

Moving the Yardstick Toward a 'Patients First' Culture

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CONNECTING SOUTH WEST ONTARIO



Funded by eHealth Ontario



Learning Objectives

- ClinicalConnect is a secure, web-based portal that enables collaboration between acute and primary/community care providers through electronic information sharing.
- Learning objectives:

Depth/breadth of regional EHR	Cross-continuum info sharing	Transformation of patient care
<ul style="list-style-type: none">• Understand what data is aggregated from various healthcare organizations/repositories in Ontario, and available for viewing by ~41,000 health service providers (HSPs) in South West Ontario	<ul style="list-style-type: none">• Understand how accessing ClinicalConnect on desktop/mobile devices is allowing HSPs to deliver healthcare to patients in their preferred location, their home	<ul style="list-style-type: none">• Understand how patients are benefitting from their health records being accessible to their health service providers, regardless of where they are or what stage they are at in their care

Data-Contributing Organizations

67 acute care hospitals



4 CCACs



Community Lab Reports



58 hospital sites' diagnostic images



HSPs Viewing Their Patients' Data

Hospital-based physicians and clinicians



CCAC care coordinators/nurses



Regulated health service providers from:

- Long term care homes
- Public Health Units
- Mental Health & Addiction organizations
- Community Support Service Agencies
- Community/Solo Practices

About ClinicalConnect


- ClinicalConnect is the Regional Clinical Viewer for the connecting South West Ontario (cSWO) Program, funded by eHealth Ontario
- Hamilton Health Sciences is the solution provider deploying ClinicalConnect across the four South West Local Health Integration Networks
- The cSWO Program is foundational to eHealth Ontario's commitment to integrate electronic health information for all Ontarians
- ClinicalConnect is recognized by eHealth Ontario as a provincial strategic asset



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What ClinicalConnect Looks Like


CONNECTING SOUTH WEST ONTARIO
Logged in as: LHIN4 eHealth Office Training
Tuesday, March 8, 2016

Main Menu

Modules

- Admissions
- Allergies
- Blood Bank
- CCAC
- Face Sheet
- Health Records
- Lab
- Microbiology
- New Results
- Orders
- Pathology and Genetics
- Patient Summary**
- Pharmacy
- Radiology
- Transcription
- Visits

General Modules

- DynaMed
- Formulary
- HRLMP Lab Test Guide
- MacPLUS
- RNAO BPGs

Notifications

None

Admin Modules

- Users
- Version
- Audit Reporting

Patient List Search: [Advanced Search](#) [Links](#) [Settings](#) [Logout](#)

MARX, GROUCHO Allergies ★ 📄 👤

Attending Physician: Hutchinson, Debra Lea	Encounter Date: 24/09/2015 08:36	Status: ADM IN
MRN: 000002015	DOB: 01/04/1987	Location: CM MED 8S
Account Number: GAO0500015	Admit Age/Gender: 28YM	Room/Bed: 8S-14/2
Facility: General	HCN: 3986255713-AV-ON	Height (Metric): 180.3cm
Reason For Visit: EXACERBATION OF COPD		Weight (Metric): 81.732kg
		BMI: 25.1
		BSA: 2.02

Patient Summary

Preferences

Lab: List (Timestamp: Tuesday, March 8, 13:06)

Days Back: 1

Displaying 1-2 of 2 total

Collected Date	Test	Department	Normalcy	Status	Facility
08/03/2016 11:17	CREATININE	ROUTINE CHEMISTRY		RES	General
07/03/2016 15:40	GLUCOSE RANDOM	ROUTINE CHEMISTRY	A	RES	General

Displaying 1-2 of 2 total

Pharmacy (Timestamp: Tuesday, March 8, 13:06)

Status: All

Page 1 of 3

Displaying 1-8 of 17 total

Rx Number	Name	Dosage	Route	Sig	Schedule	I/V Flow Rate	Start Date	Stop Date	Discontinued Date	Status	Status Flag	Facility
0000009	METOPROLOLOl/cesorol/Betaloc, Novo-Metoprol 50 mg TABLET	50 mg	PO	BID	SCH		05/10/2015 21:00	04/11/2015 21:01	04/11/2015 21:01	DC	DC	General
0000001	CLOPIDOGREL/Plavix 75 mg TABLET	75 mg	PO	DAILY	SCH		21/10/2015 00:00	19/11/2015 23:59	19/11/2015 23:59	DC	DC	General
0000010	AMODARONE/Cordarone 200 mg TABLET	400 mg	PO	TID/CC	SCH		05/10/2015 17:00	04/11/2015 17:01	04/11/2015 17:01	DC	DC	General
0000011	amLODIPine/Novvasc, PMS-AMLODIPINE 2.5 mg TABLET	2.5 mg	PO	DAILY	SCH		06/10/2015 09:00	05/11/2015 09:01	05/11/2015 09:01	DC	DC	General
0000012	potassium CHLORIDE/MICRO-K 8mmol 600 mg SUSTAINED RELEASE CAPSULE	1800 mg	PO	DAILY/CC	SCH		06/10/2015 08:00	05/11/2015 08:01	05/11/2015 08:01	DC	DC	General
0000013	FUROSEMIDE/Lasix, Novosemide 40 mg TABLET	40 mg	PO	DAILY/D	SCH		06/10/2015 08:00	05/11/2015 08:01	05/11/2015 08:01	DC	DC	General
0000014	ACETAMINOPHEN/Tylenol Plain, Novo-Gesic, Alasol Tempra 325 mg TABLET	650 mg	PO	QID	SCH		05/10/2015 16:00	04/11/2015 16:01	04/11/2015 16:01	DC	DC	General
0000015	PERINDOPRIL/Coversyl 4 mg TABLET	4 mg	PO	DAILY	SCH		06/10/2015 no no	05/11/2015 no no	05/11/2015 no no	DC	DC	General

Allergies (Timestamp: Tuesday, March 8, 13:00)

Displaying 1-12 of 12 total

Type	Coded	Category	Allergy	Reaction	Severity	Status	Date	Comment	Source
Allergy	N	Drug	Cytarabine - Cytosar		Mild		22/01/2014 00:00		OACCAC
Allergy	N	Food	Other food allergy		Unknown		29/01/2014 00:00	Celery	OACCAC
Allergy	N	Food	Shellfish		Severe		22/01/2014 00:00		OACCAC
Allergy	N	No known allergies					28/01/2014 00:00	Test of NKA and the Additional Information section in Allergies	OACCAC
Allergy	N	Unable to Assess					28/01/2014 00:00	Test of Unable to assess and Additional information section in allergies	OACCAC
Allergy	Y	Contrast	CONTRAST DYE	HEPATIC DYSFUNCTION	Unknown	Unverified	18/12/2015 11:43		HHS
Allergy	Y	Drug	acetylsalicylic acid		Unknown	Verified	28/07/2015 13:10		HPHA
Allergy	Y	Drug	bisoprolol		Unknown	Verified	28/07/2015 13:10		HPHA
Allergy	Y	Drug	oxycodone	DIZZINESS	Unknown	Unverified	17/02/2016 12:12		HHS
Allergy	Y	Drug	Sulfa (Sulfonamide Antibiotics)		Unknown	Verified	28/07/2015 13:10		HPHA
	N	OTHER	Latex	Anaphylaxis	SV				Leamington
	Y	DRUG	Penicillins	Hives	5		25/05/2015 00:00		Windsor-Metropolitan

Displaying 1-12 of 12 total



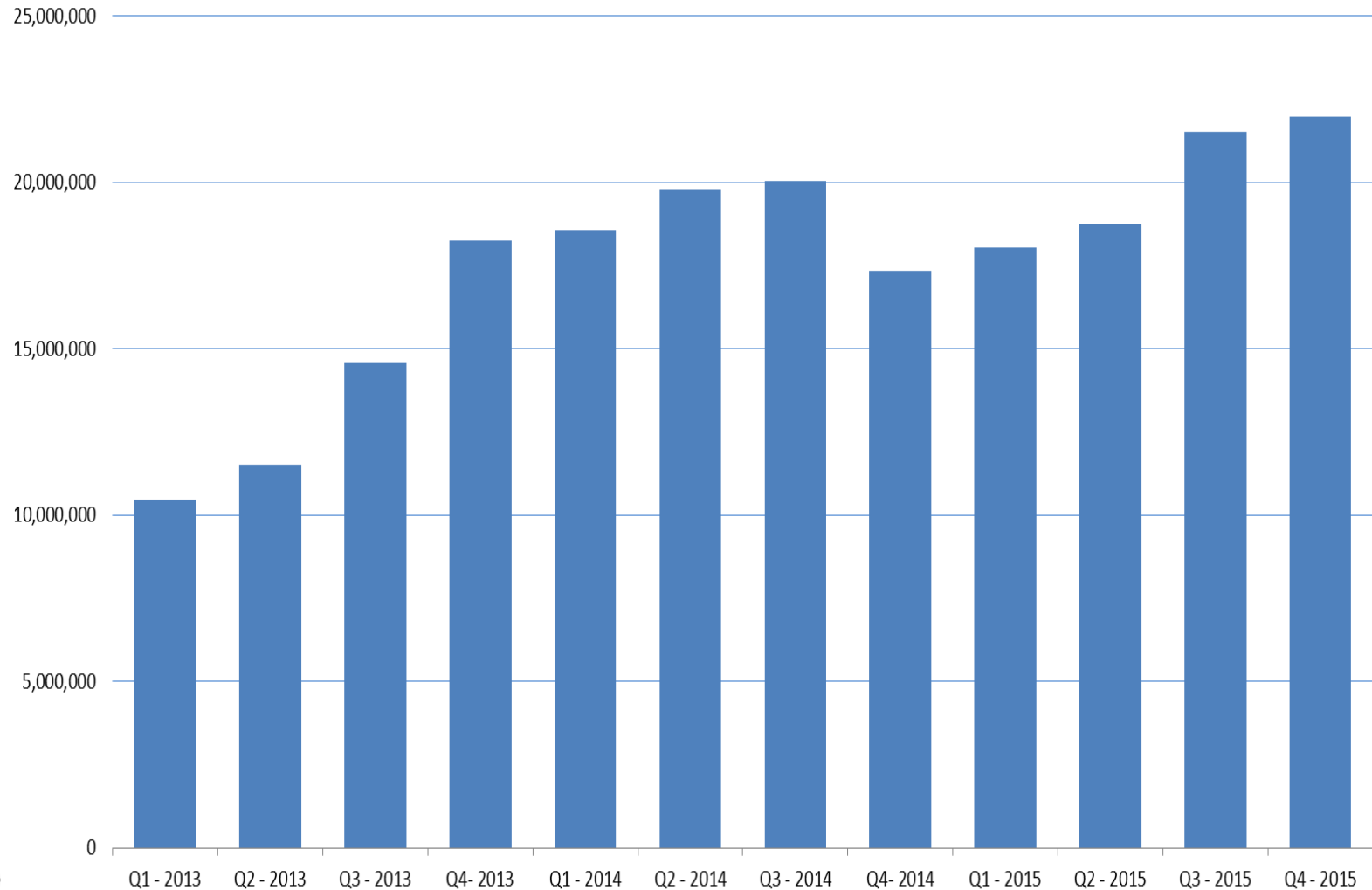
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By The Numbers

Total Data Elements Returned From User Queries - by Quarter



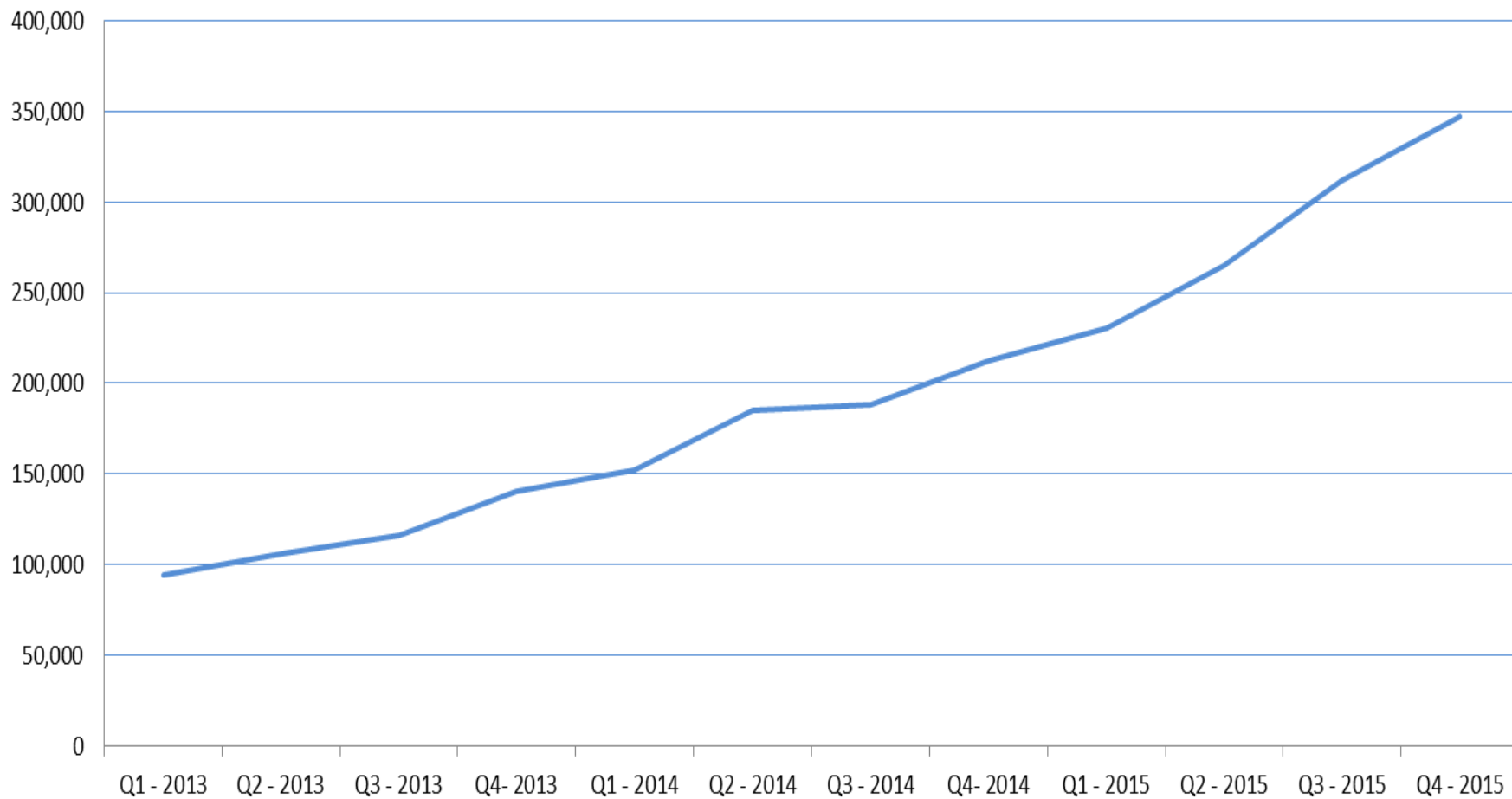
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By The Numbers

Total Logins to ClinicalConnect by Quarter



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Cross-Continuum Information Sharing

- Flagging – helping providers quickly identify high users of healthcare system and enable better coordination of care
 - Frequent ED Visits flag: identifies patients with five or more visits to EDs at acute care facilities in southwest Ontario in the last 366 days
 - Health Links flag: identifies patients who have a Coordinated Care Plan initiated by a Health Link in the HNHB LHIN

Frequent ED Visits flag

Health Links flag

MARX,GROUCHO  Allergies     

Attending Physician:		Encounter Date:	10/11/2015 13:00	Status:	DEP ER	Height (Metric):	0.0cm
MRN:	H00002015	DOB:	01/04/1987	Location:	Emergency Outpt C1	Weight (Metric):	0.000kg
Account Number:	HE005004/15	Admit Age/Gender:	28Y/M	Room/Bed:		BMI:	0.0
Facility:	Juravinski Hospital	HCN:	3986255713-AV-ON			BSA:	
Reason For Visit:							

Cross-Continuum Information Sharing

- DynaMed® – offering providers evidence-based, contextually-relevant clinical information about their patients' condition and prescribed medications

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- Radiology
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- Visits

General Modules

- DynaMed
- Formulary
- HRI MP Lab Test Guide
- MacPLUS
- RNAO BPGs
- Scheduling

Patient Record: MARX.GROUCHO

Attending Physician: Booth, John Donovan
Encounter Date: 16/04/2014 10:53
Status: ADM IN
Height (Metric): 180.3cm
MRN: 0000000537
DOB: 01/04/1987
Location: CM MED BS
Weight (Metric): 95.000kg
Account Number: GA00001014
Room/Bed: 8S-14/2
BMI: 29.2
Facility: General
BSA: 2.2
Reason For Visit: Deep Vein Thrombosis

Labs List (Timestamp: Friday, September 25, 12:01)

Collected Date	Test	Department	Nursing	Status	Facility
17/09/2015 12:17	CREATININE	ROUTINE CHEMISTRY	A	RES	General
15/09/2015 15:34	CDC			RES	General
31/09/2015 22:47	BREAST CANCER MARKER CA15-3	ROUTINE CHEMISTRY	A	COMP	General
31/09/2015 22:47	CA125	ROUTINE CHEMISTRY	A	COMP	General



DynaMed
ClinicalConnect

Search Other Services

Search: ("Deep Vein Thrombosis") AND (AG "Adult: 19-44 years") AND (ZX Male)

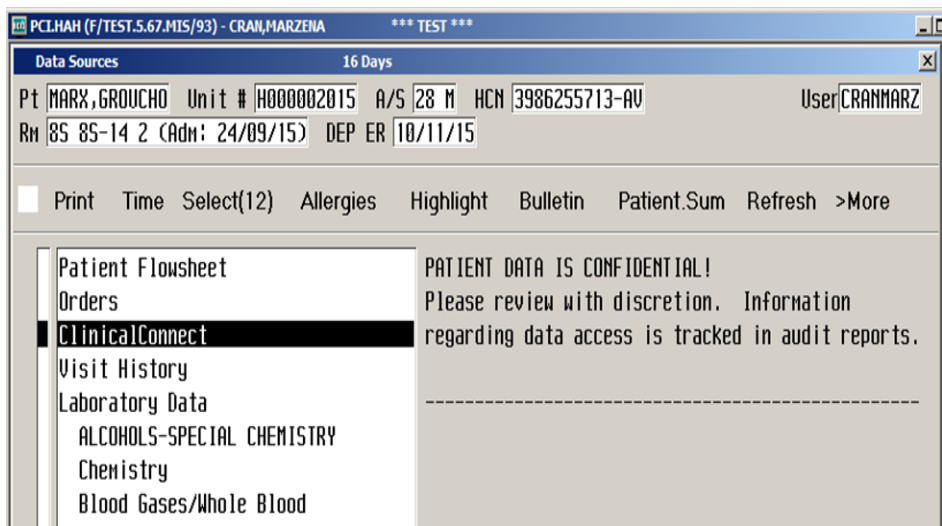
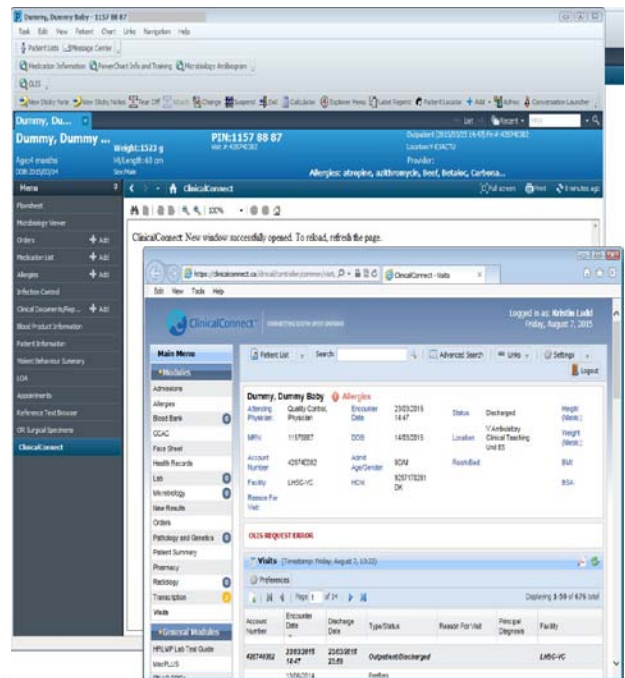
Browse: A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Browse Categories

1-50 of 158 Page: 1 2 3 4 Next

- Deep vein thrombosis (DVT)
- Superficial vein thrombosis (SVT)
- Upper extremity deep vein thrombosis
- Clinical prediction of deep vein thrombosis
- Acute portal vein thrombosis
- Chronic portal vein thrombosis
- Venous thromboembolism (VTE) prophylaxis in critically ill patients
- Anticoagulant therapy for venous thromboembolism

Cross-Continuum Information Sharing

- Contextual launch – offering providers the ability to launch additional records from source systems, outside of what’s in their own information system, but from within their information system.



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Cross-Continuum Information Sharing

- In addition to hospitals already in place, ClinicalConnect will soon launch directly from:
 - Client Health & Related Information System (CHRIS) – used by CCACs to input their clients' health information
 - eSHIFT – The Palliative Care eSHIFT (eSHIFT) program is a model of care that allows Personal Support Workers to be connected virtually to RNs through Smartphone technology to provide palliative clients with end of life care. Work underway to launch ClinicalConnect from eSHIFT.



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Supporting Community-Based Physicians & Clinicians

- In the Province of Ontario:
 - There are 14 CCACs
 - Care provided is funded by the Government of Ontario through Local Health Integration Networks (LHINs)
 - Governed by provincial legislation and regulations
 - Sets parameters regarding eligibility criteria, service provision, etc., and requires the organization to operate within a balanced budget
 - Patient care plans may include community supports and services (adult day programs, assisted living programs, meal programs, volunteer visiting, etc.), which vary by community



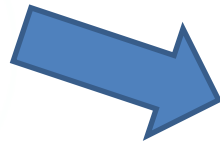
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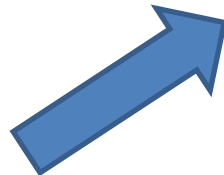


Data-Contributing Organizations

67 acute care hospitals



4 CCACs



Community Lab Reports



58 hospital sites' diagnostic images



HSPs Viewing Their Patients' Data

Hospital-based physicians and clinicians



CCAC care coordinators/nurses



Regulated health service providers from:

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- Public Health Units
- Mental Health & Addiction organizations
- Community Support Service Agencies
- Community/Solo Practices

Connecting Individuals with Care in Their Community

- The HNHB CCAC helps people:
 - access home and community care resources (navigation)
 - remain at home
 - avoid hospital admission
 - access support upon discharge from hospital
 - receive information about care options including long-term care
- Last year, HNHB CCAC provided care to more than 82,000 individuals across the region
 - Individuals served vary in age and complexity of need
- Last year, HNHB served half of all seniors in the region aged 85+
- CCACs support secure information sharing with their partners using Health Partner Gateway (HPG)

CCACs: What We Do

- Provide **information and referral** to community health supports and services
- Help people remain at home, or return there more quickly from a hospital stay by providing **in-home health and personal support care**
- Provide **school health and support services**
- Provide **patient / system navigation** to a range of community and post-acute hospital programs
- Manage the **application and admissions process to long-term care homes**

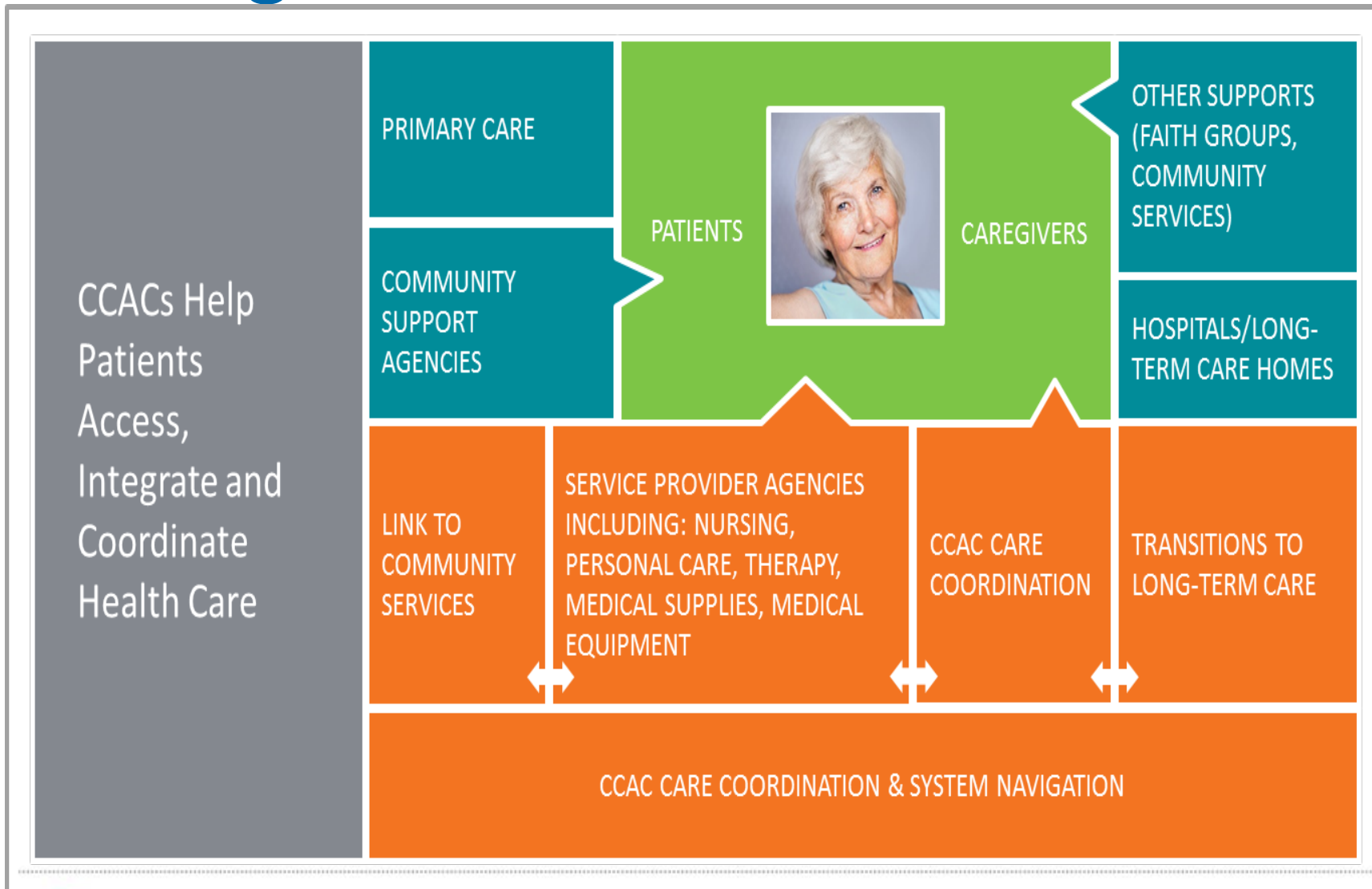


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Putting Patients First



Homecare Providers View Acute/Provincial Repository Data

Modules	
Admissions	
Allergies	
Blood Bank	0
CCAC	
Face Sheet	
Health Records	
Lab	2
Microbiology	0
New Results	
Orders	
Pathology and Genetics	0
Patient Summary	
Pharmacy	
Radiology	0
Transcription	0
Visits	



Homecare Providers View

Acute/Provincial Repository Data

• Modules	
Admissions	
Allergies	
Blood Bank	0
CCAC	
Face Sheet	
Health Records	
Lab	2
Microbiology	0
New Results	
Orders	
Pathology and Genetics	0
<i>Patient Summary</i>	
Pharmacy	
Radiology	0
Transcription	0
Visits	

Homecare Data Shared with Acute & Community Providers

- CCACs' client information available from CHRIS in ClinicalConnect, and a sample Client Note

ClinicalConnect™ CONNECTING SOUTH WEST ONTARIO

Main Menu

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- Visits

Patient List | Search: | Advanced Search

MARX, GROUCHO Allergies

Attending Physician: Encounter Date: 02/02/2016 05
 MRN: 0000002015 DOB: 01/04/1987
 Account Number: GE005024/15 Admit Age/Gender: 28Y/M
 Facility: General HCN: 3980255713-#
 Reason For Visit: EXACERBATION OF COPD

CCAC: Demographics List

Preferences | View: Demographics List

- Characteristics List
- Medical Contacts (Active)
- Personal Contacts (Active)
- Service List
- LTCH Choices and Bookings
- Community Support and Other Resources (Active)
- Diagnosis List (Active)
- Note List
- Primary Care Group List (Active)
- Risk List (Active)
- Safety Issue List (Active)
- Referral List
- Equipment and Supplies List
- CCAC Coordinated Care Plan List

Client #	Present L	one Nur
1037645	310 Limer	05)633-3
5085271	310 Dund	0)533-3

MARX, GROUCHO Allergies

Encounter Date: 05/06/2015 11:27
 DOD: 01/04/1987
 Admit Age/Gender: 28M
 HCN: 3980255713

CCAC: Note List

Preferences | View: Note List

Note Date	Author	Author Qualifications	Subject	Content
22/01/2014	Peat, Darren	Health Records Admin,Team IS&T	Test note	Test note for COCHRIS integration.. Note Created
03/02/2014	Peat, Darren	Health Records Admin,Team IS&T	Test Note Type Care Plan	Test note comments for care plan type. Note Crea
03/02/2014	Peat, Darren	Health Records Admin,Team IS&T	Test Note Type Community Support	Test note information for note type community sup
13/02/2014	Peat, Darren	Health Records Admin,Team IS&T	Test multipage note	Client Demographics (data entry only) BRN:

CCAC: Note Detail (Timestamp: Wednesday, March 16, 16:25)

Preferences

Note Date: 13/02/2014
 Author: Peat, Darren
 Author Qualifications: Health Records Admin,Team IS&T
 Subject: Test multipage note
 Client Demographics (data entry only)
 BRN:
 Salutation:
 Surname:
 First Name:
 Preferred Name:
 Gender: please choose
 Date of Birth:
 Health Card Number, Version Code, Expiry Date:
 Health Card Surname (if different):
 First Language, please choose if Other:
 Preferred Language, please choose if Other:
 Marital Status, please choose

Putting Patients First

- How do patients benefit from electronic sharing of their information between their care providers? Through:
 - **Consistent support** from home to hospital, and back to home
 - **Complete advanced care planning**, including identifying early on palliative patients' wishes so all providers (acute or community) can act accordingly
 - **Sharing of complex care plans** amongst entire team provides continuity of care across the continuum
 - **Unnecessary duplicate testing and assessments** because results from previous tests are available electronically to patient's care team
 - **Two-way & collaborative communication**: change from hospital feeding data to community with community now feeding data to hospitals



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New From CHRIS:

Messaging between providers

Advanced care plans

Nursing notes, wound care, medication review

Physio/Occupational therapy

Dietician assessments

Mental health strategies

Care plans: transition, ED avoidance, palliative wishes, recent changes to care plan

In home supports: “eClinic, eSHIFT”



To Benefit:

Hospital-based physicians and clinicians



CCAC care coordinators/nurses



Regulated health service providers from:

- Long term care homes
- Public Health Unites
- Mental Health & Addiction organizations
- Community Support Service Agencies
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New Standard of Care

- To truly build ‘patients first’ culture, we must:
 - Use ClinicalConnect before seeing any patient; **know their story** before arriving home visit
 - **Expand use of mobile devices** for community providers ‘on the go’
 - Use ClinicalConnect to **identify patients who are admitted to ER**, with view to fast-track their safe return back home
 - Ensure patient’s advanced care planning wishes/palliative measures are met – **unlock more information from CHRIS** so patient’s care providers in other healthcare settings have access



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Future State of ClinicalConnect

- Secure messaging
 - Incorporate CONNECT's Provider to Provider messaging
- eReferrals
 - **Leverage ClinicalConnect, users at acute care facilities will be able to send referrals** electronically to CCACs; HNHB CCAC is pilot site. More advanced eReferral / Central Intake approaches to follow.
- eNotification
 - **Leverage ClinicalConnect to notify** CCACs and Primary Care Providers that their patient has had an ED or in-outpatient regional hospital encounter.



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Future State of ClinicalConnect

- Primary care data integration
 - Make data from physicians' EMRs available in ClinicalConnect
- Expand use of data from Integrated Decision Support (IDS)
 - Integrate clinical groupings being developed through IDS with **ClinicalConnect to support population health** and better care for high user cohorts
 - Leverage decision support data and business intelligence tools to better support front line care



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Patient LACE Score in Regional EHR

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Logged in as: LHIN4 eHealth Office Training
Friday, July 31, 2015

Logout

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 Notifications
 None
 Admin Modules
 Users
 Version
 Audit Reporting

Patient List Search: [] Advanced Search Links Settings

MARX, GROUCHO Allergies

Attending Physician:	Booth, John Donovan	Encounter Date:	16/04/2014 10:53	Status:	ADM IN	Height (Metric):	110 cm
MRN:	0000000537	DOB:	01/04/1967	Location:	CM MED 8S	Weight (Metric):	95.000kg
Account Number:	GA000010/14	Admit Age/Gender:	27Y/M	Room/Bed:	8S-14/2	BMI:	7851.2
Facility:	General	HCN:	3966255713-AV-ON			BSA:	0.28
Reason For Visit:	CLINICAL CONNECT TRAINING ONLY						

Patient Summary
 Preferences

LACE Score: 14			
Length of Stay (13):	5	Acute Admission (Yes):	3
Comorbidity (2):	2	6 month ED visits (>=4):	4

Warnings

- ⚠ Patient is considered a frequent ED visitor. He has been to an emergency department 9 times over the last 12 months.
- ⚠ Patient has a history of mental health issues. The most recent visit addressing mental health issues was Jan 16/2010.
- ⚠ Patient has recently been discharged from hospital (October 28/2010) and is at high risk for readmission (LACE score of 14).
- ⚠ Patient is visiting emergency departments for issues that may be addressed by a family physician, walk-in clinics, or community health centres.

[Click here to view the patient journey report](#)

Visit History - Last 12 Months

Category	Event	Date
ED Visits	1	Nov 09
ED Visits	2	Dec 09
ED Visits	3	Jan 10
ED Visits	4	Mar 10
Hospital Admits	1	Apr 10
ED Visits	5	May 10
ED Visits	6	Jul 10
ED Visits	7	Aug 10
ED Visits	8	Sep 10
CCAC Admits	1	Jul 10 - Sep 10
CHC Visits	1	Oct 10
CHC Visits	2	Nov 10
Hospital Admits	2	Nov 10

Patient Portal

- Work underway to leverage existing integration to support a patient portal, where patients have access to their health data, can manage appointments, have secure bi-directional messaging with providers, access educational information etc.

The screenshot displays the INFLUENCE HEALTH patient portal for Sara Baker. The interface includes a top navigation bar with links for Home, Messages (2685), and Notifications (28), along with a user profile icon and the text "Logged in as Sara Baker". A left sidebar menu lists "User Settings", "Profile", "Messages", "Health Information", and "Appointments". The main content area is titled "Health Information" and contains several sections: "My Health Trackers" with a bar chart showing weight trends from 20-Sep-12 to 08-Jul-15; "Blood Pressure" with a reading of 190/95 mmHg and a status of "HYPERTENSIVE CRISIS"; "Blood Glucose" with a reading of 123 mg/dL and a status of "ABNORMAL"; and "Cholesterol" with a reading of 191 mg/dL and a status of "NORMAL". Other sections include "Test Results" (2), "Clinical Documents" (3), "Allergies" (listing Penicillin G benzathine, Peanuts, Soy milk, and Aspirin), "Medical History" (listing Family History, Immunizations History, History of Procedures, and Social History), and "Medications" (listing Cephalexin 500 MG Oral Caps.). A "Blue Button Download My Data" icon is also present.

Questions?



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Thank You

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