispensed from a hospital pharmacy, at an outpatient clinic at another health service for her rheumatoid arthritis.

The emergency clinician ceases the methotrexate. Florence is admitted to the hospital under the general medical team for management of her urinary infection and potential harm to her kidneys.

Care and planning

Timothy Long is a 61-year-old man a longstanding history of chronic renal failure. He is also attending a pre-admission appointment for a transurethral resection of the prostate (TURP) surgery, due in two weeks' time. Over time, Timothy has been admitted to multiple health services. He mentions that he is also on the waiting list for a total hip replacement at another hospital because of 'weak bones'.

The urologist suspects Timothy may also have coexisting metabolic bone disease and contemplates ordering further tests preoperatively. First, she views his previous attendance history in the CIS solution. She would like to know more about the planned hip replacement, and whether Timothy has already had the relevant tests.

Using the CIS solution, the urologist views Timothy's waitlist booking for his hip replacement at the other hospital, and the associated referral document. She notes that the relevant tests have been undertaken in the last month as part of Timothy's work-up for the planned total hip replacement.

Based on this information, the urologist doesn't need to order further tests for Timothy. His bone density test shows he has osteoporosis. The urologist updates Timothy's current hospital notes to include a risk of fracture. She requests physiotherapy to undertake assessment once he is admitted, to assess and reduce the risk of falls. She also updates the hospital's records with Timothy's most recent bone density results, so he can be monitored, going forward.

Appendix 6: Governance and operational safeguards

Overview

Governance arrangements will be established to oversee the operation of the new legislation and provide health services, consumers and clinicians with policy direction, codes of practice and guidance on health information sharing responsibilities. New arrangements will cover:

- clinical quality, accuracy and safety responsibilities associated with the care of patients and treatment
- privacy/confidentiality responsibilities and audits in the collection, use and disclose of health information through the CIS solution
- redress associated with inappropriate uses or use in error associated with CIS solution health information records.

Specific considerations

Clinical practice

A new clinical information sharing oversight committee will be established to oversee the development and operationalisation of the CIS solution and its enabling legislation. The committee will also provide public hospital and health services, consumers and clinicians with policy direction and codes of practice for the CIS solution.

This committee will work to ensure the selected technology preserves and protection patient's rights to privacy and security. It will also consider contemporary approaches to information sharing that support new models of integrated care and consider potential additional standards that may be necessary to manage information that is more sensitive for patients.

Confidentiality and privacy

The department will establish an audit and assessment program to examine compliance with the relevant legislation and wide management issues of significance to the community. In designing the program, the department will consult with experts including the Victorian Auditor-General's office on the principles of effective control. The department will also commission third party auditors to undertaken compliance and security audits to maintain information hygiene and controls.

Proposed health information sharing legislation and the operationalisation of the CIS solution will also need to adhere to Victorian Protective Data Security Framework (VPDSF) managed by Office of the Victorian Information Commissioner (OVIC). The framework sets out certain compliance and assurance activities that the department would be required to undertake, including the development, implementation and maintenance of a Security Risk Profile Assessment and a Protective Data Security Plan. The department must submit these plans to the OVIC and report annually to the OVIC on their implementation of, and compliance with, the VPDSF. The department must also perform a maturity assessment in line with standard 12 of the Victorian Protective Data Security Standards.

The Health Complaints Commissioner administers the Health Records Act (2001) and supports the confidentiality and privacy of health information.

Penalties and sanctions

Misuse of a person's health information is a serious matter. The potential for damage to an individual or a public hospital and health service is significant. There are professional and legal obligations to protect a patient's health information.

The Health Records Act (2001) includes penalties for unlawfully requesting or obtaining access to health information (penalty: in the case of a body corporate, 300 penalty units or \$49,600; in any other case, 60 penalty units or \$9,900). The department will consider the potential for increased penalties for the misuse of information.

The department will also engage with the Australian Health Practitioner Regulation Agency to examine sanctions associated with misuse.

Operational guidelines

The Department will develop guidelines for operationalisation of the CIS solution. These guidelines will include:

- requirements to adhere to the operational standards of use for the CIS solution
- requirements to inform an individual that their information will be shared, including the purpose, to whom and the consequences of not sharing the information through a CIS solution patient portal and notification function
- requirements to inform consumers about where and who they may contact should they have a potential issue or concern about a breach or need for redress
- requirements to provide openness and access to clinical information of an individual, and the right to make corrections to errors through the CIS solution patient portal and notification function
- requirements for quality data management including standards for how clinical information it collects, uses, holds or discloses is accurate, complete, up to date and relevant to its functions or activities
- requirements to maintain appropriate standards for data security and data retention, with reasonable steps to protect the health information it holds from misuse and loss and from unauthorised access, modification or disclosure through the CIS solution.

Freedom of information (FOI) requests and subpoenas

FOI and subpoenas for health information records will be directed to the hospital and health services as owner of the primary record in a local EMR. Only hospital and health services may request additional information pertaining to information stored in the CIS solution, including audit logs held within the CIS solution from the department in order to comply with FOI and subpoenas.

Appendix 7: National and international examples

Program name, jurisdiction	Description	Patient consent and access	Features
eMR Connect, New South Wales ²	<ul style="list-style-type: none"> Statewide, comprehensive electronic medical record for hospitals, community health services and outpatient care services. 	<ul style="list-style-type: none"> Organisations can use health information for the purpose for which it was collected or a directly related purpose that a patient would expect. 	<ul style="list-style-type: none"> Electronic medication management. Manages appointment scheduling, wait-lists and referrals. <p>Legislation: <i>Health Records and Information Privacy Act 2002</i></p>
Queensland Health, Queensland ³	<ul style="list-style-type: none"> Health records held for each patient are updated each time a patient attends a Queensland Health facility, and are available to a patient's GP. 	<ul style="list-style-type: none"> Patients can request that information is not disclosed to GPs. Consent is sought before data is provided to some (but not all) research initiatives. Patients have the right to apply for access to their health records. 	<ul style="list-style-type: none"> Information can be electronic, or paper based Record includes family history, diagnosis and treatment, test results, and x-rays and scans. Legislation: <i>Information Privacy Act 2009</i>
Great North Care Record, UK ⁴	<ul style="list-style-type: none"> Platform providing access to the GP record to accident and emergency, out of hours, ambulance, mental health and telephone emergency services. 	<ul style="list-style-type: none"> Patients can choose to opt out. Patient platform provides individuals with access to their own record. 	<ul style="list-style-type: none"> Analysis system will use data to improve insight and outcomes. Data includes illnesses, hospital admissions and treatments.

² Information sourced from: <<https://www.ehealth.nsw.gov.au/programs/clinical/emr-connect>>, viewed 5 June 2020.

³ Information sourced from: <<https://www.health.qld.gov.au/system-governance/records-privacy/health-personal>>, viewed 5 June 2020.

⁴ Information sourced from: <<https://www.greatnorthcarerecord.org.uk/>>, viewed 5 June 2020.

Program name, jurisdiction	Description	Patient consent and access	Features
OpenSafely, UK ⁵	<ul style="list-style-type: none"> Secure analytics platform created during COVID-19 emergency, used to deliver insights into characteristics of high-risk patients; will be used to analyse treatments and health service pressures. 	<ul style="list-style-type: none"> No consent provided, however anonymity is supported as data is fully pseudonymised and held by providers already storing the records – analysis is run within the database, and the only outputs are summary tables (with low numbers removed). 	<ul style="list-style-type: none"> Data includes medical history, test results, diagnoses, medications, treatments, and death data. Data is held centrally; only summary tables leave the data centre following analysis.
Electronic Health Records, Canada ⁶	<ul style="list-style-type: none"> Province-level network linking clinics, hospitals, pharmacies and other points of care. 	<ul style="list-style-type: none"> Implied consent is assumed for disclosure between organisations involved in direct patient care. Patients are entitled to withdraw their consent.⁷ 	<ul style="list-style-type: none"> Components include lab test results, diagnostic imaging, medication histories, communicable disease information. Registries will accurately and securely identify patients and health care providers.
e-Health Record, Estonia ⁸	<ul style="list-style-type: none"> Platform functioning as a centralised patient record database; retrieves data as necessary from providers to present in standardised e-Patient portal. 	<ul style="list-style-type: none"> Patients have access to their own records and can see which doctors have accessed their files. Patient consent is not required to collect or share EHRs for the purpose of providing health care.⁹ 	<ul style="list-style-type: none"> Includes test results, image files, allergies, recent treatments, and medications. Compiles data to inform national statistics and health trends.
Patient Data Act, Sweden ¹⁰	<ul style="list-style-type: none"> The Act enables a national information exchange platform, providing a single point of connectivity to patient records. 	<ul style="list-style-type: none"> Patients can block shared medical records and opt to explain their own relevant history to Health Services.¹¹ Using five different EHR providers, all regions in Sweden provide citizens with access to their records 	<ul style="list-style-type: none"> Health records are developed locally, at the county level

⁵ Information sourced from: <<https://opensafely.org/>>, viewed 5 June 2020.

⁶ Information sourced from: <<https://www.infoway-inforoute.ca/en/solutions/digital-health-foundation/electronic-health-records>>, viewed 5 June 2020.

⁷ Information sourced from: <<https://www.cmpa-acpm.ca/en/advice-publications/browse-articles/2013/managing-access-to-electronic-health-records>>, viewed 5 June 2020. 0

⁸ Information sourced from: <<https://e-estonia.com/solutions/healthcare/e-health-record>>, viewed 5 June 2020.

⁹ Information sourced from: <https://ec.europa.eu/health/sites/health/files/ehealth/docs/laws_estonia_en.pdf>, viewed 7 July 2020.

¹⁰ Information sourced from: <<https://www.digitalhealth.gov.au/get-started-with-digital-health/digital-health-evidence-review/international-overview-of-digital-health-record-systems#30>>, viewed 9 June 2020.

¹¹ Information sourced from: <<https://www.sls.se/en/Safeandsecurecare/Yourmedicalrecord/>>, viewed 5 June 2020.

Glossary of terms

- **Health information:** Health information is information or an opinion about an individual's physical, mental or psychological health, their disability, or any health services provided to them or to be provided, that is also personal information about an individual who has not been dead for more than 30 years. (Health Records Act)
- **Health Records Act 2001 (Vic):** The purpose of the *Health Records Act* is to promote fair and responsible handling of health information by protecting the privacy of an individual's health information, providing individuals with a right of access to their health information; and the resolution of complaints.
- **Health Services Act 1988 (Vic):** The purpose of the *Health Services Act* is to make provision for the development of health services in Victoria, for the carrying on of hospitals and other health care public hospitals and health services and related matters. Section 141 of Act relates to confidentiality matters and states:

A relevant person must not give to any other person, whether directly or indirectly, any information about a patient or person who has received health services who could be identified from that information. Exemptions to these requirements are outlined in s141 subsection 2A, 2A, 3. This includes an exemption for the giving of information:

'by a person engaged or employed by or on behalf of a public hospital or a denominational hospital by means of an electronic records system established for the purpose of enabling the sharing of information in or between public hospitals and denominational hospitals for the treatment of patients at any time' (s. 141(3)(e)(ii))

This use or collection of this information is conditional on the following —

- the use or collection is by a person engaged or employed by or on behalf of a public hospital or a denominational hospital; and
- the use or collection is to enable the treatment of that second-mentioned person at or by that hospital; or to charge or bill that second-mentioned person for treatment at or by that hospital; and
- the use or collection is in accordance with the regulations (if any).

Text-equivalent descriptions of figures

Figure 1: Health information sharing legislative reform overview

Purpose: authorise the secure sharing of vital health information electronically between public health services and the department via the CIS in support of continuity of care

CIS solution

Repository of personal health information from health services

Allows clinical information stored within the digital clinical systems of each participating public health service to be shared by the department with other public health services

Current process

Clinicians rely on patients notifying them that they have received health care at other services

Clinicians directly contact other health services to request patient records, using fax, phone and email

Future process

Clinical information automatically uploaded to the CIS solution

Department is responsible for centralised data storage

Clinicians can access all health information via the one interface

Key legislative reform design features

Role of the department

The department will be permitted to collect, use and disclose sensitive health information, including historical health information.

Confidentiality

A person's consent will not be required for electronic collection, use and disclosure of their health information.

Scope of services

Scope of services will be expanded to cover more Victorian public health services, with regulatory provisions in legislation to enable future changes if required.

Purpose of use

The use of electronic historical and current health information will be permitted for patient care.

Benefits from CIS solution

Safety and quality – resolve fragmentation and inaccuracy of patient information to reduce adverse events and improve information sharing.

Patient and workforce experience – reduce repetition of information gathering, improve the completeness of information, and improve patient outcomes and workforce experiences

Systemic challenges – resolution of care delivery and population health related issues associated with an ageing and growing population, that is, rise in chronic disease and inequities.

Efficiency – delivery of efficiency in business processes and designing solutions for the future with greater returns on technology investment

Innovation – improved quantity, quality and linkage of clinical information for use in clinical/social care and for system-level service performance management and research

Questions for consideration

Consent:

How will confidentiality of health information be maintained without the requirement for patient consent?

Safeguards:

What safeguards will be put in place to ensure data integrity, and security and record keeping requirements are met?

Medico-legal:

Are there any potential medico-legal issues presented by the new legislation?

Figure 2: Clinical information solution information flow

A: CIS collects health information from each of the local public hospitals and health service EMRs.

B: Health information from individual public hospital and health services is linked and integrated, creating a new CIS record.

This includes:

- ADT details
- OPD details
- Medications
- Images, path, rad, lab results
- alerts and allergies
- patient summaries
- My Health Record
- Patient demographics and IDs.

The CIS solution includes:

- Data repository
- network applications
- analytics and business rules

C: Local public hospitals and health services can view the new CIS record through their individual EMRs

Figure 3: Information flow in the health system

The figure shows how Victorian public hospitals, community health services that are part of rural or metropolitan health services, designated and specialist mental health services and ambulance services all use the Victorian unique patient identification solution, which in turn will feed into the Victorian CIS solution.

These are linked to My Health Record, which is also linked to private hospitals, private diagnostic services, community health, general practice and community pharmacy.

References

- i Victorian Government 2016, *Targeting zero: supporting the Victorian hospital system to eliminate avoidable harm and strengthen quality of care – report of the Review of Hospital Safety and Quality Assurance in Victoria*, State of Victoria, Melbourne.
- ii AIHW 2019, 'Admitted patient care 2017–18', <<https://www.aihw.gov.au/reports/hospitals/admitted-patient-care-2017-18/data>>.
- iii Hillestad R, Bigelow J, Bower A, Girosi F, Meili R, Scoville R and Taylor R 2005, 'Can electronic medical record systems transform health care? Potential health benefits, savings, and costs', *Health Affairs*, vol. 24, no. 5, pp. 1103–117.
- iv Takian A, Sheikh A and Barber N 2012, 'We are bitter, but we are better off: case study of the implementation of an electronic health record system into a mental health hospital in England', *BMC health services research*, vol. 12, no. 1, p. 1. (Finding: EHR provided real time access, with increased legibility.)
- v Australian Digital Health Agency 2020, 'My Health Records statistics', <https://www.myhealthrecord.gov.au/sites/default/files/myhealthrecord_stats_may2020.pdf?v=1592536256>.
- vi Rotter T, Kinsman L, James E, Machotta A, Gothe H, Willis J, Snow P and Kugler J 2010, 'Clinical pathways: effects on professional practice, patient outcomes, length of stay and hospital costs', *Cochrane Database of Systematic Reviews*, vol. 3, art. no. CD006632. (Finding: Clinical pathways found to be associated with reduced in-hospital complications.)
- vii Smith PC, Araya-Guerra R, Bublitz C et al. 2005, 'Missing clinical information during primary care visits', *Journal of the American Medical Association*, vol. 293, no. 5, pp. 565–571.
- viii Appari A, Eric Johnson M and Anthony DL 2013, 'Meaningful use of electronic health record systems and process quality of care: evidence from a panel data analysis of US acute-care hospitals', *Health services research*, vol. 48, no. 2, pt 1, pp. 354–75. (Finding: Hospitals transitioning to EHR systems (excluding advanced systems) experienced improved process quality.)
- ix Hopper K and Jacobs P 2009, 'Halting the sepsis cascade', *The Cerner Quarterly*, vol. 5, no. 1, pp. 15–23. (Finding: 18 per cent reduction in length of stay due to sepsis.)
- x Murphy E, Oxencis C, Klauck J, Meyer D, Zimmerman J 2009, 'Medication reconciliation at an academic medical center: implementation of a comprehensive program from admission to discharge', *American Journal of Health-System Pharmacy*, vol. 66, no. 23, pp. 2126–31. (Finding: Pharmacy-driven multidisciplinary admission history and medication reconciliation process reduced medication errors from 90 per cent to 47 per cent on the surgical unit, and from 57 per cent to 33 per cent on the medicine unit.)
- xi Gallego B, Magrabi F, Concha OP, Wang Y and Coiera E 2015, 'Insights into temporal patterns of hospital patient safety from routinely collected electronic data', *Health Information Science and Systems*, vol. 3, no. 1, p 1–10.
- xii Paneth-Pollak R, Schillinger JA, Borrelli JM, Handel S, Pathela P, Blank S 2010, 'Using STD electronic medical record data to drive public health program decisions in New York City', *American Journal of Public Health*, vol. 100, no. 4, pp. 586–90.
- xiii Ibid.
- xiv Calman N, Hauser D, Lurio J, Wu WY, Pichardo M 2012, 'Strengthening public health and primary care collaboration through electronic health records', *American Journal of Public Health*, vol. 102, no.

11:e13–e18. (Finding: Syndromic surveillance for emerging conditions can alert primary care providers to take timely action.)

xv Vogel J, Brown JS, Land T, Platt R, Klompas M 2014, 'MDPHnet: secure, distributed sharing of electronic health record data for public health surveillance, evaluation, and planning', *American Journal of Public Health*, vol. 104, no. 12, pp. 2265–70.

xvi Wager KA, Lee FW, Glaser JP 2017, *Health care information systems: a practical approach for health care management*. John Wiley & Sons.

xvii Zhao J, Henriksson A, Asker L, Boström H 2015. 'Predictive modeling of structured electronic health records for adverse drug event detection', *BMC Medical Informatics and Decision Making*, vol. 15, no. 4:S1.

xviii Salathé M 2018, 'Digital epidemiology: what is it, and where is it going?.' *Life sciences, society and policy*, vol. 14, no. 1, doi:10.1186/s40504-017-0065-7.

xix Australian Signals Directorate, *Australian Government Information Security Manual*, Commonwealth of Australia, Canberra.