

Data to Deployment: Closing the Loop on Preventive Care

Presented by

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East Wellington Family Health Team



East Wellington
Family Health Team



Presenter Disclosure

- **Presenters:** Michelle Karker, Hope Latam and Dr. Kevin Samson
- **Relationships with commercial interests:**
 - **Grants/Research Support:** NONE
 - **Speakers Bureau/Honoraria:** NONE
 - **Consulting Fees:** NONE
 - **Other:** Hope Latam is an Employee of CognisantMD

Disclosure of Commercial Support

Commercial Support: None

- This program has NOT received financial support
- This program has NOT received in-kind support

Potential for conflict(s) of interest: None

Mitigating Potential Bias

- Hope Latam was not being compensated by Cognisant MD when this work was being completed at the East Wellington Family Health Team.
- This work was submitted for inclusion in this conference before Hope Latam became an employee of Cognisant MD there is no direct benefit to Cognisant MD from this work.

Preventative Care – why was it important to do this work?

What problem were we trying to solve?

What are the benefits to the work we did?

How does this improve care for our patients and our clinical team?

Why

History – it all started with me asking a simple question

“How many smokers do we have?”

That simple question 5 years ago opened the door to:

Quality Improvement journey:

- **Data clean up**
- **Extraction**
- **Analysis of our EMR data**

Outcomes:

- **Use our EMR more efficiently,**
- **Easy for providers to know what preventive care their patients need and when they need it**
- **Integrated health system data into our EMR**



Preventive Care Management

Reviewed our Cancer screening data:

- Found the many ways in which diagnosis, screenings and test results had been recorded into the chart.
- How did our EMR data compare to the CCO SAR (Screening Activity report)?
- Screening rates were lower than how “WE THOUGHT” we were doing
- Was the information in our EMR correct?
- From an administrators viewpoint could I confidentially use this data in our EMR for our reporting requirements and program development?

WHAT WE DID....

Prev Care Button



Explorer, Dora E next visit: not booked

Alzheimer's disease fatherbmd mom: breast ca died 68y	CHF - Congestive Heart Failure Asthma
Alcohol abuse Pulmonary embolism Chicken pox (or Varicella immune) Breast cancer 2014 echo normal	Tylenol with Codeine No 3 300-30-15 mg 1 tablet 2 times daily, PRN for ASA 81 mg Tablet Ec 1 Tablet(s) Once daily for 3 Month(s) (30) insulin aspart 100/ml cartridge (ml) subcutaneous 1 Tablet(s) Once dai Spiriva 18Mcg capsule as dir alogliptin 25 mg 1 time daily Vitamin B12 1200 mg 1 tablet 1 time daily for 365 days to improve B12 sertraline 100 mg 1 capsule 1 time daily for 90 days
? Food: Tree Nuts	Fluviral Jan 1, 2013 Quadracel (PF) May 29, 2015
Zoster vaccine Zostavax 1 dose recommended Flu shot reminder - general population due Oct 1, 2016	10 alcoholic never

EWFHT Toolbar Email Consent Granted - May 31, 2016 Workshops In-house Referrals PROB **Email** Phone **Prev Care**

Dear Dora:

test

<input type="checkbox"/> Sep 16, 2016	Individual Reminder	HL
Changed: hl test; Intervention Suggested: Due for pap		
<input type="checkbox"/> Sep 16, 2016	Reminder Response	HL
Reminder: Due for pap Response: informed patient on Sep 16, 2016		

Prev Care Button



Prev Care Summary - Dora Explorer						
Test	Status	Frequency	Date of Most Recent	Response		
PAP	Due	3 yr		Add		Criteria
Mammogram	Up to Date	2 yr	Apr 3, 2015	Add		Criteria
FOBT	Due within 6 mo	2 yr	Oct 10, 2014	Add	Kit Provided Oct 9, 2016	Criteria
Colonoscopy	Excluded	Does not meet criteria		Add		Criteria
BMD	Excluded	Does not meet criteria		Add		Criteria

Prev Care Button



Test	Status	Frequency
PAP	Due	3 yr
Mammogram	Up to Date	2 yr
FOBT	Due within 6 mo	2 yr
Colonoscopy	Excluded	Does not meet criteria
BMD	Excluded	Does not meet criteria

Prev Care - Pap Criteria

File

Pap Criteria - Dora Explorer

Eligible

Criteria

- Female
- 21 to 69 years old
- Uterus present (no hysterectomy)

Include Exclude

Reason: Not yet sexually active

Details:

Discard Add to Notes

Criteria

Criteria

Criteria

Criteria

Criteria

Prev Care Button



Prev Care Summary - Dora Explorer						
Test	Status	Frequency	Date of Most Recent	Response		
PAP	Excluded not sexually active			Add		Criteria
Mammogram	Up to Date	2 yr	Apr 3, 2015	Add		Criteria
FOBT	Due within 6 mo	2 yr	Oct 10, 2014	Add	Kit Provided Oct 9, 2016	Criteria
Colonoscopy	Excluded Does not meet criteria			Add		Criteria
BMD	Excluded Does not meet criteria			Add		Criteria

Prev Care Button



Prev Care - Mammogram Criteria

File

Mammogram Criteria - Dora Explorer

Eligible

Criteria

- Female
- 50 to 74 years old
- No Bilateral Mastectomy

Include Exclude

Reason

Details

Frequency (years)

Criteria

Every 2 years

Frequency for this patient years months

Reason

Details

Discard Add to Notes

Prev Care Button



Prev Care Summary - Dora Explorer						
Test	Status		Frequency		Date of Most Recent	Response
PAP	Excluded	not sexually active				Add
Mammogram	Due		1 yr	FHx of Breast Ca	Apr 3, 2015	Add
FOBT	Due within 6 mo		2 yr		Oct 10, 2014	Add
Colonoscopy	Excluded	Does not meet criteria				Add
BMD	Excluded	Does not meet criteria				Add

Prev Care Button




 115 Delhi Street
 Guelph, ON N1E 4J4
 Tel: 519.837.6413 Fax: 519.766.9982
 www.ggh.org.ca

REQUEST FOR MAMMOGRAPHY, BREAST ULTRASOUND, BONE DENSITY

Date of Request: Oct 9, 2016
 Last Name: ZZ First Name: Top

Prev Care - Mammogram Response

File

Mammogram Response - Dora Explorer

Prev Care Summary - Dora Explorer

Test	Status	Frequency	Date of Most Recent	Response
PAP	Excluded not sexually active			Add
Mammogram	Due	1 yr FHx of Breast Ca	Apr 3, 2015	Add Requisition Oct 9, 2016
FOBT	Due within 6 mo	2 yr	Oct 10, 2014	Add
Colonoscopy	Excluded Does not meet criteria			Add
BMD	Excluded Does not meet criteria			Add

Discard

[Headwaters Healthcare Centre](#)
[Louise Marshall Diagnostic Imaging](#)
[Milton Diagnostic Imaging](#)

Discard



Mammography
Note: All eligible women will be screened through the Ontario Breast Screening Program

Breast Ultrasound
 Targeted ultrasound
 Follow-up of previous GGH Study
 Other _____

Preventive Care EMR Data Quality

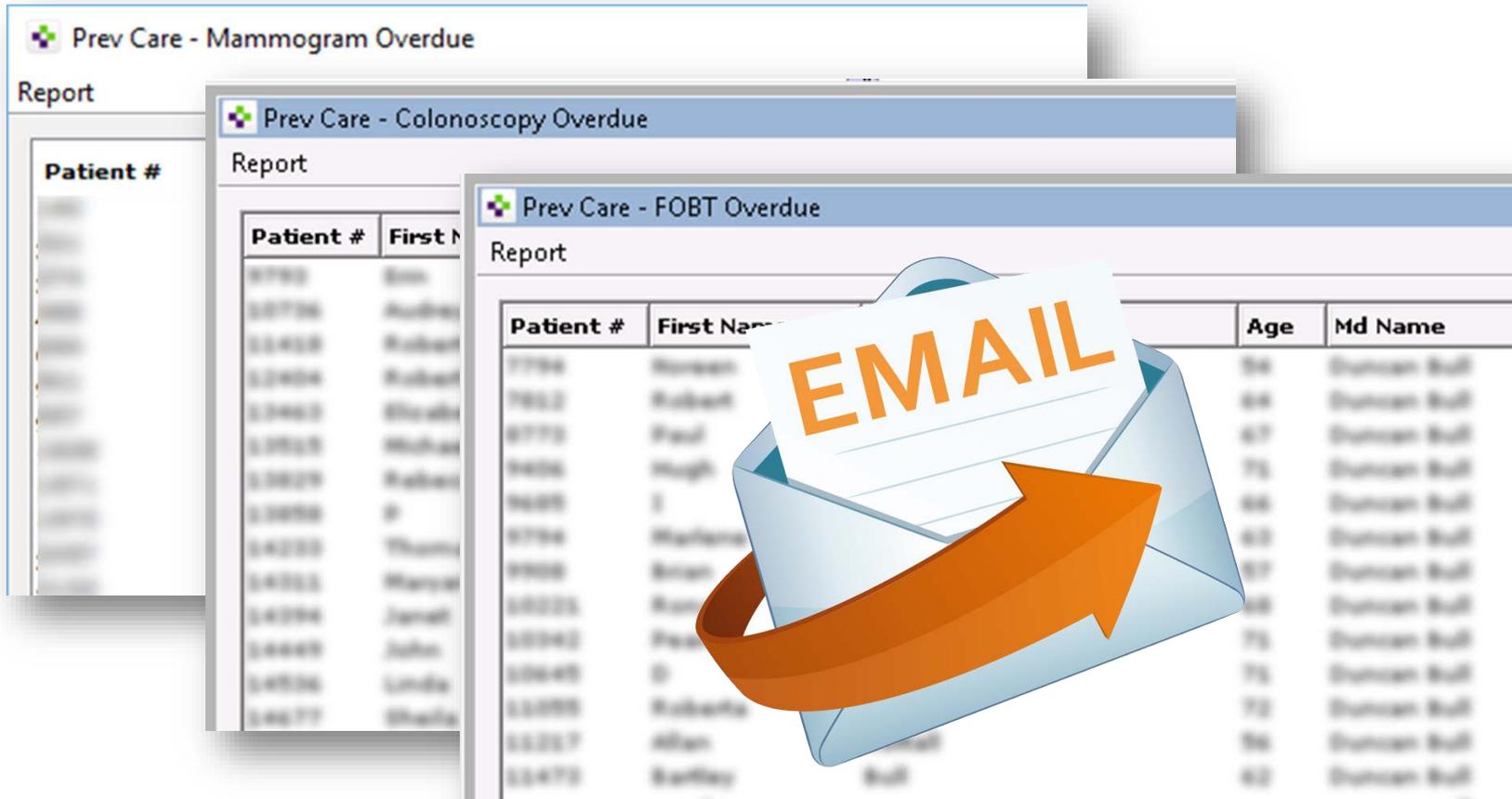
Physician Level Summary		Breast Screening	Cervical Screening	Colorectal Screening
Total eligible individuals		186	333	600
Total excluded individuals (due to previous cancer, surgery, or OBSP high risk)				

	Patient Information						Screening Status					
	Surname	Given Name	HIN	Date of Birth	Age	Sex	Breast		Cervical		Colorectal	
							Eligible	Status	Eligible	Status	Eligible	Status
Action required												
Abnormal screen, follow-up needed					51	F	X		Y	Action	Y	Review
Invalid result, retest required					54	M	N		N		Y	Review
Overdue for screening					47	F	N		Y	Action	N	
					67	F	Y	Review	Y	Action	Y	Review
					68	M	N		N		Y	Action
					68	F	Y	Review	Y	Normal	Y	Normal
Due for screening ≤ 6 months					56	M	N		N		Y	Action
					56	M	N		N		Y	Review
					71	M	N		N		Y	Review
Physician review required					55	M	N		N		Y	Action
Colonoscopy in the last 10 years					57	M	N		N		Y	Action
Flexible Sigmoidoscopy in the last 5 years					46	F	N		Y	Normal	N	
Review patient history					68	M	N		N		Y	Review
					66	M	N		N		Y	Review
Abnormal screen, follow-up undone or completed					52	M	N		N		Y	Action
					69	M	N		N		Y	Review
					58	F	Y	Review	Y	Normal	Y	Normal
					35	F	N		Y	Action	N	
No screening action required: normal screen					52							131

Preventive Care EMR Data Quality



Preventive Care Email Notifications



The image displays three overlapping software windows, each showing a list of patients for a specific preventive care service that is overdue. The windows are titled 'Prev Care - Mammogram Overdue', 'Prev Care - Colonoscopy Overdue', and 'Prev Care - FOBT Overdue'. Each window contains a table with columns for 'Patient #', 'First Name', 'Age', and 'Md Name'. An illustration of a blue envelope with a white card inside that says 'EMAIL' in orange letters is overlaid on the windows, with a large orange arrow pointing to the right, symbolizing the email notification process.

Patient #	First Name	Age	Md Name
17766	Steven	66	Derman Bull
17622	Robert	66	Derman Bull
87719	Paul	67	Derman Bull
9406	Hugh	70	Derman Bull
9685	I	66	Derman Bull
8794	Marlene	63	Derman Bull
9968	Brian	57	Derman Bull
88225	Ron	68	Derman Bull
88942	Paul	70	Derman Bull
88648	D	70	Derman Bull
88888	Roberta	72	Derman Bull
88287	Alan	66	Derman Bull
88478	Barley	62	Derman Bull

Preventive Care



Screenshot of a medical software interface (PSS) showing patient information and medical history.

mom: Ca7
dad: BP, gout, liver cirrhosis (ETOH), Ca7, IHD >52yo
bro: melanoma

2000 Thyroid ca - thyroidectomy
2005 bowel polyps - Dr. Bovell - 2006 R hemicolectomy for polyposis
4/10 CT # C6
Chicken pox (or Varicella immune)
7/10 bowel polyps on colonoscopy - repeat in 2 years
10/11 squamous cell carcinoma L preauricular
31/8/12 colonoscopy normal but poor prep so repeat in 2 years
17/10/14 Colonoscopy and polypectomy - repeat in 1 years
21/8/15 colonoscopy polyps - repeat in 3 y
18/9/15 left inguinal hernia.

Hypertension
GERD - Gastro Esophageal Reflux Disease
Prostate cancer
ED - Erectile dysfunction
Gout
LVH, aortic valve sclerosis Mitral/tricuspid regurg A-flutter, A-fib - coumadin
Diabetes type 2 - DCP
Hypothyroid
2001 renal cell ca - R nephrectomy - impaired renal function - Dr. Friedman - rehec...
Chronic renal disease

metoprolol tartrate 25 mg 1 tablet 2 times daily for 60 days started 11/2015 End: ...
Synthroid 150 mg 1 tablet 1 time daily for 90 days End: Oct 2, 2016
Allopurinol 200 mg Tablet 1 tablet 1 time daily for 3 months of 30 days End: Oct 3, 2...
Coumadin 1 mg Tablet 1 tablet 1 time daily for 3 months of 30 days End: Oct 3, 2016
Diamiron Mr 30 mg tab Sa 2 tablets 1 time daily for 90 days End: Oct 3, 2016
Lipitor 10 mg Tablet 1 tablet 1 time daily for 3 months of 30 days End: Oct 3, 2016
Loosec 20 mg caps 1 tablet 1 time daily for 3 months of 30 days End: Oct 3, 2016
terazosin 2 mg 1 tablet 1 time daily Dr. Friedman
spironolactone 25 mg 1.5 tablets 1 time daily
Rasilez 150 mg 1 tablet 1 time daily
furosemide 40 mg 1 tablet 2 times daily Dr. Friedman
Coumadin 2 mg as dir

? Altace 10 mg capsule-> cough
? Atacand 16 mg-> post nasal drip

HepA8
Td (2)

Aug 27, 2004
latest: Jul 24, 2008

work: retired marketing
married: Carol

Diabetes Visit Form Last Visit: Jul 4, 2016 K030: Jul 4, 2016 Q040: Mar 16, 2016

EWHT Toolbar Email Consent Granted - Aug 12, 2015 Workshops In-House Referrals PROB HPH RH Opical Calc Email Phone Prev Care

Last Checked: Update: never smoked current smoker ex-smoker In Visit E079: FU Visit K039: Q042

Prev KS Msg KS: 53 messages + 1051 overdue for others Next KS Msg



Explorer, Dora E

Alzheimer's disease father/bmd
mom: breast ca died 68y

CHF - Congestive Heart Failure
Asthma

Tylenol with Codeine No 3 200-30-15 mg 1 tablet 2 times daily, PRN for
ASA 81 mg Tablet Ec 1 Tablet(s) Once daily for 3 Month(s) (30)
insulin aspart 100/ml cartridge (ml) subcutaneous 1 Tablet(s) Once da
Spiriva 18Mq capsule as dir
aloplectin 25 mg 1 time daily
Vitamin B12 1200 mg 1 tablet 1 time daily for 365 days to improve B12
sertraline 100 mg 1 capsule 1 time daily for 90 days

? Food: Tree Nuts
Fluviral
Quadracel (PF)
Jan 1, 2013
May 29, 2015

Zoster vaccine Zostavax: 1 dose recommended
Flu shot reminder - general population due Oct 1, 2016

10 alcohol
never

EWFHT Toolbar: Email Consent Granted - May 31, 2016 Workshops In-house Referrals PROB Home Email Phone **Prev Care**

Dear Dora:
test
Sep 16, 2016 Individual Reminder HL

Prev Care Summary - Dora Explorer

Test	Status	Frequency	Date of Most Recent	Response
PAP	Excluded			Add
Mammogram	Due	1 yr FHx of Breast Ca	Apr 3, 2015	Add Requisition Aug 8, 2017
FOBT	Due	2 yr	Oct 10, 2015	Add FOBT kit provided Aug 8, 2017
Colonoscopy	Excluded	Does not meet criteria		Add
BMD				Add

GOELPH GENERAL HOSPITAL
115 Dewey Street
Guelph, ON N1E 4J4
Tel: 519 837 6413 Fax: 519 756 9982
www.gophp.ca

REQUEST FOR MAMMOGRAPHY, BREAST ULTRASOUND, BONE DENSITY

Date of Request: Oct 3, 2016

Last Name: ZZ First Name: Top
D.O.B.: Aug 12, 1981 HC #: ON 1111 000 004
Address: 328 Imperial Road S, City/Town: Nowheresville, P
Home Phone: Work/Cell:
WSIB Claim #: Other Insurance:

(NB: Consent to send copies can be implied if the recipient will be involved in a verbal or implied consent to send copies or result/notes to: Dr Family Doctor)

BREAST IMAGING EXAMINATIONS - Fax Requisitions with Clinical Findings to 519 837 6413

RELEVANT CLINICAL INFORMATION: *inv*

INDICATE FINDINGS ON DIAGRAM

Mammography
Note: All eligible women will be screened through the Ontario Breast Screening Program

Breast Ultrasound
 Targeted ultrasound
 Follow-up of previous GGH Study
 Other

immunosci, inc. **hema-screen** HEMATEST FOR COAGULATION MONITORING

Date Specimen Collected: YYYY / MM / DD
Time Specimen Collected: AM PM
TEAR BACK FOR INSTRUCTIONS

↑ 1 ↑ **Tab**

Date Specimen Collected: YYYY / MM / DD
Time Specimen Collected: AM PM
TEAR BACK FOR INSTRUCTIONS

↑ 2 ↑ **Tab**

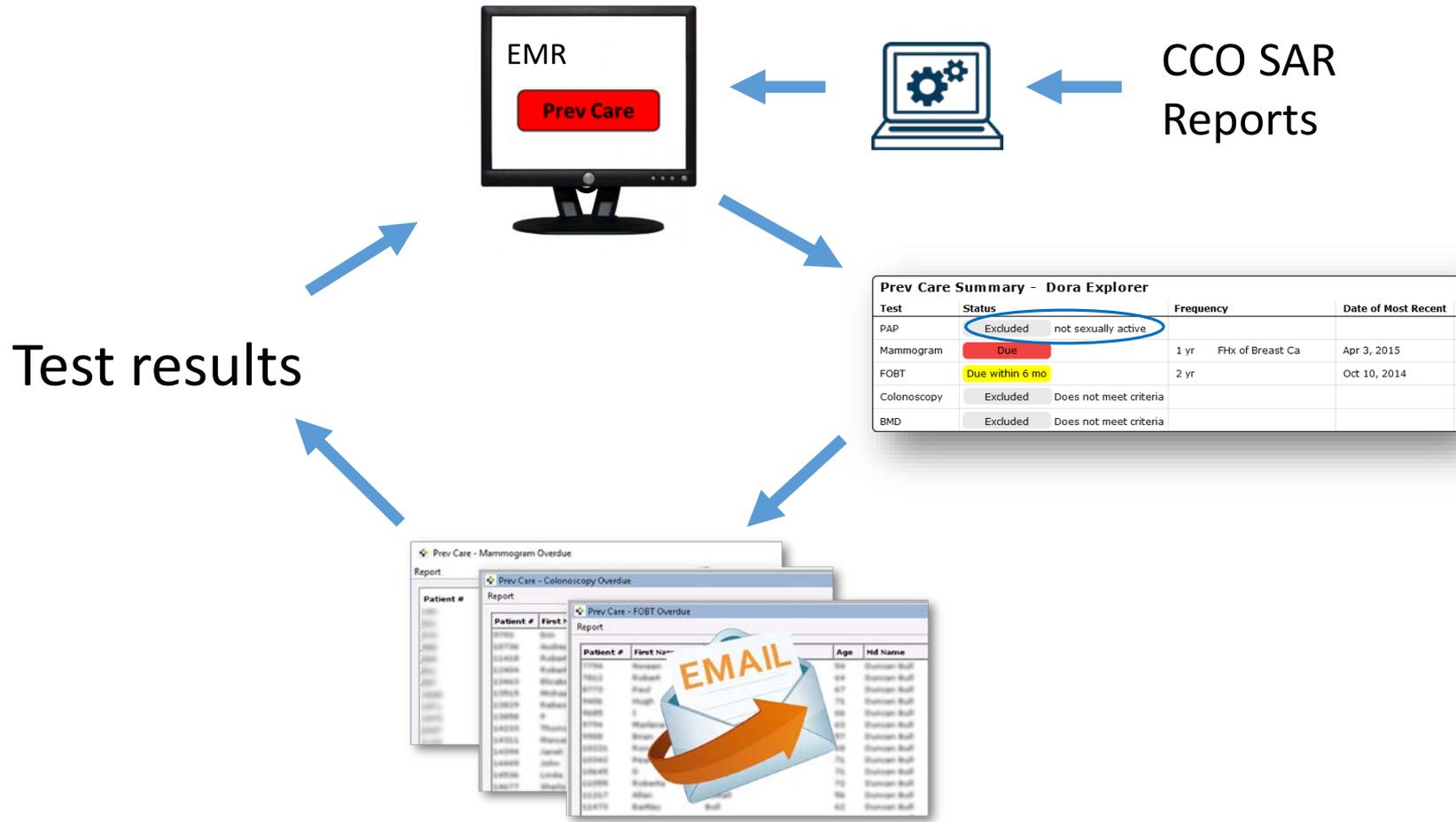
Date Specimen Collected: YYYY / MM / DD
Time Specimen Collected: AM PM
TEAR BACK FOR INSTRUCTIONS

↑ 3 ↑ **Tab**

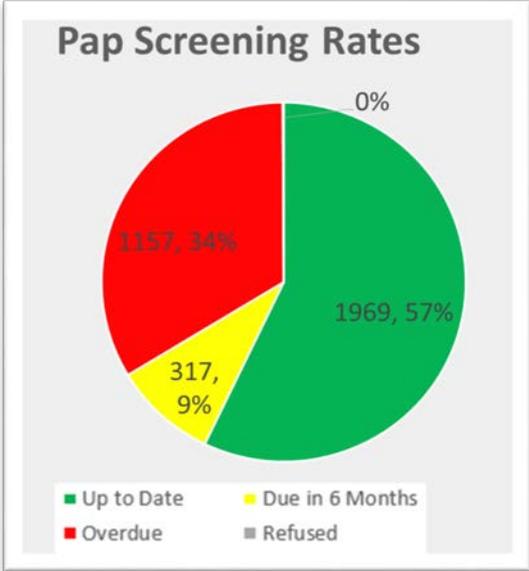
Patient Name: _____ Date: _____
Address: _____

Rx

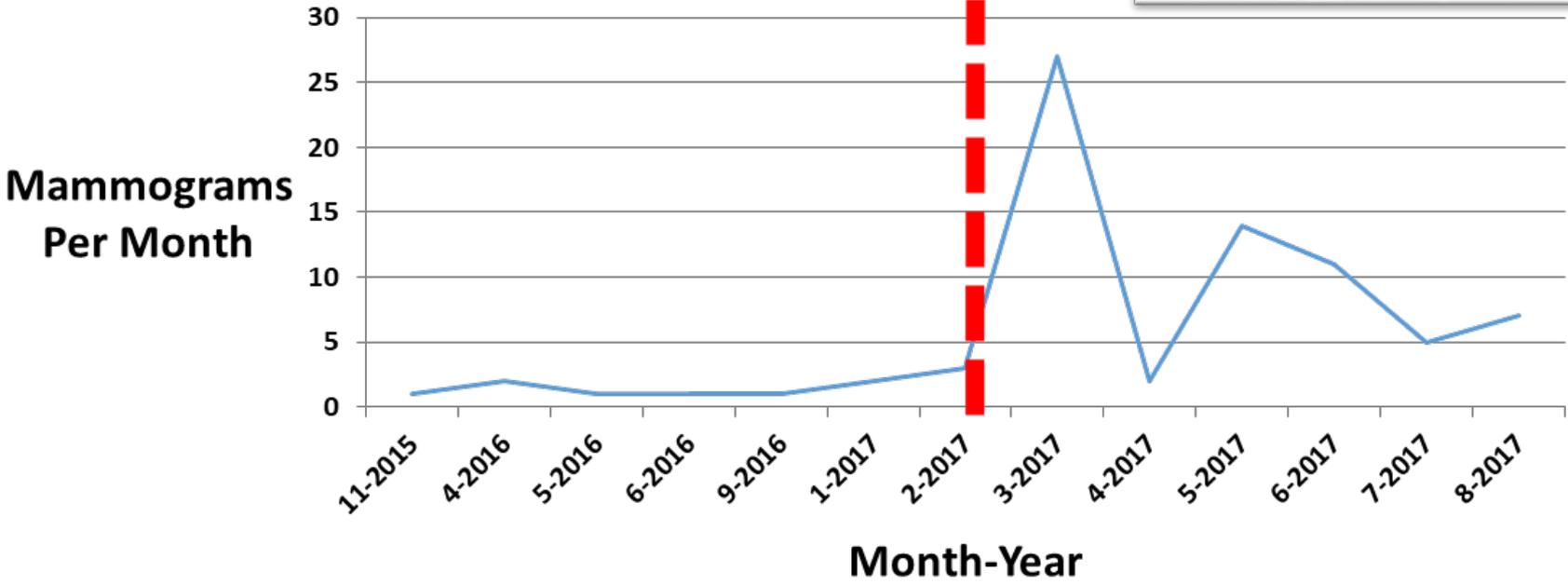
MD: _____
Signature: _____



	# of Emails Sent	Email Response Rate
Paps	305	18.36%
Mammos	285	27.72%
FOBTs	389	24.68%



Emails sent





Kevin Samson

- Feed
- People
- Groups
 - Recently Viewed
 - My Groups
 - Active Groups**
 - My Archived Groups
- Files
- Topics

Active Groups

New Group

Name	Last Activity	Membership
------	---------------	------------



East Wellington Family Health Team

This group was created to share the PS tools developed by EWFHT to improve office workf...

28 Members

Owner: **Hope Latam** (Customer)

07/10/2017



Current state after deployment

Patient

- I. Seamless care
 - I. Merge and Manage CCO SAR reports with EMR data
 - II. Notify patients if over due – in addition to CCO notification
 - III. Customized based on the patient, their family history, exclusions etc
 - IV. Use of emails vs letters to notify patients per patient requests on how “they’d like to be notified”

Efficient use of resources

- I. Limited funding we have been creative
 - I. Quality improvement initiatives aligned with better patient care
 - II. Staff time merging data and emailing vs calling
 - III. Email vs mailing costs
 - IV. Ease & accuracy of reporting

System

- I. Better Integration of system data and local EMR data
 - I. Focus has been on making a difference in the care we as a team deliver
 - II. We know that our data is accurate and “WHAT WE THOUGHT” has become “WHAT WE KNOW”

Future state and next steps

Spread to P/C teams across the province

I. P/C teams across 6 LHINs

II. 22 FHT's across the Province

III. Various individual FHO's and individual offices

Used by physicians, Nurses, NPs, and receptionists

Where we are going next?

Find out more about the Prev Care Tools ...

Thank You!

Data to Deployment: Closing the Loop on Preventive Care

