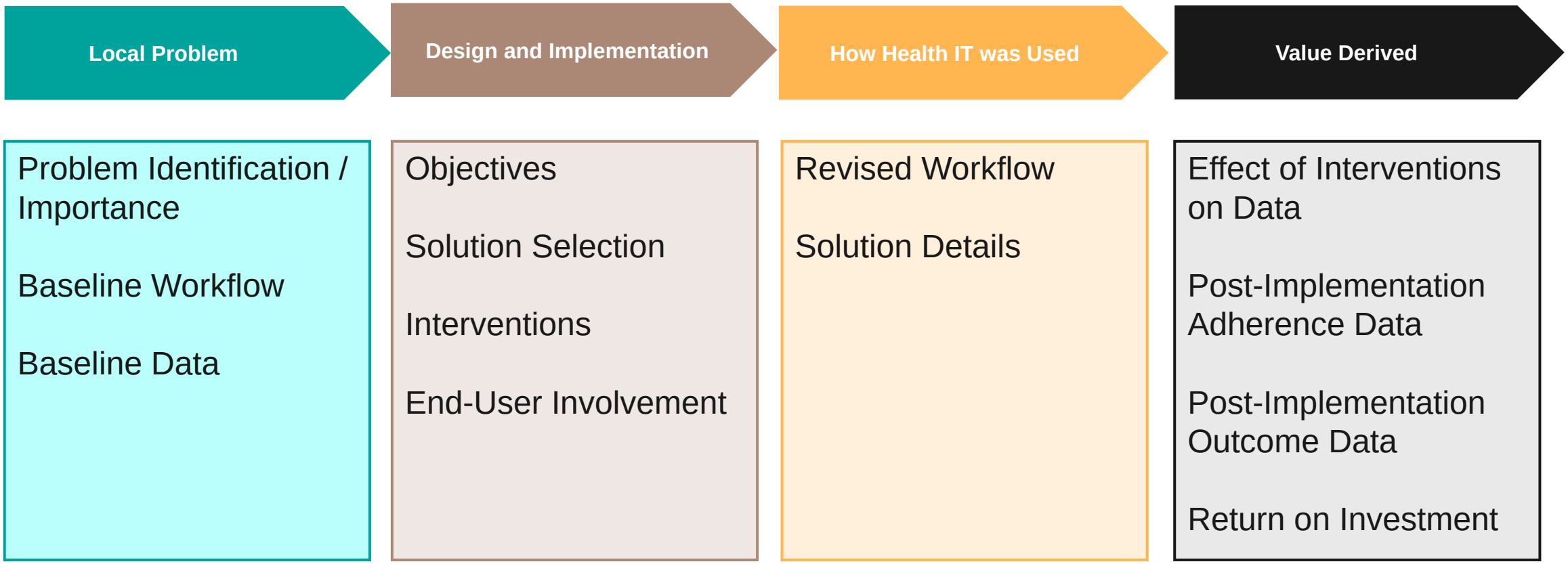
3

Discharge Medication Reconciliation

camh

Agenda



Overview of Discharge Issue

Data from across Ontario and within CAMH has shown that discharge from mental health diagnosis inpatient stays is difficult for people with mental health issues; high rates of readmission is indicative of this problem.

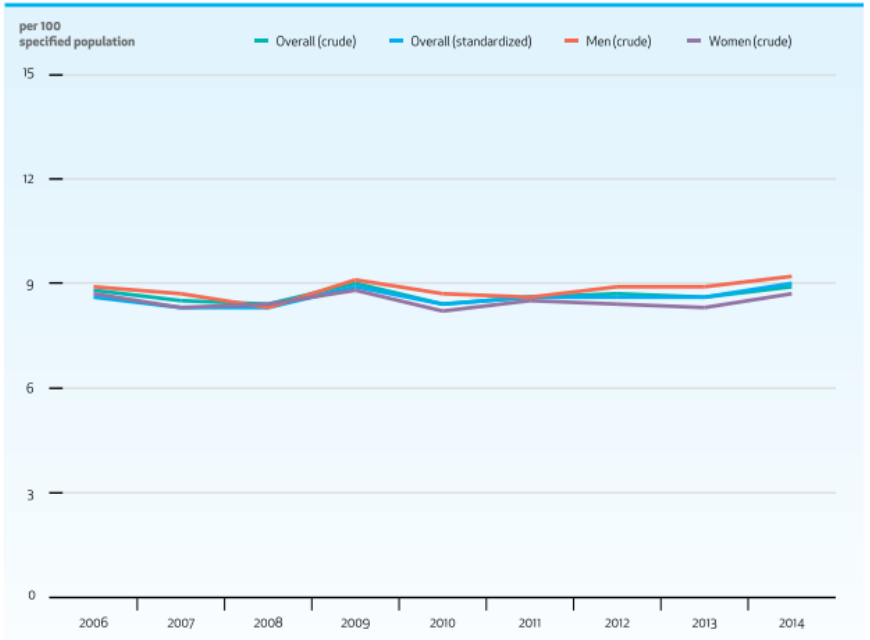
Evidence and data examined to determine factors related to discharge that have the greatest impact on readmission for a mental health population, and a multi-pronged project was designed to implement initiatives to address them at CAMH:

- Better patient education at discharge
- More timely completion and distribution of discharge summaries
- Improved patient safety and medication adherence through better medication reconciliation and associated practices
- Booking follow up appointments for better continuity

EXHIBIT 2.7.1 Number of inpatient readmissions within 30 days of discharge per 100 population aged 16 to 105 years with an incident mental health and addictions-related hospital admission, overall and by sex, in Ontario, 2006 to 2014

Key Finding

From 2006 to 2014, the rate of inpatient readmission within 30 days of discharge was stable and similar for men and women.



Problem Identification

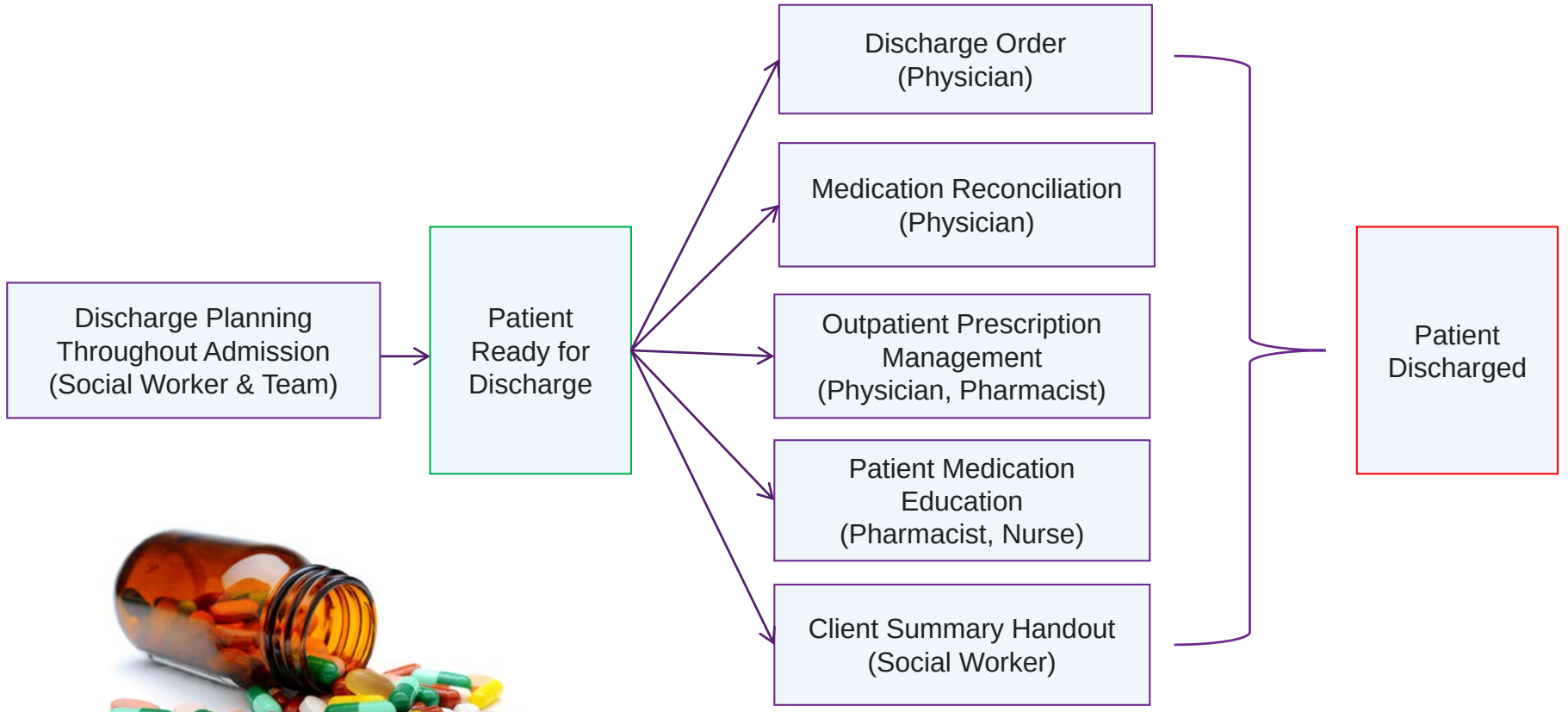
Problem Identification

- Discharge best practices include medication reconciliation and communicating medication clearly to patients and their outpatient providers
- CAMH's Medication Reconciliation rate at Discharge was lower than best practice standards
- Feedback from patients via patient experience surveys demonstrated that they found CAMH's medication information unclear

Why is this Important?

- Medication non-adherence is a major reason for readmission in patients with mental illnesses
- Transitions in care are risk periods for unintentional medication discrepancies
- Reduction of avoidable readmissions reduces system burden and improved patient treatment

Baseline Workflow



Discharge Summary – Previous State

Your Medications:

New Medications

ARIPiprazole (Abilify 2 mg oral tablet) , See Instructions, 8 mg Oral qAM x 4 weeks
Blister pack

insulin glargine (insulin glargine (Lantus)) , See Instructions, 32 units S/C qAM x 2 weeks

Non Formulary Medication (Diabetes supplies) , See Instructions, Please provide a glucometer, lancets, strips and needles for insulin x 4 weeks
Then follow up with GP

sitaGLIPtin (sitaGLIPtin 100 mg oral tablet) , See Instructions, 100 mg Oral qAM x 2 weeks
Blister pack

The following medications have been updated

Current:. **atorvastatin (atorvastatin 20 mg oral tablet)** , See Instructions, 20 mg Oral qAM x 2 weeks
Blister pack
STOP: **atorvastatin (atorvastatin 20 mg oral tablet)** 1 tab(s), Oral, once a day in the morning
, Refills: 0

Current:. **candesartan (candesartan 4 mg oral tablet)** , See Instructions, 4 mg Oral Once a day (at dinner)
x 2 weeks
Blister pack
STOP: **candesartan (candesartan 4 mg oral tablet)** 1 tab(s), Oral, once a day at bedtime
, Refills: 0

Current:. **metFORMIN (metFORMIN 500 mg oral tablet)** , See Instructions, 500 mg Oral TID with meals x 2 weeks
Blister pack
STOP: **metFORMIN (metFORMIN 500 mg oral tablet)** 2 tab(s), Oral, 2 times a day, Refills: 0

No Longer Take the Following Medications

carbidopa-levodopa (carbidopa-levodopa 25 mg-250 mg oral tablet) 1 tab(s), Oral, 5 times a day, Refills: 0

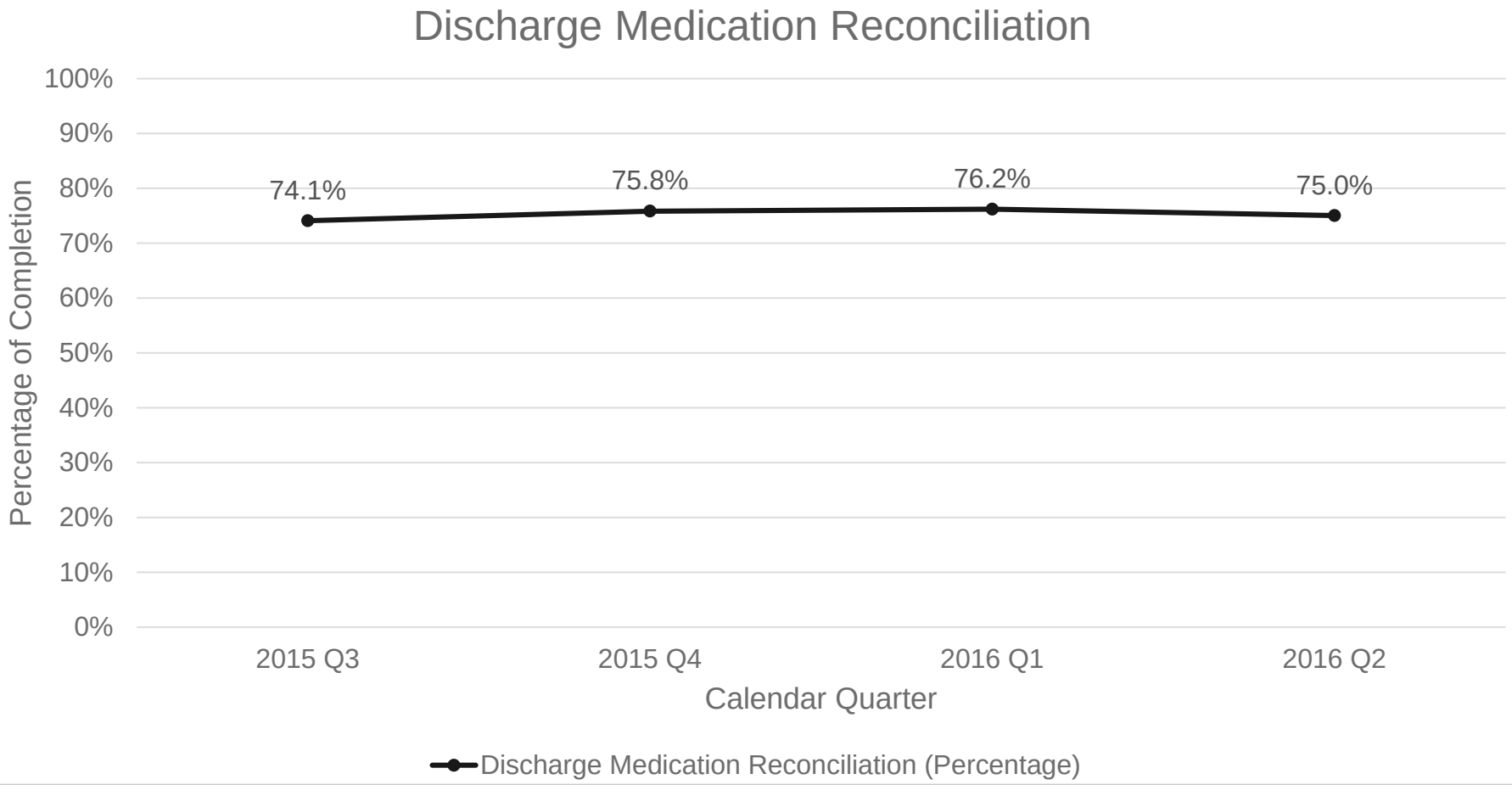
gliclazide (gliclazide 30 mg MR oral tablet) 1 tab(s), Oral, 2 times a day with breakfast and dinner
, do not crush or chew, Refills: 0

Major Issues:

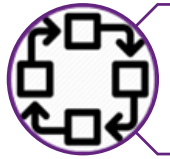
- Medication information may not be accurate
  - ➢ Populated incorrect information if discharge medication reconciliation not completed or not completed correctly
- Excessive length of document made medication information difficult to find
- Medication information not in patient-friendly language

Baseline Data

	2015 Q3 – 2016 Q2
Discharge Medication Reconciliation	75.3%



Objectives


Streamline workflow processes to save clinician time and prevent errors


Multidisciplinary approach to discharge medication reconciliation


Improve rates of discharge medication reconciliation

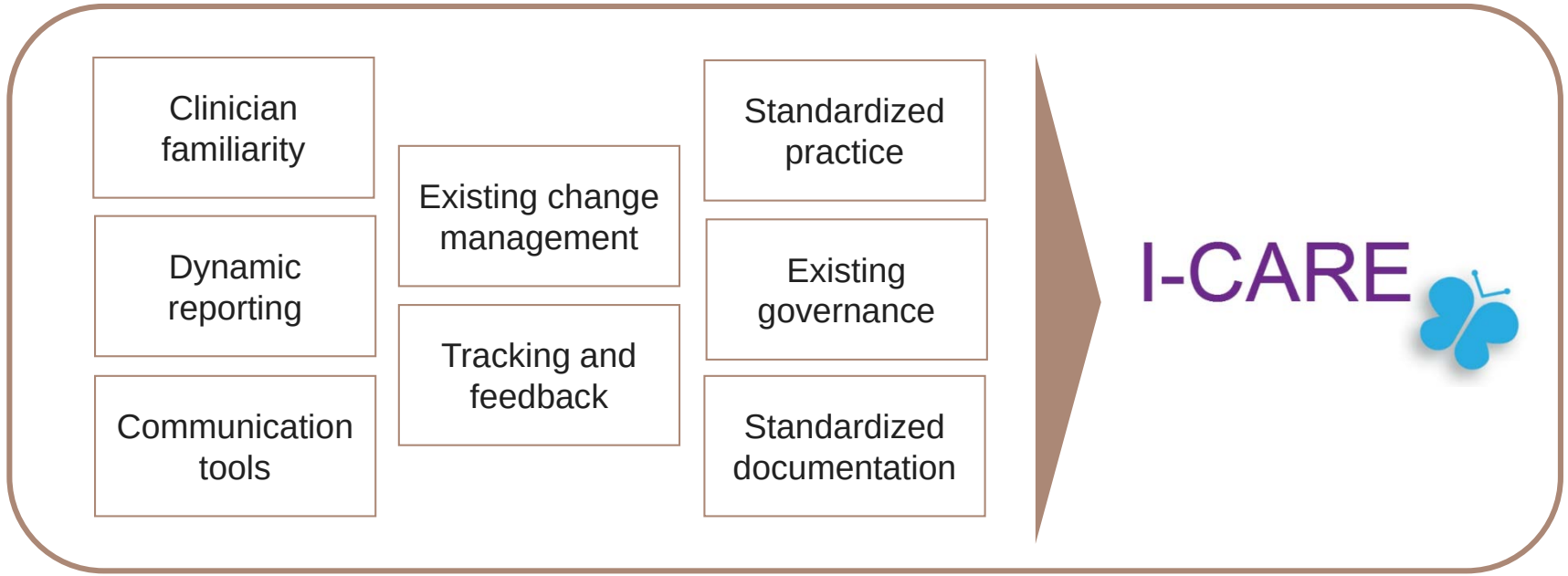

Provide meaningful information about medication to patients upon discharge


Improve continuity of care and decrease readmission rates

Solution Selection

CAMH identified a method to increase Medication Reconciliation rates upon discharge.

Options reviewed and selected by Medication Reconciliation P&T Subcommittee members and Discharge Optimization Project Working Group members.



Interventions

Discharge Date On Electronic Whiteboards

- Estimated discharge date placed on electronic whiteboards and pharmacist electronic patient list; monthly reporting of data (May 2017)

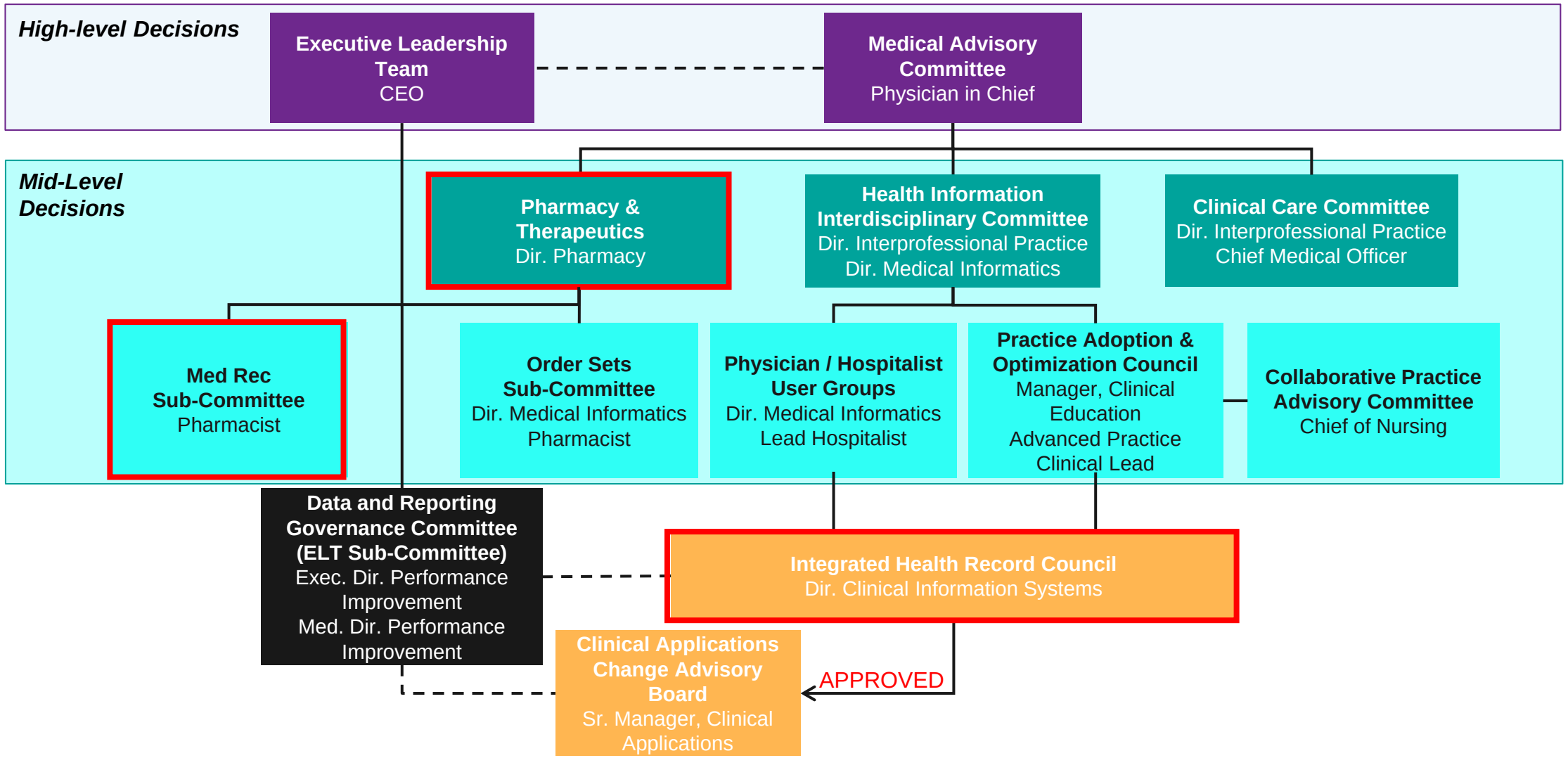
Patient Oriented Discharge Summary (PODS)

- Pilot (Sept. 2017) and rollout of patient oriented discharge summaries (Nov. 2017)

Discharge Medication Reconciliation Alert

- Alert fired if Discharge Medication Reconciliation is not completed upon discharge (Mar. 2018)

Strategic Governance

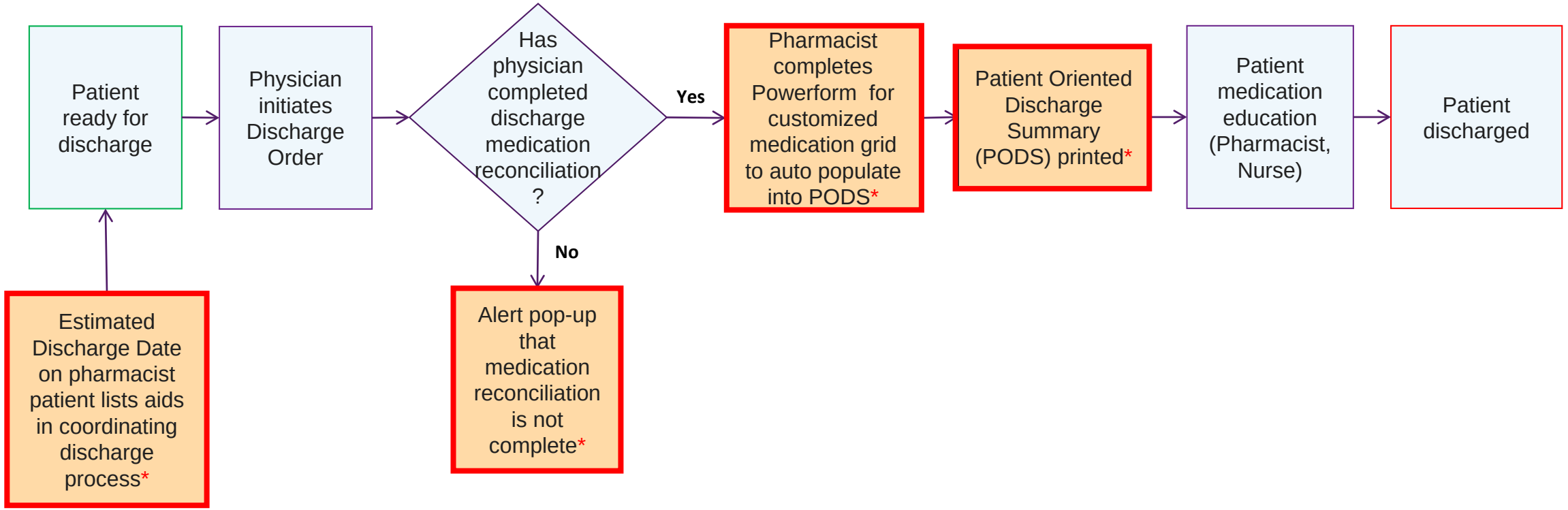


**** Advisory / Working Groups established as required***

End-User Involvement

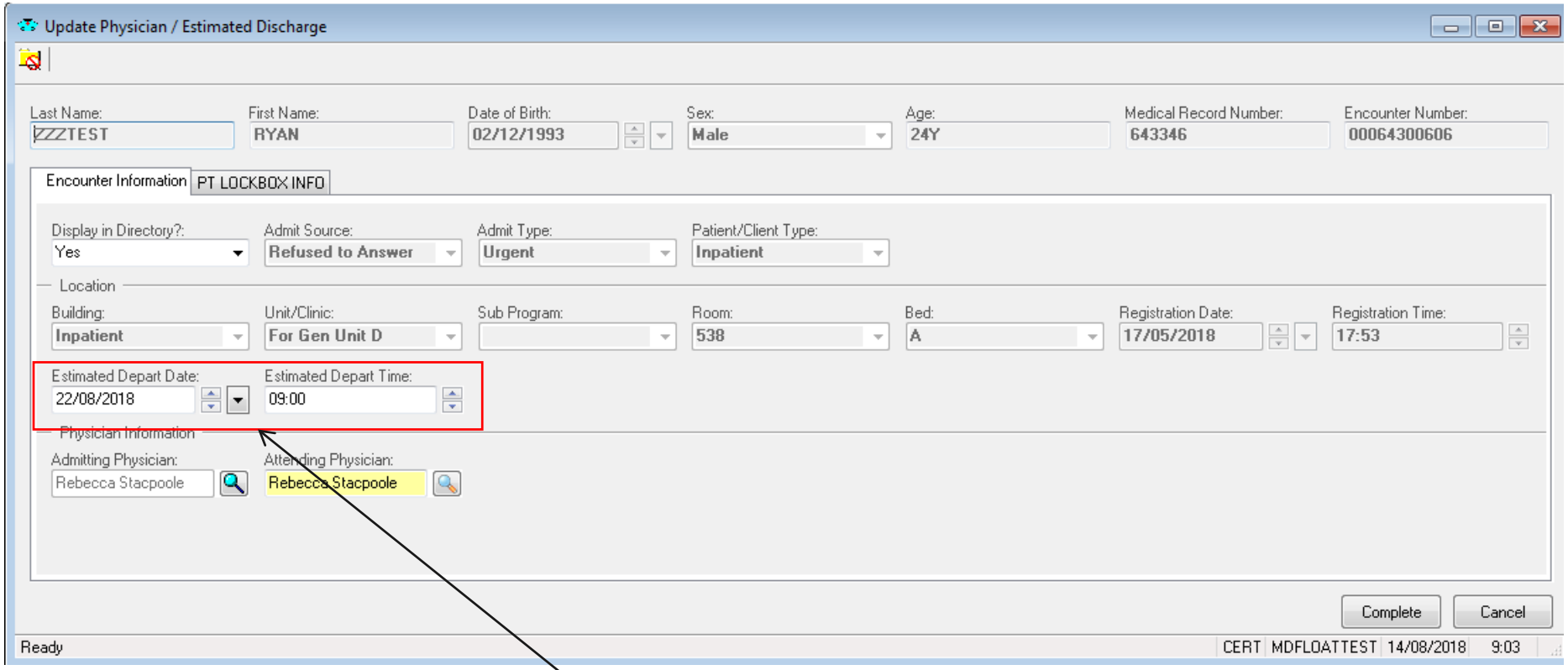
Integrated Health Record Committee	• Chairs: Dir. Interprofessional Practice, Dir. Medical Informatics • Includes clinicians and other stakeholders • Initial approval of need
Medication Reconciliation P&T Subcommittee	• Chair: Pharmacist • Representatives from pharmacy, physicians, nurses, IT education, medical informatics, health information management
Pharmacy & Therapeutics	• Co-chairs: Appointed Physician and Dir. Pharmacy • Owners and approvers of Med Rec Policies • Includes a minimum of 6 physicians, 4 pharmacists
Discharge Optimization Project	• Senior Executive Sponsorship • Included membership from clinical programs, Professional Practice, front line managers, social workers, pharmacists, physicians, nurses, patients, and families

Revised Workflow



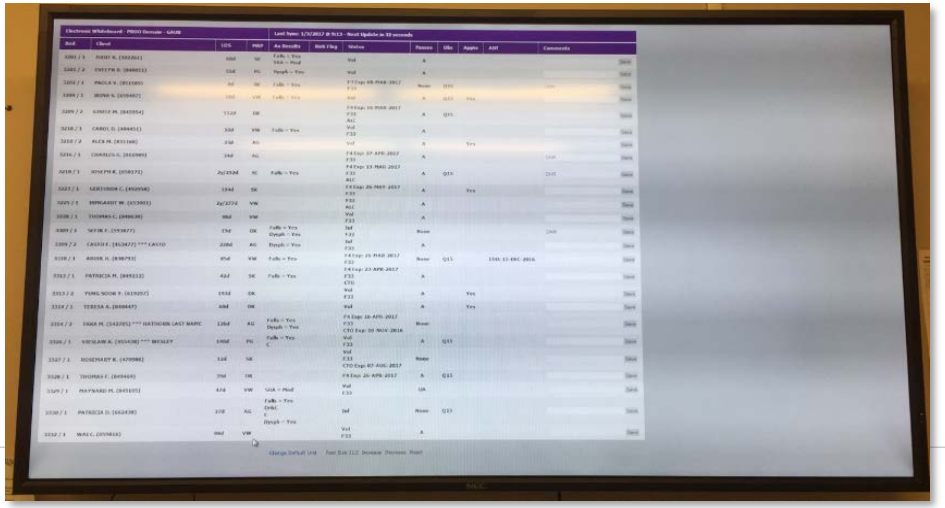
New Health IT used within intervention *

Estimated Discharge Date on Electronic Whiteboards



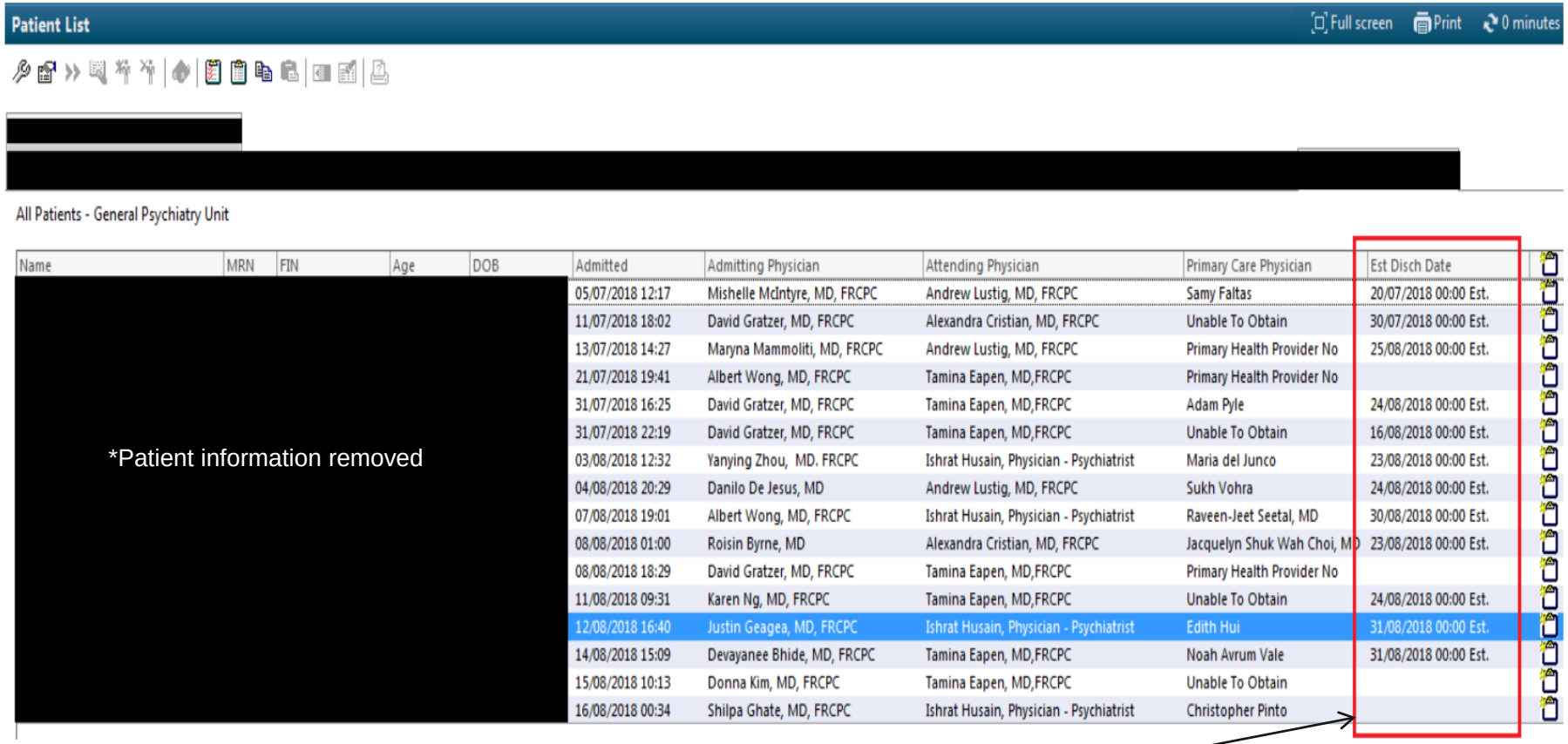
Estimated Discharge Date on Electronic Whiteboards

BED	CLIENT	LOS	MRP	SW / SA	AX RESULTS	RISK FLAG	STATUS	PASSES	OBS	APPTS	ADT	COMMENTS
100 A	ALEX H. (110032) ***Tony	8d	JR	TF / AC	Choking Alert		Vol	Indirect			Total LOS = 8 d	
100 B	James Smith (348990)	364d	JR	AB / AC	DASA = 4 SRA-High Falls = Yes EpiPen No CPR	S	Vol	None	SR		EDD - 09/25/18 Total LOS = 364 d	RAI Due Oct 29
101 A	C A (227398)	14d	JR	TF / RP	A&C EpiPen DASA = 7 Dysph = Yes		F33	None	MR	Yes	EDD - 10/14/18 Total LOS = 14 d	
101 B	FIONA M. (234959)***Apple	1y 60d	KJ	AB / LX	DASA = none Dr&C Thc	P-	F1 05/29	Escorted***	CO		F-ULOA Total LOS = 1y 60 d	Primary Nurse: YP
101 C	B B (235555)	12d	KJ	TF / AC	C DASA = 7 Etoh CAPI		F48 05/29	A***	PDP - MR	Yes	EDD - 10/12/18 Total LOS = 21 d	



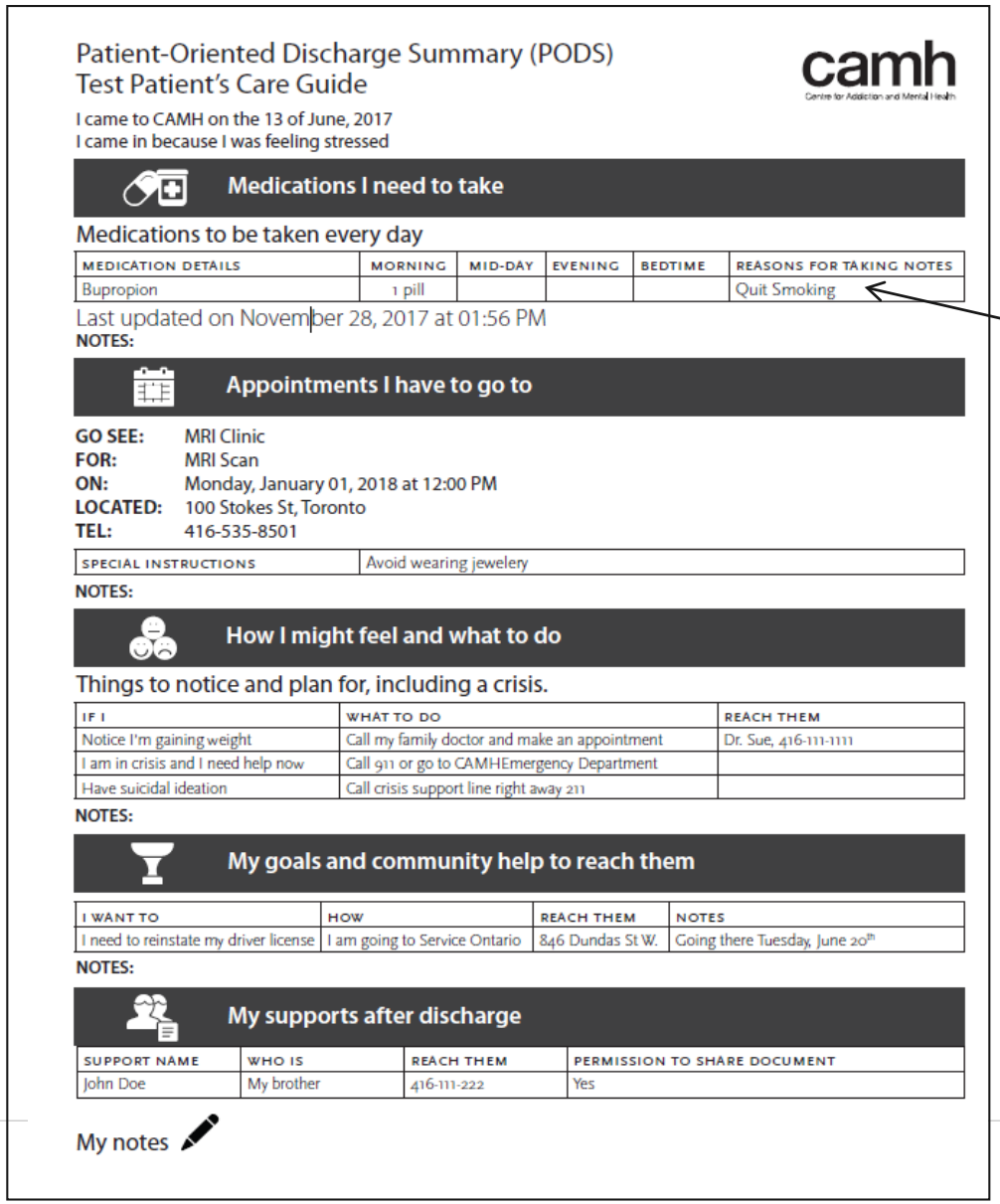
Estimated Discharge Date

Estimated Discharge Date on Pharmacy Patient List



Name	MRN	FIN	Age	DOB	Admitted	Admitting Physician	Attending Physician	Primary Care Physician	Est Disch Date
[redacted]					05/07/2018 12:17	Mishelle McIntyre, MD, FRCPC	Andrew Lustig, MD, FRCPC	Samy Faltas	20/07/2018 00:00 Est.
					11/07/2018 18:02	David Gratzer, MD, FRCPC	Alexandra Cristian, MD, FRCPC	Unable To Obtain	30/07/2018 00:00 Est.
					13/07/2018 14:27	Maryna Mammoliti, MD, FRCPC	Andrew Lustig, MD, FRCPC	Primary Health Provider No	25/08/2018 00:00 Est.
					21/07/2018 19:41	Albert Wong, MD, FRCPC	Tamina Eapen, MD,FRCPC	Primary Health Provider No	
					31/07/2018 16:25	David Gratzer, MD, FRCPC	Tamina Eapen, MD,FRCPC	Adam Pyle	24/08/2018 00:00 Est.
					31/07/2018 22:19	David Gratzer, MD, FRCPC	Tamina Eapen, MD,FRCPC	Unable To Obtain	16/08/2018 00:00 Est.
					03/08/2018 12:32	Yanying Zhou, MD. FRCPC	Ishrat Husain, Physician - Psychiatrist	Maria del Junco	23/08/2018 00:00 Est.
					04/08/2018 20:29	Danilo De Jesus, MD	Andrew Lustig, MD, FRCPC	Sukh Vohra	24/08/2018 00:00 Est.
					07/08/2018 19:01	Albert Wong, MD, FRCPC	Ishrat Husain, Physician - Psychiatrist	Raveen-Jeet Seetal, MD	30/08/2018 00:00 Est.
					08/08/2018 01:00	Roisin Byrne, MD	Alexandra Cristian, MD, FRCPC	Jacquelyn Shuk Wah Choi, MD	23/08/2018 00:00 Est.
					08/08/2018 18:29	David Gratzer, MD, FRCPC	Tamina Eapen, MD,FRCPC	Primary Health Provider No	
					11/08/2018 09:31	Karen Ng, MD, FRCPC	Tamina Eapen, MD,FRCPC	Unable To Obtain	24/08/2018 00:00 Est.
					12/08/2018 16:40	Justin Geagea, MD, FRCPC	Ishrat Husain, Physician - Psychiatrist	Edith Hui	31/08/2018 00:00 Est.
					14/08/2018 15:09	Devayanee Bhide, MD, FRCPC	Tamina Eapen, MD,FRCPC	Noah Avrum Vale	31/08/2018 00:00 Est.
					15/08/2018 10:13	Donna Kim, MD, FRCPC	Tamina Eapen, MD,FRCPC	Unable To Obtain	
					16/08/2018 00:34	Shilpa Ghate, MD, FRCPC	Ishrat Husain, Physician - Psychiatrist	Christopher Pinto	

Patient Oriented Discharge Summaries



Patient-Oriented Discharge Summary (PODS)
Test Patient's Care Guide

camh
Centre for Addiction and Mental Health

I came to CAMH on the 13 of June, 2017
I came in because I was feeling stressed

Medications I need to take

Medications to be taken every day

MEDICATION DETAILS	MORNING	MID-DAY	EVENING	BEDTIME	REASONS FOR TAKING NOTES
Bupropion	1 pill				Quit Smoking

Last updated on November 28, 2017 at 01:56 PM
NOTES:

Appointments I have to go to

GO SEE: MRI Clinic
FOR: MRI Scan
ON: Monday, January 01, 2018 at 12:00 PM
LOCATED: 100 Stokes St, Toronto
TEL: 416-535-8501

SPECIAL INSTRUCTIONS	Avoid wearing jewelery

NOTES:

How I might feel and what to do

Things to notice and plan for, including a crisis.

IF I	WHAT TO DO	REACH THEM
Notice I'm gaining weight	Call my family doctor and make an appointment	Dr. Sue, 416-111-1111
I am in crisis and I need help now	Call 911 or go to CAMH Emergency Department	
Have suicidal ideation	Call crisis support line right away 211	

NOTES:

My goals and community help to reach them

I WANT TO	HOW	REACH THEM	NOTES
I need to reinstate my driver license	I am going to Service Ontario	846 Dundas St W.	Going there Tuesday, June 20th

NOTES:

My supports after discharge

SUPPORT NAME	WHO IS	REACH THEM	PERMISSION TO SHARE DOCUMENT
John Doe	My brother	416-111-222	Yes

My notes

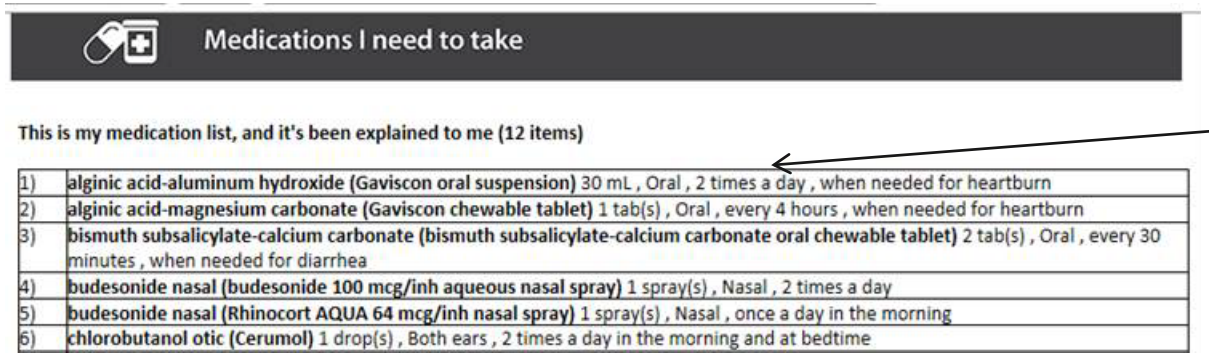
Revised medications section

Patient Oriented Discharge Summaries

Option 1 – Discharge Med Rec + Pharmacy Form

Medications to be taken every day					
Name	Morning	Mid-Day	Evening	Bedtime	**Reason For Taking / Notes**
Olanzapine 5 mg tablet (Take 1 tablet once each day)	1				To reduce symptoms of schizophrenia
Medication to be taken regularly but less often					
Depo-Provera (medroxyprogesterone) 150 mg injection every 3 months					For birth control Last dose: July 5, 2017 Next dose due: Sept 27, 2017
Medications to be taken only when needed					
Lorazepam 1 mg tablet every 4 hours (up to 3 tablets per day at most)					To reduce anxiety

Option 2 – Discharge Med Rec only



Medications I need to take

This is my medication list, and it's been explained to me (12 items)

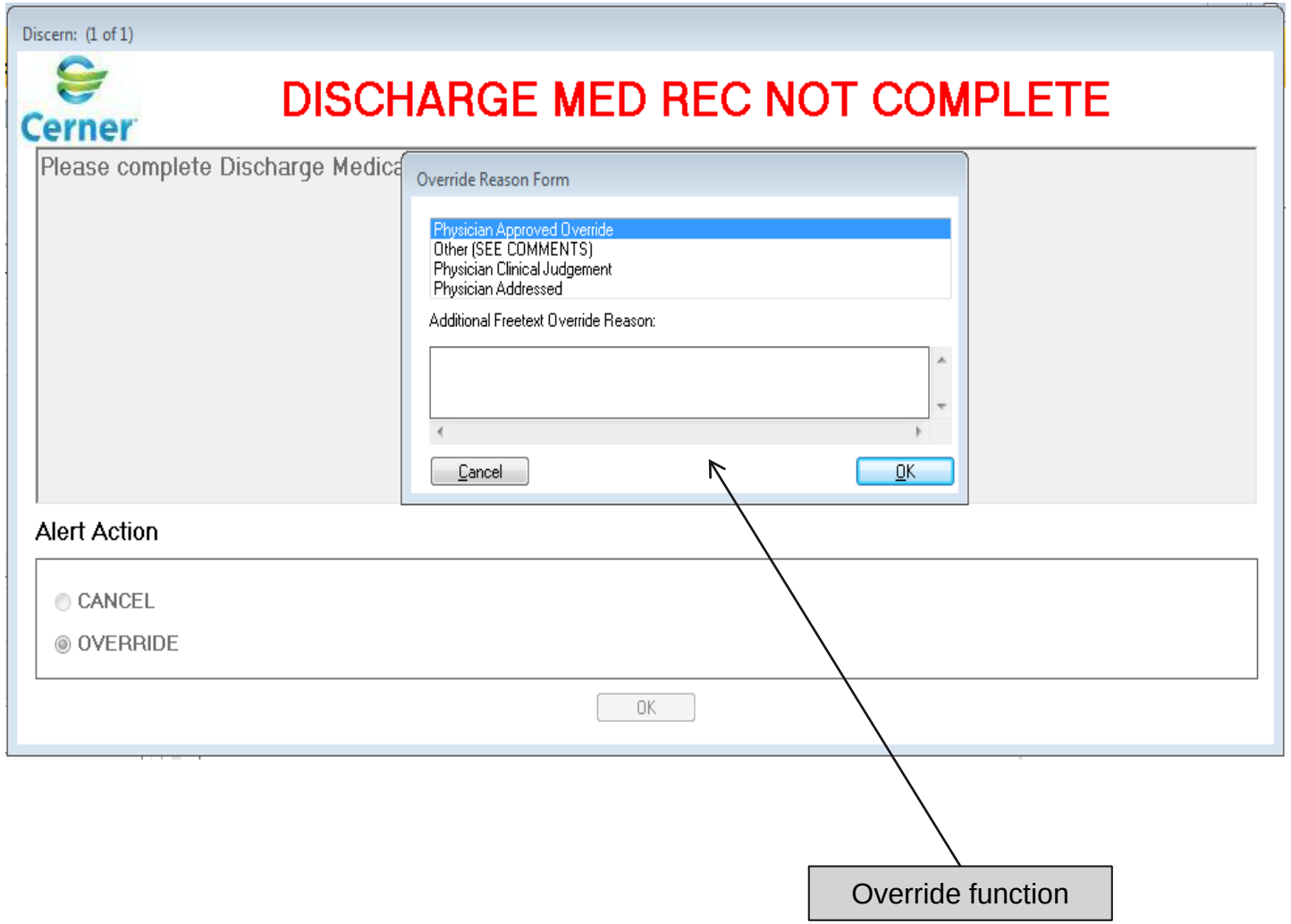
1)	**alginic acid-aluminum hydroxide (Gaviscon oral suspension)** 30 mL , Oral , 2 times a day , when needed for heartburn
2)	**alginic acid-magnesium carbonate (Gaviscon chewable tablet)** 1 tab(s) , Oral , every 4 hours , when needed for heartburn
3)	**bismuth subsalicylate-calcium carbonate (bismuth subsalicylate-calcium carbonate oral chewable tablet)** 2 tab(s) , Oral , every 30 minutes , when needed for diarrhea
4)	**budesonide nasal (budesonide 100 mcg/inh aqueous nasal spray)** 1 spray(s) , Nasal , 2 times a day
5)	**budesonide nasal (Rhinocort AQUA 64 mcg/inh nasal spray)** 1 spray(s) , Nasal , once a day in the morning
6)	**chlorobutanol otic (Cerumol)** 1 drop(s) , Both ears , 2 times a day in the morning and at bedtime

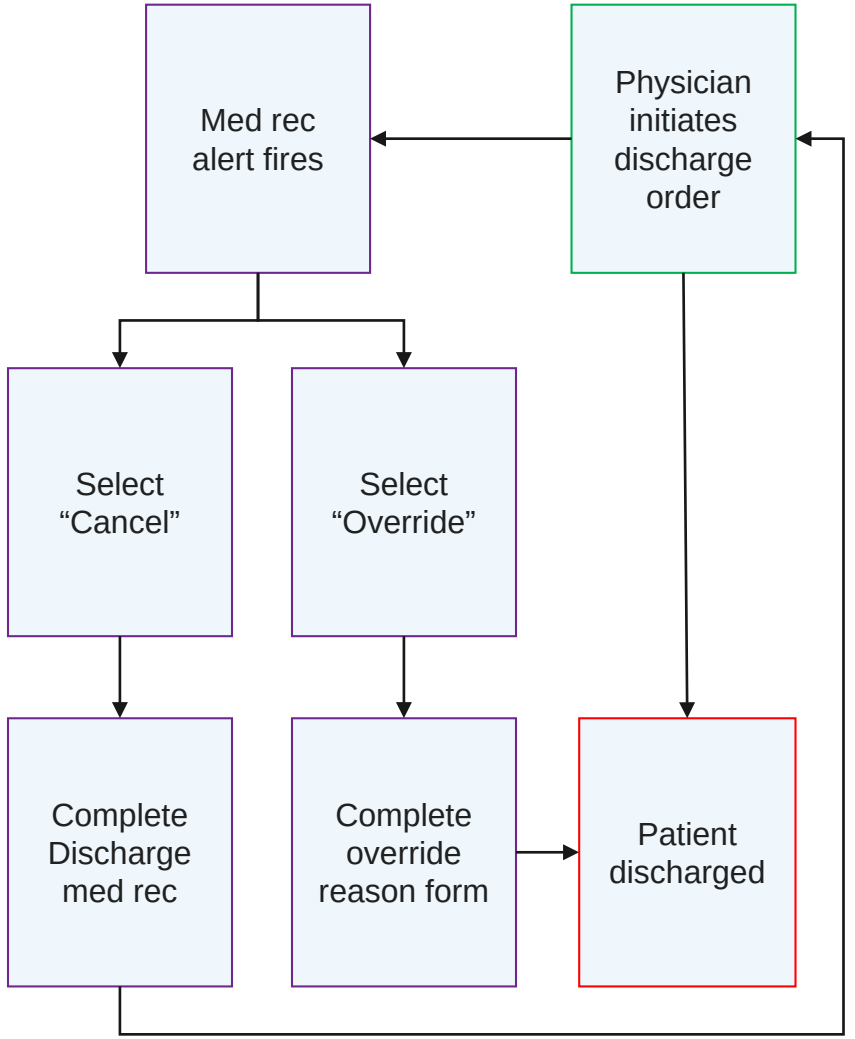
Patient-friendly terms

Option 3 – Incomplete Discharge Med Rec

Please follow-up with your physician or pharmacist.

Discharge Medication Reconciliation Alert



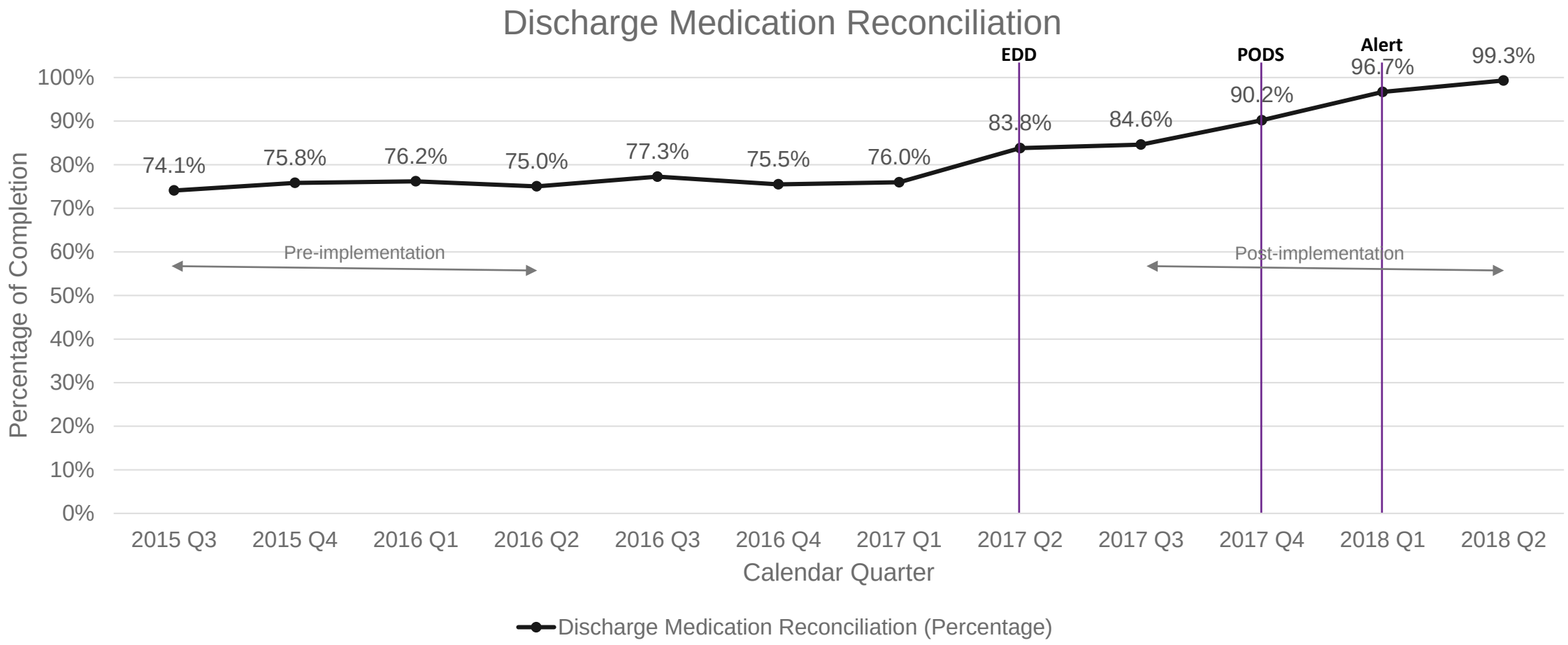


Effect of Interventions on Data

	Discharge Date on Electronic Whiteboards	Patient Oriented Discharge Summary (PODS)	Discharge Medication Reconciliation Alert
Intervention	• Estimated discharge date placed on electronic whiteboards and pharmacist electronic patient list; monthly reporting of data (May 2017)	• Pilot (Sept. 2017) and rollout of patient oriented discharge summaries (Nov. 2017)	• Alert fired if Discharge Medication Reconciliation is not completed upon discharge (Mar. 2018)
Effect	• Team able to better coordinate patient discharge planning (social workers, nurses, physicians, pharmacists) • Pharmacists able to better track pending discharges remotely, since most pharmacists provide care on multiple units	• Patients able to better understand and ask questions about medications • Tangible evidence of medication reconciliation in a patient-facing document	• Clinical decision support reminds physicians to complete medication reconciliation step early in the discharge process to enable medication information to populate into PODS

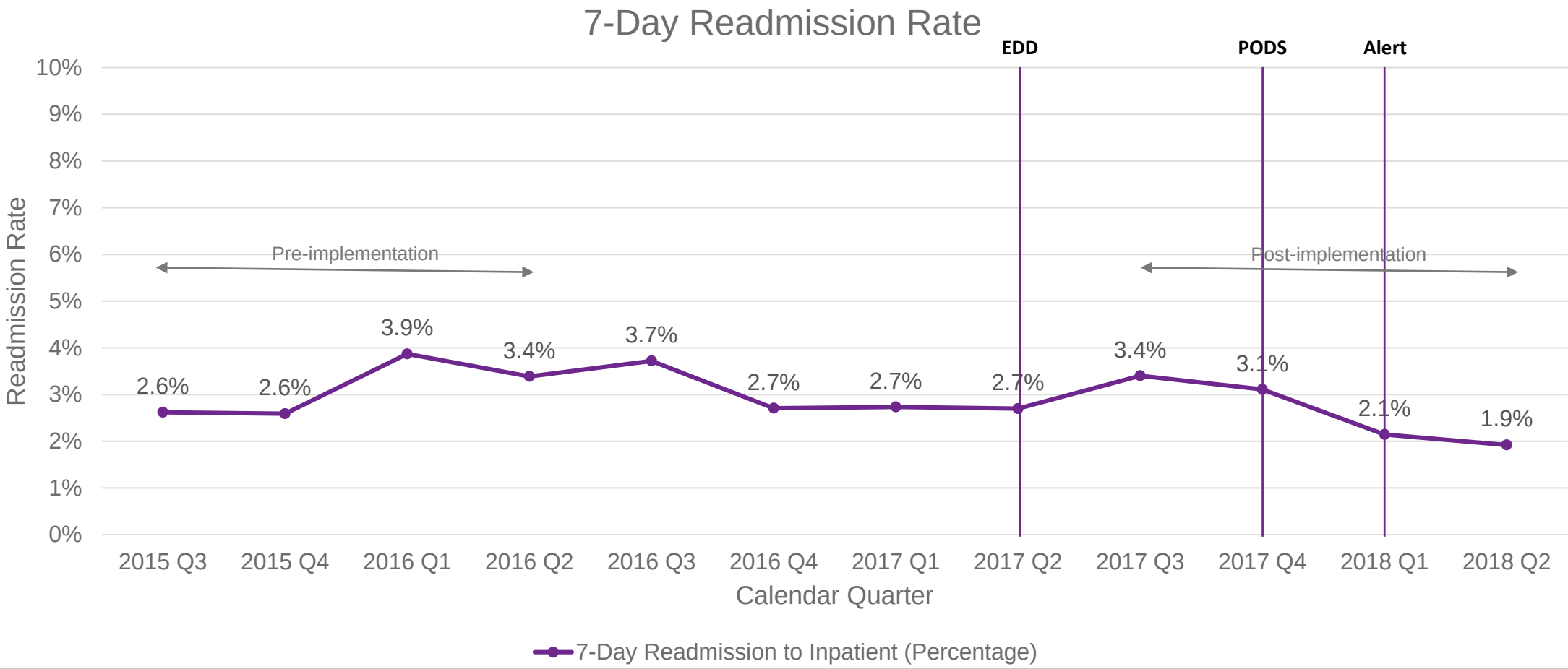
Post-Implementation Adherence Data

	2015 Q3 – 2016 Q2	2017 Q3 – 2018 Q2
Discharge Medication Reconciliation	75.3%	92.8%

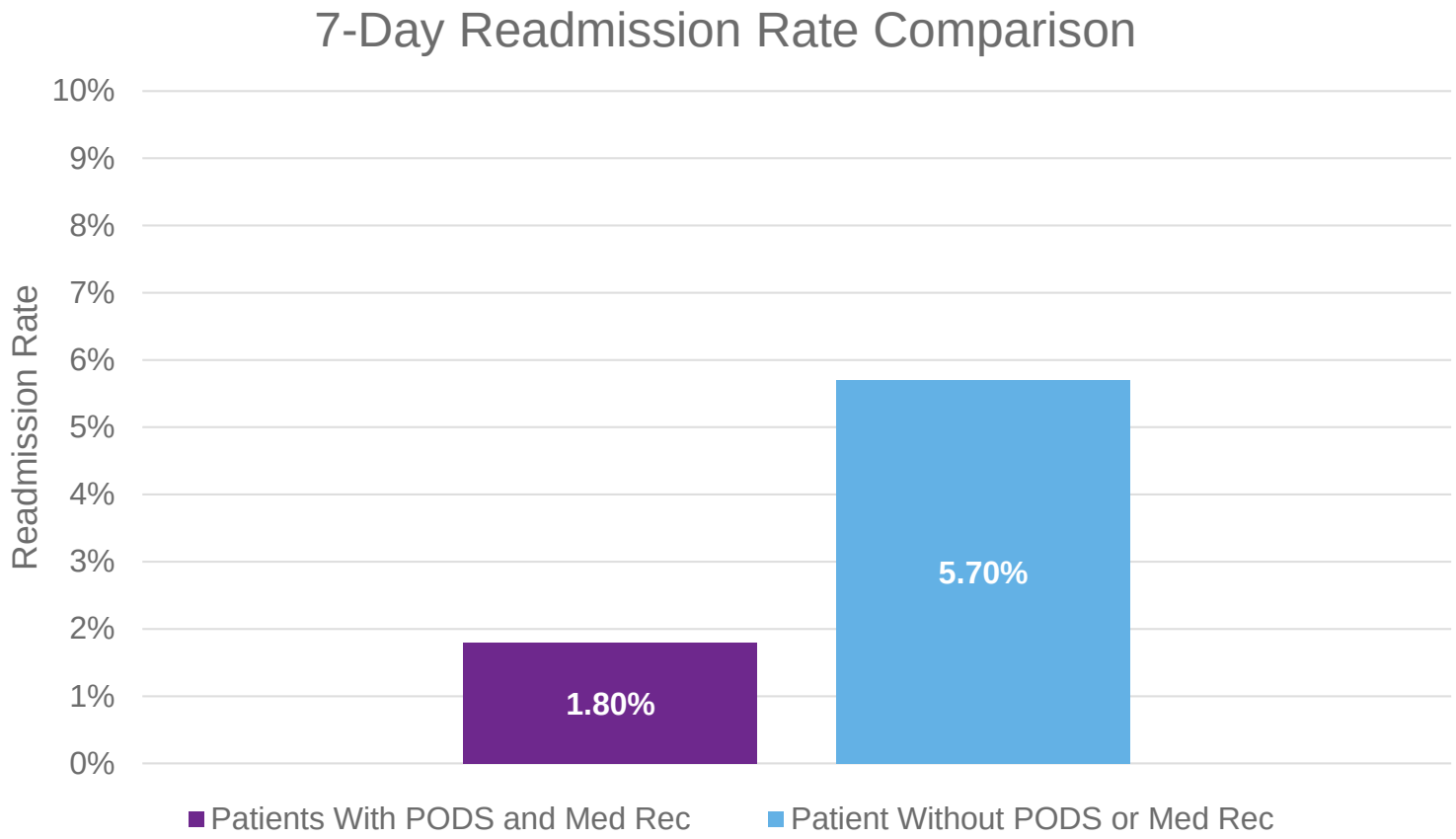


Post-Implementation Outcome Data

	2015 Q3 – 2016 Q2	2017 Q3 – 2018 Q2
7-Day Readmission Rate	3.12%	2.64%



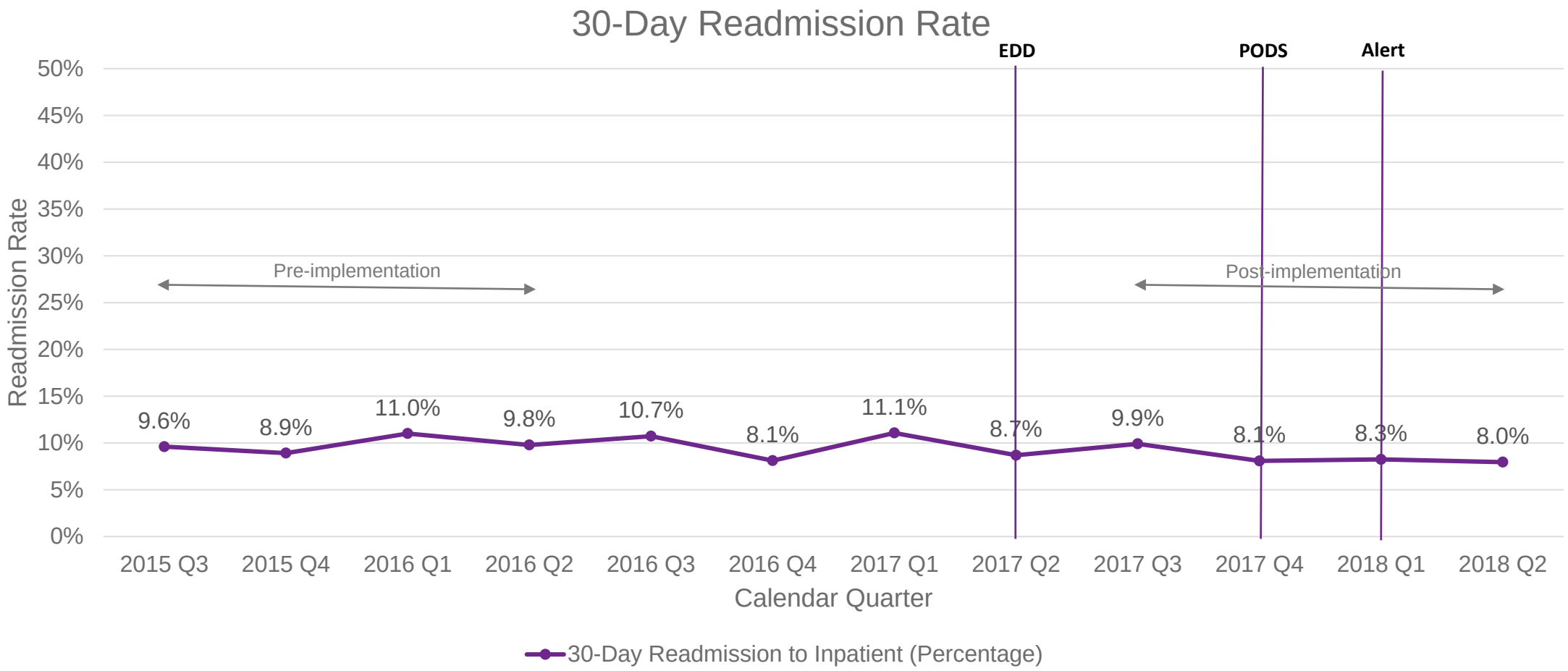
Post-Implementation Outcome Data



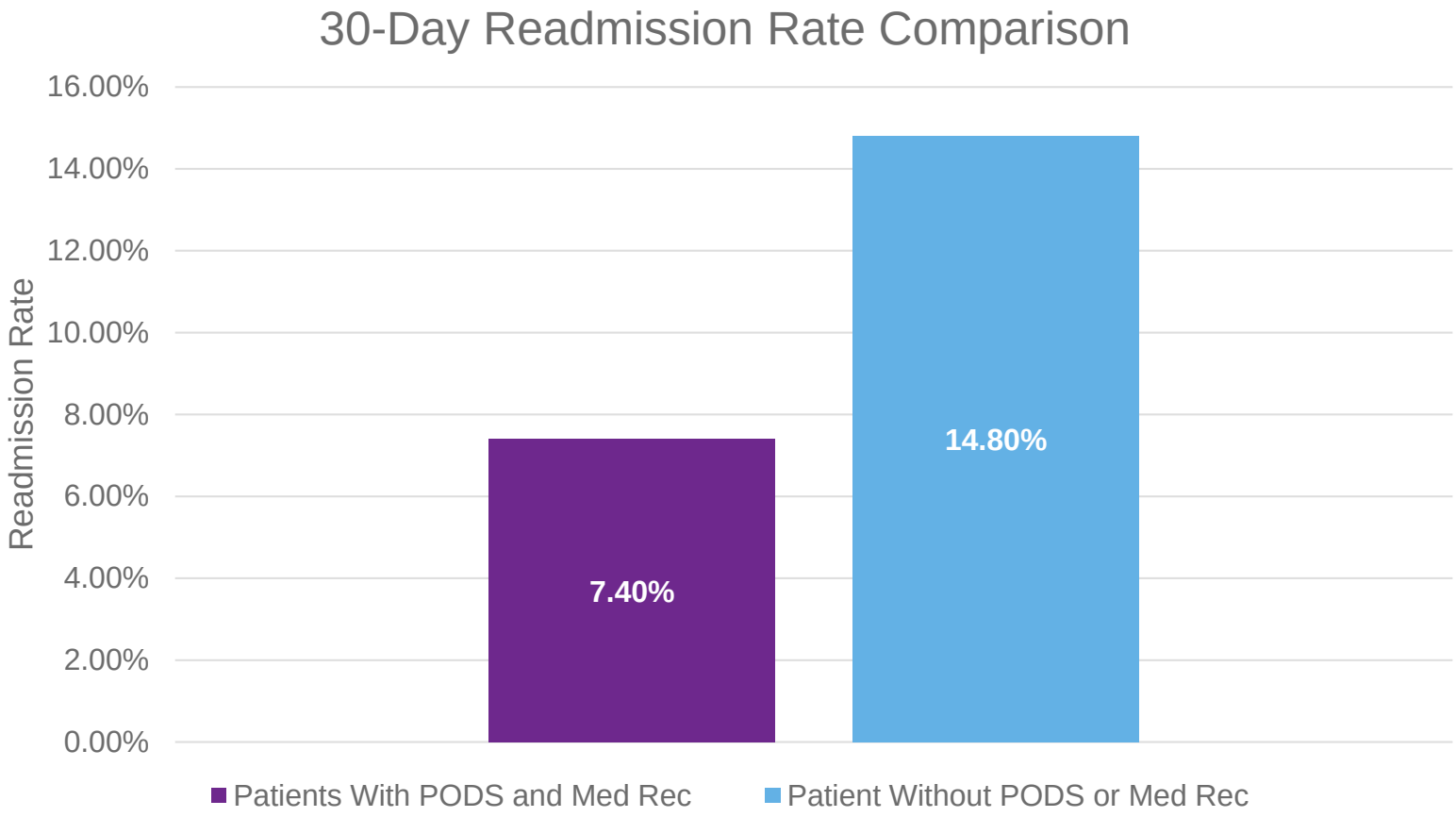
From Jan 2018 – Aug 2018, patients discharged with a PODS and medication reconciliation completed have lower 7-day readmission rates than those without a PODS or medication reconciliation completed.

Post-Implementation Outcome Data

	2015 Q3 – 2016 Q2	2017 Q3 – 2018 Q2
30-Day Readmission Rate	9.82%	8.55%



Post-Implementation Outcome Data



From Jan 2018 – Aug 2018, patients discharged with a PODS and medication reconciliation completed have lower 30-day readmission rates than those without a PODS or medication reconciliation completed.

Return on Investment

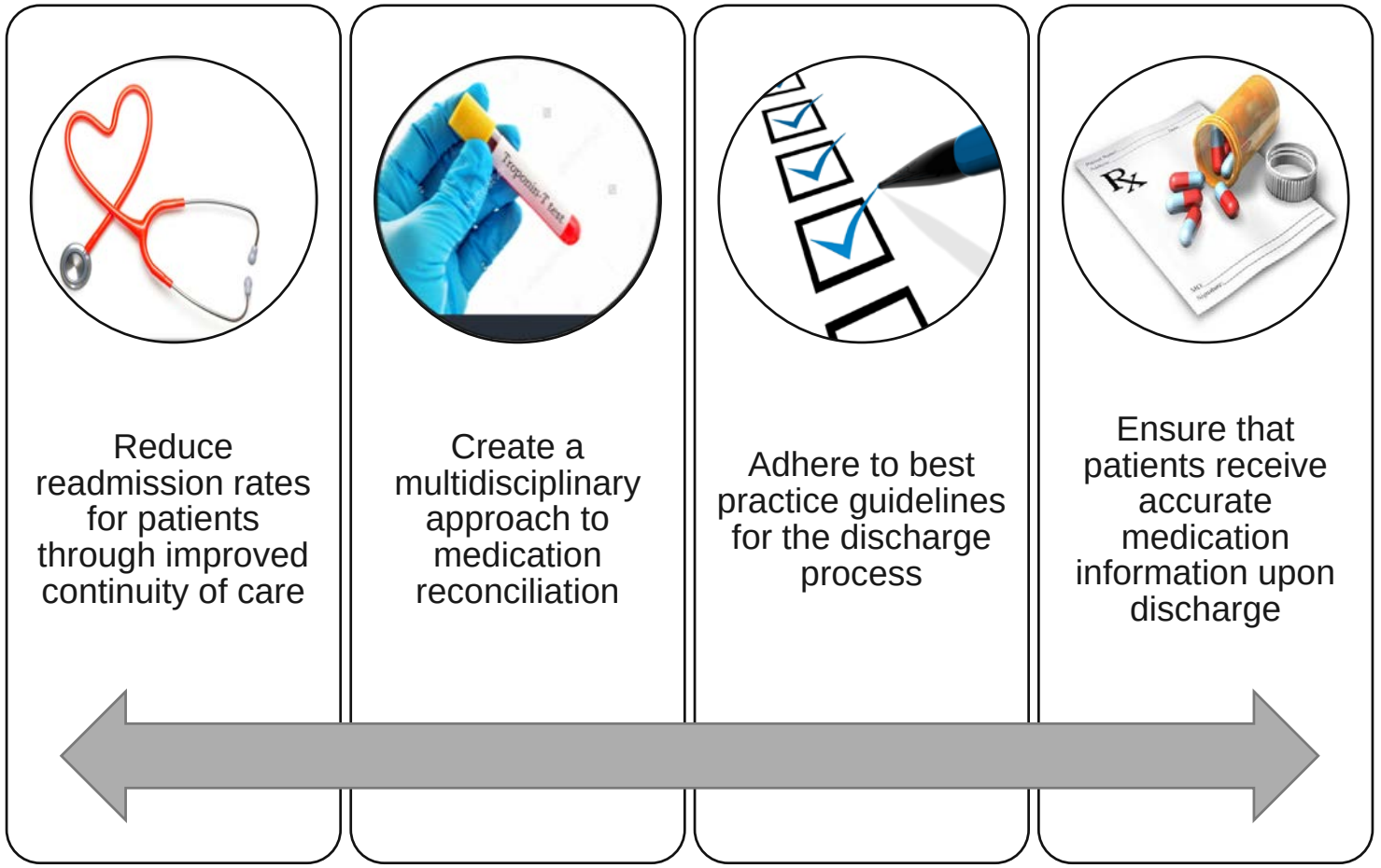
	Jun 2014 – May 2015	Apr 2017 – Mar 2018	Pre / Post intervention difference
Reconciliation rate	62.9%	88.8%	25.9%
Potential savings	$7 484 024	$9 280 512	$1 796 488

An increase in patients with medication reconciliation completed upon discharge can result in a decrease of adverse events after leaving CAMH.

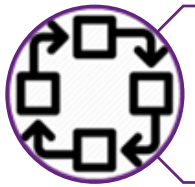
(Reconciliated discharges * Cost of adverse event) = Potential savings**

*Etchells, E., et al. "The economics of patient safety in acute care."Canadian Patient Safety Institute (2012)
**North York General Hospital winning Davies Submission. (2016)

Return on Investment



Lessons Learned



Optimization of health IT can be used to support multidisciplinary care workflows

Inclusion of patients in health IT solution design can help improve documentation

Targeted physician alerts can be effective, even with override functions

Thank You

camh