NORTH YORK GENERAL

Making a World of Difference

Spreading the word of Choosing Wisely at NYGH

Laboratory Medicine

Manuel Giraldo. MHA, CHE, BSc. MLT
Pathology and Core Laboratory, Manager

LABCON-Ottawa-May 26 , 2018

Will review….

- Backgrounder
- Choosing Wisely Campaign at NYGH
- Laboratory Pre and Post-CWC Implementation
- Challenges/Keys to success
- Benefits/New lab initiatives

EXHIBIT ES-1. OVERALL RANKING

COUNTRY RANKINGS

Top 2*

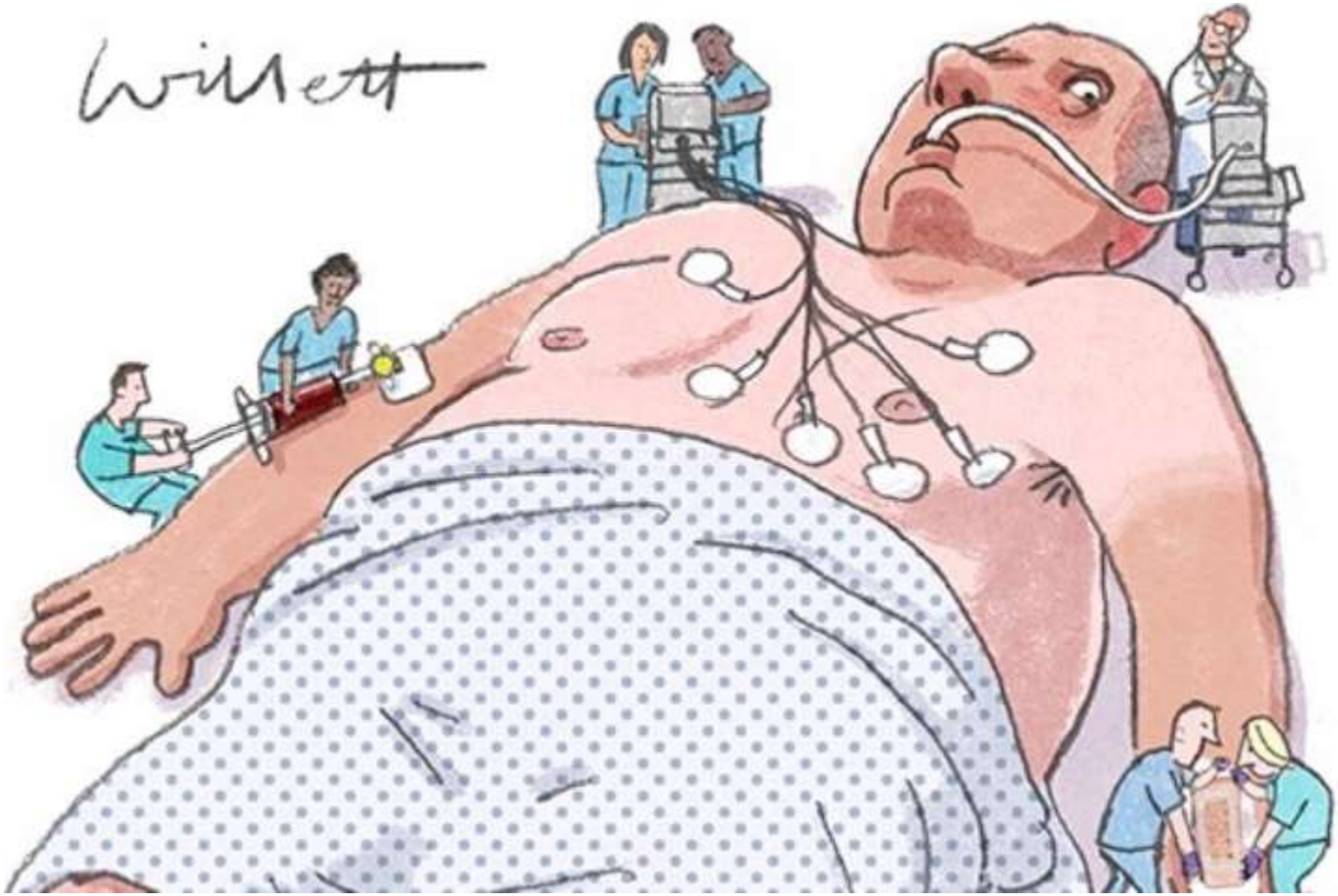
Middle

Bottom 2*

	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US
OVERALL RANKING (2013)	4	10	9	5	5	7	7	3	2	1	11
Quality Care	2	9	8	7	5	4	11	10	3	1	5
Effective Care	4	7	9	6	5	2	11	10	8	1	3
Safe Care	3	10	2	6	7	9	11	5	4	1	7
Coordinated Care	4	8	9	10	5	2	7	11	3	1	6
Patient-Centered Care	5	8	10	7	3	6	11	9	2	1	4
Access	8	9	11	2	4	7	6	4	2	1	9
Cost-Related Problem	9	5	10	4	8	6	3	1	7	1	11
Timeliness of Care	6	11	10	4	2	7	8	9	1	3	5
Efficiency	4	10	8	9	7	3	4	2	6	1	11
Equity	5	9	7	4	8	10	6	1	2	2	11
Healthy Lives	4	8	1	7	5	9	6	2	3	10	11
Health Expenditures/Capita, 2011**	$3,800	$4,522	$4,118	$4,495	$5,099	$3,182	$5,669	$3,925	$5,643	$3,405	$8,508

Notes: * Includes ties. ** Expenditures shown in $US PPP (purchasing power parity); Australian $ data are from 2010.

Source: Calculated by The Commonwealth Fund based on 2011 International Health Policy Survey of Sicker Adults; 2012 International Health Policy Survey of Primary Care Physicians; 2013 International Health Policy Survey; Commonwealth Fund *National Scorecard 2011*; World Health Organization; and Organization for Economic Cooperation and Development, *OECD Health Data, 2013* (Paris: OECD, Nov. 2013).



Choosing Wisely Canada

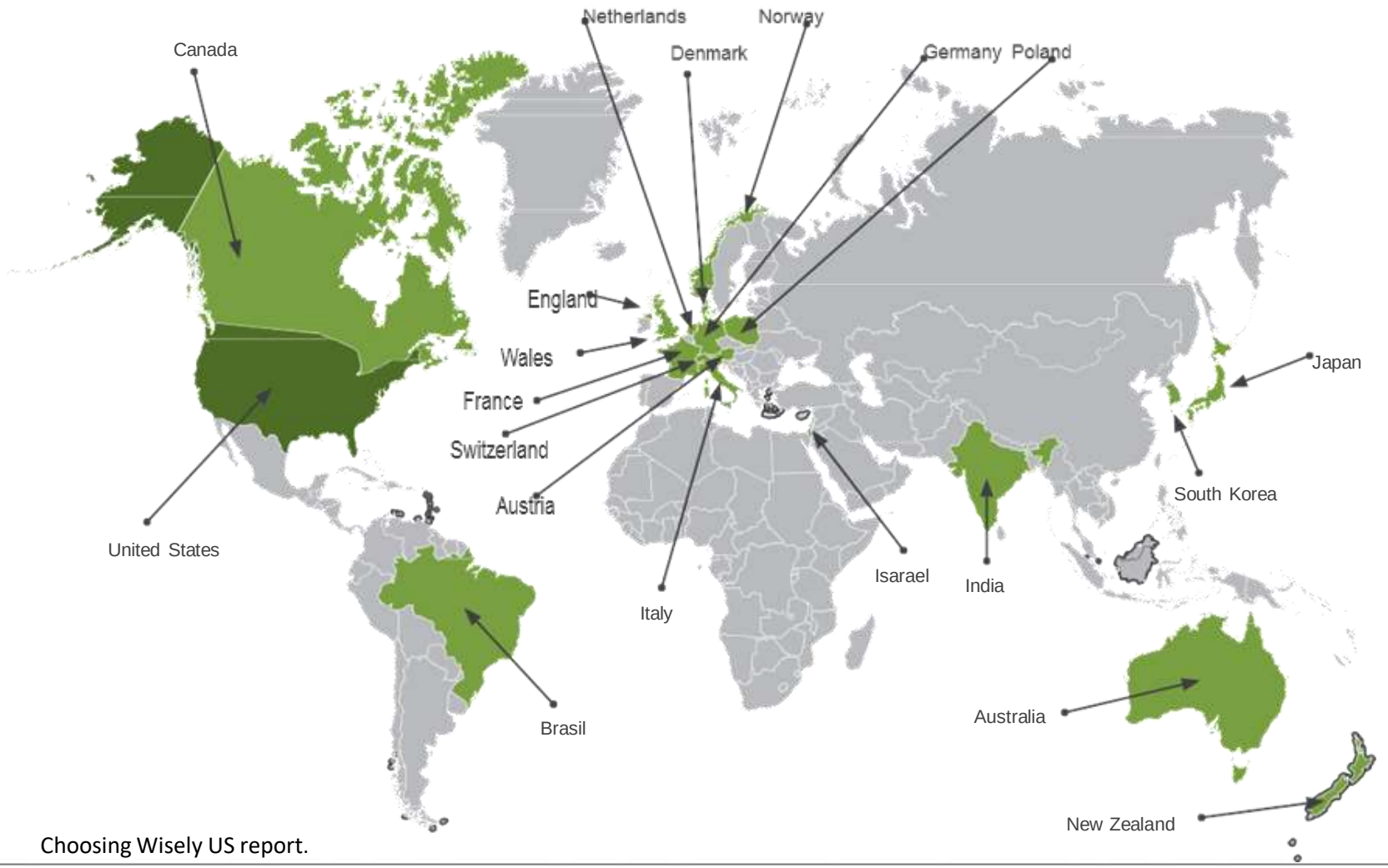
Choosing Wisely Canada

Choosing Wisely Canada is a campaign to help clinicians and patients engage in conversations about unnecessary tests, treatments and make smart and effective choices to ensure high-quality care.

- Began in **April 2014**


DR. MIKE EVANS...
I'M WONDERING if
MORE SCREENING
TESTS are BETTE

A GROWING GLOBAL MOVEMENT



Choosing Wisely US report.

Five Things Physicians and Patients Should Question

1 Don't perform population based screening for 25-OH-Vitamin D deficiency.

Vitamin D deficiency is common in many populations, particularly in patients at higher latitudes, during winter months and in those with limited sun exposure. Over the counter Vitamin D supplements and increased summer sun exposure are sufficient for most otherwise healthy patients.

Laboratory testing is appropriate in higher risk patients when results will be used to institute more aggressive therapy (e.g., osteoporosis, chronic kidney disease, malabsorption, some infections).

2 Don't screen women with Pap smears if under 21 years of age or over 69 years of age.

Follow provincial guidelines for cervical cancer screening. Screening before the recommended age of initiation (age 21 in most provinces), screening women over the age of 69, or annual screening is not recommended.

3 Avoid routine preoperative laboratory testing for low risk surgeries without a clinical indication.

Most preoperative laboratory tests (typically a complete blood count, prothrombin time and partial thromboplastin time, basic metabolic panel and urinalysis) performed on elective surgical patients are normal. Findings influence management in under 3% of patients tested. In almost all cases, no adverse outcomes are observed when clinically stable patients undergo elective surgery, irrespective of whether an abnormal test is identified. Preoperative laboratory testing is appropriate in symptomatic patients and those with risks factors for which diagnostic testing can provide clarification of patient surgical risk.

4 Avoid standing orders for repeat complete blood count (CBC) on inpatients who are clinically/laboratorily stable.

Standing orders for inpatients for CBC testing should be avoided as this can lead to over-testing in relatively stable patients. Particularly in patients with longer term hospital stays, there is some evidence that repeated blood testing can have a negative effect on patients including some increase in anemia. Trauma patients often have blood draws repeated frequently even in the absence of indications of hematologic instability on admission.

5 Don't send urine specimens for culture on asymptomatic patients including the elderly, diabetics, or as a follow up to confirm effective treatment.

There is no evidence that antibiotic treatment is indicated in any of these patients. Thus sending urine specimens in asymptomatic patients will only result in inappropriate antibiotic use and increased risk of resistance. The only exceptions are screening of pregnant women early in pregnancy for whom there are clear guidelines for screening/management; and screening for asymptomatic bacteriuria before urologic procedures for which mucosal bleeding is anticipated.


MORE IS
NOT
ALWAYS
BETTER
www.ChoosingWisely.ca

Choosing Wisely Canada

Organized by leading Canadian physicians in partnership with the Canadian Medical Association and endorsed by all provincial and territorial associations, including CAP and CSTM.

Others have also endorsed: Nursing, Pharmacy, Lab Professionals?

Choosing Wisely Principles

1. Clinician-led
2. Emphasize quality of care and harm prevention
3. Patient-focused
4. Evidence-based
5. Multi-professional
6. Transparent

Clinician Engagement

60+ SOCIETIES COMMITTED

to Choosing Wisely Canada at various stages of engagement.

260+ RECOMMENDATIONS

published to date across 40+ specialties.

OTHER HEALTH CARE PROVIDER GROUPS ENGAGED

including nursing, pharmacy, nurse practitioner, hospital dentistry.

BEYOND THE LISTS


LOSE THE TUBE.
A toolkit for appropriate use of urinary catheters in hospitals


BYE-BYE, PPI.
A toolkit for deprescribing proton pump inhibitors in EMR-enabled primary care settings


WHY GIVE TWO WHEN ONE WILL DO?
A toolkit for reducing unnecessary red blood cell transfusions in hospitals


DROP THE PRE-OP.
A toolkit for reducing unnecessary visits and investigations in pre-operative clinics


LESS SEDATIVES FOR YOUR OLDER RELATIVES.
A toolkit for reducing inappropriate use of benzodiazepines and sedative-hypnotics among older adults in hospitals


WHEN PSYCHOSIS ISN'T THE DIAGNOSIS
A Toolkit for Reducing Inappropriate Use of Antipsychotics in Long Term Care

WHY ARE WE DOING ALL OF THESE?

Unnecessary care in Canada

Wastes health system resources

Increases wait times for patients

Can lead to patient harm

Canadians have

1 million+

potentially unnecessary medical tests and treatments each year.

of patients indicated in the 8 selected Choosing Wisely Canada recommendations had tests, treatments and procedures that **are potentially unnecessary.**

There is room to reduce unnecessary care.

Substantial variation exists among regions and facilities in terms of the number of unnecessary tests and procedures performed — **this points to an opportunity to improve.**

cihi.ca

Choosing Wisel
to help clinician
conversations a
and treatments,

Unnecessary C
8 out of 200+ C
recommendatic
health system:
care, emergenc

Choosing Wisely Canada

Choosing Wisely Canada

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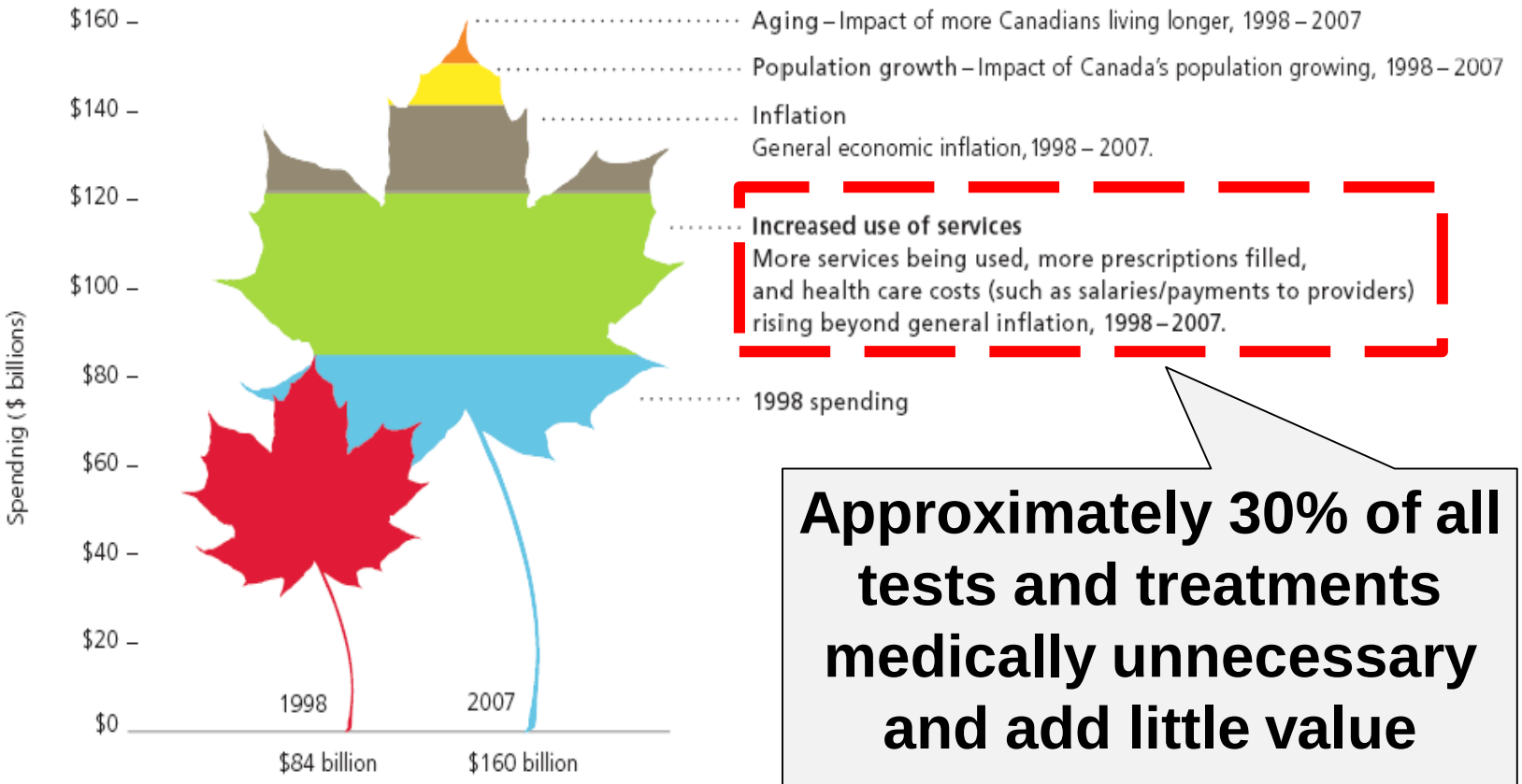
Making a World of Difference

What doubled healthcare $?



Approximately 30% of all tests and treatments medically unnecessary and add little value

Choosing Wisely Canada

HOW DOES CHOOSING WISELY WORK AT NYGH?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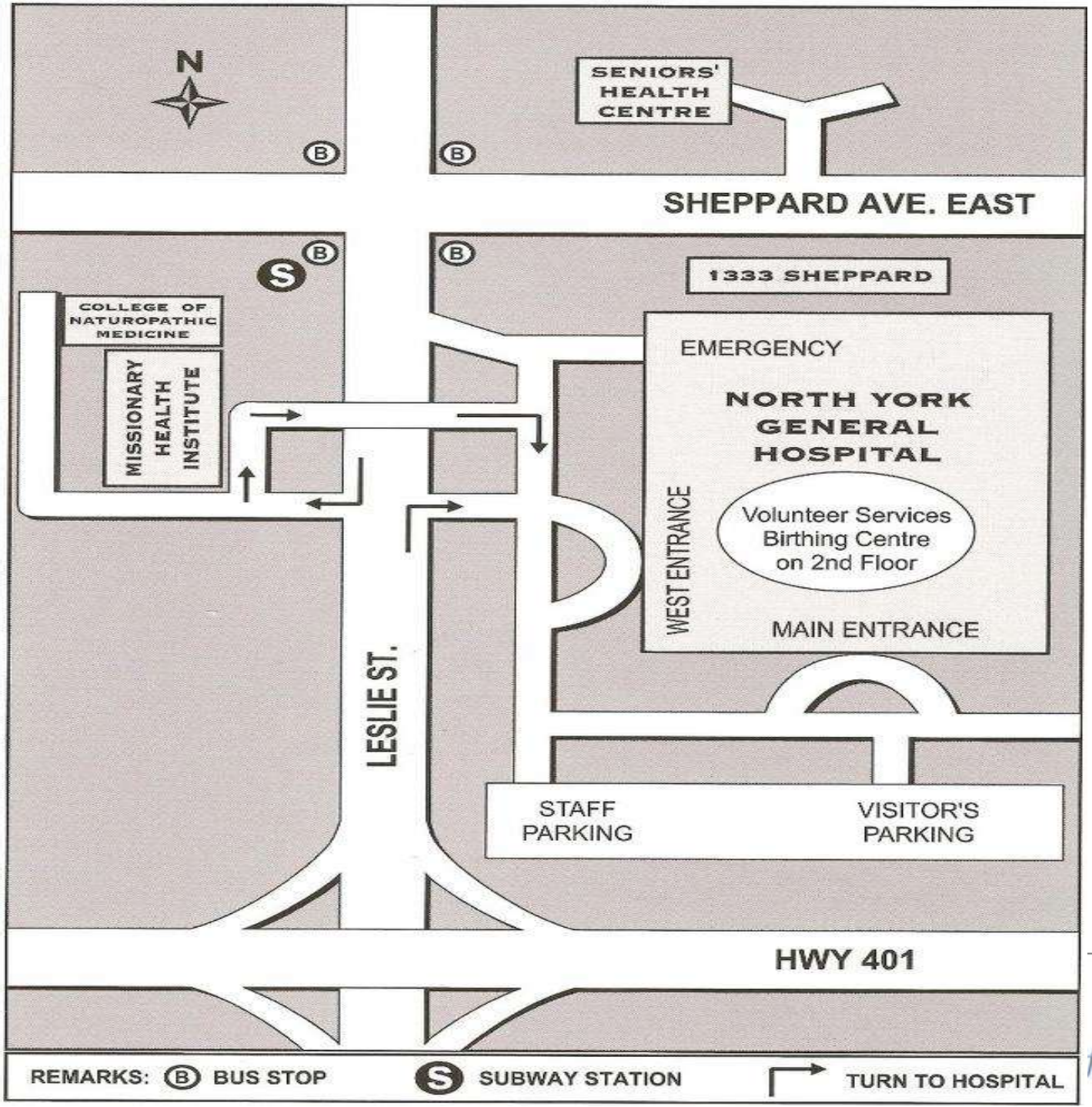
STEINBERG FAMILY TOWER


N
SENIORS' HEALTH CENTRE
SHEPPARD AVE. EAST
1333 SHEPPARD
COLLEGE OF NATUROPATHIC MEDICINE
MISSIONARY HEALTH INSTITUTE
EMERGENCY
NORTH YORK GENERAL HOSPITAL
WEST ENTRANCE
Volunteer Services Birthing Centre on 2nd Floor
MAIN ENTRANCE
LESLIE ST.
STAFF PARKING
VISITOR'S PARKING
HWY 401
REMARKS: B BUS STOP
S SUBWAY STATION
TURN TO HOSPITAL

About NYGH

A community academic hospital, NYGH has three campuses:

General	Branson Ambulatory Care Centre	Seniors Health Centre
• 420 acute care beds • 28,000 inpatients/year • 145,000 outpatient visits • 116,000 emergency visits • 31,000 day surgeries • 6,000 deliveries per year	• Provides Diagnostics, OBSP, Geriatrics, Mental Health, eye surgery, joint assessment, prostate and urologic care	• 192 long-term care beds • Specialized Geriatric Services

2015-2018 STRATEGY

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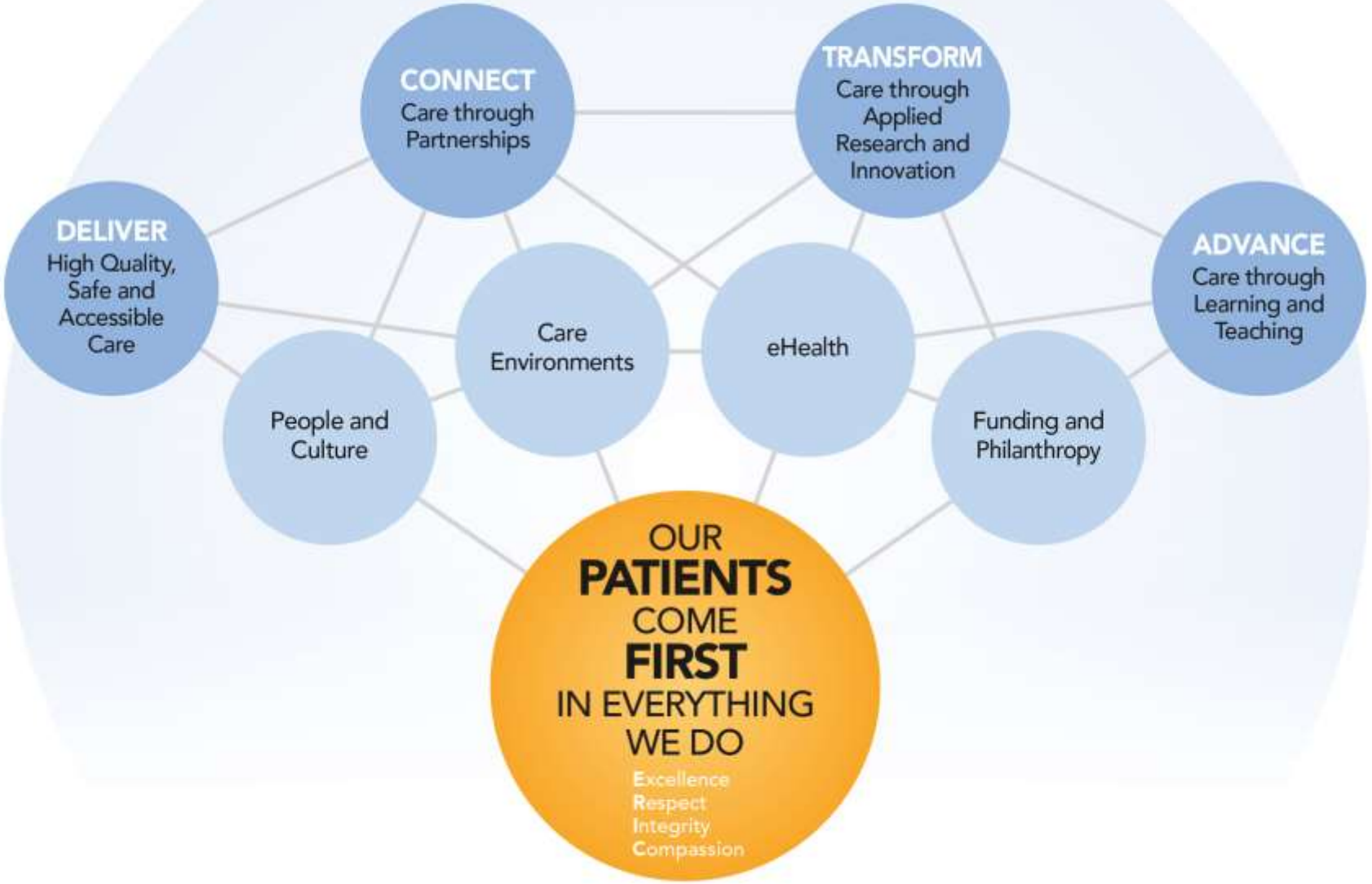
Making a World of Difference

VISION:
Excellence in integrated patient-centred care through learning, innovation and partnerships



MISSION: **Providing exceptional health care to our diverse communities**

Choosing Wisely at NYGH

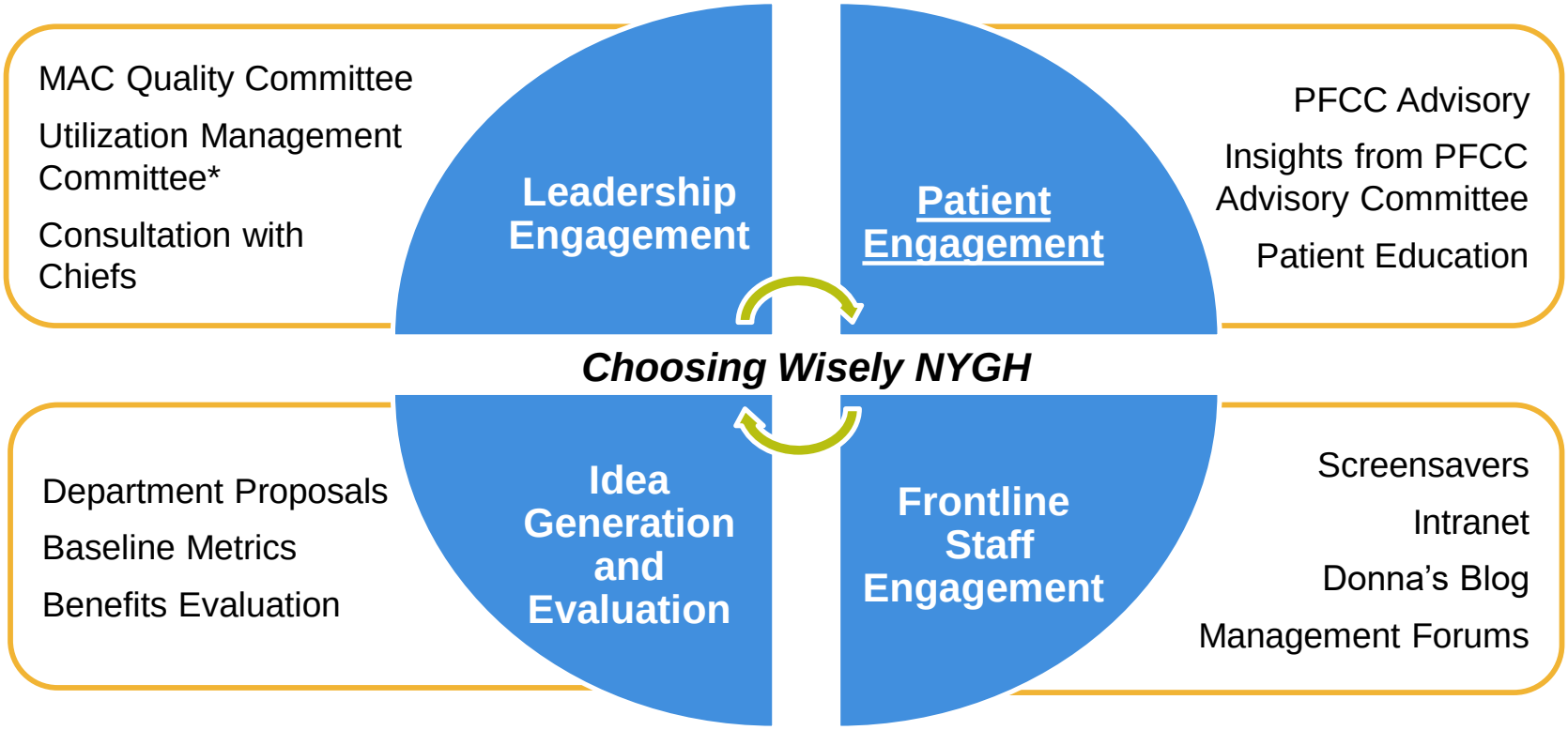
- North York General Hospital was one of the early adopters of the Choosing Wisely Canada campaign (June 2014)
- NYGH has achieved significant success through the use of CPOE*, order sets, pharmacy, medical directives, and physician engagement
- New efforts on utilization management are building on these successes, with a focus on improving Lab and Medical Imaging utilization
- This effort is supported by a multidisciplinary Choosing Wisely Committee of the hospital*, which reports to the MAC

*CPOE: *Computerized Physician Order Entry*

NYGH-CW Committee Multidisciplinary Team

Campaign Activities

- After initial planning, *Choosing Wisely NYGH* was launched in June 2014
- Four major efforts have guided our implementation campaign



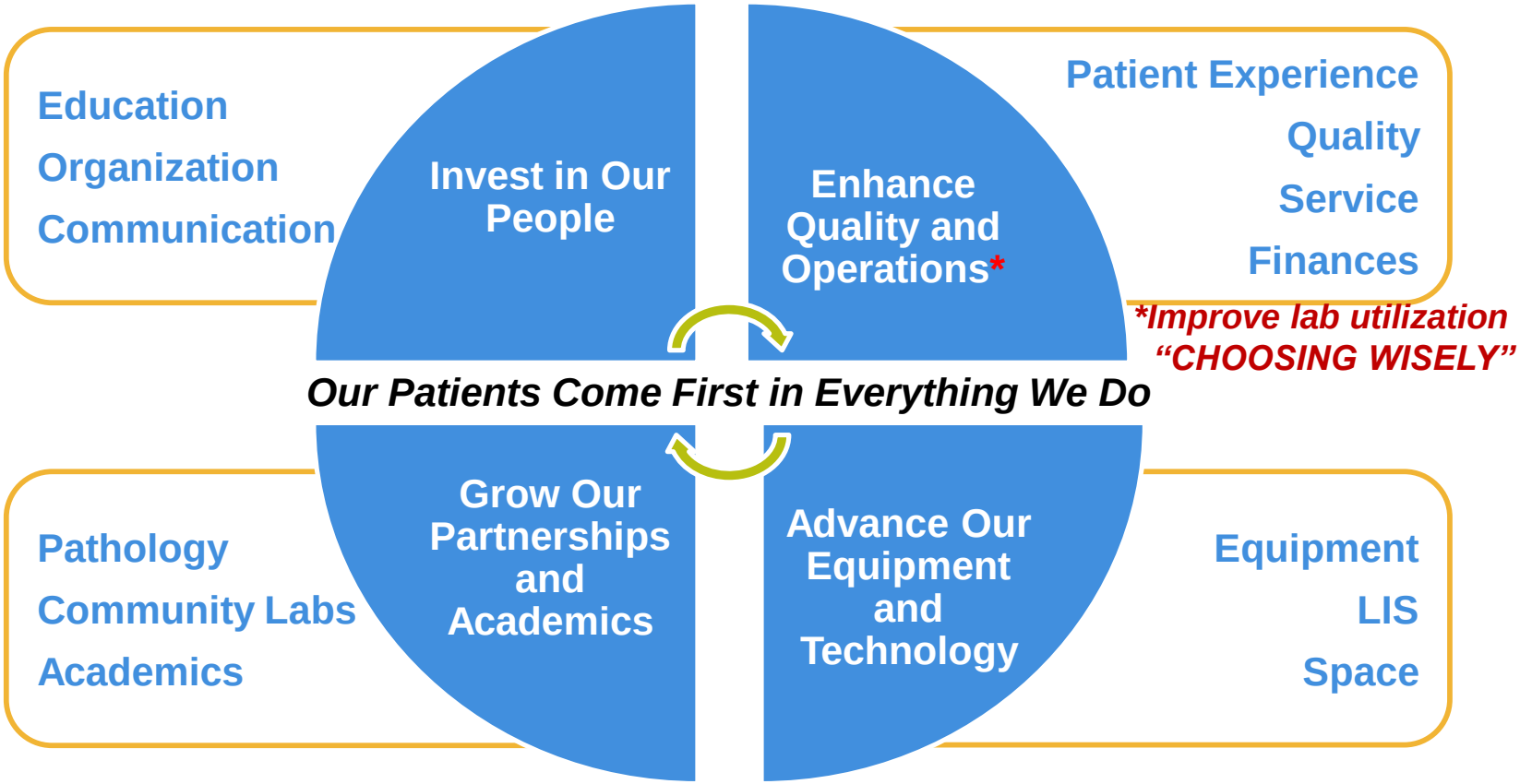
Department of Laboratory Medicine

Laboratory Medicine

Staff	Volumes	Achievements
Over 100 laboratory professionals MLTs, PAs, MLA/T Support.	**1.6 million test** **> 21,000 Pathology Cases** **90,000 blocks** **180,000 slides** **22,000 IHC slides**	Choosing Wisely Synoptic Reporting Cancer Care TAT Blood Inventory Management

Laboratory Medicine Strategic Plan

- Our Laboratory Medicine Strategic Plan has four strategic directions that keep our patients at the centre of everything we do:



GIVE THE TEST A REST

40%

of all lab tests at NYGH came from the emergency department (ED).

50%

of those were ordered through medical directives.

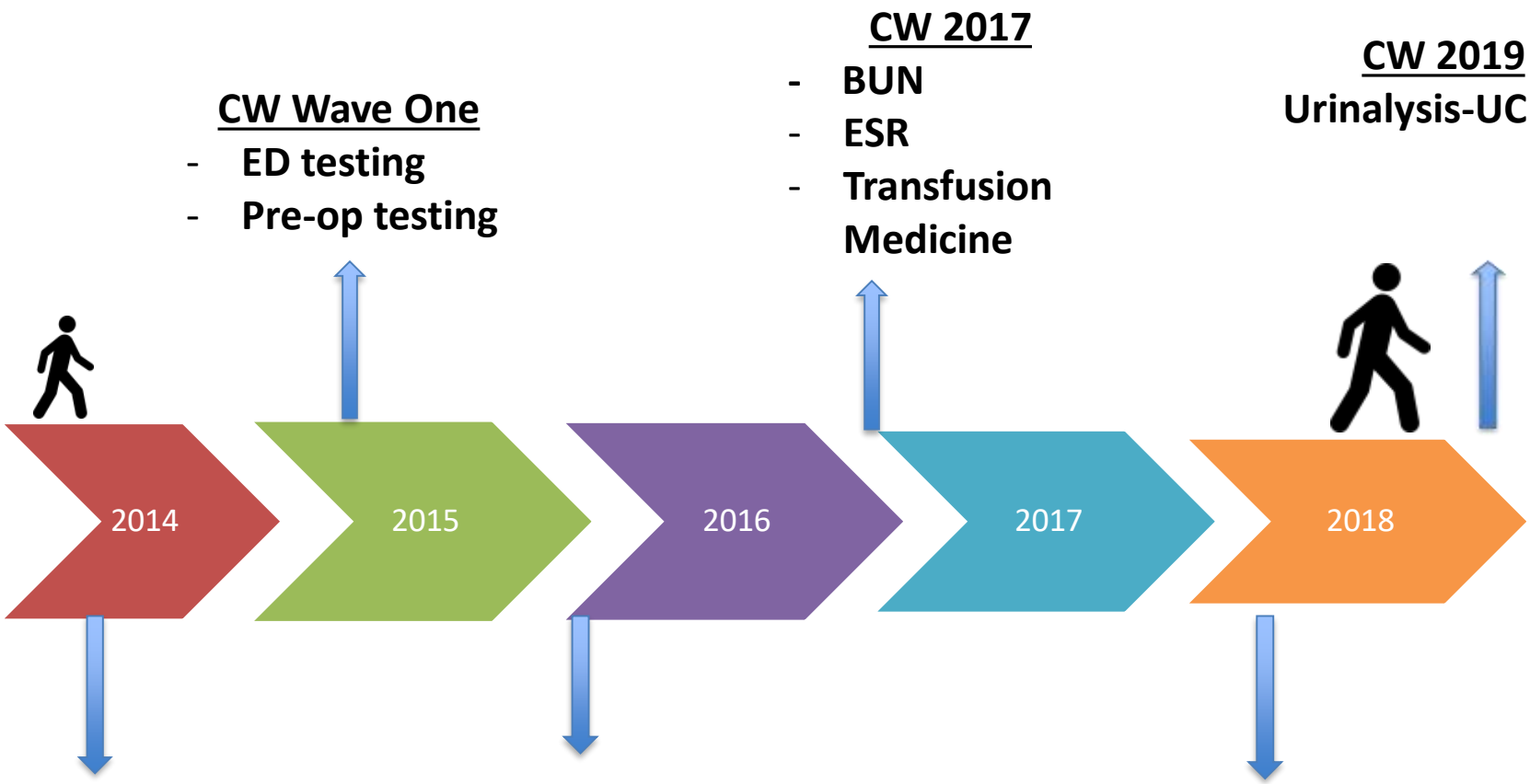
ED at NYGH has experienced a

23%

reduction in lab testing over 2 years by incorporating the latest evidence-based practices and CWC recommendations.

Our lab Journey

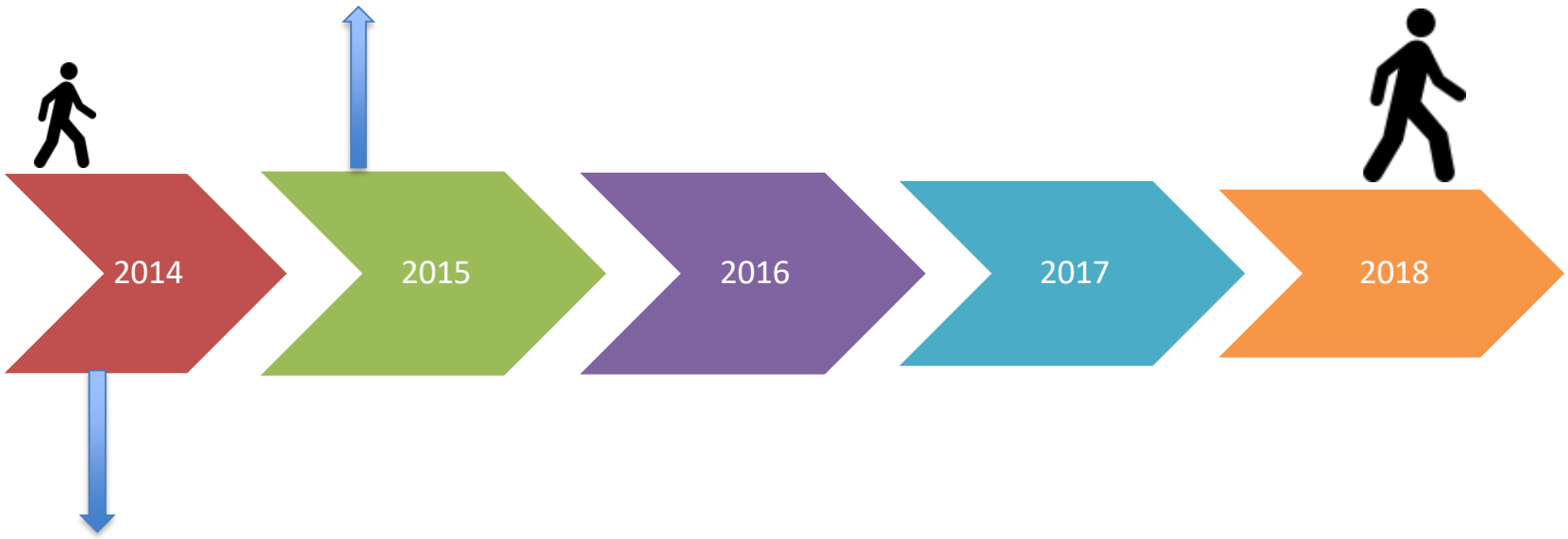
Our Journey


CW Wave One
- ED testing
- Pre-op testing
CW 2017
- BUN
- ESR
- Transfusion Medicine
CW 2019
Urinalysis-UC
2014
2015
2016
2017
2018
Pre-CW activities
- Elimination
- Replacements
- Auto-cancels
CW 2016
- Free PSA
- D-Dimers
- FOBT
CW 2018
Thrombophilia

Our Journey

CW Wave One

- **ED testing**
- **Pre-op testing**



Pre-CW activities

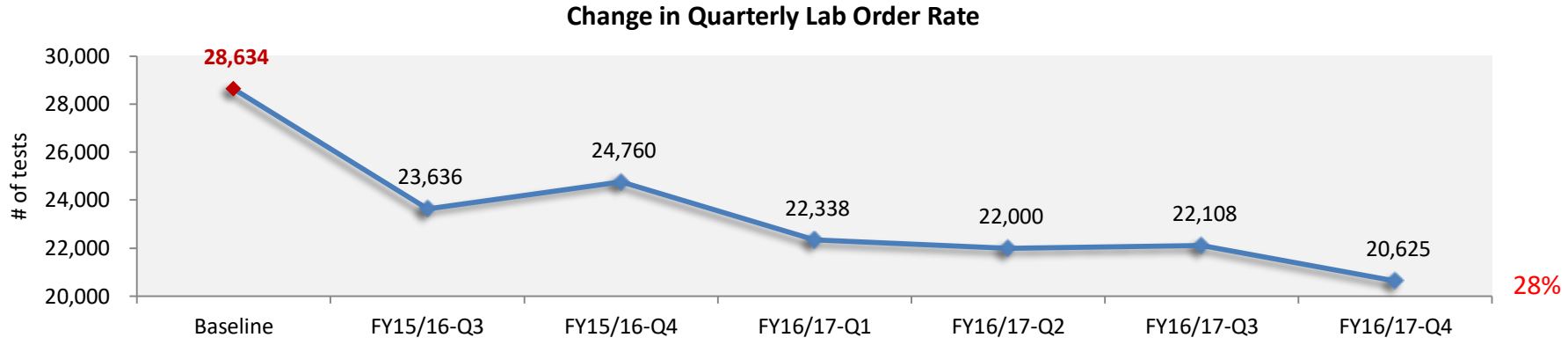
- **Elimination**
- **Replacements**
- **Auto-cancels**

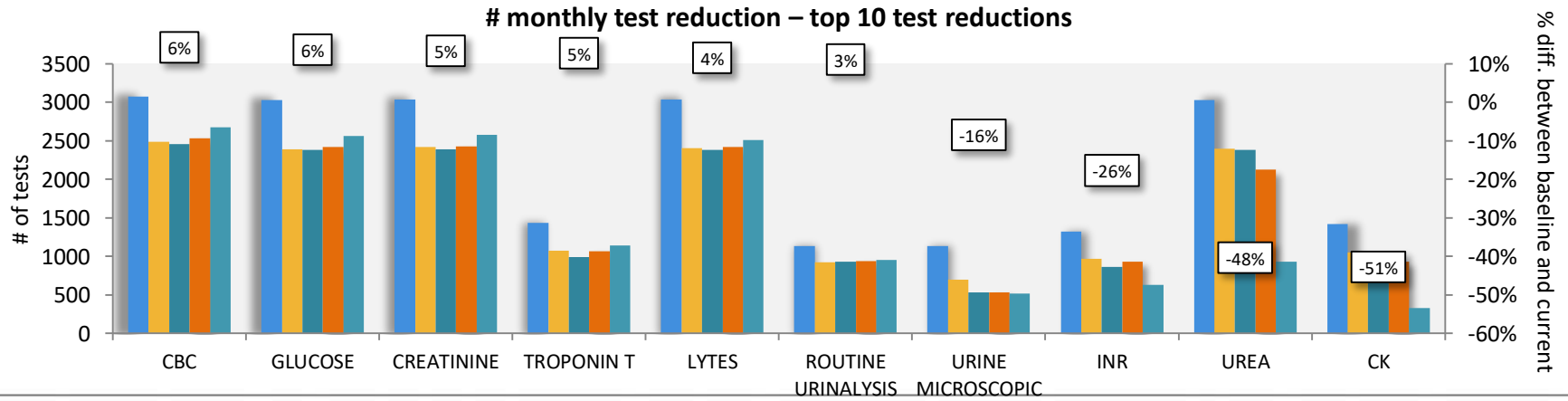
CW Wave I
ED Lab Initial Impact Analysis

- Early *Choosing Wisely NYGH* implementation efforts have achieved gains in Emergency Department, Pre-Op Clinic and Inpatient laboratory testing
    - Emergency Department Lab Testing: ↓ 28%/month since Sept. 2014
    - Pre-Op Clinic Lab Testing: ↓ 38%/month since Feb. 2015
- Several other activities were undertaken in 2015 to align medical directives, enhance patient education and support related research.
    - Identification of new Choosing Wisely ideas (Wave II)

ED - Lab Order Reductions

Before/ After Program Implementation





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Laboratory Services Expert Panel Report

(released in Nov 2015)

- Ontario funding for labs is close to $2 Billion per year.
- **Seven** elements of key findings:
  - **Appropriate Utilization** (Choosing Wisely Canada is mentioned several times).
- 20-50% ordered may be inappropriate, resulting in:
  - longer hospital stay.
  - false positive diagnoses.
  - patient anxiety.


All your labs are back. They show a serious overuse of unnecessary and inappropriate tests and procedures.
SEMELROTH ©'13

Causes of Test Overutilization*

- Ordering test panels rather than “ala carte”
  - Ordering tests as groups
- Repetitive test orders.
- Poor understanding of the consequences of overutilization
- Patient pressure
- Defensive testing
- Perverse financial incentives (more tests = more revenue)

* Astion M. Overutilization of the laboratory, part 1: Googling our way into overutilization and misinterpretation. Laboratory Errors and Patient Safety. 2005; 2(3): 5-6.

Pre-Op – Choosing Wisely Test Reductions

Pre-Operative Process Review

- Support from Chief of Surgery and Chief of Anaesthesia ; led by Anaesthesiologist: Physician champions were a must
- Engagement from all stakeholders: administrators, Surgeons, Anaesthesia, Office secretaries, staff .
- Transparency of the process through education of Surgeons/ Team members, Strategic initiatives to enhance Patient and Family Centered Care
- Daily meetings with Pre-op staff to discuss any challenges/concerns

Pre-Operative Clinic Pre-appointment process

New Order Set

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PRE-OPERATIVE ORDERS
FOR PATIENTS 18 YEARS OF AGE OR GREATER

LABORATORY TESTS ARE VALID FOR 90 DAYS
(if no changes in patient's health)
WITH THE EXCEPTION OF CROSSMATCH/GROUP AND SCREEN VALID FOR 30 DAYS
Please check appropriate boxes
OS019

Patient Weight _____kg Height _____cm Allergies ☐ No ☐ Yes:_____

PRE-OP ASSESSMENT CLINIC ORDERS

CONSULTS:
(Please indicate reason for consult AND include all relevant reports with chart e.g. cardiology, respirology, neurology etc.)

❑ Anesthesiology _____
❑ Internal Medicine _____

❑ CCAC
❑ Enterostomal

❑ Other _____

BOWEL PREPARATION:
(if yes, specify)_____

INVESTIGATIONS:

☒Follow Standardized Testing Grid
❑ Number of cross-matched units:_____

Other:
❑ HbA1C
❑ Ferritin
❑ βhCG
❑ Sickle Cell screen

Hip arthroplasty (Xray pelvis with hip in 20 degree internal rotation and lateral of hip):
❑ Right ❑ Left

Knee arthroplasty (Xray knee):
❑ Right ❑ Left
❑ AP ❑ Lateral ❑ Skyline ❑ AP 4 feet standing

❑ Fax Rehabilitation papers to St. John's

❑ Other:_____

DAY OF SURGERY ORDERS

PREOPERATIVE ANTIBIOTIC:

❑ Vancomycin 500 mg IV 1hour preop
or
❑ Vancomycin 1000 mg IV 1 hour preop

ANTITHROMBOTICS:
(Anesthesiologist to administer anticoagulant in Operating Room)

❑ Compression stockings (TED)
❑ Other _____

SAME DAY INVESTIGATIONS:

❑ Glucose
❑ INR
❑ Other _____

PREOPERATIVE ANALGESICS:
On arrival to Day Surgery

Acetaminophen ☒ 1000 mg PO x1

Celecoxib ❑ 200mg **or** ❑ 400mg POx1

Gabapentin ❑ 100mg ❑ 300mg **or** ❑ 600mg POx1

Other:_____

PHYSICIANS SIGNATURE:
DATE:
TIME:

PHYSICIAN'S SIGNATURE:	DATE: TIME:
Posted by Pre-op Assessment Clinic Nurse:	DATE: TIME:
Posted by Day of Surgery Nurse:	DATE: TIME:

Yellow Copy to Pharmacy
Sept 2014

PHYSICIAN'S ORDERS

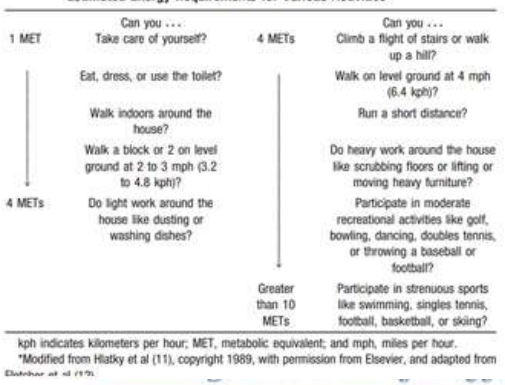
NYGH Pre-Operative Testing Grid

If there is any doubt regarding appropriate preoperative testing please notify the Pre-Operative Clinic Anesthesiologist for guidance. Please avoid ordering repeat testing (and include current test results) if a patient has had recent similar testing and there are no new changes to the patient's health or therapies:

	CBC	G&S	Creat	Lytes	Gluc	LFTs	INR&PTT	EKG	CXR
Surgical procedure on Group and Screen list (refer to **MSBOS).	■	■							
History of anemia, bleeding disorder and/or active bleeding. Major cardiovascular disease (i.e. exercise tolerance of METS <4 see table below). Cancer diagnosis. Age >70 or < 1 year old.	■	■							
Any history of renal or endocrine disease.			■	■					
Use of digoxin, lithium, diuretics, ACE-I or ARB. History of electrolyte abnormality.			■	■					
History of diabetes.			■		■				
History of steroid use within 6 months.				■	■				
History of bleeding disorder. Use of anticoagulant drugs. History of liver disease. Alcohol use >2 drinks/d for women and >3/d for men. History of malnutrition.						■	■		
Age >69. History of cardiac disease. History of peripheral, cerebral or pulmonary vascular disease. ≥ 2 risk factors (HTN, CKD, DM, BMI>35)								■	
Symptomatic respiratory or cardiac disease (METS <4 – see table below). History of lung cancer or mass.									■

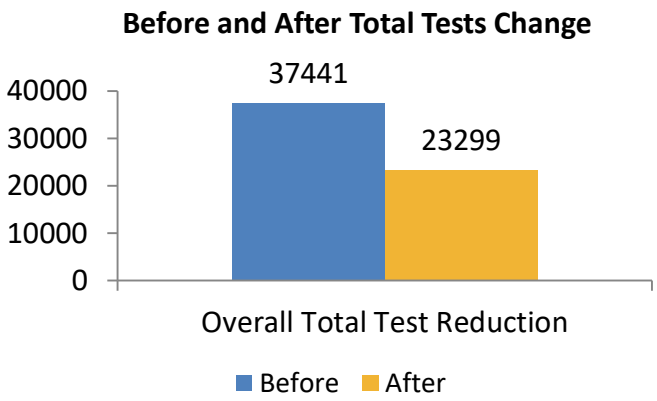
βhCG can be ordered, if result would change management, on the Preop Order Sheet.
Sickle cell screen can be ordered for high risk populations (West Central Africa, Saudi Arabia, East Central India, Southern Italy, Northern Greece, Southern Turkey, African American, Caribbean), if result would change management, on the Pre-op Order Sheet.
****MSBOS** = Maximum Surgical Blood Order Schedule

Estimated Energy Requirements for Various Activities



kph indicates kilometers per hour; MET, metabolic equivalent; and mph, miles per hour.
*Modified from Hlatky et al (11), copyright 1989, with permission from Elsevier, and adapted from

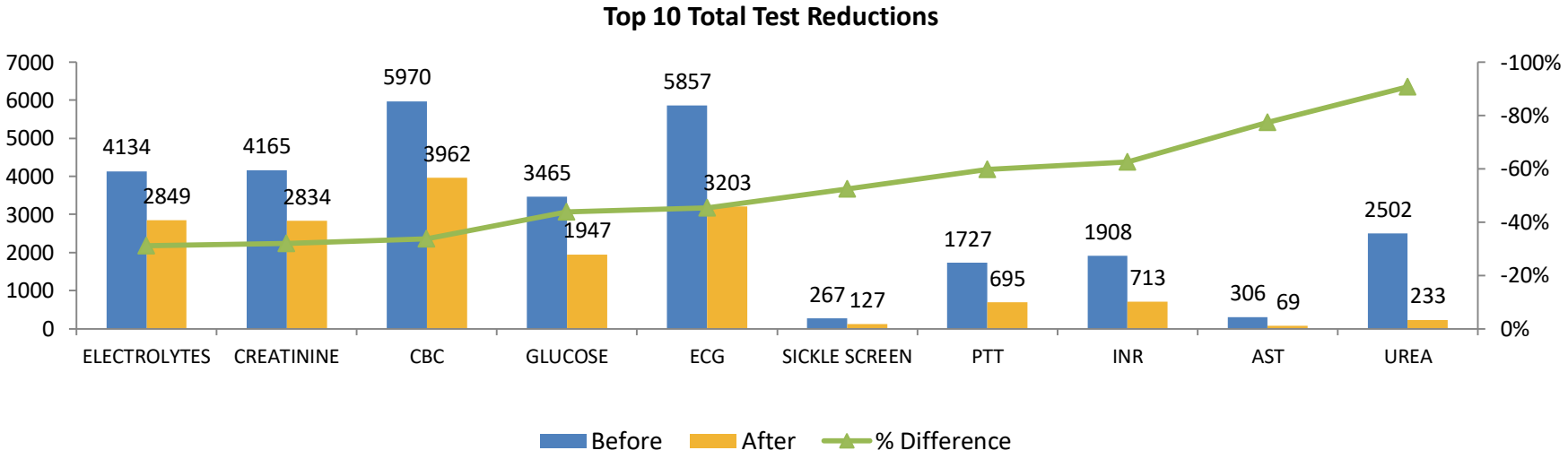
Pre-Op – Choosing Wisely Test Reductions



There has been a 38% decline in the number of Tests pre- and post-program implementation.

The graphs below show the top 10 reductions.

Tests per unique visit reduced from 5.6 tests/per visit to 5.1 tests/per visit, a 0.5 change on a per visit basis for patients with at least one test.
Corollary: For every two visits where at least one test is done, there is one fewer test ordered between them.

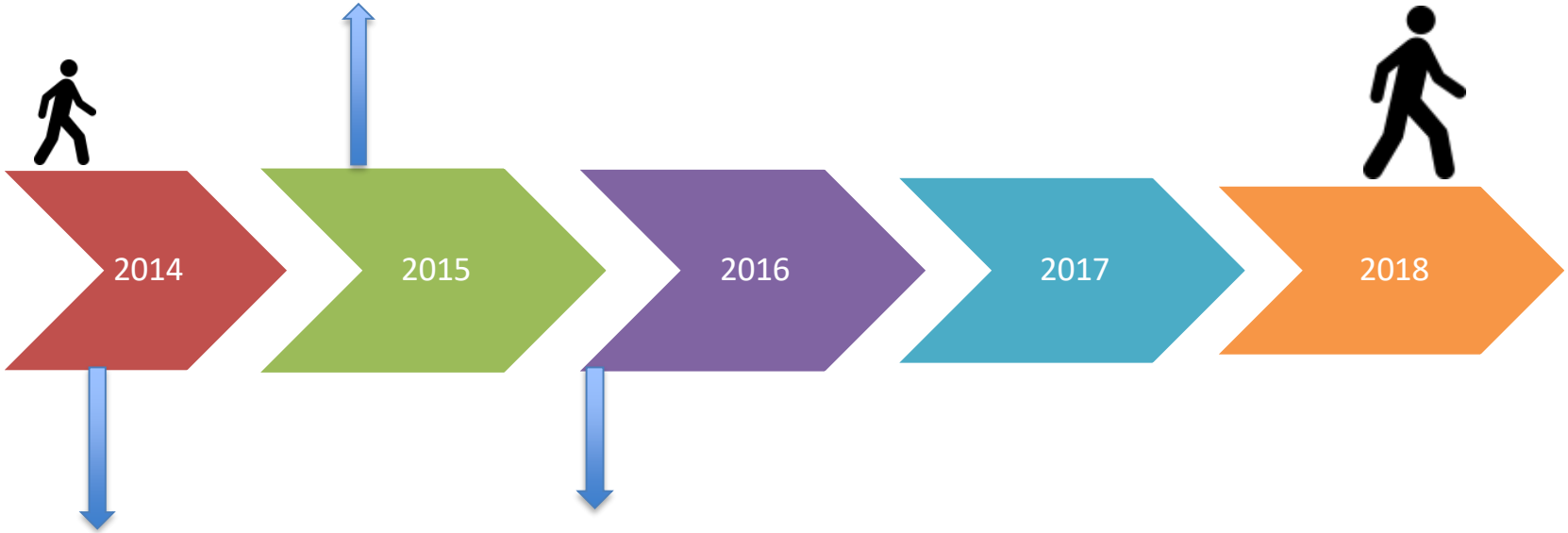


"BEFORE": Pre Choosing wisely (Feb 2 2014 – Dec 31 2014)
"AFTER": Post Choosing wisely (Feb 2 2015 – Dec 31 2015)

Our Journey

CW Wave One

- ED testing
- Pre-op testing



Pre-CW activities

- Elimination
- Replacements
- Auto-cancels

CW 2016

- Free PSA
- D-Dimers
- FOBT

2016 lab initiatives implemented

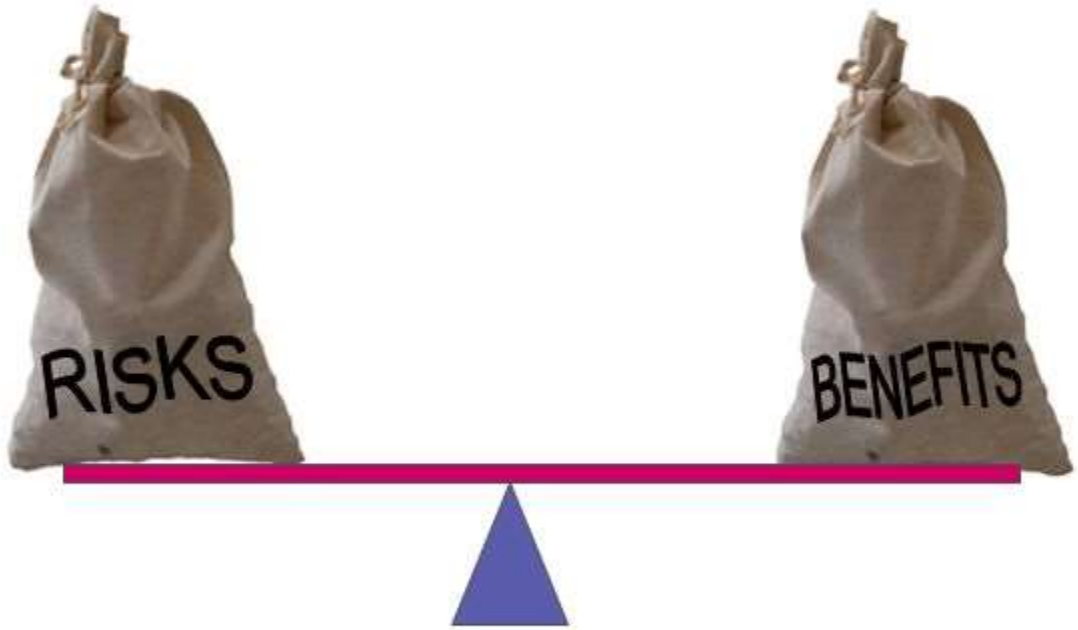
- **Free- Protein Specific Antigen** (Free- PSA): Eliminated from the menu, for in-patients. Endorsed by the Oncologists, Urologists and Family Practice team.

- **FOBT testing**: Eliminated for in-patients (was leading unnecessary Colonoscopies). Supported by multiple teams, including the ED, Internal Med and the Family Practice physicians group.
  - Only kept for specific Paediatric cases (e.g. necrotizing enterocolitis or milk protein allergy/intolerance).

* **Highlighted by Cancer Care Ontario (CCO).**

*** IQMH Published.**

Weighing the Risks & Benefits



Burkman R. *Am J Obstet Gynecol*. 2004.

Overcoming challenges to implementation

- Reducing unnecessary testing without impacting patient flow (medical directives)
- **Changing order sets**
- **Achieving buy-in from stakeholders**
- Changing habits and practices
- **Overwhelming at first, required support for and from Chiefs**
- Mindfulness to avoid transient impact only

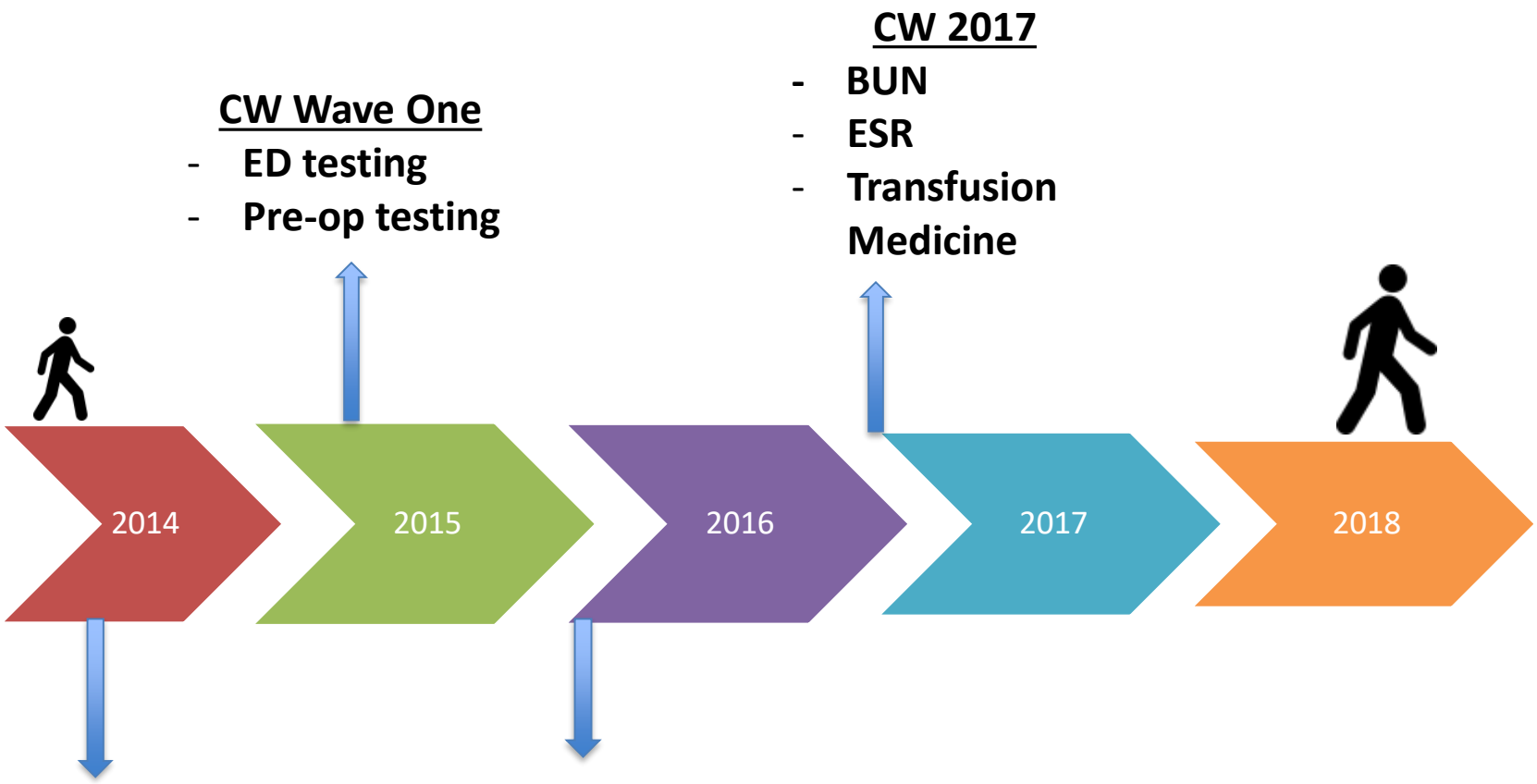
Change is a process and requires time, not everything happens right away!

Keys to success

- **Project management**
- **Leveraging culture and informat**
- Patient insights
- Senior leadership buy-in
- **Achieving consensus**
- Change focus away from costs
- Start small, think big
- Have fun
- **Friendly competition is a good thing**

Physician and Administrative leadership is critical!

Our Journey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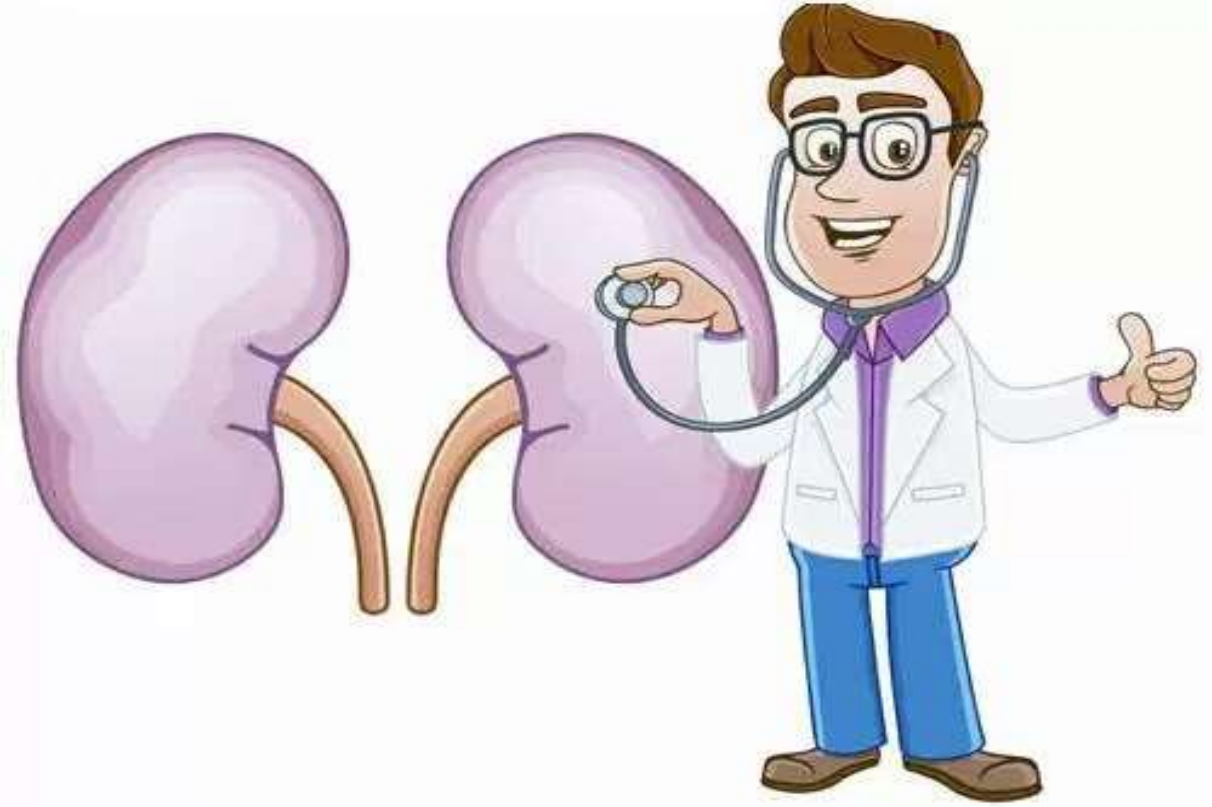
2017 laboratory initiatives implemented
BUN (UREA)

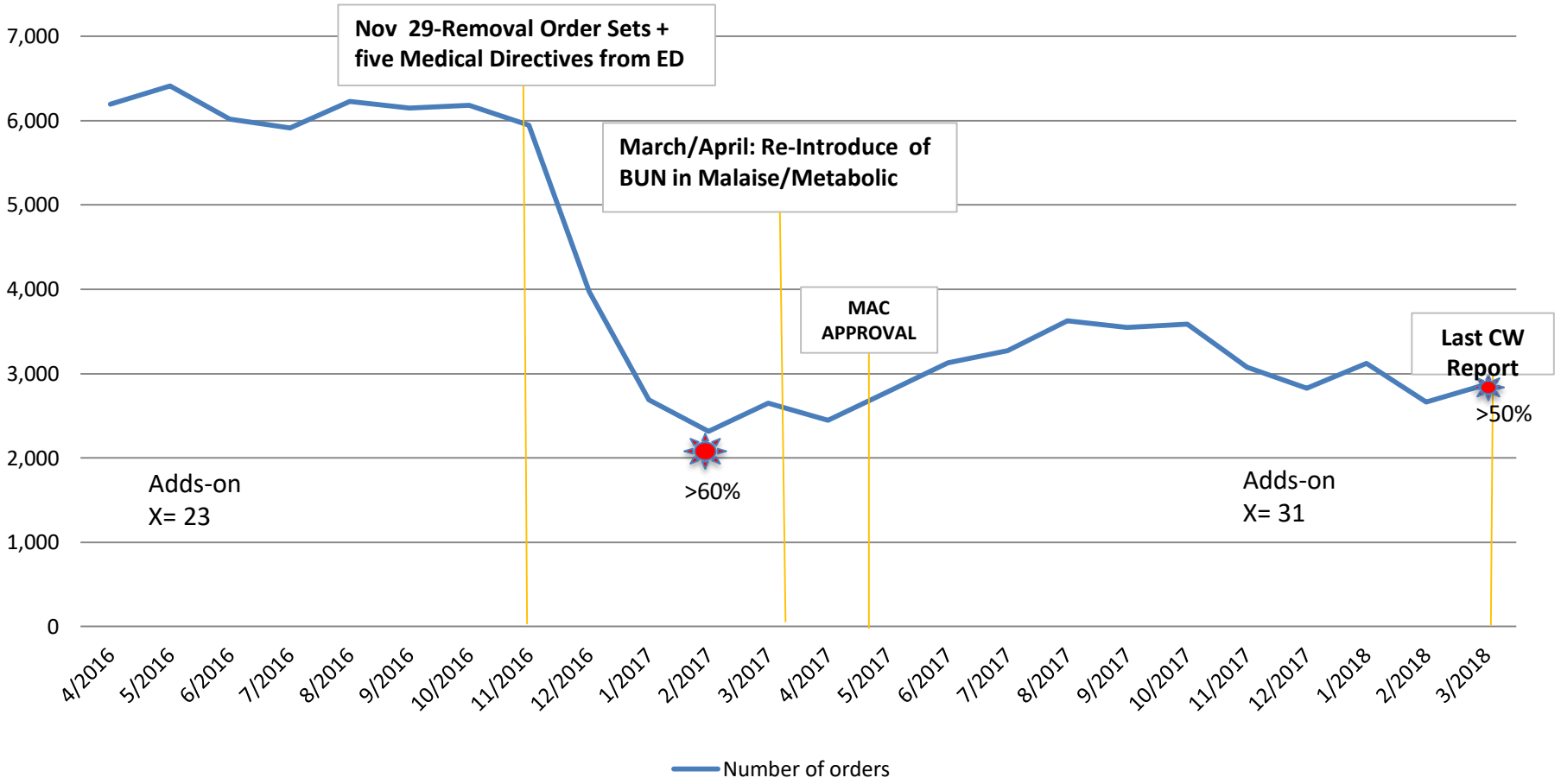
Proposed:

Use Creatinine as preferred Indicator for renal assessment/damage



Biochemistry Lab-NYGH

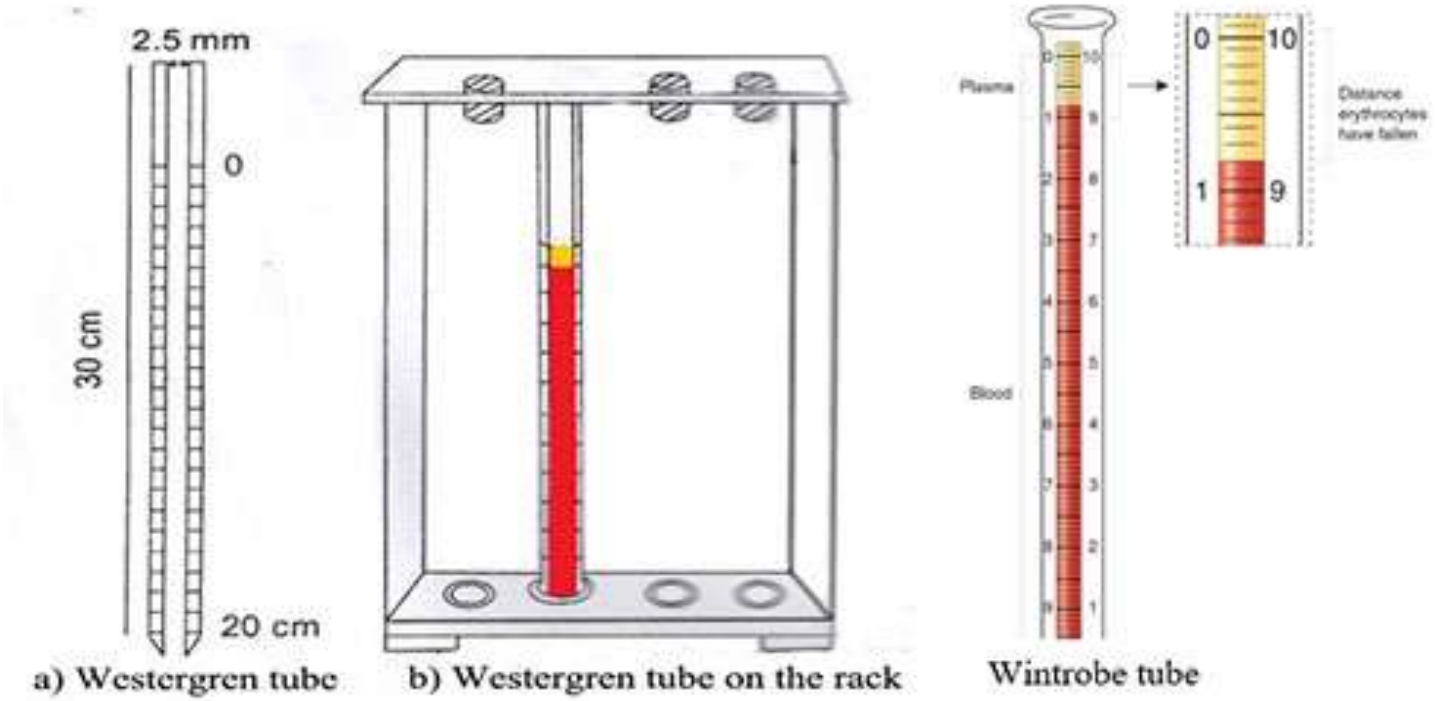
BUN-CW-NYGH 2017



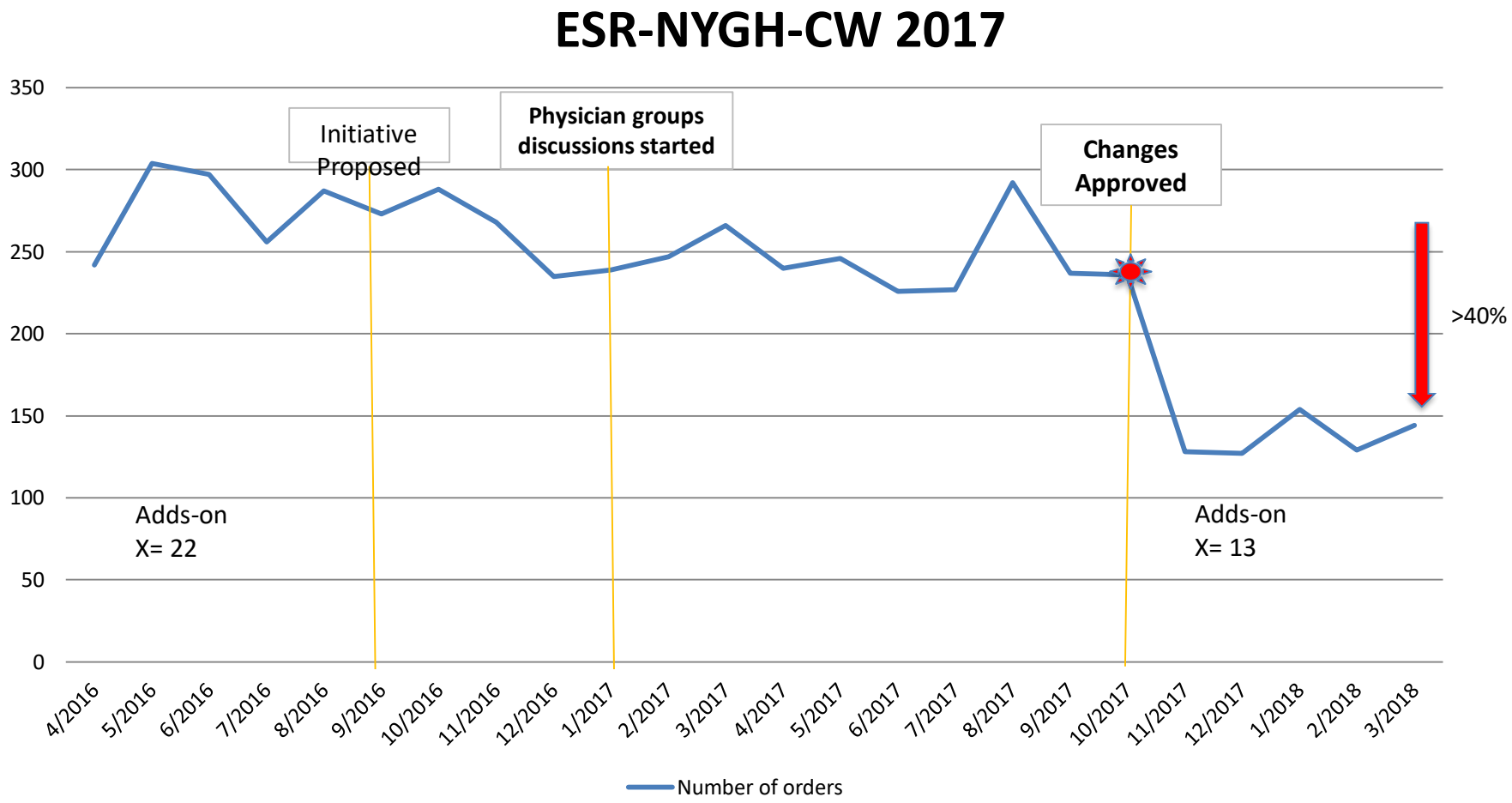
*** Abstract selected to the 2018 CW National Meeting**

2017
ESR vs. CRP

Proposed: Use CRP as preferred Indicator for inflammation and infection



Haematolology Lab-NYGH



Choosing Wisely Canada™

WHY GIVE TWO WHEN ONE WILL DO?

Help reduce unnecessary red blood cell transfusions in our hospital

Transfusion Medicine-NYGH

- Based on CWC-TM tool kit
  - Don’t transfuse patients based solely on an arbitrary hemoglobin threshold.
  - Don’t transfuse more than one red cell unit at a time.
- Team approach: Physician Champion, TM MLT Senior, Clinical Application Specialist.
- Involved other teams: LIS and IS

Laboratory Benefits

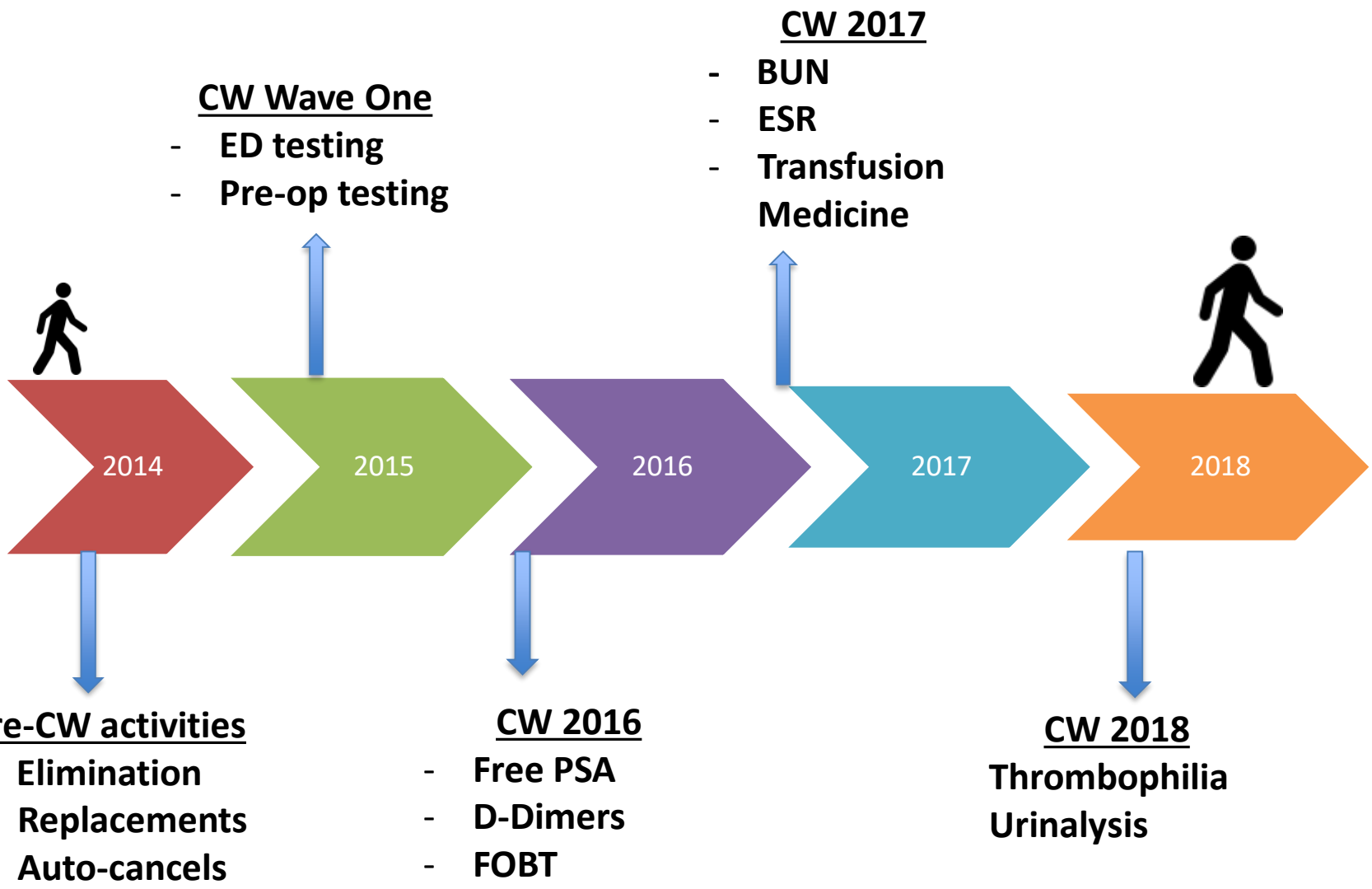
- Contributed to the overall campaign, engaged in an ongoing conversations with physicians and boosted the lab profile.

- Redirected savings **to implement new tests** that can facilitate medical decisions and improve patient care (e.g. NT- proBNP, Tumour Markers, Thrombin Time).

- **Enhanced** Quality Assurance and Quality Control practices.

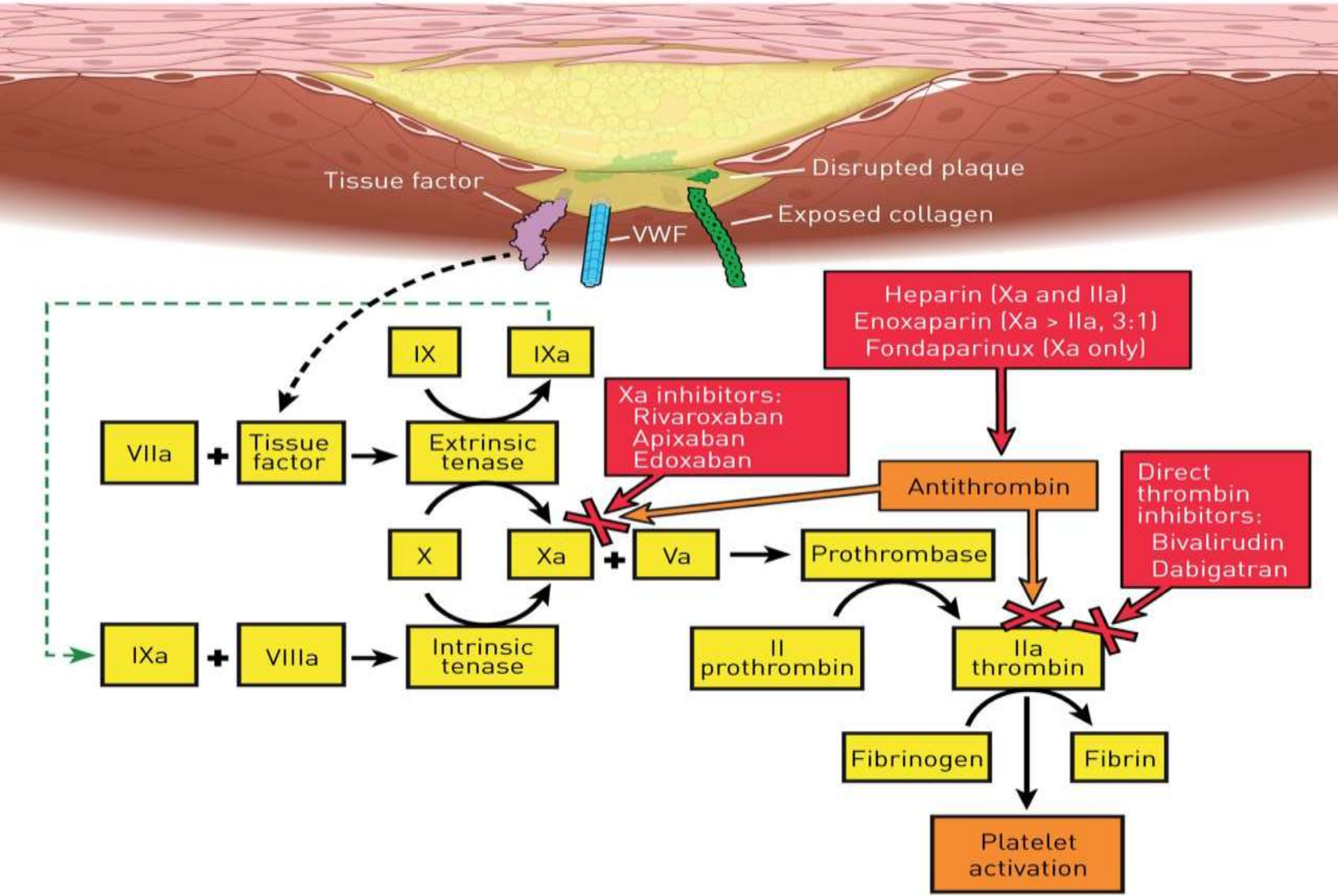
- Impacted **utilization practices in other areas**. For example in DI, reduce unnecessary CT Angio Chest (used to rule out PE) by implementing a D-Dimer higher sensitive and cut-off (replaced previous DD).

Our Journey

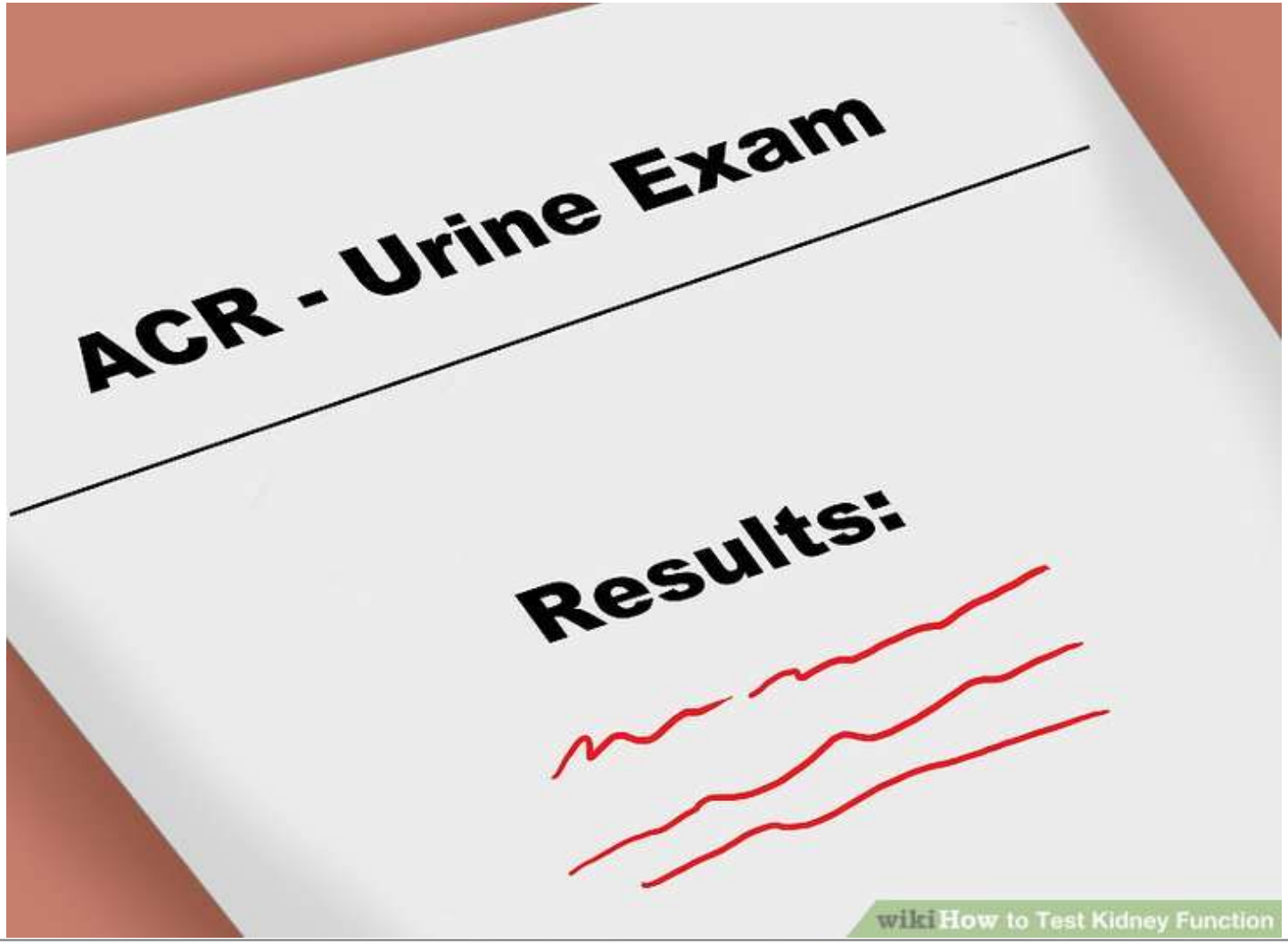

CW Wave One
- ED testing
- Pre-op testing
CW 2017
- BUN
- ESR
- Transfusion Medicine
2014
2015
2016
2017
2018
Pre-CW activities
- Elimination
- Replacements
- Auto-cancels
CW 2016
- Free PSA
- D-Dimers
- FOBT
CW 2018
Thrombophilia
Urinalysis

2018 Laboratory Initiatives

Review appropriateness of Thrombophilia Studies



Review Criteria for Urine Microscopic Examination



More is good?... Sometimes “OK”

- Patient Advisory Committee (PAC):
  - » Provides feedback

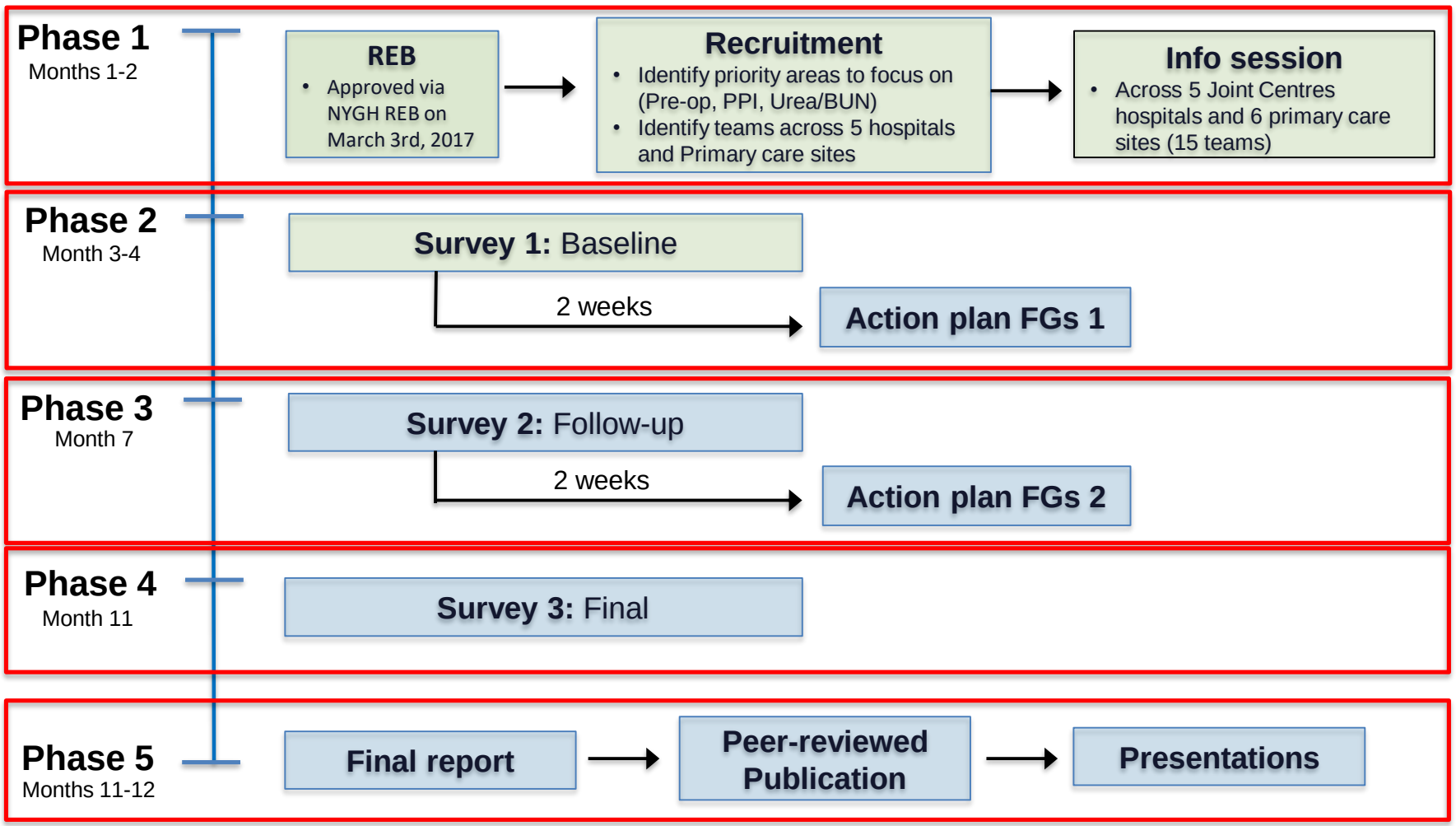
- Research studies
  - » Sustainability studies
  - » Research studies U of T and PhD students.
- Collaborative Work-Peer comparison (Joint Centres).

PATIENT ADVISORY COMMITTEE (PAC)

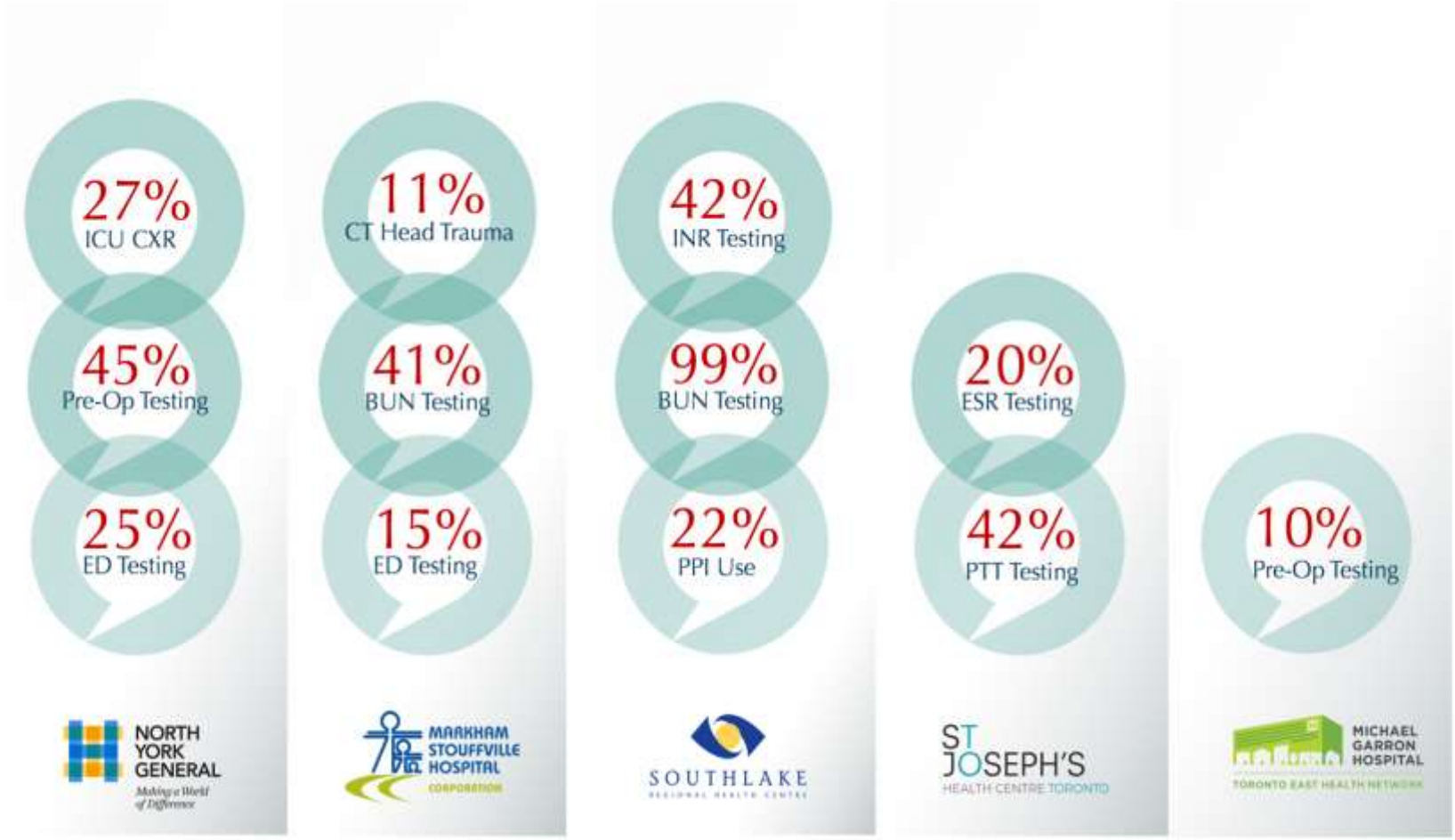
PAC OBJECTIVES

- Provide feedback.
- Approach to patient engagement.
- Communicating the Choosing Wisely campaign message.

CW Sustainability Study: overview & activities

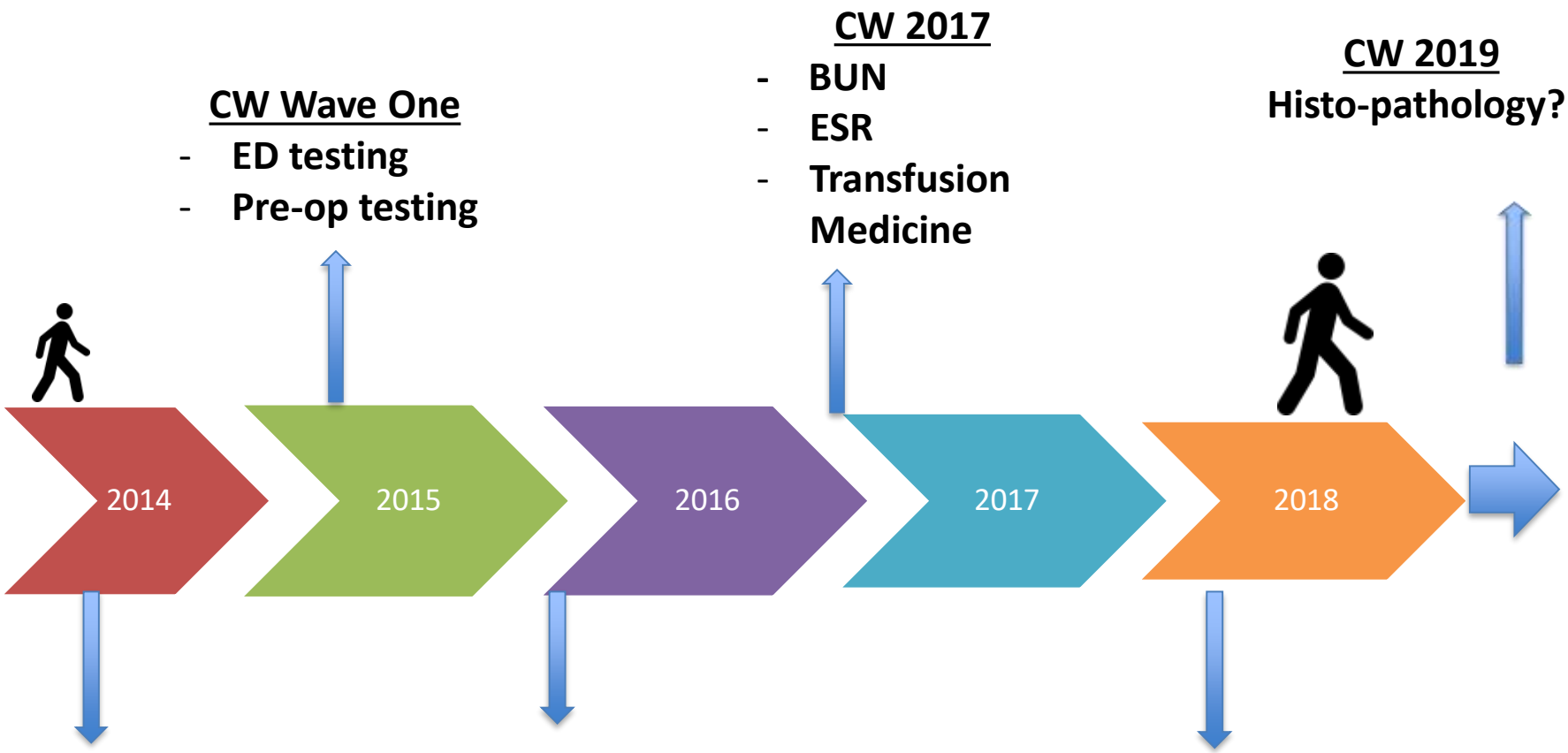


CELEBRATING SUCCESS
JOINT CENTRES



NYGH-CW Committee Multidisciplinary Team

Our Journey


CW Wave One
- ED testing
- Pre-op testing
CW 2017
- BUN
- ESR
- Transfusion Medicine
CW 2019
Histo-pathology?
2014
2015
2016
2017
2018
Pre-CW activities
- Elimination
- Replacements
- Auto-cancels
CW 2016
- Free PSA
- D-Dimers
- FOBT
CW 2018
Thrombophilia
Urinalysis

2019 Lab Initiatives

- Extend CW principles to other laboratory areas (e.g. histo-pathology)??

    - Review appropriateness of placenta examination.

THANK YOU!

www.nygh.on.ca

mgiraldo@nygh.on.ca

@ManuelMgiraldo

ca.linkedIn/manuel-giraldo

@giraldo5736

NORTH YORK GENERAL


That's all Folks!