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Enhancing

PUBLIC HEALTH DISEASE INVESTIGATIONS THROUGH AI SCRIBE TECHNOLOGY:

A Pilot Study in Two Ontario Public Health Units

PRESENTED BY HELEN CHEN, NATALIE RIEWE, MICHAEL WHYTE

FEBRUARY 5, 2026

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Land Acknowledgement

- *Ontario is covered by 46 treaties and other agreements and is home to many Indigenous Nations from across Turtle Island, including the Inuit and the Métis. These treaties and other agreements, including the One Dish with One Spoon Wampum Belt Covenant, are agreements to peaceably share and care for the land and its resources. Other Indigenous Nations, Europeans and newcomers were invited into this covenant in the spirit of respect, peace and friendship.*
- *Most of us have come here as settlers, immigrants or newcomers in this generation or generations past.*

[Image Source: Microsoft stock image]

Disclosure

- The presenters, Dr. Helen Chen, Natalie Riewe and Michael Whyte have no conflict of interests to disclose.

Learning Objectives

1

1. Describe AI scribe technology including assessment of the potential benefits and limitations for public health practice.

2

2. Identify important considerations when reviewing and selecting AI scribe software for a local public health organization.

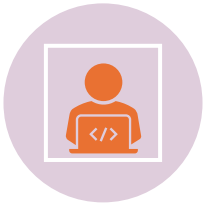
3

3. Describe how AI scribe can successfully be implemented into case and contact management workflows.

What is an Ambient AI Scribe?

CONSENT-BASED CAPTURE OF CONVERSATION AUDIO TO CREATE STRUCTURED ENCOUNTER DOCUMENTATION.

APPLIES NLP TO AUTONOMOUSLY PRODUCE STRUCTURED NARRATIVE RECORDS OR COMPLETE PRE-DEFINED FORMS



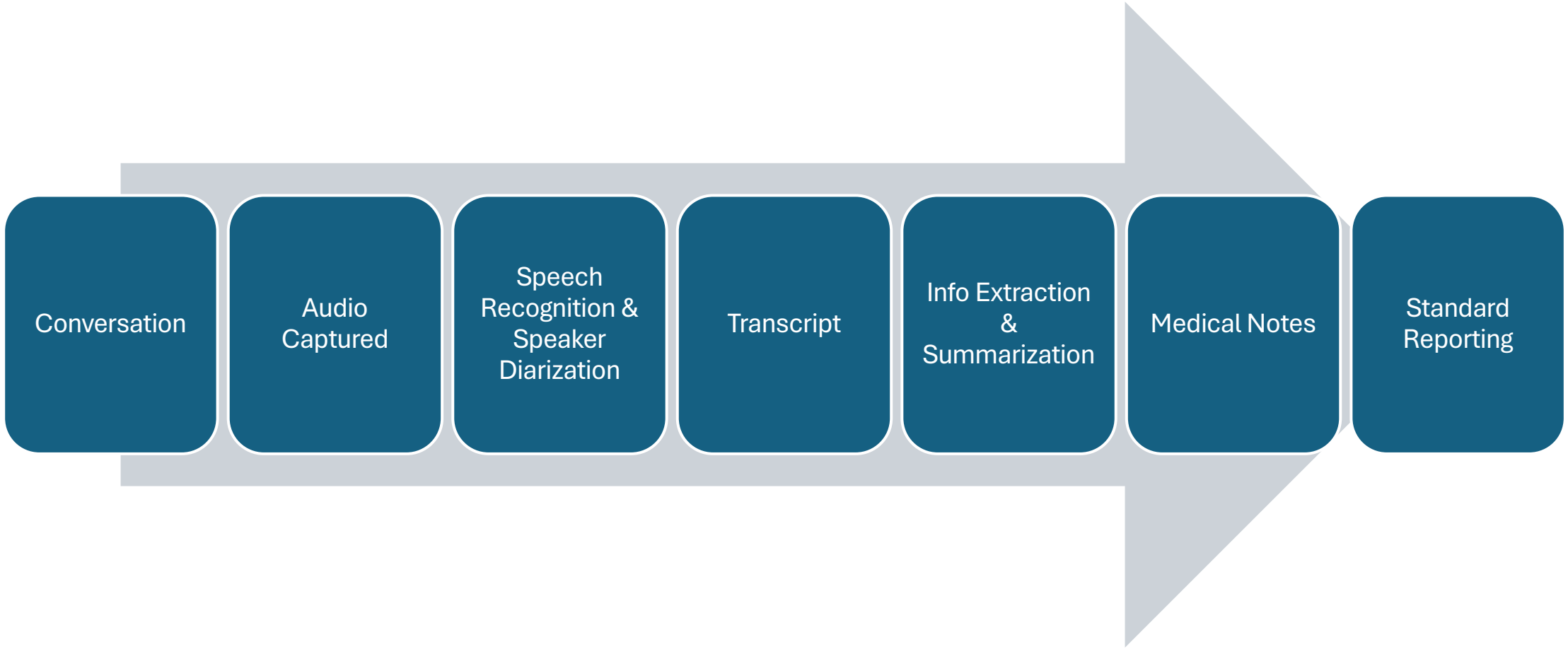
HUMAN-IN-THE-LOOP VALIDATION: STAFF EDIT & ATTEST BEFORE RECORDS ARE SAVED.

EDITS TRACKED; STAFF RETAIN AUTHORSHIP OF FINAL RECORD

GOAL: REDUCE DOCUMENTATION WORKLOAD WITHOUT COMPROMISING ACCURACY.

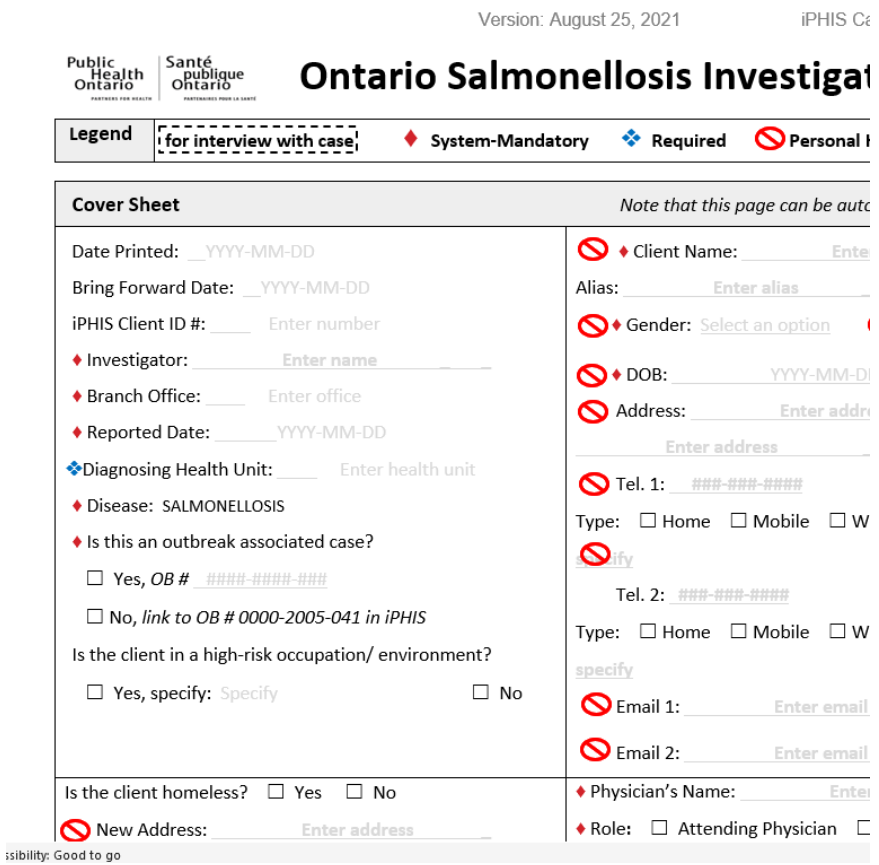
COMPLEMENTS—NOT REPLACES—PROFESSIONAL JUDGMENT

AI Scribe Technology Composition



Context: Documentation Requirements in Public Health Disease Investigation

- Case/contact interviews generate extensive narrative documentation.
- Multiple systems/fields; structured + free-text
- Additional documentation needs after calls extends cycle times and can require after-hours work.
- Risk of backlogs during surges
- Timeliness and quality of reports has direct impact on downstream actions (e.g., contact management, lab testing, public communications, exclusions).
- Clear, consistent documentation supports program performance



Version: August 25, 2021 iPHIS Ca

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Ontario Salmonellosis Investigat

Legend for interview with case ♦ System-Mandatory ❖ Required ⃠ Personal I

Cover Sheet *Note that this page can be autc*

Date Printed: YYYY-MM-DD
Bring Forward Date: YYYY-MM-DD
iPHIS Client ID #: Enter number
♦ Investigator: Enter name
♦ Branch Office: Enter office
♦ Reported Date: YYYY-MM-DD
❖ Diagnosing Health Unit: Enter health unit
♦ Disease: SALMONELLOSIS
♦ Is this an outbreak associated case?
☐ Yes, *OB #* ####-####-###
☐ No, *link to OB # 0000-2005-041 in iPHIS*
Is the client in a high-risk occupation/ environment?
☐ Yes, specify: Specify ☐ No

⃠ ♦ Client Name: Ente
Alias: Enter alias
⃠ ♦ Gender: Select an option
⃠ ♦ DOB: YYYY-MM-DI
⃠ Address: Enter addr
Enter address
⃠ Tel. 1: ###-###-####
Type: ☐ Home ☐ Mobile ☐ W
⃠ ify
Tel. 2: ###-###-####
Type: ☐ Home ☐ Mobile ☐ W
specify
⃠ Email 1: Enter email
⃠ Email 2: Enter email

Is the client homeless? ☐ Yes ☐ No
⃠ New Address: Enter address

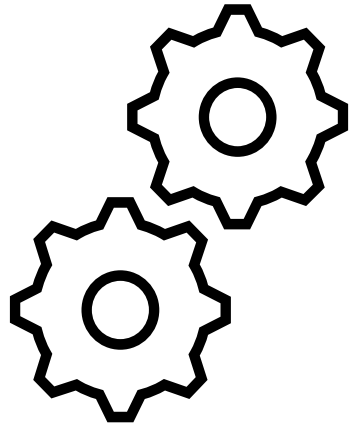
♦ Physician's Name: Ente
♦ Role: ☐ Attending Physician ☐

ssibility: Good to go

Public Health Ontario (2021) Ontario Salmonellosis Investigation Tool. [Screenshot] www.publichealthontario.ca. Screenshot by author.

Pilot Overview (Multi-Site, Phased)

- Participants: infectious disease investigators (nurses and inspectors) and supervisors in public health programs.
  - Licenses limited to early adopters for iterative learning
- Scope: infectious disease case interviews and creation of case notes.
  - Use in routine and surge scenarios where feasible
- Phases: simulation → onboarding → live use.
  - Quality gate at each phase before scale-up
- •15 licenses between 2 public health agencies



Evaluation Questions

How does AI scribe technology impact the time spent on administrative tasks by Infectious Disease (ID) investigators?

What are the perceived benefits and challenges of integrating AI scribe technology in local PHUs?

Does the use of AI scribe technology improve the accuracy and completeness of ID investigation records?

Methods: Design & Instruments

Staged testing and validation

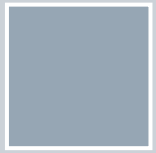
Simulation tests

- different use environment and voice input
- Script to check accuracy of AI technology

Live operational use

Time tracking for baseline and intervention periods

- Overall and by Disease of Public Health Significance
- Errors and omissions



User Experience Evaluation

Surveys and semi-structured focus groups

- Thematic analysis of adoption, fit, and change management needs

Privacy, Security and Trust

Key considerations:

Legal and privacy compliance (PHIPA, SCO2 Type II compliance, etc.)

Privacy Impact Assessment (PIA)

Client Consent

Key takeaways:

- Privacy work took more time than expected
- Transparency with clients did not appear to reduce participation or trust
- Consent scripts and investigator comfort mattered as much as policy language

Features and Workflow Fit

Core feature categories

- Documentation quality
- Workflow compatibility
- Editability & transparency

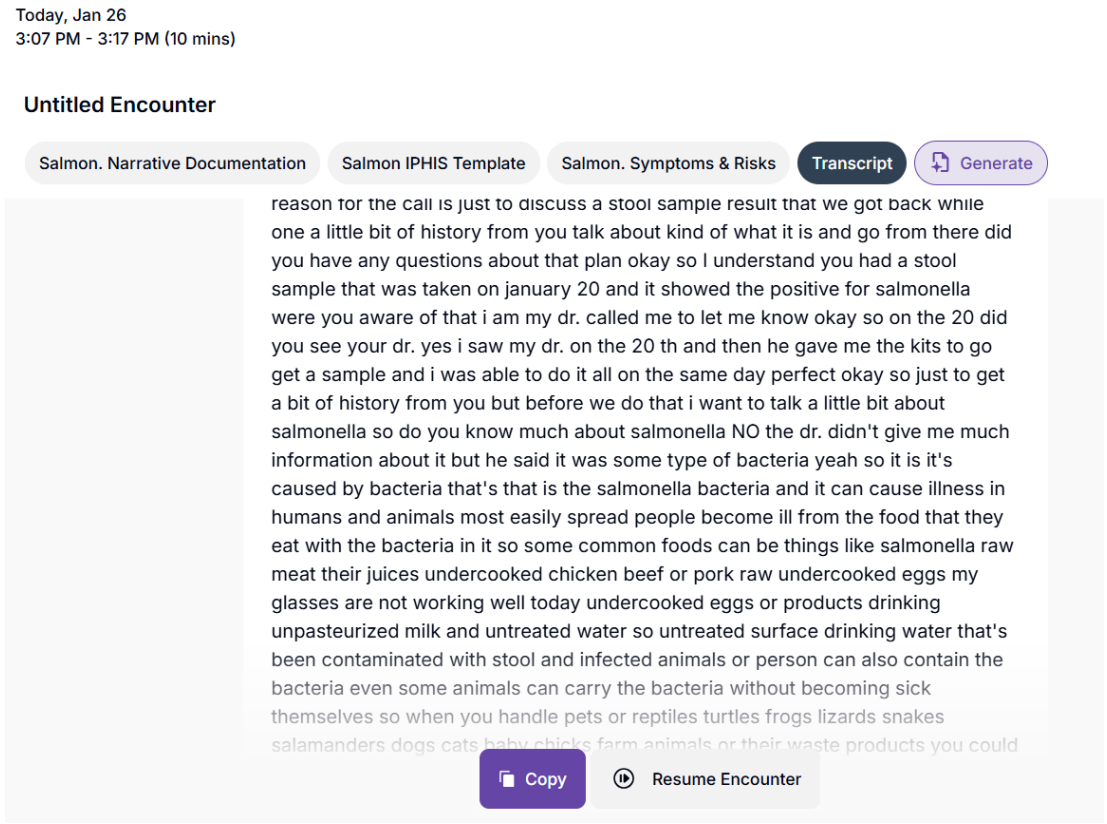
What the pilot showed

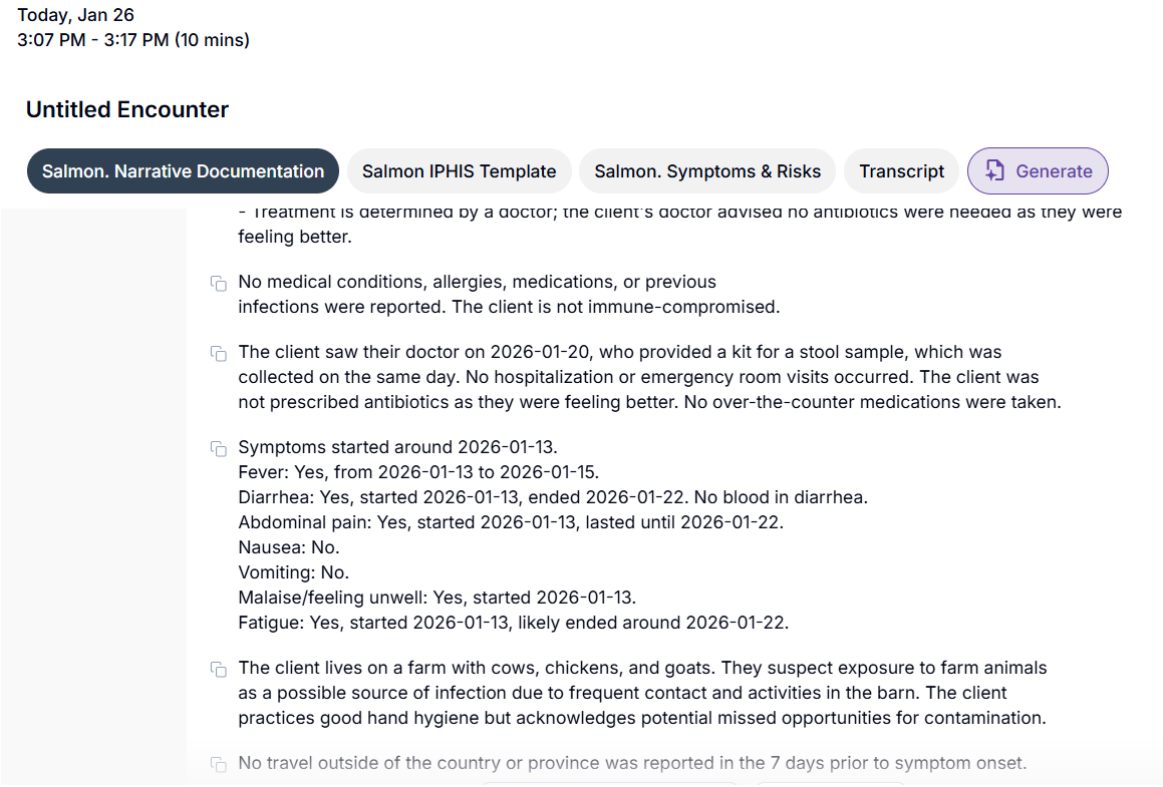
- Templates were *essential;* out-of-the-box formats did not meet DOPHS needs
- Process requirements are important to determine early

Implementation and Sustainability

True success lies within the organization; we've identified 4 key principles integral to this success:

Transcripts to Organized Note





Overall Use and Reach of the AI Scribe Pilot

[Image Source: Microsoft stock image]

44 interactions used AI scribe

20 interactions were baseline comparisons

10 of 15 investigators used AI scribe

Documentation Quality and Accuracy

SIMULATION TESTING SHOWED ~80% AGREEMENT BETWEEN TRANSCRIPTS AND AI-GENERATED NOTES

AI SCRIBE MOSTLY FILTERED IRRELEVANT CONTENT

CUSTOM TEMPLATES IMPROVED ACCURACY AND RELEVANCE OF GENERATED NOTES

Time Efficiency and Editing

The two PHUs experienced differences in time savings

Time for editing also varied

Approximately 3 errors per scribed interaction

Common error types:

- Incorrect or missing proper nouns (dates, locations, restaurants, etc.)
- Omission of important case details
- Occasional mistranscriptions with accents or rapid speech

User Experience and Perceptions

Survey participants generally expressed positive experiences:

Useful

Easy to use and navigate

Accurate

Made documentation more efficient

Themes from focus groups:

Positive and promising impact

Flexibility and adaptability of the tool

Building trust in technology

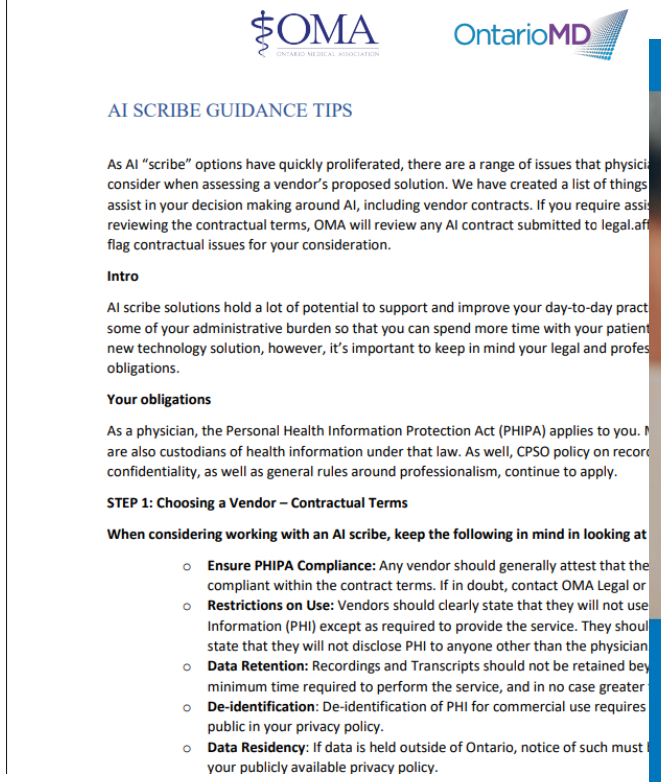
Changes in practice and culture

Professional Standards and AI Scribe

Consent

Privacy

Accountability



OMA OntarioMD

AI SCRIBE GUIDANCE TIPS

As AI "scribe" options have quickly proliferated, there are a range of issues that physici
consider when assessing a vendor's proposed solution. We have created a list of things
assist in your decision making around AI, including vendor contracts. If you require assis
reviewing the contractual terms, OMA will review any AI contract submitted to legal.aff
flag contractual issues for your consideration.

Intro

AI scribe solutions hold a lot of potential to support and improve your day-to-day pract
some of your administrative burden so that you can spend more time with your patient
new technology solution, however, it's important to keep in mind your legal and profes
obligations.

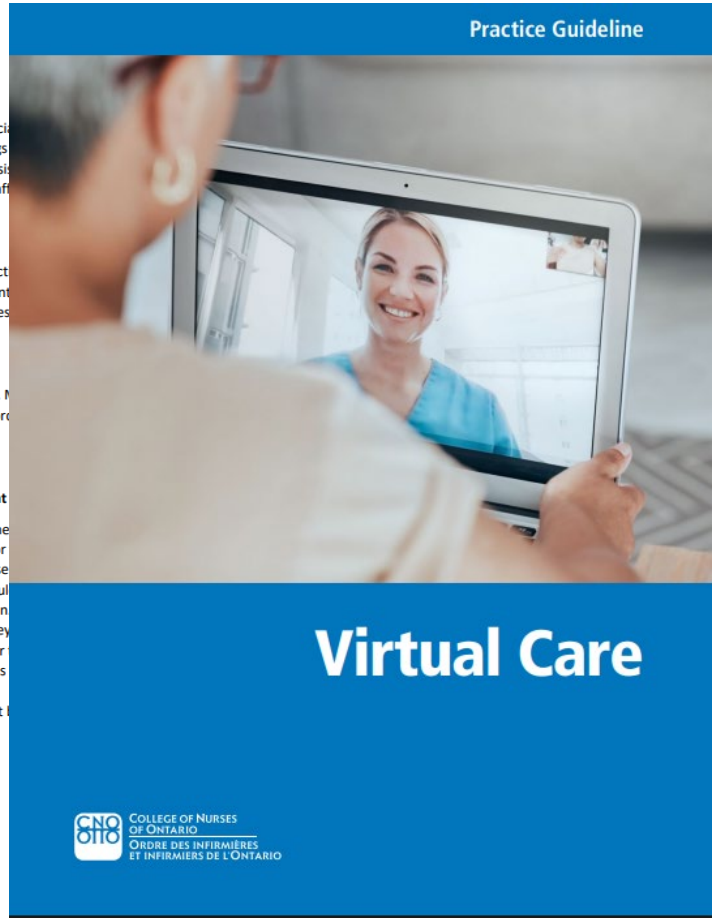
Your obligations

As a physician, the Personal Health Information Protection Act (PHIPA) applies to you. M
are also custodians of health information under that law. As well, CPSO policy on record
confidentiality, as well as general rules around professionalism, continue to apply.

STEP 1: Choosing a Vendor – Contractual Terms

When considering working with an AI scribe, keep the following in mind in looking at

- **Ensure PHIPA Compliance:** Any vendor should generally attest that the
  compliant within the contract terms. If in doubt, contact OMA Legal or
- **Restrictions on Use:** Vendors should clearly state that they will not use
  Information (PHI) except as required to provide the service. They shoul
  state that they will not disclose PHI to anyone other than the physician
- **Data Retention:** Recordings and Transcripts should not be retained bey
  minimum time required to perform the service, and in no case greater
- **De-identification**: De-identification of PHI for commercial use requires
  public in your privacy policy.
- **Data Residency**: If data is held outside of Ontario, notice of such must
  your publicly available privacy policy.



College of Nurses of Ontario (2025) Virtual Care Guideline [Screenshot] www.cno.org. Screenshot by author.
OntarioMD. (2025) AI Scribe Guidance Tips. [Screenshot]. www.OntarioMD.ca. Screenshot by author.

Trust

“I think it was a little bit of learning to trust technology. I know the first couple of investigations I did, I was just keeping my regular notes, writing down every single thing I could, and as I started to trust that it would actually pick up relevant information, I decreased some of the physical notes I was making. So definitely it was a little bit of learning to trust the technology.” – Focus Group Participant

Impact on Workflow

“If I had 2 or 3 phone calls back-to-back, I didn’t have to worry about documenting this phone call because I would forget what I said in this phone call when I would move onto another phone call. It enabled me to do back-to-back phone calls a little bit more quickly. I know myself, my brain won’t remember things if I don’t write it down.” – Focus Group Participant

“With the scribe, I could finish a phone call at 4:00 or 4:30, close it all down because I knew the scribe had the transcript of what everybody said and I had my minimal notes, and I could chart the next morning. So I didn’t have to stay extra late to finish off a late phone call, which was different for me.” – Focus Group Participant

ROI ?

- Inputs: licenses, onboarding time, privacy/security assurance, change mgmt.
- Track avoidable rework from incomplete notes
- True ROI limited until data integration with case management systems reduces duplicate entry
- Benefits: minutes saved × case volume; improved completeness; reduced after-hours work.
- Value of information: faster, clearer narratives aid decision making
- Sensitivity: model ranges of time savings; scenario plan scale-up.
- Consider surge scenarios where capacity is constrained

[Image Source: Microsoft stock image]

What's Next

- Share completed analysis and publish open tools (time log, survey, focus group guide).
- Share implementation tools/supports for broader public health workflows and Scribe solutions.
- Share de-identified artifacts & templates
- Continue pilot, consider broadening types of diseases and other health unit programs
- Collaborate: multi-jurisdiction test beds with shared metrics
- Standardize evaluation to compare across programs

“Positive overall impression of AI integration into everyday work. It was easy to use and has the potential to increase efficiency and accuracy of work.” – User Survey Respondent

Looking to the Horizon – AI scribe and Other Tools in Public Health

[Image Source: Microsoft stock image]

Thank You

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Thank you

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DALLA LANA SCHOOL OF PUBLIC HEALTH

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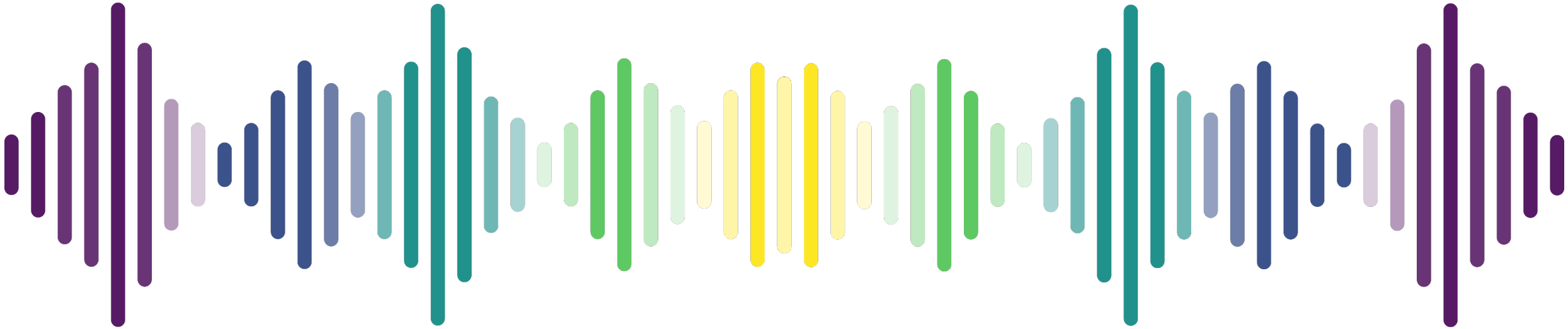
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