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# **Assessing Information Governance (IG) at Niagara Region Public Health and Emergency Services (NRPH & EMS):**

**February 4<sup>th</sup> 2020: PHO Grand Rounds**

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Diane Vanecko, Director of Organizational and Foundational Standards

# Disclosures

- None of the presenters at this session have received financial support or in-kind support from a commercial sponsor.
- None of the presenters have potential conflicts of interest to declare.

# Objectives

- List 10 organizational competencies for health information governance (IG)
- Identify recommendations with short-, medium-, and long-term outcomes from a local public health unit's IG maturity assessment
- Discuss the steps and potential partners required to develop an IG action plan within a public health organization

# EXCLUSIVE Pentagon's AI Problem Is 'Dirty' Data: Lt. Gen. Shanahan

The military has all the  
it

Google Secretly Tests Medical Records Search Tool

to find it all and clean

C

## Google To Buy Fitbit For \$2.1 Billion, What About Privacy Concerns?

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**Bruce Y. Lee** Senior Contributor ⓘ

[Healthcare](#)

*I am a writer, journalist, professor, systems modeler, computational and digital health expert, avocado-eater, and entrepreneur, not always in that order.*

system in the U. S.

## Driven Businesses

# What is Information Governance (IG)?

- IG considers the lifecycle of information from its creation and integration through archiving or destruction.
- IG considers a range of functions including information design and collection, records and content management, access, disclosure and use, privacy and security and the quality and integrity of information.
- IG requires a multi-stakeholder approach anchored in a formally supported program by senior leaders (IFHIMA, 2017).
- “Information Governance” describes the approach within which accountability, standards, policies and procedures are developed, implemented and maintained to ensure that all types of information (including data) used in NRPH are sourced, held and used appropriately, securely and legally.

# IG: How we found our way

- Information governance has many layers and components that are difficult to understand
- Foundational to good quality data resulting in quality decision making
- Struggling to manage information within a silo'd system
  - Lack of data quality compliance standards for healthcare data
  - Multiple electronic medical records internally and provincially
  - Lack of interoperability
- One time funding from the Ministry in 2018/2019

# Crucial roles

- Senior Leadership
- S.H.A.R.E. team (Epidemiology and Informatics Unit)
- Continuously Quality Improvement Team
- Program champions
- Corporate partners
  - Legal
  - Privacy
  - IT
- eHRM Consultants <https://www.ehrmconsulting.com/>

# Information Governance definition

## Definition:

*“An organization-wide framework for managing information throughout its lifecycle, and for supporting the organization’s strategy, operations, regulatory, legal, risk and environmental requirements” (AHIMA)*



# What is the IGHealthRate™ (AHIMA)

- **IGHealthRate™** allows the organization to create a baseline assessment based on their existing practices/policies across spectrums of data governance, IT governance and Enterprise IM and defines a current state maturity rating (on a 5 rating scale).
- **IGHealthRate™** assesses and scores your organization using 10 IG organizational competencies. Each competency includes several key markers that identify critical requirements that are required to achieve IG maturity.

# ***IGHealthRate*<sup>TM</sup> assessment process**

- Establish a qualified IG leader
- Establish an executive sponsor
- Identify stakeholders and schedule meetings for each competency discussion
- Complete the assessment over a number of sessions/days
- Discuss the results as a group
- Review report and dashboard summary and discuss next steps
- Coaching feature
- Implement recommendations
- Eventually .....reassess using IGHealthRate<sup>TM</sup>

# NRPH's Information Governance Initial Assessment

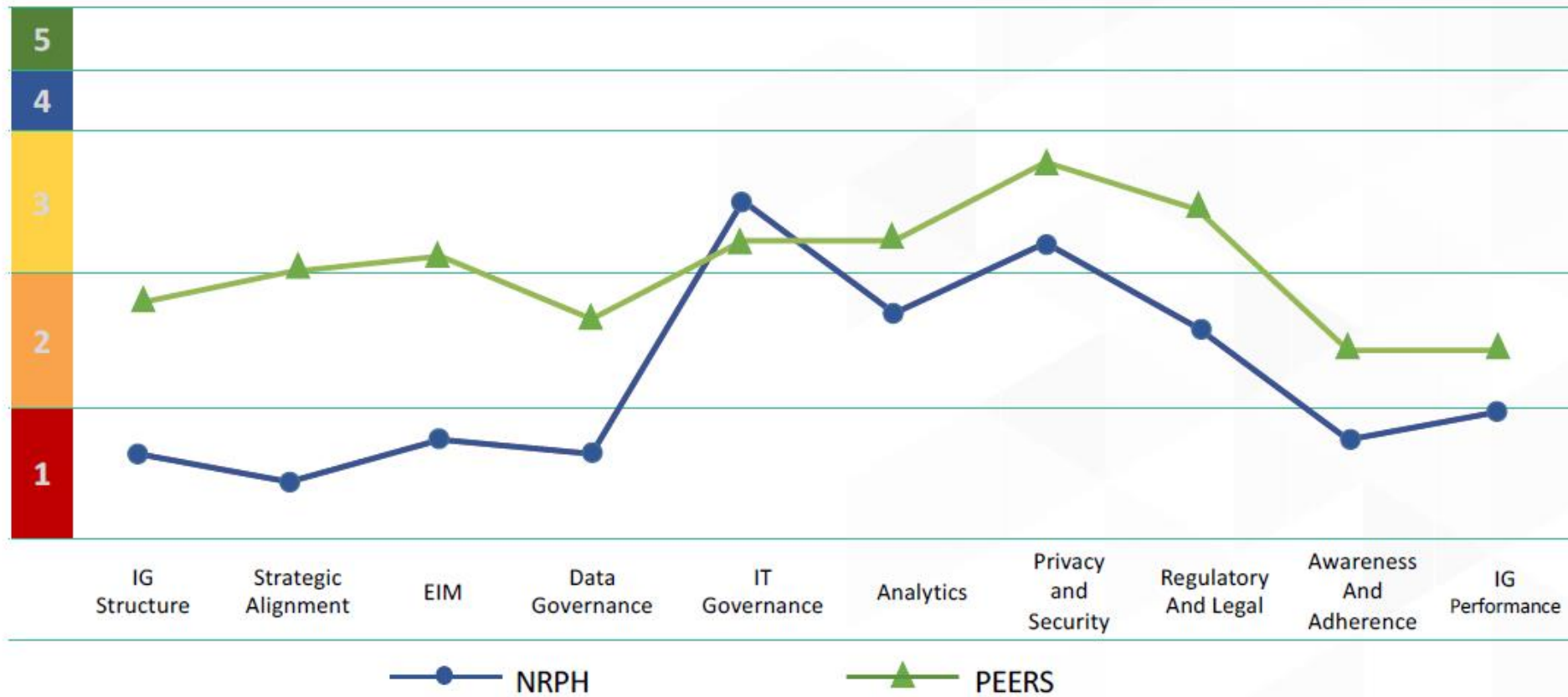
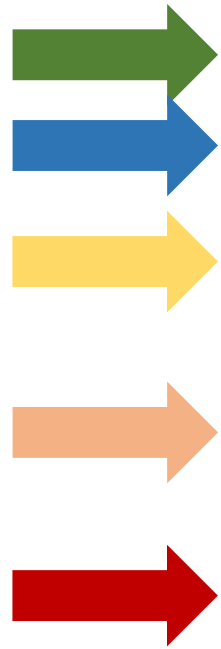
NIAGARA REGION PUBLIC HEALTH IG COMPETENCY SUMMARY				
IG STRUCTURE	STRATEGIC ALIGNMENT	ENTERPRISE INFORMATION MANAGEMENT	DATA GOVERNANCE	IT GOVERNANCE
Level 1	Level 1	Level 1	Level 1	Level 3
ANALYTICS	PRIVACY & SECURITY	REGULATORY & LEGAL	AWARENESS & ADHERENCE	IG PERFORMANCE
Level 2	Level 3	Level 2	Level 1	Level 1

Score **1.9**

This level indicates an environment where information governance concerns, requirements, and opportunities are not addressed, are addressed minimally, or are addressed in an ad hoc manner. Organizations that identify primarily with these descriptions should be concerned that their programs will not meet legal or regulatory scrutiny, may not effectively serve the business needs of the organization, and may impede patient care and service delivery.



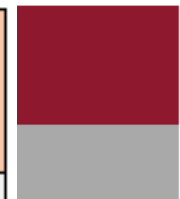
# IG ASSESSMENT - PEER BENCHMARK



# Res

- 90 recommendations across

				Short Term 6-12 Months	Medium Term 1-3 Years	Long Term 3-5 Years
<b>1</b>			<b>Develop and Execute Information Governance Model</b>			
1	D2	A1	Establish both Executive leadership for IG and formal Information Governance Program leadership	X		
2	D2	A1	Define IG Principles for NRPH	X		
3	D2	A1	Review existing safeguards, policies, procedures, and technology necessary to ensure trust and utilization of information assets.	X		
4	D2	A2	Establish the IG value proposition to align with business strategy.	X		
5	D2	A1	Establish an IG Vision, IG Governance Committee, to address related policies and standards.	X		
6	D2	A1	Establish an IG framework and program appropriate for NRPH.	X		
7	D2	A1	Define high level IG program staffing plan, including job descriptions.	X		
8	D2	A1	Develop business case for an Information Governance Program	X		
9	D2	A2	Build an IG road map with projects being prioritized, documented and successfully completed.		X	
10	D2	A1	Establish multi-disciplinary IG Steering Committee and develop IG program charter.	X		
11	D2	A9	Develop a reporting framework to the organization's governing bodies on information-related projects, issues, risks, and successes.		X	
12	D2	A1	Seek operational funding for the IG program. Create a multi-year roadmap that identifies incremental steps that will sustain NRPH's IG strategy to ensure necessary funds.	X	X	X
13	D2	A10	Establish IG metrics and develop method for measuring impact of IG program effectiveness.		X	
14	D2	A2	Establish collaboration processes between information technology governance, data governance and information management.	X	X	X



Reporting  
Establish a  
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as on how



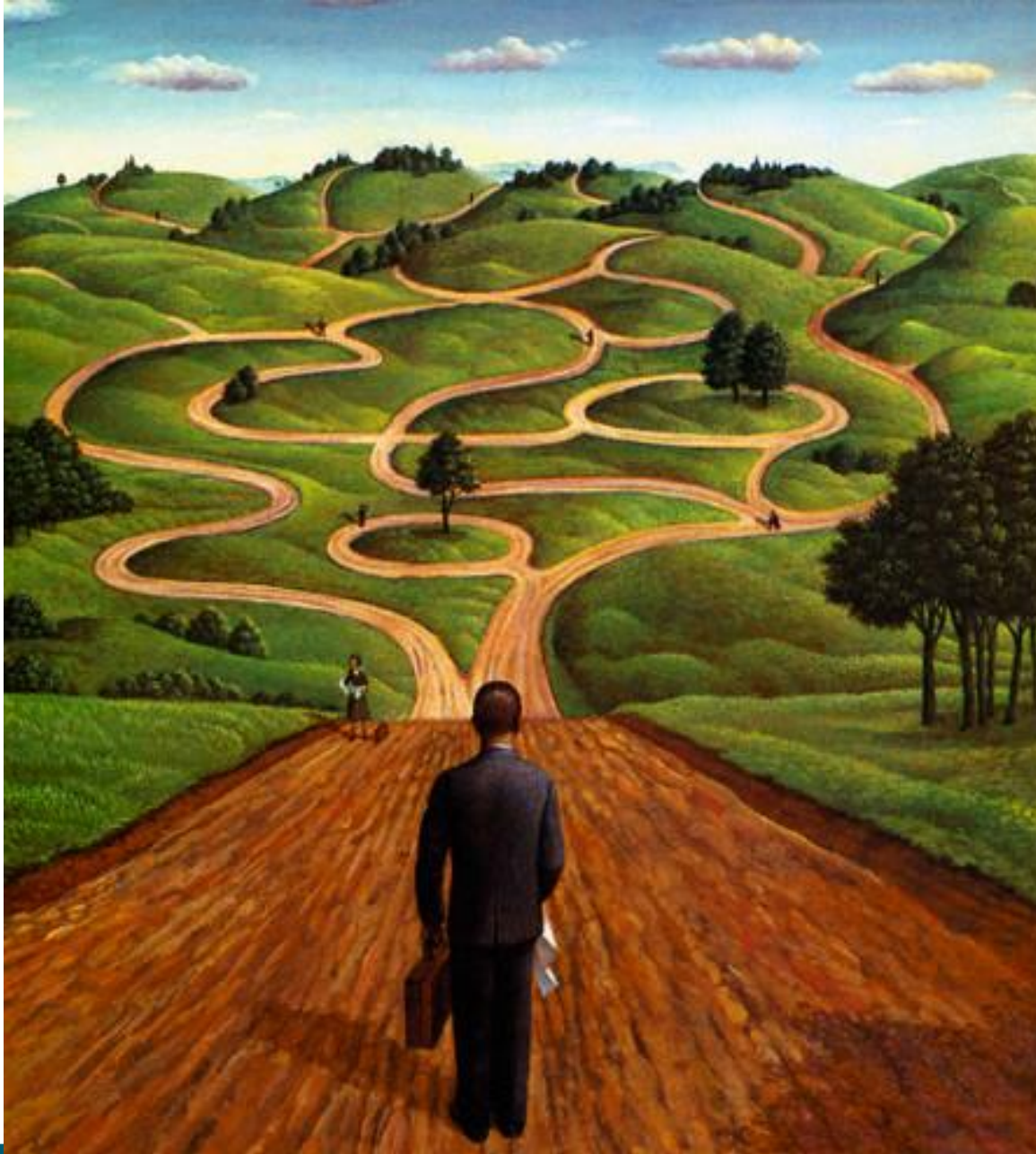
Operational readiness

1  
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the  
committee.



# How NRPH & EMS is implementing the IGHealthRate™ assessment







# SHARE (Informatics and Analytics Team) responsibilities within Niagara Region Public Health

1. Database  
Generation and  
Management

2. Data  
Governance

3. New Software  
and Analysis  
Techniques

4. Surveillance  
and Health  
Assessment

5. Research and  
Evaluation

6. Education  
and Training

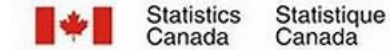
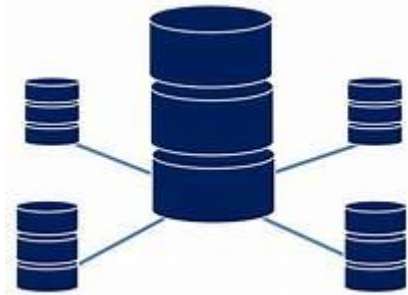
7. Knowledge  
Exchange

# What data do we have in NRPH



B14

Extract and use data from approximately 30 different data sources



**ENVIRONICS**  
ANALYTICS

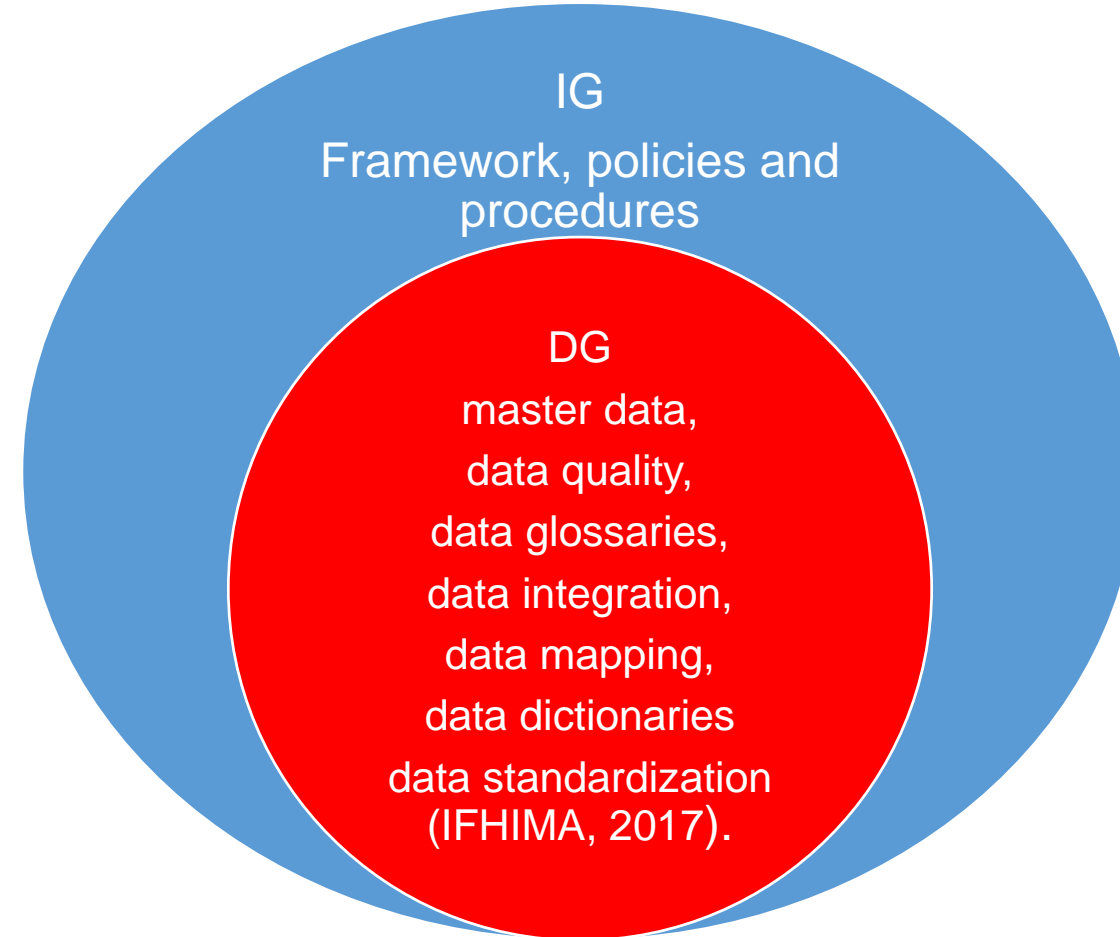




## **Aim of the NRPH & EMS IG Roadmap:**

To improve decision-making by applying Information Governance (IG) principles to improve the quality, timeliness and quantity of relevant data and information to underpin decision-making at NRPH & EMS.

# What is the difference between Information Governance (IG) and Data Governance (DG)?



*'IG sets the ground rules across the lifecycle of information and it considers the way information is handled throughout the organization' (IFHIMA, 2017).*

# Short, medium and long term examples of how to implement an IG framework

Short term activities	Medium term activities	Long term activities
Build an IG road map	Adapt or adopt a data quality management framework	Establish an enterprise wide mandate for Data Quality compliance.
Establish an IG Vision, IG Governance Committee(s)	Identity of IG leader	Establish an Analytics vision for NRPH that aligns with eHealth Ontario and the Ministry of Health for Ontario.
Build out a minimal action data quality program	Establish a culture of IG awareness as an organizational/provincial priority	Seek operational funding for the IG program.
Seek a data standards-based approach whenever possible.	Define and operationalize a data quality scorecard	Establish collaboration processes between IT governance, data governance and information management.
Initiate collaboration of Public Health Units to create a coordinated plan for COMOAH to present to MoH for additional funding sources.	Request direct support of the Ministry of Health and eHealth Ontario through shared strategic planning.	Repeat IG HealthRate™ Assessment to monitor and report progress and performance against baseline.

# Build and IG Roadmap and Establish IG Vision/Governance

	<b>7 areas of the Information Governance Roadmap</b>			<b>Activities</b>
<b>7</b>	<b>Evidence Informed Public Health</b>			<b>Information to insight (Knowledge Translation)</b>
<b>6</b>	<b>Visualization and Reporting</b>			<b>Accessible &amp; interactive information</b>
<b>5</b>	<b>Surveillance, Health Assessments and Analyses</b>			<b>Basic &amp; advanced analytics (descriptive, predictive etc.)</b>
<b>4</b>	<b>Data Quality and Stewardship (structured and unstructured data)</b>			<b>Clean data that are trusted credible &amp; timely. Use of Data Quality Framework. Data Literacy training</b>
<b>3</b>	<b>Data Generation (EMRs, Databases, SharePoint etc)</b>	<b>Research &amp; Evaluation</b>	<b>Data Acquisition</b>	<b>Generation, acquisition and storage of both structured and unstructured data from internal/external sources</b>
<b>2</b>	<b>Information Governance Roadmap</b>			<b>IG and DG framework, policies &amp; activities identified</b>
<b>1</b>	<b>IG Leadership</b>			<b>Establish the vision &amp; resources for IG &amp; DG at NRPH and communicate</b>

Data Visualization and Knowledge Translation should be centralized and appropriately resourced for initiatives and projects

Niagara Region Executive Information Governance Council\* TBD

NRPH Information Governance Steering Committee

Data Governance Committee

Research and Evaluation Review Committee

Analytics Group: SHARE (descriptive, predictive analytics, Power BI etc).

EMR decision making group

Application specific groups (Profile, Hedgehog, Edge, CRMS etc)

# Focus on data quality initiatives

# Hedgehog Data Quality Initiative: (Database for capturing the work of Public Health Inspectors)

- Data Dictionaries
  - Components of Hedgehog
- Workflow Processes/Shadowing
  - Inspection
  - PA
  - Time Tracking
- PowerBI Pilot
- Training Documentation
- Data Quality Processes
  - SSRS Facility

# Hedgehog: Training Documents

- Contact Management
- Course Session Management
- Facility Closure
- Facility Creating/Management
- File Review
- Inspection Management Training
- New Change Request
- New Exemption
- Person Involved
- Animals Involved
- Samples Management
- Time Sheets (update with definitions)

## Update Facility – add mandatory fields required



Changing information on a Facility can be done one of two ways; requesting a **Change Request**, or entering the changes manually by clicking **Update Facility** on home tab of the Ribbon.

A screenshot of a software application window titled 'Update Facility'. The window has a ribbon at the top with tabs for 'Save & Close', 'Manage Temporary Closure', 'Link Contact', 'Update Contact', 'Attach Note', 'Attach Document', 'Attach Photo', 'Show/Hide Columns', 'Data', and 'Support'. Below the ribbon, there are sections for 'Site Information', 'Physical Location', and 'Phone Numbers'. The 'Site Information' section includes fields for Site number (FD-36-00123), Site name (St. Catharines), Community (St. Catharines), Site capacity (No value), Legal name (St. Catharines), and Reporting site (St. Catharines). The 'Physical Location' section includes a map area with the address '101-71 King Street St. Catharines ON L2R 3H7', Latitude (No value), Longitude (No value), and Elevation (No value). The 'Phone Numbers' section includes fields for Phone (280 362-2874) and Fax. There are also fields for Website and Email under the 'Internet' section.

A Facility Window will be presented. From here, fields can be edited. **There are certain input fields mandatory to be entered on every newly created facility. This information can be found in the [Hedgehog Basics - Facility V1.2](#) file or here: <https://bit.ly/331PtcB>**

# Hedgehog: Dashboard Pilot

- Based on the performance indicators and monthly required inspections
- Automate the manual reporting that is asked for monthly/quarterly with live data

Remaining High Risk Inspections for this Month

371

Count of FacilityNumber

Remaining Medium Risk Inspections for this Month

152

Count of FacilityNumber

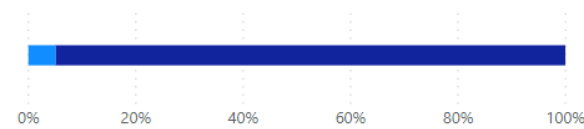
Remaining Low Risk Inspections for this Month

115

Count of FacilityNumber

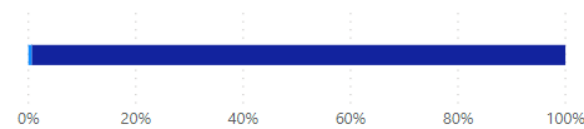
Completed/Incomplete High Risk Facility

RoutineComplete ● Completed ● Not Completed



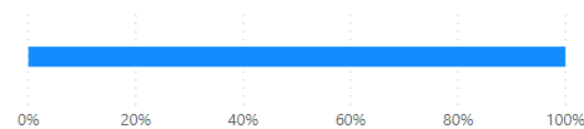
Completed/Incomplete Medium Risk Facility

RoutineComplete ● Completed ● Not Completed

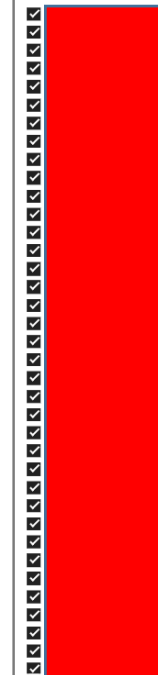


Completed/Incomplete Low Risk Facility

RoutineComplete ● Not Completed



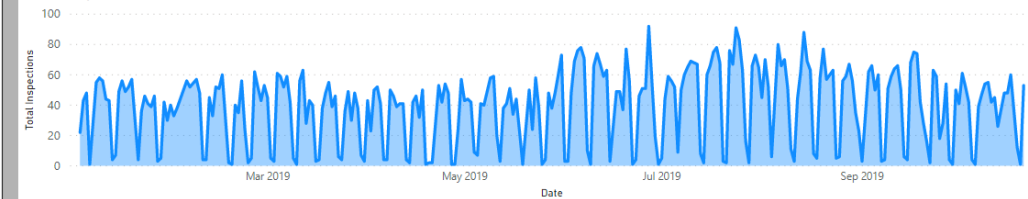
Select Inspector(s)



Select Month



Total Inspections



Routine Inspections

8283

Re-Inspections

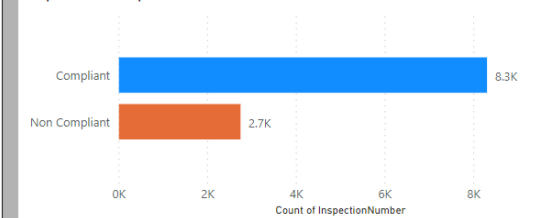
1205

Complaint Inspections

265

NEXUS

Inspection Compliance



# Niagara Region Address Look-up tool

## NIAGARA REGION ADDRESS VALIDATION TOOL

Address or GSmartID

1812 Sir Isaac Brock Way, St. Catharines

Full Street Number

1812

Copy

Municipality

St. Catharines

Copy

Street Name

Sir Isaac Brock

Copy

GSmartID

11501698

Copy

Street Type

Way

Copy

Latitude

-79.2522946967775

Copy

Street Direction

Copy

Longitude

43.1171109261785

Copy

- Is this address valid?
- Am I spelling it correctly?
- What municipality is this address in?
- Can I copy and paste address information into ministry or local data systems?
- Know the street number and not the street name?

# Examples of Unique Naming Variations

St. Catharines	St. Catharines	St. Catharines	St. Catharines
st. catharines	st catharines q	St. Cathariines	St. Cathjarines
Dt. Catharines	St Catharines.	St. Catharimes	St. Cathrarines
Ridgeway / St Catharines	St Catharinesl2s1z3	St. Catharinaes	St. Cathrines
S. Catharines	St Catharins	St. Catharine	St. Cathtarines
Saint Catharines	St Catharnes	St. Catharined	St. cathzrines
Sr. Catharines	St Catharnies	St. Catharinens	St. Catjharines
Sst. Catharines	St Cathatrines	St. Catharines	St. Catrharines
sT Catharines	st catherines	St. Catharine's	St.. Catharines
St . Catharines	st cathrines	St. Catharines Apt 209	St.Catahrines
St Cath	St, Catharines	St. Catharines Port Dalhousie	St.Cath
St cathairnes	St, Catharines, On	St. Catharines,	St.Cathairnes
St Cathareines	St,. Catharines	St. Catharines, ON	St.Cathariens
St Cathariens	St. Catahrines	St. Catharines, Ontario	St.Catharines
St catharine	St. Catarines	St. Catharines?	St.Catharines Unit 97
St Catharines	St. Cathaines	St. Catharinesl	St.Catharines.
St- Catharines	St. Cathainres	St. Catharines-On Border Of Pelham	St.Cathrines
St Catharines On	St. Cathairines	St. catharinesq	St>Catharines, ON
St Catharines Ontario	St. Cathairnes	St. Catharinew	
St. Cathanines	St. Catharinrd	St-Catharines	
St. Cathar	St. Catharinse	Stcatharinrs	
St. Catharianes	St. Catharnies	StCatherines	
St. Cathariens	St. Cathatines	Stg. Catharines,	
St. Cathariensa	St. Catherines	Stl Catharines	
StCatharines	St. Catherine's	T. Catharines	

- 89 Unique Name variants for “St. Catharines”

# Data Standards

# COMOH - EMR Data Standards and Interoperability Group

## Overall project goals and objectives (**Toronto PHU**):

- Develop a minimum core dataset of agreed upon demographic data standards such as
  - Age
  - Gender
  - DOB
  - Health card number \*\*\*
  - Mailing Address etc
- Facilitate interoperability of EMR data for current and future needs

# COMOH - EMR Data Standards and Interoperability Group

## Scope of this activity:

- Environmental scan of PHU EMR demographic fields (Toronto PHU)
- Gather demographic information from COMOH DS&I workgroup and consolidate information
- Narrowed down list to 64 demographics fields that are good candidates as standard EMR fields
  
- Niagara Region PH & EMS to continue on with this work – further refine and identify core demographic data standards to use within EMRs/ This work will continue in 2020.

Establish a culture of IG awareness  
as an organizational/provincial  
priority

# First steps to establish an IG culture - Communicate

## Internal

- Presentations to SLT (Endorsed by SLT as a strategic Priority for 2020 and beyond..)
- Monday morning emails from the MoH re 'good news' data stories
- Education Day on data quality (n = 400+ staff)
- Data Literacy initiative for 2020
- Monthly PH staff newsletter (IG article)



How do you wrangle nine terabytes of information?

The SHARE Unit is working on more ways we can [harness the power of our data](#).

# First steps to establish an IG culture - Communicate

## External

- IG Conference presentation (Data and Analytics for Healthcare: Dec 2019)
- PHO - IG Grandrounds (Feb 2020)
- PHO - pre-TOPHC Conference workshop (March 2020)



# TOPHC Pre-Convention Workshop: Information and Data Governance in Public Health

This workshop is co-led by PHO and Niagara Region Public Health.

- Date: March 24, 2020
- Time: 1:00 p.m. - 4:30 p.m.
- Location: 480 University Ave. 3rd floor - boardroom 350 or by webinar

Public  
Health  
Ontario

Santé  
publique  
Ontario

# Wrap up

# Main focus 2020/2021

## **Draft IG Roadmap & attended SLT for endorsement**

- Strike an IG Steering group and sub groups to monitor and manage IG/DG related activities
- Opportunities to work with other PHUs, the Ministry, Internationally on IG
- Create a multiyear project charter for IG

## **Data Quality Initiatives**

- Internal EMRs – Data dictionaries and glossaries
- Health Equity stratifiers & data standards (provincial)
- Data Literacy initiatives

## **Master Data**

- Pilot some form of MDM activity (e.g. data warehouse/cloud etc. – work with IT)

## **Data visualization**

- Architecture/Privacy around Power BI – finalise and publish dashboards (iPHIS dashboard up and running)
- GIS mapping platform being updated for release in 2020/21 (Niagara Region project)

*Typically organizations find great value in starting with just organizational awareness, stewardship and data quality – with potentially a light touch on information lifecycle management to contain the proliferation of “rogue” datasets.’ (Fleissner et al, 2014).*

In a publication by Collibra (2017) ‘The Chief Data Officers complete guide to Data Governance; (2017), the recommend to begin with initiatives involving:



Data Protection



Big Data



BI & Analytics



Data Quality



Master Data  
Management (MDM)

# Stakeholders and Potential Partners

- Public Health Stakeholders (*Informatix and analytics team, data owners, SLT, Communications*)
- Niagara Region Stakeholders (*Privacy, IT, Legal*)
- External Stakeholders (*COMOH, PHO, Ministry (funding), eHRM, CIHI, other PHUs, Brock University, Conestoga College*)
- Potential partners (*OHT, APHEO, alpha, other Universities and Colleges, e-Health Ontario, Health Canada, Canadian Data Governance Standards Collaborative, technical standards organisations*)

# Lessons learned

- Need senior leadership buy-in
- In our case – needed experts to guide us (e-HRM)
- Need dedicated time to do the assessment & trainings (face-to-face and online)
- Need the right people at the table (Privacy, IT, legal, internal champions, informatics and analytics team)
- (Ideally) dedicated resource to lead the project and navigate recommendations
- Humility & Patience
- Try to keep abreast with IG work that is happening Provincially, Nationally and Globally but.....
- Start small and focus on what is within your control
- Communicate Communicate Communicate
- Aim for the STARS!!!!!!

# Objectives

- List 10 organizational competencies for health information governance (IG)
- Identify recommendations with short-, medium-, and long-term outcomes from a local public health unit's IG maturity assessment
- Discuss the steps and potential partners required to develop an IG action plan within a public health organization

# References

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www.ahima.org/~media/AHIMA/Files/HIM-Trends/IG/IGHealthRateFlyer](https://www.ahima.org/~media/AHIMA/Files/HIM-Trends/IG/IGHealthRateFlyer)
- IFHIMA (2017) Advancing Health Information Governance; A Global Imperative <https://ifhima.files.wordpress.com/2017/10/ifhima-ig-whitepaper-final.pdf>
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- The CDOs complete guide to Data Governance (2017) Collibra.com

# Thank you!

# Questions?

For more information:

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[Diane.vanecko@niagararegion.ca](mailto:Diane.vanecko@niagararegion.ca)