

The Ontario Telemedicine Network (OTN) is the world leader in telemedicine, using technology to improve access to healthcare, with more than 600 members, 1200 sites and 2200 systems providing care to more than 135,000 patients annually. OTN's flagship service is videoconferencing, however over the past two years, OTN has diversified its service offering, expanding into other innovative technologies including asynchronous telemedicine, Webconferencing and Telehomecare monitoring. Growing at an annual rate of approximately 30%, OTN is a not-for-profit organization funded by the Government of Ontario (Canada). OTN is considered a Healthcare Information Network Provider (HINP) under the terms of the Personal Health Information Protection Act, 2004 PHIPA.

Three years ago OTN's Privacy Team developed a 'privacy scorecard' to monitor internal performance with respect to privacy indicators, including privacy incidents and breaches (attributed to either OTN staff or its membership base); privacy risks; privacy training completion; and audit and compliance reporting. Upon implementing a formal tracking tool it became immediately apparent that there were critical areas of risk with respect to privacy.

In the fiscal year 2009/10, OTN reported 30 breaches with one high and seven medium-rated risks. Root cause analysis demonstrated there were three primary causes: manual bridge programming, faxing of patient referral information and Member/staff knowledge. The privacy breaches identified were primarily the result of 'human error' when performing repetitive tasks (faxing, programming, Member scheduling/connecting calls). As the volume of OTN's activity grew by more than 25% annually, the volume of repetitive tasks also increased. The business model of growth needed to be supported through the use of technology to eliminate the repetitive tasks (where possible) and aggressive education campaigns where technology couldn't assist.

OTN shares and transmits a significant amount of Personal Health Information (PHI). This information is often highly sensitive, e.g. referral notices for mental health consults or methadone treatment plans. Although the actual 'number' of breaches is relatively low (goal of <.04% compared to event total) each breach affects one or more individuals directly and is significant. Additionally, breaches which result in the wrong systems connecting have the potential for patients to be seen in a health care setting by individuals that are not part of their health care team. Mitigating these risks is paramount to the ongoing success and adoption of the use of telemedicine to provide care. Access to healthcare is a driving force behind videoconference use sparing patients the difficulties of travelling out of their home communities to receive it. The citizens of Ontario benefit from the service and any privacy improvements strengthens their trust in the use of this new technology to access healthcare.

OTN developed a two-year strategy to address the top three concerns identified in its root cause analysis of the privacy breaches.

- Automatic bridge programming (implemented March 2010) was responsible for 21% of the breaches,
- Member Best Practice Tool Kit (implemented July 2010) was attributed to 33% of all breaches in 09/10 and,
- FOIP (implemented March 2011) accounted for 33% of overall breaches.

The Privacy Team faced many challenges and barriers:

- Gaining organizational support for privacy initiatives that were not understood, in order to contribute to OTN's strategic pillars of driving growth and innovation,
- Influencing the Membership base across 1200 highly diverse sites in a meaningful way and,
- Identifying technological solutions that would reduce or eliminate any manual processes which were contributing to breaches.

To weave privacy into the fabric of OTN's culture, the Vice-President of Customer Services/Chief Privacy Officer, was able to influence the strategic planning process and have privacy identified as one of five strategic initiatives in the 2010/11 operating plan. This drove support for aligning resources to key privacy projects, including implementation of technological controls to effectively eliminate the sources of greatest privacy risks internally: FOIP and Automated Bridge Programming.

To influence the Membership, the team conducted a survey and analysis of the Membership base, and used those findings, along with analysis of three years of Member breaches, to develop a strategy to effectively influence end-to-end privacy practices related to telemedicine. This resulted in OTN developing and launching the OTN Member Best Practice Toolkit: (<http://www.otn.ca/en/privacy-toolkit/resource-library>).

The technology projects were chosen because they eliminated manual processes which had a significant potential for error due to the high volume. The move to FOIP eliminated manual transmission of 250,000+ faxes annually and automated bridge programming eliminated manually programming connections for 35,000 sites into large events annually.

OTN was able to source privacy consultants through its Vendor of Record process to give third party expert opinion on technology solutions and implementation across all projects. Consultants completed formal PIAs to ensure OTN's due diligence as a HINP under PHIPA. OTN sourced a Master's Student to complete a research study of its Membership in order to further understand Member privacy maturity. OTN also utilized a privacy maturity model approach and surveyed a subset of its Membership. This drove a deeper understanding of membership knowledge related to privacy and helped develop more effective strategies to ensure the Members are adequately supported and knowledgeable to deliver telemedicine. Most importantly, OTN Members provided information and insight that was essential to building a privacy toolkit that reflects and respects the diversity and autonomy of the membership itself, while laying a common privacy framework for consistent use of OTN technology. This not only boosts confidence in OTN's service offering, but creates trust between the health care providers who use the technology to provide care to their patient populations.

Through the implementation of this holistic approach that strengthened end-to-end opportunities to enhance privacy, the numbers of privacy breaches are declining. The combination of initiatives resulted in decreasing overall privacy incidents from .06%/event total in 09/10; to .05% in 10/11 and on track for .035% end of Q2 11/12.

This initiative has elevated privacy to being a key contributor to OTN's ongoing success. Indicators from the Privacy Scorecard have been embedded into both the Corporate Scorecard and Governance Scorecard. These indicators ensure that leaders are able to see the ongoing status of privacy breaches. OTN's Privacy Team seized the opportunity to foster a culture of privacy within the organization, and then exported their success to enable OTN Members to do the same. By working with the organization's Project Management Office to implement the two key privacy projects, the Privacy Team gained visibility and credibility within OTN. Privacy is now embedded into technology and process development; improving service and technology design. The Project Managers and Business Leads are acutely aware of privacy requirements, and Privacy is now invited to the early stages of new projects lifecycle within OTN. OTN's Adoption Team, responsible for increasing utilization, has been trained using the Member Best Practice Toolkit. They can speak articulately to the OTN Membership regarding privacy risks and best practices. The Training Team has also embedded the toolkit content into the Member on-line training modules. This "all hands on deck" approach has succeeded in weaving privacy seamlessly across OTN operations.

By strategically elevating privacy internally, embedding privacy into the service offering, and providing practical tools for Members to use OTN solutions in privacy-enabling ways, OTN has laid a strong foundation for growth. OTN is also well-positioned as a global leader in the field of telemedicine, repeatedly asked to speak at international engagements and to sponsor country delegates here in Canada. Its achievements in privacy, in particular, are a high-demand presentation, as confidence in privacy and security is continually identified globally as a barrier to using enabling technology to improve access to healthcare. Senior leaders within OTN are now aware of the importance of privacy to support the strategic plan.

Integrating Privacy by Design concepts is critical to OTN's future success. The organization's five year strategy includes the launch of new technologies and the use of mobile devices to improve access to healthcare. Privacy Specialists are now embedded into project teams, influencing both design and implementation of our new technologies. The most significant achievement in this two year strategy was developing and growing the visibility of the privacy function and thus support for privacy within OTN going forward.

To find out more information about OTN please visit [www.otn.ca](http://www.otn.ca)