

FAQs for patients and families about Unity Health's use of Artificial Intelligence (AI)

1. What is personal health information (PHI)?

PHI is any information that identifies you and connects you to receiving care at a health care organization. This includes things like your physical or mental health, diagnoses, testing and treatment, appointment information, demographic information (age, sex, neighborhood) amongst other things.

2. How does Unity Health use my PHI?

We take your privacy and protecting your PHI very seriously. There are laws related to PHI that we have to follow. [You can read them here.](#)

Using PHI is core to our hospital and the care we provide. The laws say that we may use your PHI to:

- Treat and care for you
- Manage and reduce risk to other patients and our teams
- Support education and ongoing learning for our teams
- Gather statistics (these can help us to better understand our patient population and their needs)
- Bill the Ontario Health Insurance Plan (OHIP), Workplace Safety and Insurance Board (WSIB) or private insurer for your treatment and care
- Plan, administer and manage programs, services and internal operations
- Help improve the patient experience, quality of care and safety (such as sending patient satisfaction surveys)
- Conduct some research without consent, as approved by the [Research Ethics Board](#)
- Comply with legal and regulatory requirements

3. What is artificial intelligence (AI) and how do we use it at Unity Health?

AI are programs that allow machines to do tasks that would normally be done by humans, such as analysis or prediction. We use your PHI to create AI solutions that help us do some of the tasks listed above. This helps us provide the best possible care and plan for internal programs and operations.

4. How does the Data Science and Advanced Analytics team at Unity Health use my data when developing AI solutions?

We may use your data as part of a large data set to create AI solutions. We develop AI solutions by seeing patterns in large data sets, which can be used to create programs that find those patterns and predict what can happen in the future. This is important because it can help inform clinicians when they are making decisions about a patient's diagnosis or treatment. We may also use AI solutions to help us do our work better and faster so we can create a better care experience.

Here are some examples of what this may look like:

- Patient data is pooled together to look for patterns and build an AI solution to help predict when patients may need more intensive care
- Patient data is pooled together to build an AI solution to help understand where and when we should send staff to clean an area of the hospital

5. How does the Data Science and Advanced Analytics team protect my privacy?

We have a specific process in place to protect your PHI when building and using AI solutions. This process has been reviewed by our [Privacy Office](#) and follow the expectation of the Ontario's Privacy Commissioner.

- Our data governance team reviews how data will be used to make sure each use follows privacy and ethics best practices
- We store and handle identifiable information on systems protected by common security tools, such as firewalls
- Access controls are used to prevent unauthorized individuals from seeing or using identifiable information
- We use de-identified data, which is information that cannot identify specific patients, when possible

6. How does Unity Health ensure AI solutions developed by the Data Science and Advanced Analytics team are unbiased and ethical?

Bias is an unfounded or unfair view in favor of or against a thing, person or group. If human actions are biased, there is risk that AI solutions will learn these biases and unintentionally lead to inequitable care.

We work hard to ensure our AI solutions work for all patients regardless of sex, age or health status. When reliable and complete information is available, we also test how they work across different ethnic groups, sexual orientations and gender identities. If we find a bias, we do our best to fix it. Unity Health's goal with any AI solution is to provide the best possible patient care.

As part of our collaboration with Signal 1, AI projects must go through an approval process before work can begin. The approval process includes consulting with an ethicist at Unity Health who will discuss any potential biases or inequities and ensure the project reflects our [values as an organization](#). Our values include:

- **Human Dignity:** We affirm that every person has sacred value and is worthy of respect.
- **Compassion:** We enable health and healing by understanding each person's needs and by providing care with kindness and sensitivity.
- **Excellence:** We strive to achieve the best care and quality through innovation and continuous improvement.
- **Community:** Together we embrace diversity, trust, joy and teamwork to fulfil human potential.
- **Inclusivity:** We foster an inclusive, welcoming environment where everyone is treated equitably and without judgement.

7. How does Unity Health ensure the data used in its AI solutions reflects our community?

The Unity Health Data Science and Advanced Analytics team uses data from as many applicable patients as possible. This helps the AI solutions learn who our communities are to make the most accurate predictions for them.

8. Why is Unity Health working with Signal 1 to grow and share AI solutions?

We want to share our AI expertise with other hospitals. Unity Health is a leader in Canada at making AI solutions in a hospital. We are already seeing our AI solutions save lives and improve how we care for our patients.

When we make AI solutions at Unity Health, we work closely with the staff and doctors who will use the AI solution to design it and give them training and support. We do not have the resources to give this kind of support to other hospitals outside of Unity Health.

This is why we are working with Signal 1. The leadership team from Signal 1 has a lot of experience with making AI solutions in the banking industry, which has very high security and privacy standards. They can help us share our AI solutions across many hospitals and health care organizations in Canada and around the world.

By collaborating with Signal 1, we can continue to grow and invest in more AI research while maintaining high security and privacy standards related to your PHI.

9. How will Unity Health protect my privacy and prevent privacy breaches when working with Signal 1?

When we work with Signal 1, they must follow our privacy rules and precautions. This includes:

- Being managed and monitored by our Unity Health team
- Only having access to the data needed for the work they are doing
- Completing our privacy training
- Signing confidentiality agreements where Signal 1 will keep all data that they see or handle confidential, and will not try to identify any specific patient from a data pool that was meant to be de-identified
- Immediately reporting any privacy breach and cooperating with an investigation
 - If the breach is confirmed, Unity Health will let any impacted patient know about the breach
- Participating in audits to ensure our privacy rules and precautions are followed

While Signal 1 may have access to your PHI, they can only use your PHI as directed by us. We will monitor them to make sure they follow our privacy rules and precautions.

Your PHI will **not** be sold or shared by Signal 1. Your data may be used as part of a large data set to look for patterns and build AI solutions. Once a pattern has been found and an AI solution is built, data sets from Unity Health are no longer needed. In many cases, when Signal 1 works with another organization, they will use that organization's data sets to tailor the AI solution.

10. Will Unity Health make money from the collaboration with Signal 1?

Unity Health will have shares in Signal 1. These shares may make money for Unity Health in the future. Any money made will be reinvested in patient care at Unity Health.

11. Who do I contact if I have more questions about how my PHI is used in AI projects at Unity Health?

For questions about how your PHI is used in AI solutions, email our Data Governance team at dsaa@unityhealth.to.

For general questions about privacy at Unity Health, check out our [Privacy FAQ](#) or call the Privacy Office at 416-864-6088 or email privacy@unityhealth.to.

Email is not secure and may be seen by email or internet service providers or intercepted by others. **Only email information that you feel is safe should others see it.**