

# Practical Quality Improvement (QI) in the World of EMRs

Vineet Nair, MD CCFP  
OntarioMD Peer Leader

# Faculty/Presenter Disclosures

- **Faculty:** Dr. Vineet Nair
- **Relationship with Commercial Interests:**
  - OntarioMD – Peer Leader

# Disclosure of Commercial Support

- **Commercial Support**
  - None
- **Potential for Conflict(s) of Interest**
  - Dr. Vineet Nair receives payment via OntarioMD Peer Leader Program for consultations and practice engagements

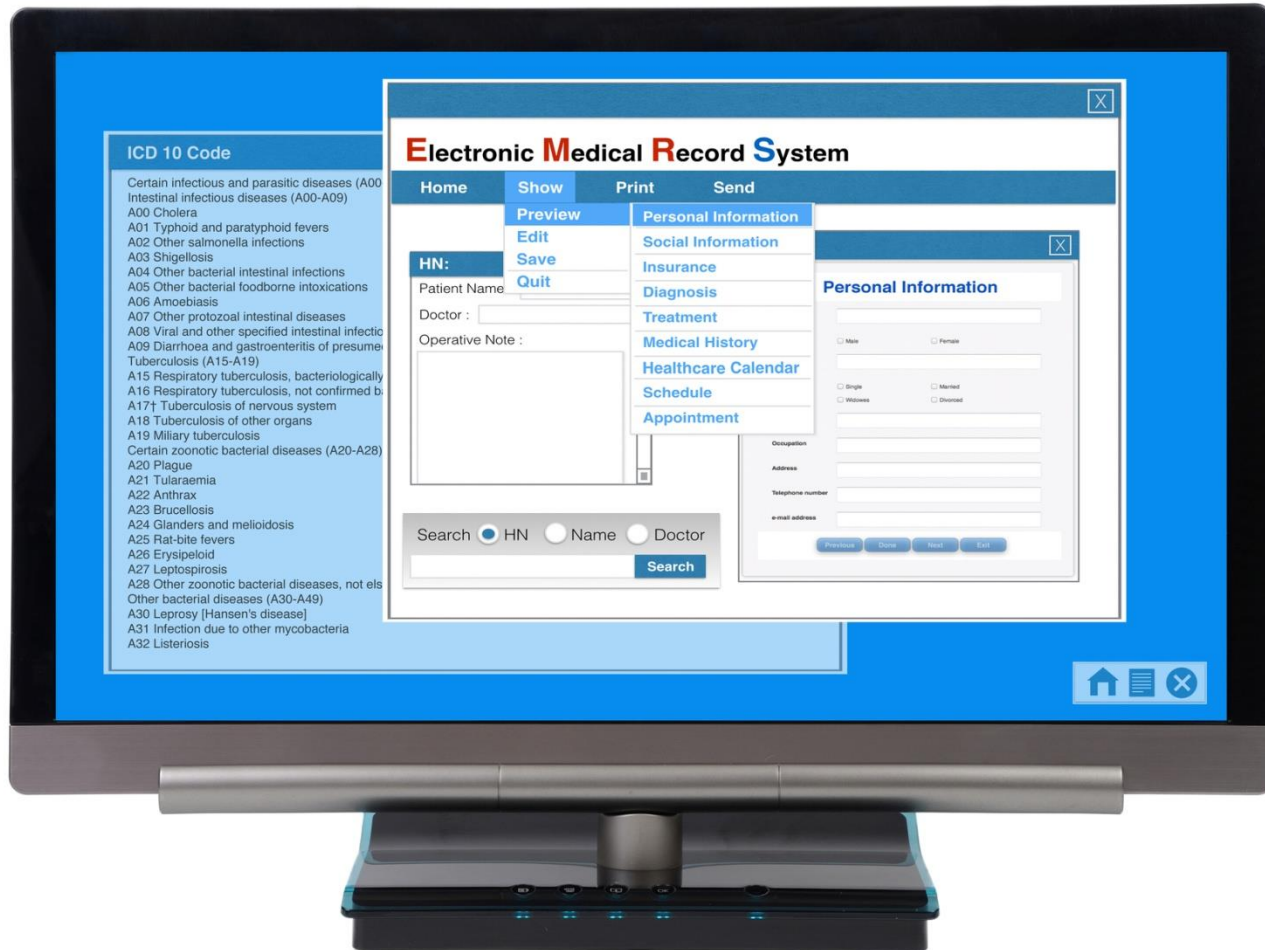
# Objectives

1. Understand Practical Elements of QI
2. Learn Strategies for Implementing QI
3. Discover High Value Targets for Improving EMR Usage

# White Rock, BC



 Vancouver's  
Best Places



### ICD 10 Code

Certain infectious and parasitic diseases (A00-  
Intestinal infectious diseases (A00-A09)  
A00 Cholera  
A01 Typhoid and paratyphoid fevers  
A02 Other salmonella infections  
A03 Shigellosis  
A04 Other bacterial intestinal infections  
A05 Other bacterial foodborne intoxications  
A06 Amoebiasis  
A07 Other protozoal intestinal diseases  
A08 Viral and other specified intestinal infecti  
A09 Diarrhoea and gastroenteritis of presume  
Tuberculosis (A15-A19)  
A15 Respiratory tuberculosis, bacteriologically  
A16 Respiratory tuberculosis, not confirmed b  
A17 Tuberculosis of nervous system  
A18 Tuberculosis of other organs  
A19 Military tuberculosis  
Certain zoonotic bacterial diseases (A20-A28)  
A20 Plague  
A21 Tularaemia  
A22 Anthrax  
A23 Brucellosis  
A24 Glanders and melioidosis  
A25 Rat-bite fevers  
A26 Erysipeloid  
A27 Leptospirosis  
A28 Other zoonotic bacterial diseases, not els  
Other bacterial diseases (A30-A49)  
A30 Leprosy [Hansen's disease]  
A31 Infection due to other mycobacteria  
A32 Listeriosis

## Electronic Medical Record System

Home Show Print Send

Preview Personal Information

Edit Social Information

Save Insurance

Quit Diagnosis

Treatment

Medical History

Healthcare Calendar

Schedule

Appointment

HN:

Patient Name

Doctor :

Operative Note :

Search  HN  Name  Doctor

Search

### Personal Information

Male  Female

Single  Married

Widowed  Divorced

Occupation

Address

Telephone number

e-mail address

Print Close Next Exit



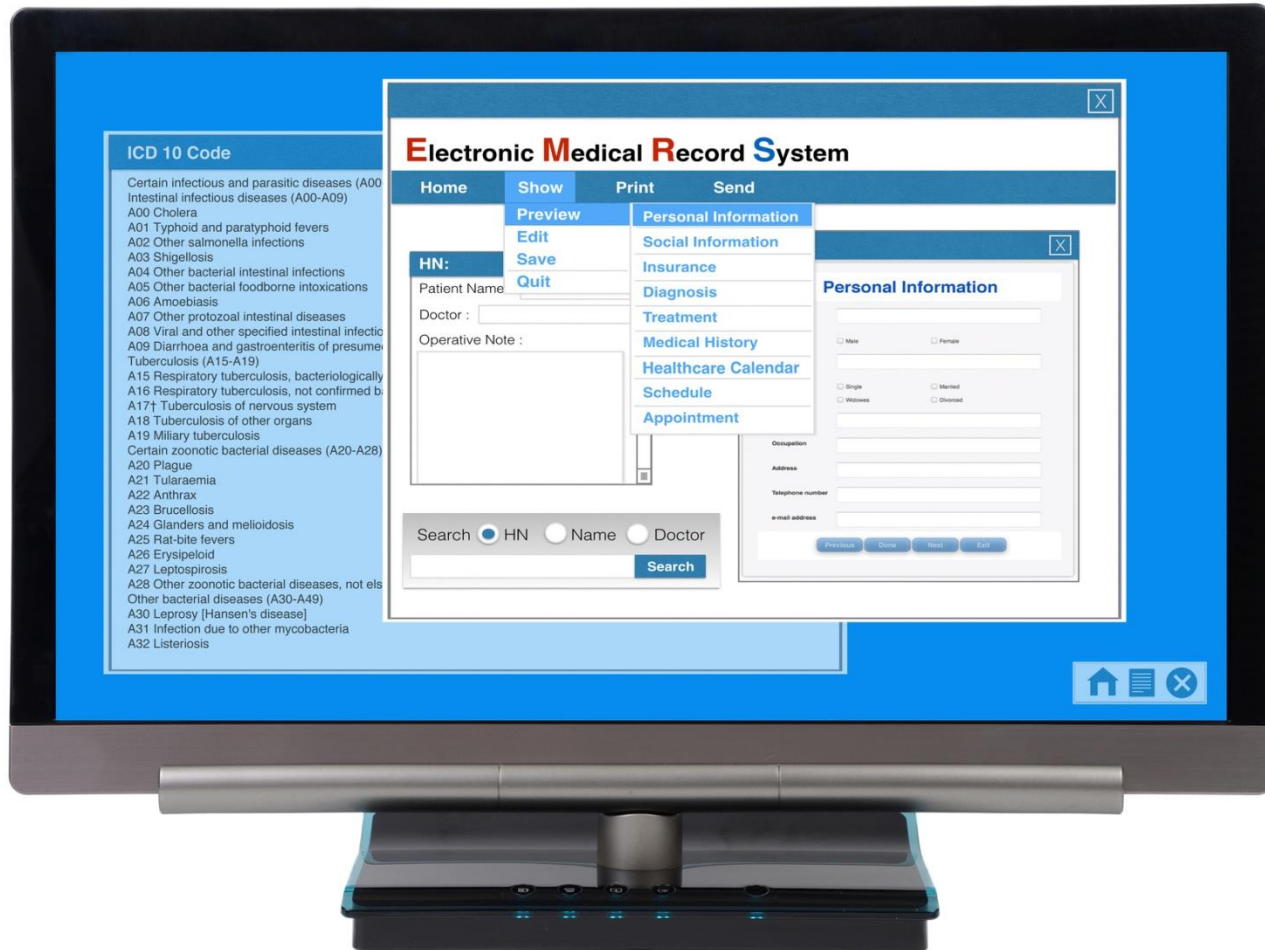


**SUPPLY**



**DEMAND**





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Patient Name

Doctor :

Operative Note :

Search  HN  Name  Doctor

Search

### Personal Information

Male  Female

Single  Married

Widowed  Divorced

Occupation

Address

Telephone number

e-mail address

Print Close Next Exit





**Institute for  
Healthcare  
Improvement**



“ Everyone in health care has two jobs  
when they come to work;  
to do their work and to improve it.  
This is the essence of  
Quality Improvement (QI).”

- Paul B. Batalden

24TH ANNUAL  
**national forum**

ON QUALITY IMPROVEMENT  
IN HEALTH CARE

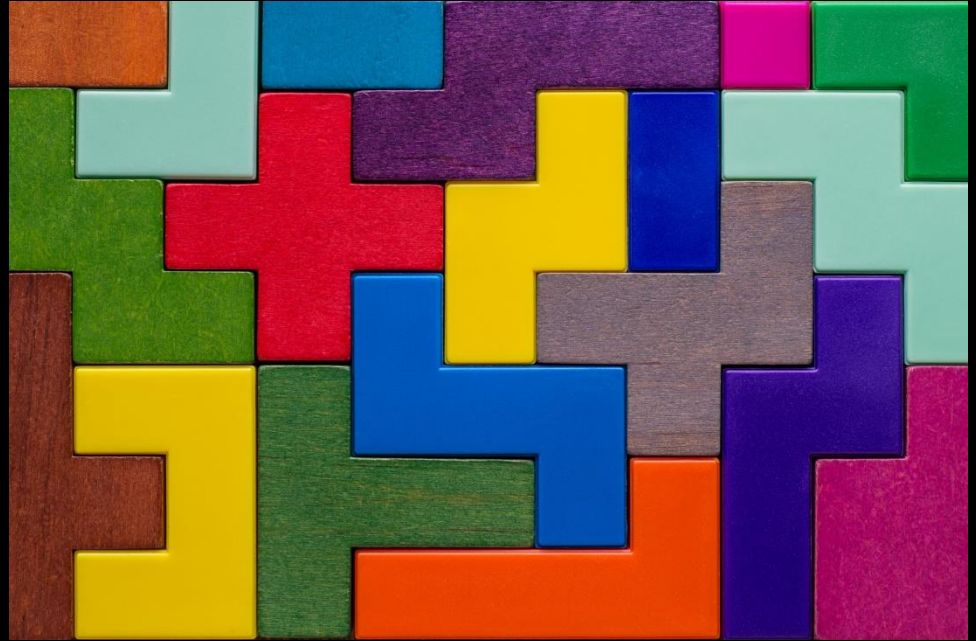
DECEMBER 9-12, 2012



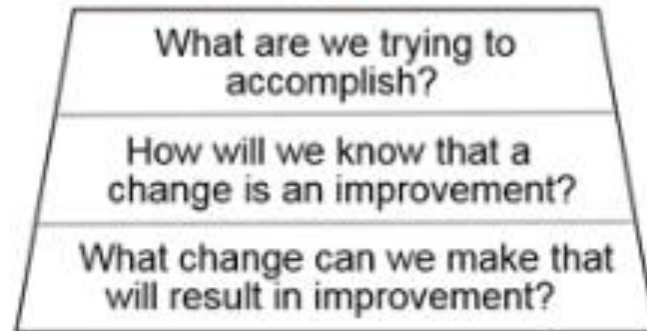




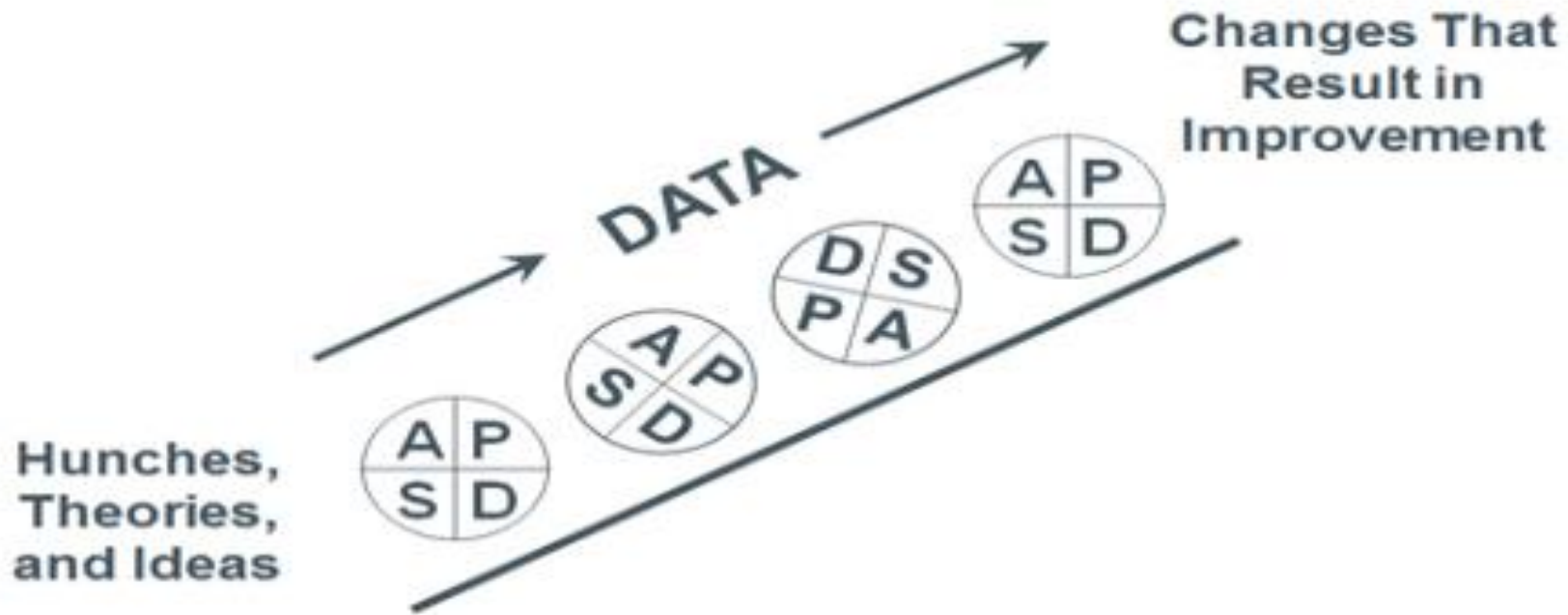
# How does QI fit into our practice?



## Model for Improvement







Source: *The Improvement Guide*, p. 103

Specific

**S**

G

Measurable

**M**

©

Achievable

**A**

A

Relevant

**R**

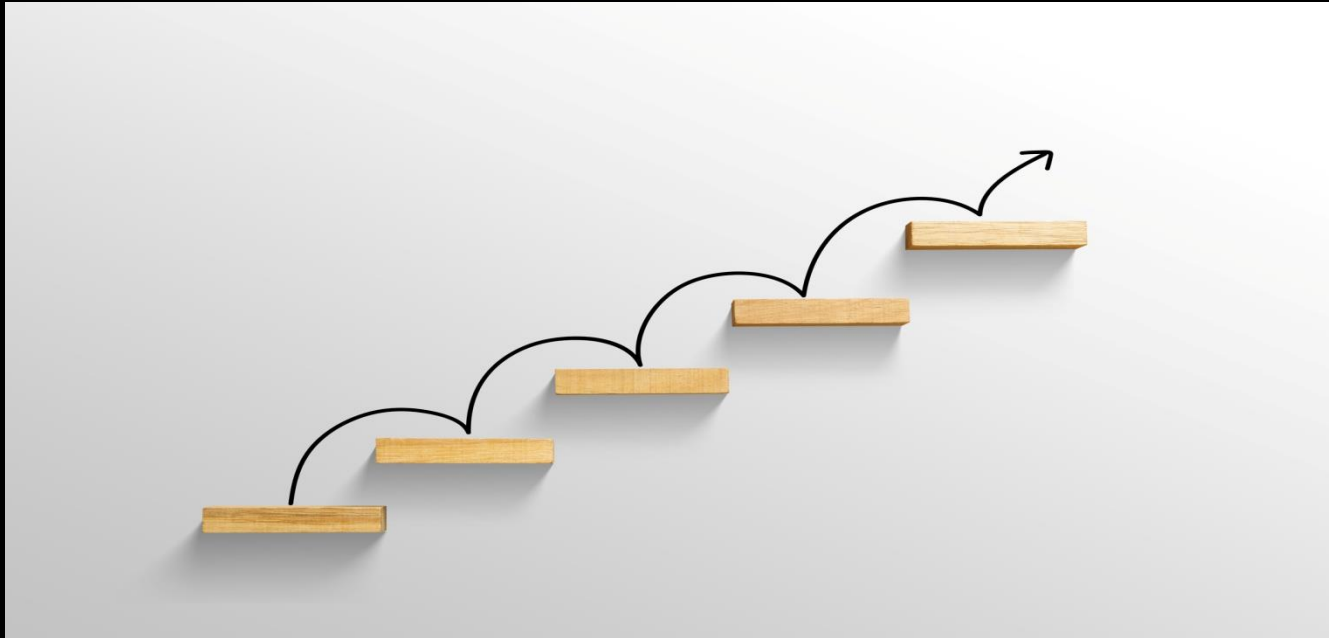
L

Timed

**T**

S

# What are the principles of QI?









RESOURCES

WORKFLOW

COMMUNICATION

SYSTEMATIC









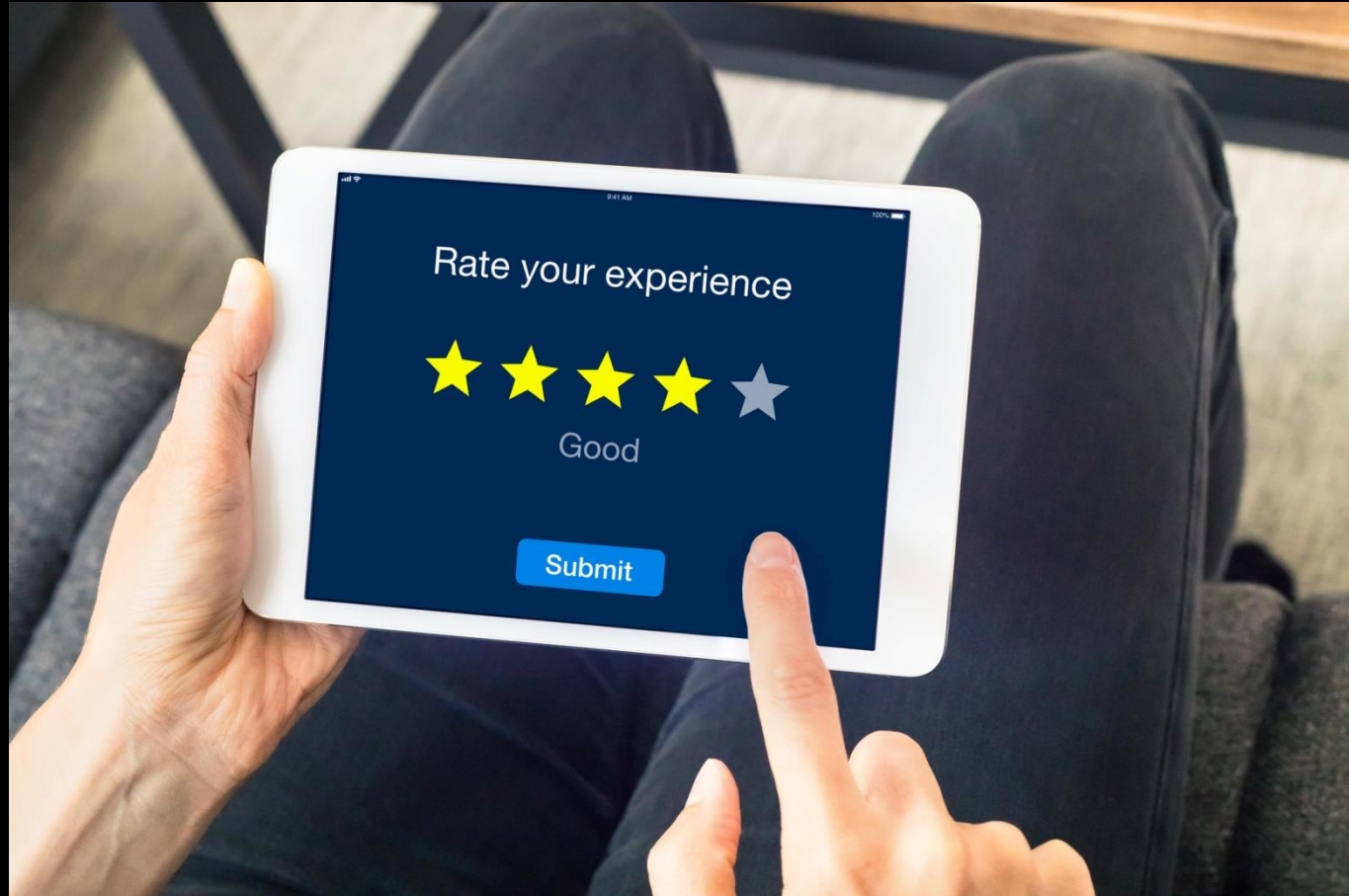
# PLAN





DO

STUDY







ACT





# Patient Scheduling

# **Information and Procedures for Claiming the Cumulative Preventive Care Bonus**

PRESCRIPTION

Rx





1 Patient: Test, Sally 1976-Jul-05 (42 Yr female) H# 1111 119 9999 Provider:  
 Home#(519) 888-8888 Work#(519) \_\_\_-\_\_\_ Mobile#(519) \_\_\_-\_\_\_ Roster:Not Enrolled

Dr. Vineet Nair

Day Sheet | **Encounter Notes** | Chronic Conditions | Virtual Chart | Medications | Medical History | Patient Information

Patient Test, Sally 42 years old female Filter --All Items-- Providers --All--

\*VN - Referral

2018-May-16: Opioid Medication Treatment Agreement

Provider: Nair, Vineet

2018-May-16 OPIOID MEDICATION TREATMENT AGREEMENT I, Sally Test, understand that I am receiving opioid medication from Dr. Vineet Nair to treat my pain condition. I agree to the following: I will not seek opioid medication from another physician. Only Dr. Nair will provide opioids for me. ...

2018-May-09: To whom

Provider: Nair, Vineet

Dr Vineet Nair 825 Richmond Street London ON N6A 3H7 (519) 963-1875 (519) 963-1880

2018-May-09 Regarding: Sally Test 825 Richmond Street London ON N6A 3H7 (519) 888-8888 To Whom it may concern: \_\_\_\_\_

2018-May-09: \*VN - Referral

Provider: Nair, Vineet

Labs

Result	2018-Mar-07	2018-Jan-22	2017-Nov-01	2017-Sep-28
Height				5' 6"
Weight		55		155
BMI				25.0
Temperature	36.8			
BP - Systolic	120		130	132
BP - Diastolic	80		80	78

- Tracking**
- (0) Labs
- (0) All Tasks
- (2) CDM
- (1) Preventive Care
- (0) Referrals and Orders

0 | | |

**History of Problems**

2017-Sep-28 **HYPERTENSION**

**Active Medications**

2018-Feb-05 MAVIK 2 MG CAPSULE 1 Capsule(s) Once daily x 90 Day(s)

2018-Jan-24 APO-BISOPROLOL 5 MG TABLET 1 Tablet(s) Once daily x 30 Day(s)

2018-Jan-19 LIPITOR 20 MG TABLET 1 Tablet(s) Once daily x 90 Day(s)

2018-Jan-19 PARIET EC 20 MG TABLET 1 Tablet(s) Once daily x 1 Day(s)

2018-Jan-17 PLAVIX 75 MG TABLET 1 Tablet(s) Once daily x 30 Day(s)

**External Medications**

atenolol 50 mg Oral Tablet [1 tab od]

ASPIRIN 81 MG TABLET EC []

**Allergies**

**Drug Allergies**

Drug - Allergy - None Known

**Non-Drug Allergies**

Non-Drug - Allergy - None Known

**Drug Intolerances**

Edit Templates
Title Type 
 Edit Macros

Verdana

12

**b***i*u**A****S****X<sup>2</sup>****X<sub>2</sub>**

- \*TP - PHE - Female
- \*TP - PHE - Male
- \*TP-SOAP
- \*VN - DM
- \*VN - PHE - Female
- \*VN - PHE - Male
- \*VN - Referral
- \*VN-SOAP
- Abdominal Pain
- Annual Health Exam
- Asthma
- Blank Note
- Cardiac Heart failure
- Cold
- compression stoking
- conjunctivitis
- CPP Summary
- Diabetes Follow Up
- Discharge Letter #1
- Discharge Letter #2
- ear syringing
- foot pain
- Headache
- Immunization Summ
- Immunization Visit
- Injections

## Annual Health Examination

## Subjective:

History of present illness:

Past history:

Medical:  Unchanged |  Updated |  None to RecordSurgical:  Unchanged |  Updated |  None to RecordMedications:  Unchanged |  Updated |  Recorded |  On no medicationsAllergies:  Unchanged |  Updated |  Recorded |  None KnownFamily history:  Unchanged |  Updated |  Recorded |  None to recordSocial history:  Unchanged |  Updated |  Recorded |  Nothing pertinent to record

## Review of symptoms:

Neurological:  headache |  dizziness |  syncope |  paresthesiae |  visual problems |  No Neurological symptomsCV / Respiratory:  chest pain |  dyspnea |  palpitations |  PND |  orthopnea |  cough |  No respiratory symptomsGI:  appetite |  weight change |  nausea |  vomiting |  abdominal pain |  change in bowel movements |  bleeding |  No GI symptomsGU:  dysuria |  hematuria |  frequency |  urgency |  nocturia |  incontinence |  erectile dysfunction |  urinary stream |  No GU symptomsMSK:  joint pain |  swelling |  redness |  range of motion |  No MSK symptomsReproductive:  menses |  pregnancy |  birth controlMental Health:  anxiety |  depression |  sleep |  other |  No mental health symptomsImmunization Status:  Influenza |  Pneumococcal |  Td

## Objective:

Recorded and Reviewed

{Blood pressure|

Pulse|

Current Weight|

Height|

Current BMI}

Head &amp; neck:

Chest:

Cardiovascular:

Respiratory:

New

Save

Delete

Close

Title \*Ontario Laboratory Not Reviewed

Description  DOS --None-- Provider Nair, Vineet

021984	88233	11111199999	F	yyyy	mm	dd
Check (✓) one: <input checked="" type="checkbox"/> OHIP/Insured <input type="checkbox"/> Third Party / Uninsured <input type="checkbox"/> WSIB		Province: Other Provincial Registration Number	Patient's Telephone Contact Number (519) 888-8888			
Additional Clinical Information (e.o. diagnosis)		Patient's Last Name (as per OHIP Card) <b>Test</b>				
		Patient's First & Middle Names (as per OHIP Card) <b>Sally</b>				
<input type="checkbox"/> Copy to: Clinician/Practitioner Last Name                      First Name		Patient's Address (including Postal Code)  825 Richmond Street London ON N6A 3H7				
Address						

**Note: Separate requisitions are required for cytology, histology / pathology and tests performed by Public Health Laboratory**

<input checked="" type="checkbox"/> Biochemistry	<input checked="" type="checkbox"/> Hematology	<input checked="" type="checkbox"/> Viral Hepatitis (check one only)
<input checked="" type="checkbox"/> Glucose <input type="checkbox"/> Random <input checked="" type="checkbox"/> Fasting	<input type="checkbox"/> CBC	<input type="checkbox"/> Acute Hepatitis
<input checked="" type="checkbox"/> HbA1C	<input type="checkbox"/> Prothrombin Time (INR)	<input type="checkbox"/> Chronic Hepatitis
<input checked="" type="checkbox"/> Creatinine (eGFR)	<input type="checkbox"/> <b>Immunology</b>	<input type="checkbox"/> Immune Status / Previous Exposure
<input type="checkbox"/> Uric Acid	<input type="checkbox"/> Pregnancy Test (Urine)	Specify: <input type="checkbox"/> Hepatitis A
<input checked="" type="checkbox"/> Sodium	<input type="checkbox"/> Mononucleosis Screen	<input type="checkbox"/> Hepatitis B
<input checked="" type="checkbox"/> Potassium	<input type="checkbox"/> Rubella	<input type="checkbox"/> Hepatitis C
<input checked="" type="checkbox"/> ALT	<input type="checkbox"/> Prenatal: ABO, RhD, Antibody Screen (titre and ident. if positive)	or order individual hepatitis tests in the "Other Tests" section below
<input type="checkbox"/> Alk. Phosphatase	<input type="checkbox"/> Repeat Prenatal Antibodies	<b>Prostate Specific Antigen (PSA)</b>
<input type="checkbox"/> Bilirubin	<input type="checkbox"/> <b>Microbiology ID &amp; Sensitivities (if warranted)</b>	<input type="checkbox"/> Total PSA <input type="checkbox"/> Free PSA
<input type="checkbox"/> Albumin	<input type="checkbox"/> Cervical	Specify one below:
<input checked="" type="checkbox"/> Lipid Assessment (includes Cholesterol, HDL-C, Triglycerides, calculated LDL-C & Cholesterol/HDL-C ratio; individual lipid tests may be ordered in the "Other Tests" section of this form)	<input type="checkbox"/> Vaginal	<input type="checkbox"/> Insured - Meets OHIP eligibility criteria
<input checked="" type="checkbox"/> Albumin / Creatinine Ratio, Urine	<input type="checkbox"/> Vaginal / Rectal - Group B Strep	<input type="checkbox"/> Uninsured - Screening: Patient responsible for payment
<input type="checkbox"/> Urinalysis (Chemical)	<input type="checkbox"/> Chlamydia (specify source):	<b>Vitamin D (25-Hydroxy)</b>
<input type="checkbox"/> Neonatal Bilirubin:	<input type="checkbox"/> GC (specify source):	<input type="checkbox"/> Insured - Meets OHIP eligibility criteria: osteopenia; osteoporosis; rickets; renal disease; malabsorption syndromes; medications affecting vitamin D metabolism
Child's Age:                      days                      hours	<input type="checkbox"/> Sputum	<input type="checkbox"/> Uninsured - Patient responsible for payment
Clinician/Practitioner's tel. no. (                      )	<input type="checkbox"/> Throat	<b>Other Tests - one test per line</b>



## Favorite Prescriptions



Import

	Favorite	Category	Prescription	
<input type="checkbox"/>	actonel	Active	ACTONEL 150 MG TABLET	^
<input type="checkbox"/>	Adalat 20	Active	ADALAT XL 20 MG TABLET	
<input type="checkbox"/>	Alesse 28	Active	ALESSE (28) 100 MCG-20	≡
<input type="checkbox"/>	All Purpose Nipple Ointment	Active	C# Bactroban ointment and	
<input type="checkbox"/>	Allopurinol 100	Active	allopurinol 100 mg Oral	
<input type="checkbox"/>	Amoxicillin 125 liquid	Active	amoxicillin 125 mg/5 ml Oral	
<input type="checkbox"/>	Amoxicillin 500	Active	amoxicillin 500 mg Oral	
<input type="checkbox"/>	Amoxicillin Prophylaxis	Active	amoxicillin 500 mg Oral	
<input type="checkbox"/>	Amoxil 250 mg liquid	Active	amoxicillin 250 mg/5 ml Oral	
<input type="checkbox"/>	Avapro 150 mg	Active	AVAPRO 150 MG TABLET	
<input type="checkbox"/>	Avapro 300	Active	AVAPRO 300 MG TABLET	
<input type="checkbox"/>	Baclofen	Active	baclofen 10 mg Oral Tablet	
<input type="checkbox"/>	Bactroban cream	Active	BACTROBAN 2 % CREAM	
<input type="checkbox"/>	Bactro <b>Baclofen</b>	Active	BACTROBAN 2 %	
<input type="checkbox"/>	Betaderm foreskin	Active	BETADERM 0.1 % CREAM	
<input type="checkbox"/>	Biaxin 500	Active	BIAXIN BID 500 MG TABLET	
<input type="checkbox"/>	Bismuth	Active	bismuth subsalicylate 262	
<input type="checkbox"/>	Bisoprolol 5 mg	Active	APO-BISOPROLOL 5 MG	
<input type="checkbox"/>	Celebrex 200mg	Active	CELEBREX 200 MG	
<input type="checkbox"/>	Celestone	Active	CELESTONE SOLUSPAN 6	▼



Apply

Cancel

## Existing Definitions

Filter Visible Definitions

A1C &gt;9

Cancer Patients

Cancer Patients (Diagnosis)

Diabetes Core London

HTN Core London

Last A1C &gt; 6 months

1945

AFHTO COPD

AFHTO Opioids and Benzo...

AFHTO Opioids Frontend S...

AFHTO Osteoarthritis

AFHTO-Dementia

AFHTO-Hypertension

Bipolar

Email Address

Existing HCV/Liver Disease

gyne

HCV Risk Factors Present

Heart failure

Hep C patients

Home visits

Last BP &gt; 1 year ago

Mammo bonus

Meadow Park Nursing Home

MMR adult

MNH



A1C &gt;9

## Current Rules

**Diagnosis** Diagnosis Code Starts With '250'**Status** = 'Active'**Lab Type** Contains 'A1C' AND Unit >= '9.0' AND Only Check Latest Result AND Include Reviewed Labs

## New Rule

Rule Category

Demographics

Address

Carecard

City

Deceased

Default Insurer

Email Address

Employer

Enrolled Date

Enrolled Provider

Family Phys.

File Number

Flags

Global Message

Next of Kin

Occupation

Office Provider

Official Language

Paper Chart

## Manage Rule

Lab Result

Update Rule

Remove Rule

 Doesn't Match Patient Records Only OptionalInstances **Lab Type:**

Contains

A1C

**Unit:**

Greater Than or Equal To

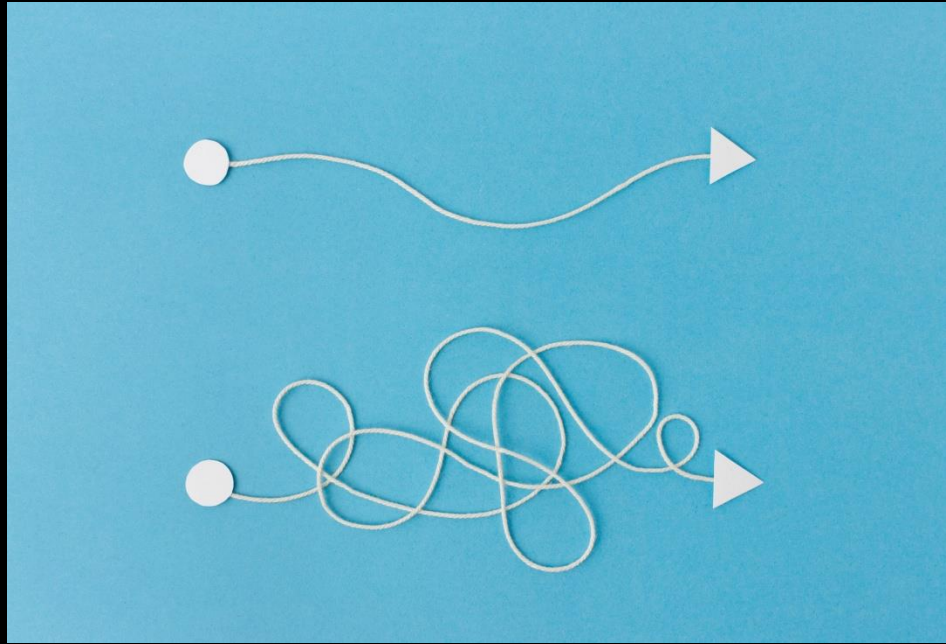
9.0



+ New

 Only Check Latest Result Within Observation Date Range Include Reviewed Labs Only Abnormal Results

K. I. S. S.



Keep It **Simple** (& **Selfish**)



“Better is possible. It does not take genius.  
It takes diligence. It takes moral clarity.  
It takes ingenuity. And above all, it takes a  
willingness to try.”

- Atul Gawande



# Thank You

Vineet Nair, MD CCFP  
Corefamilyhealth.com

