



HIMSS Davies Enterprise Award
Case Study – Improving Depression Care

UNC Health Care

Leveraging IT to Improve Patient Outcomes

September 11, 2018



Our Journey – Improving Depression Care

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UNC Health Care System Overview

Providing high quality care to patients in North Carolina

Who we are, Who we serve (1 of 3)

UNC Health Care System Overview

Integrated, not-for-profit health care system, owned by the State of North Carolina and based in Chapel Hill. We provide comprehensive patient care, facilitate physician education and research excellence, and promote the health and well-being of all North Carolinians



<u>Key Stats</u>	<u>2011</u>	<u>2017</u>
Net patient revenues	\$2.0B	\$4.9B
Licensed beds	1,530	>3,400
Employees	14,000	>31,500
Medical staff	3,186	>5,400
Employed MDs	2,110	>3,200
Surgeries	60,000	>120,000
ED visits	151,000	>510,000
Clinic visits	1.1M	>3.5M

We are committed to providing them high quality care across our state

Who we are, Who we serve (2 of 3)

Delivering High Quality Care Across the State

 **UNC ROCKINGHAM**
HEALTH CARE

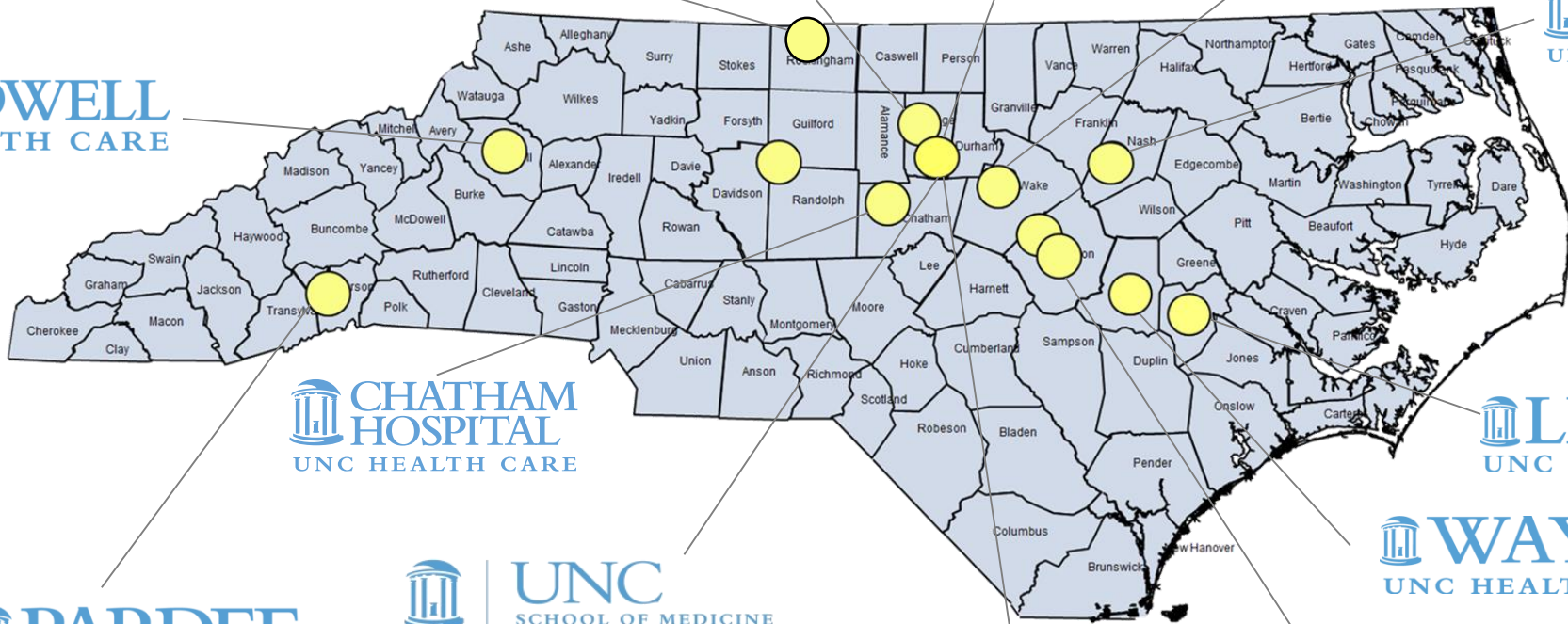
 **UNC**
HOSPITALS
HILLSBOROUGH
CAMPUS

 **UNC**
HOSPITALS

 **UNC REX**
HEALTHCARE

 **NASH**
UNC HEALTH CARE

 **CALDWELL**
UNC HEALTH CARE



 **CHATHAM**
HOSPITAL
UNC HEALTH CARE

 **LENOIR**
UNC HEALTH CARE

 **PARDEE**
UNC HEALTH CARE

 **UNC**
SCHOOL OF MEDICINE

 **UNC FACULTY**
PHYSICIANS
UNC HEALTH CARE

 **UNC PHYSICIANS**
NETWORK
UNC HEALTH CARE

 **WAYNE**
UNC HEALTH CARE

 **JOHNSTON**
UNC HEALTH CARE

As a system, a success for one is a success for all

Who we are, Who we serve (3 of 3)



Nobel Prizes for Science



2016 HOSPITAL RANKINGS:

- 8 nationally recognized adult specialties
- 2 high performing adult specialties
- 7 nationally recognized children's specialties

"BEST HOSPITALS IN THE REGION":

- UNC Hospitals
- UNC Rex
- High Point Regional

2016 SCHOOL RANKINGS

- #2 for Primary Care
- #2 School of Public Health



Local Problem

Depression is a significant problem across our nation and our state

Local Problem (1 of 6)

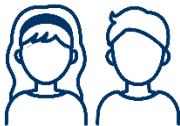
Background and Importance

Major depression is one of the most common mental disorders in the United States. For some, major depression can severely limit one's ability to carry out major life activities [1].

Have had at least one major depressive episode (US)



6.2 million adults, or 6.7% of all adults



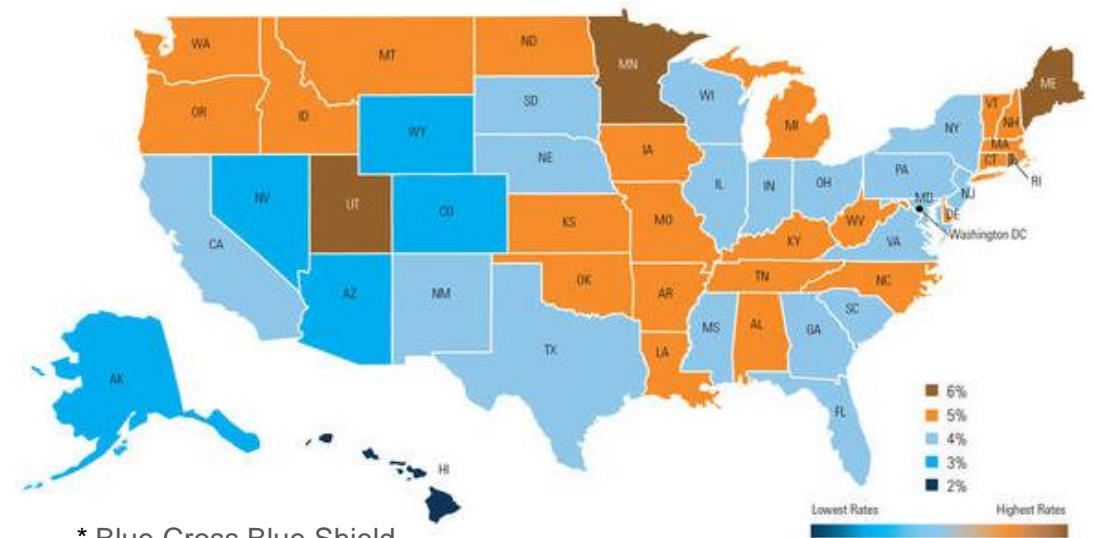
3.1 million adolescents aged 12 to 17, or 12.8% of all adolescents

NC is among states with the highest rates of depression



5% of North Carolinians have a diagnosis of major depression, or over 500 thousand people (Ref 2)

Major Depression Rates By State [2]



* Blue Cross Blue Shield

PHQ-2 and PHQ-9 are the most commonly used tools for depression screening

Local Problem (2 of 6)

Patient Health Questionnaires

PHQ-2: Frequency of Depressed Mood

PHQ-2 Depression Screen		Office Visit from...
		5/2/18
		1300
Over the last 2 weeks, how often have you been bothered by any of the following problems?		
Little interest or pleasure in doing things		1
Feeling down, depressed, or hopeless		2
Clinic Collected PHQ-2 Total Score		3
OTHER		
***** PHQ-2 is positive. Complete PHQ-9 to finish depression screen.*****		

P4: Suicide Risk

P4 Suicidality Screener		Office Vi...
		4/19/18
		1200
Initial Suicide Screening Question: active vs. passive thoughts		
Have you had thoughts of actually hurting yourself?		
P4 Suicidality Screener		
1 - Have you ever attempted to harm yourself in the past?		
2 - Have you thought about how you might actually hurt		
3 - There's a big difference between having a thought and		
4 - Is there anything that would prevent or keep you from		
Suicide Risk Summary		
P4 - Acute Suicide Risk Level		
Clarifying questions: if unclear if patient has a plan		
Do you live alone?		
Have you thought about taking an overdose of medication, driving		
Do you own a gun?		
Have you been stockpiling (saving up) medications?		
Do you feel hopeless about the future?		
Do you feel you can resist your impulses to harm yourself?		
Right now, how strong is your wish to die?		

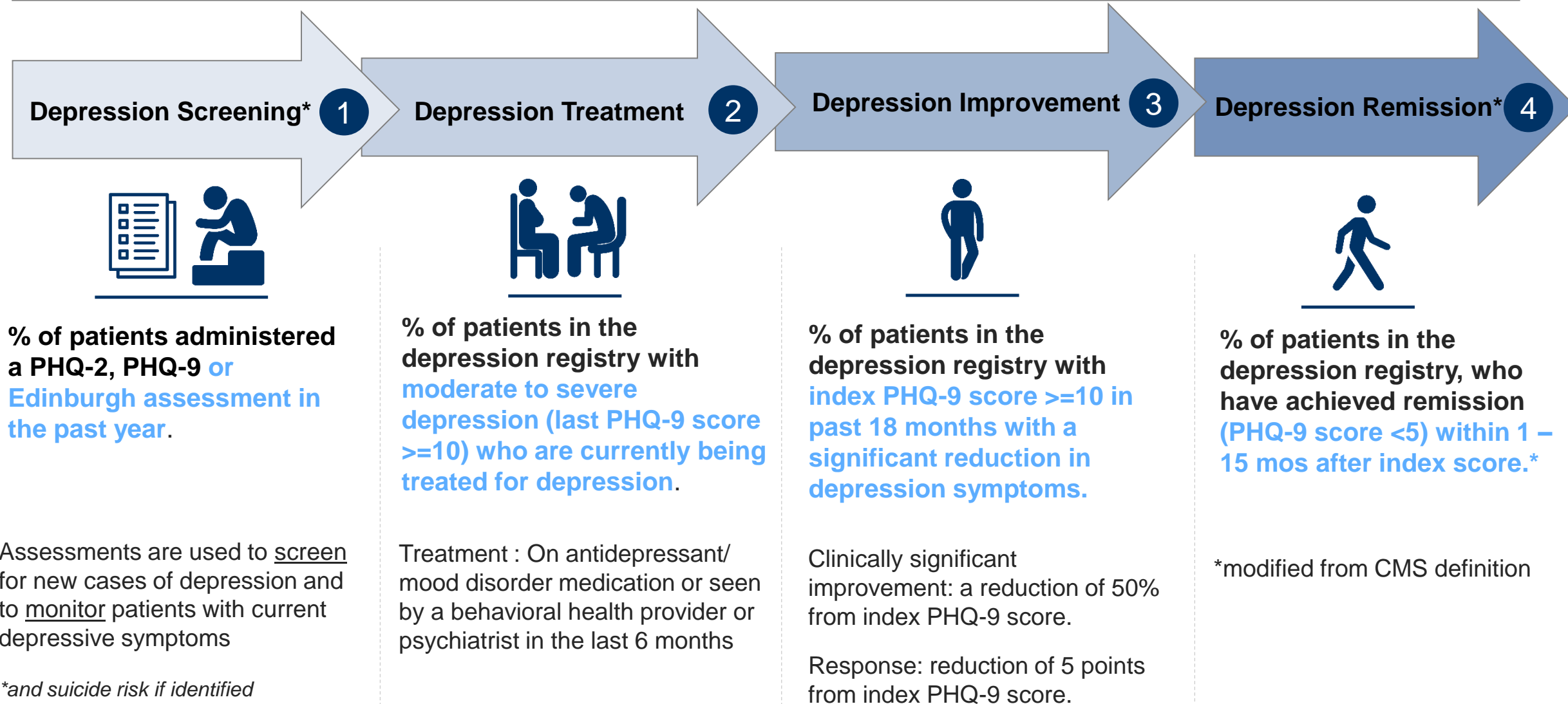
PHQ-9: Determines Whether or Not Patient Meets Criteria for Depressive Disorder

PHQ-9 Depression Scale		Office Visit from...
		4/16/18
		1600
PHQ-9: Over the last 2 weeks, how often have you been bothered by any of the following problems?		
Reported by		
Little interest or pleasure in doing things		
Feeling down, depressed, or hopeless		
Trouble falling or staying asleep, or sleeping too much		
Feeling tired or having little energy		
Poor appetite or overeating		
Feeling bad about yourself - or that you are a failure or have let yourself or your family down		
Trouble concentrating on things, such as reading the newspaper or watching television		
Moving or speaking so slowly that other people could have noticed. Or the opposite - being so fidgety or		
Thoughts that you would be better off dead, or of hurting yourself in some way		
Clinic Collected PHQ-9 Total Score		
PHQ-9 Total Score Depression Severity:		
PHQ-9 Total Score Depression Severity:		Moderate
*****PHQ-9, Q10 is positive. Complete P4 suicide assessment to finish suicide screen*****		

Providing quality depression care is a multi-step process

Local Problem (3 of 6)

Measuring and Improving Depression Care



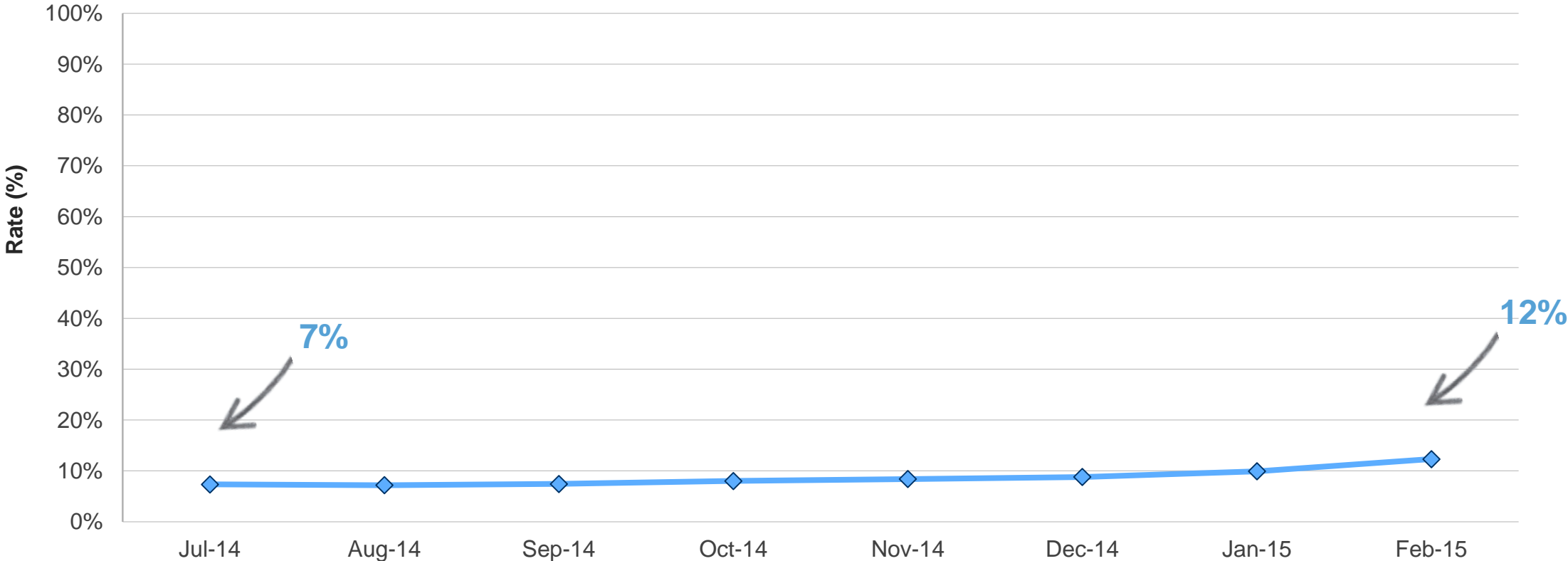
In 2014, our depression screening rate was 7%

Local Problem (4 of 6)



July 2014, our depression screening rate across primary care clinics was 7%. Loss of historical data during Epic implementation and screening results recorded as unstructured data contributed to low rates. Screening is essential because depression is often underdiagnosed. (Ref 3)

Depression Screening Rate



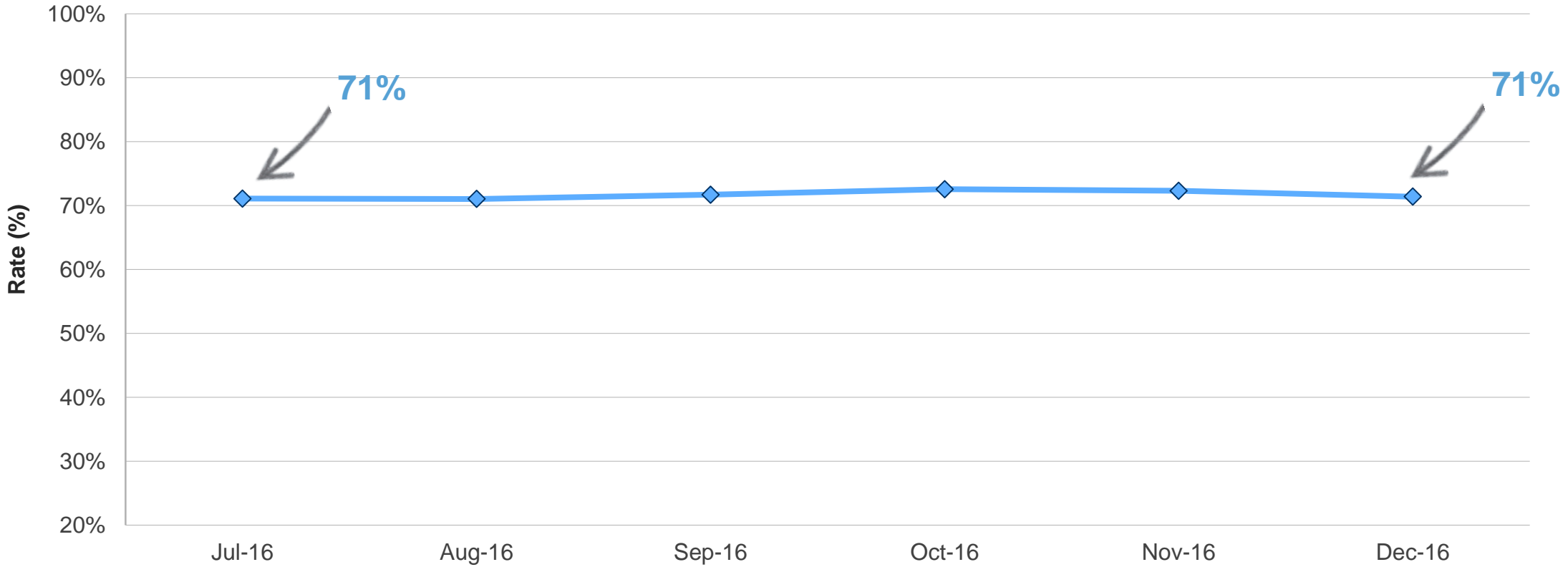
In 2016, our depression treatment rate was 71%

Local Problem (5 of 6)



In 2016, we began looking at how we were doing treating patients with known depression.
In July 2016, our depression treatment rate was 71%.

Depression Treatment Rate



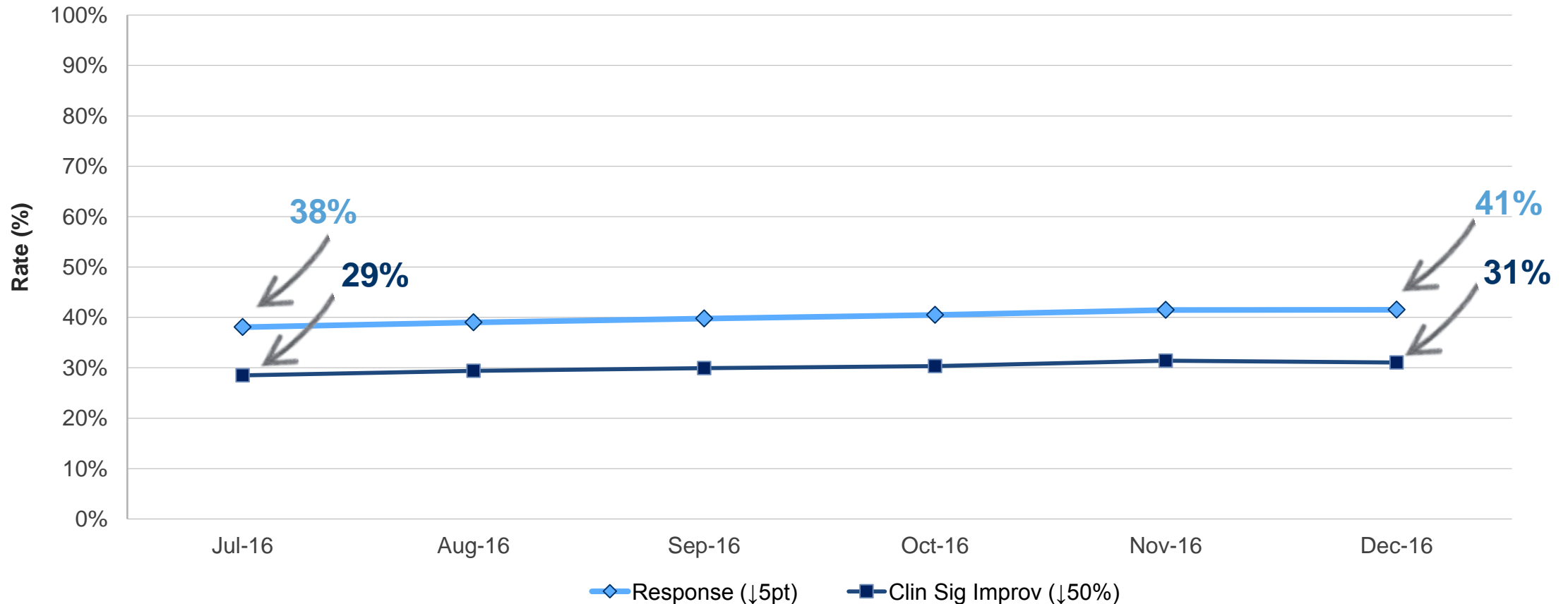
In 2016, our response rate was 38% and our rate of symptom improvement was 29%

Local Problem (6 of 6)



In July 2016, our response rate was 38% and clinically significant improvement was 29% across primary care clinics. Decreasing symptom severity for patients with depression is an important outcome measure.

Depression Symptom Improvement



Design and Implementation

Efforts to improve depression care was driven by our primary care collaborative

Design and Implementation (1 of 16)

Primary Care Improvement Collaborative (PCIC) - All primary care practices participate in this collaborative to set priorities, develop best practices, measure results, and share improvements.

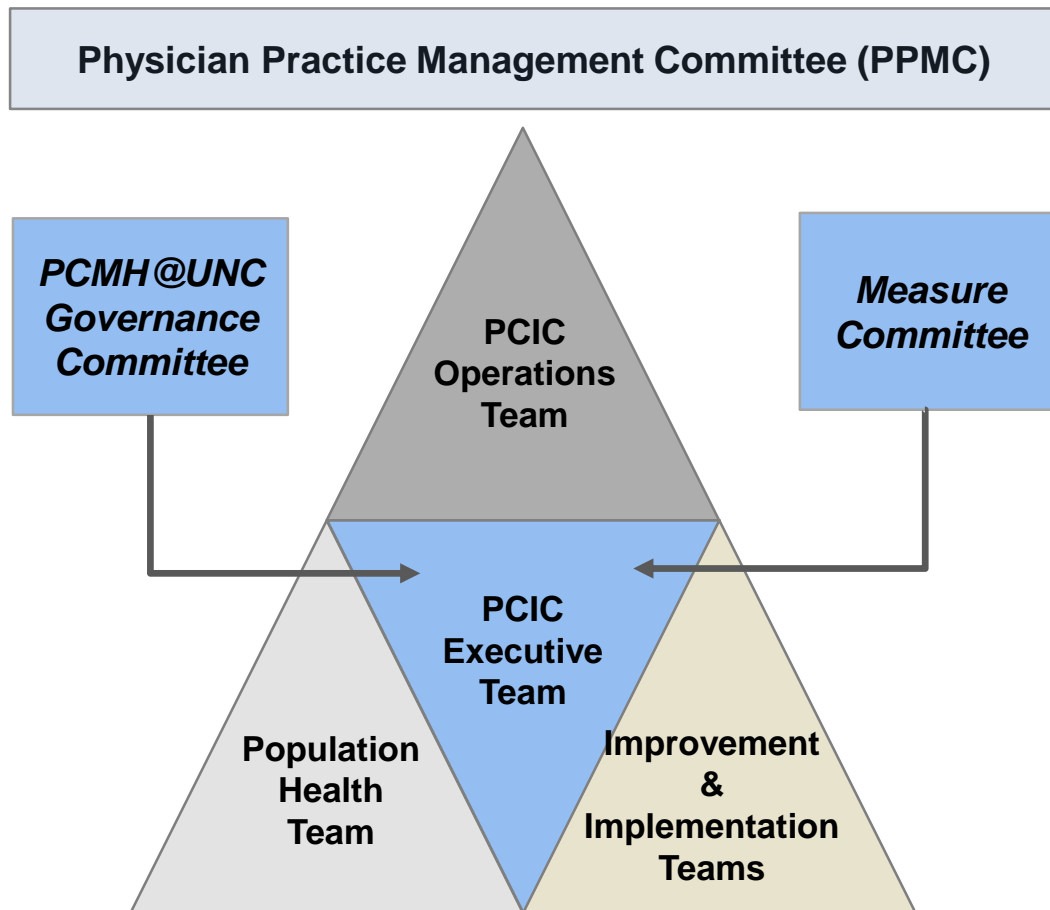


PCIC's governance structure and framework provided us with direction and support

Design and Implementation (2 of 16)

The PCIC executive committee approved our depression care QI work and its accompanying IT solutions and measures. PCIC's framework was used to support the development and implementation of these solutions to drive improvements.

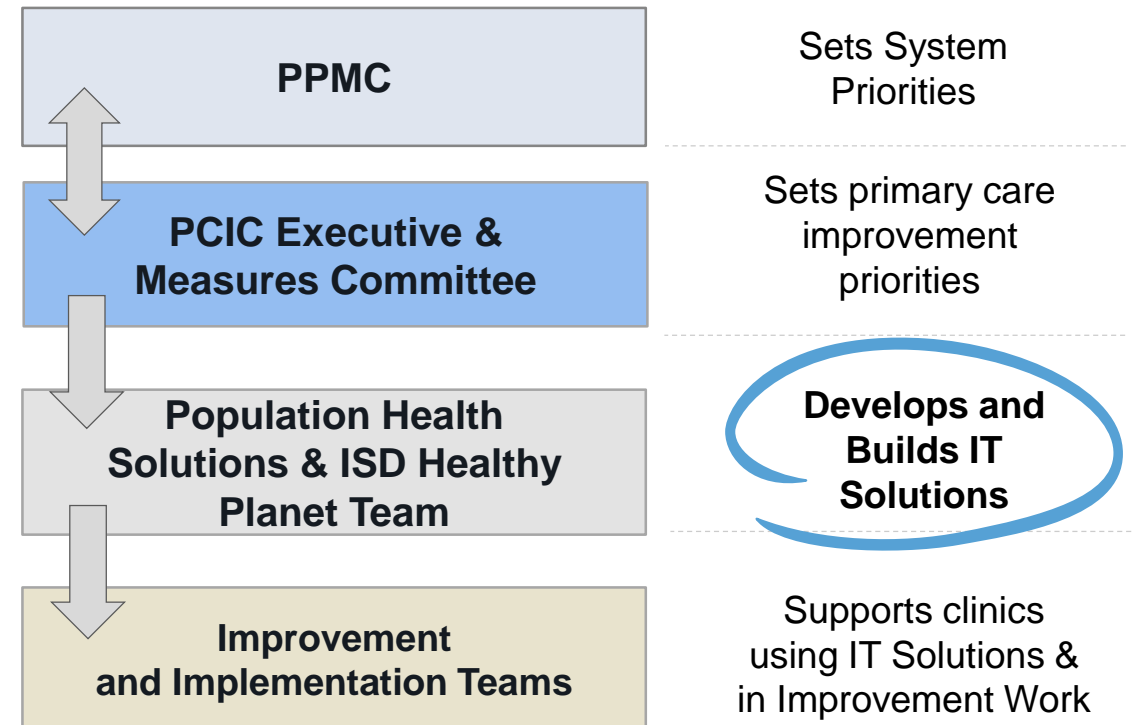
Governance



Framework/Approach

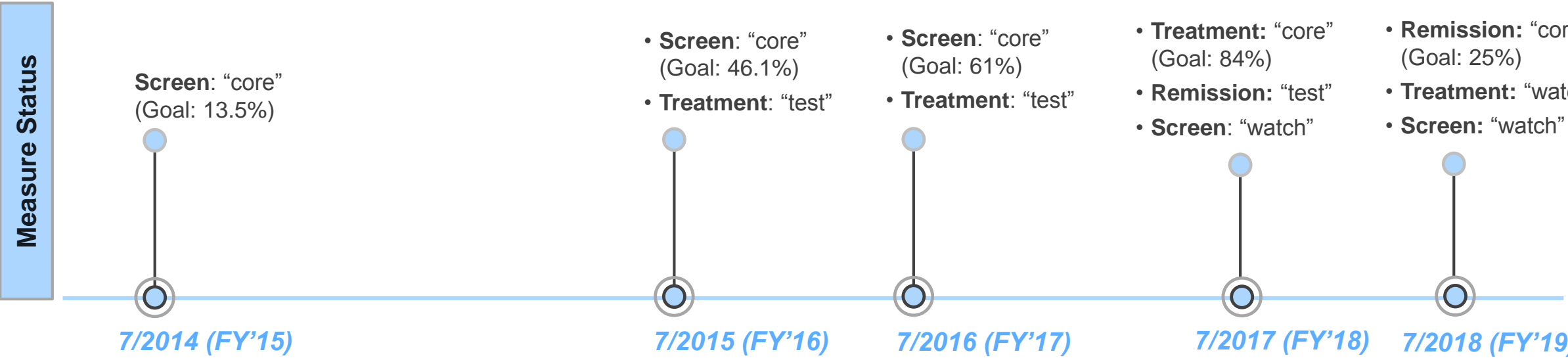
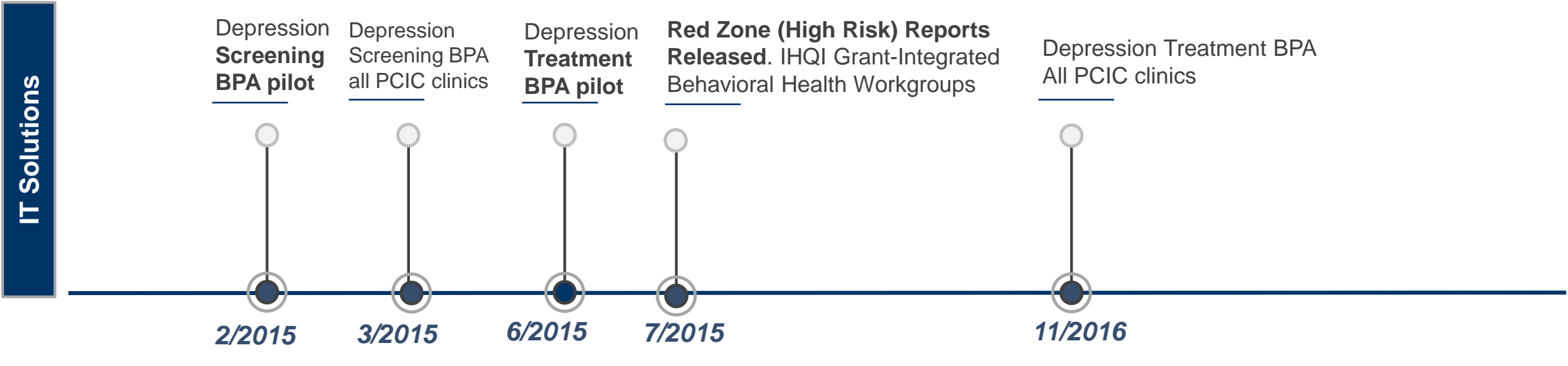


Primary care physician and specialist subject matter experts were involved at every level – providing ongoing clinical input and guidance.



Timeline – *Epic*@UNC depression solutions & measurement goals

Design and Implementation (3 of 16)



Before building any IT solutions, we outlined the desired action for each scenario

Design and Implementation (4 of 16)

Scenario/Population

Action/Workflow

Depression Screening:
Patients not in depression registry



- Administer PHQ-2 annually
- If PHQ-2 ≥ 3 , administer full PHQ-9

Depression Monitoring:
Patients in depression registry



- Administer PHQ-9
- Frequency determined by severity of last score
 - Last score < 10 , prompt every 1 year
 - Last score 10-14, prompt every 12 weeks
 - Last score > 14 , prompt every 4 weeks

Patients with incomplete screens
(PHQ-2 ≥ 3 but no PHQ-9)



- Administer full PHQ-9

Patients answering positive to question #9 of PHQ-9: (“thoughts that you would be better off dead”)



Assess passive vs. active suicidal thoughts. Add “thoughts of self-harm to PHQ flowsheet.



If thoughts (active ideation), administer full suicide risk assessment (P4 screen).

We leveraged our standard process to identify, build, and deploy the right IT solutions

Design and Implementation (5 of 16)

Co-Creating Value-Added Solutions

Operational, clinical and IT teams work together to develop value-added depression care tools and resources to improve care delivery

Clinical Stakeholders

- Primary Care Improvement Collaborative (PCIC) members

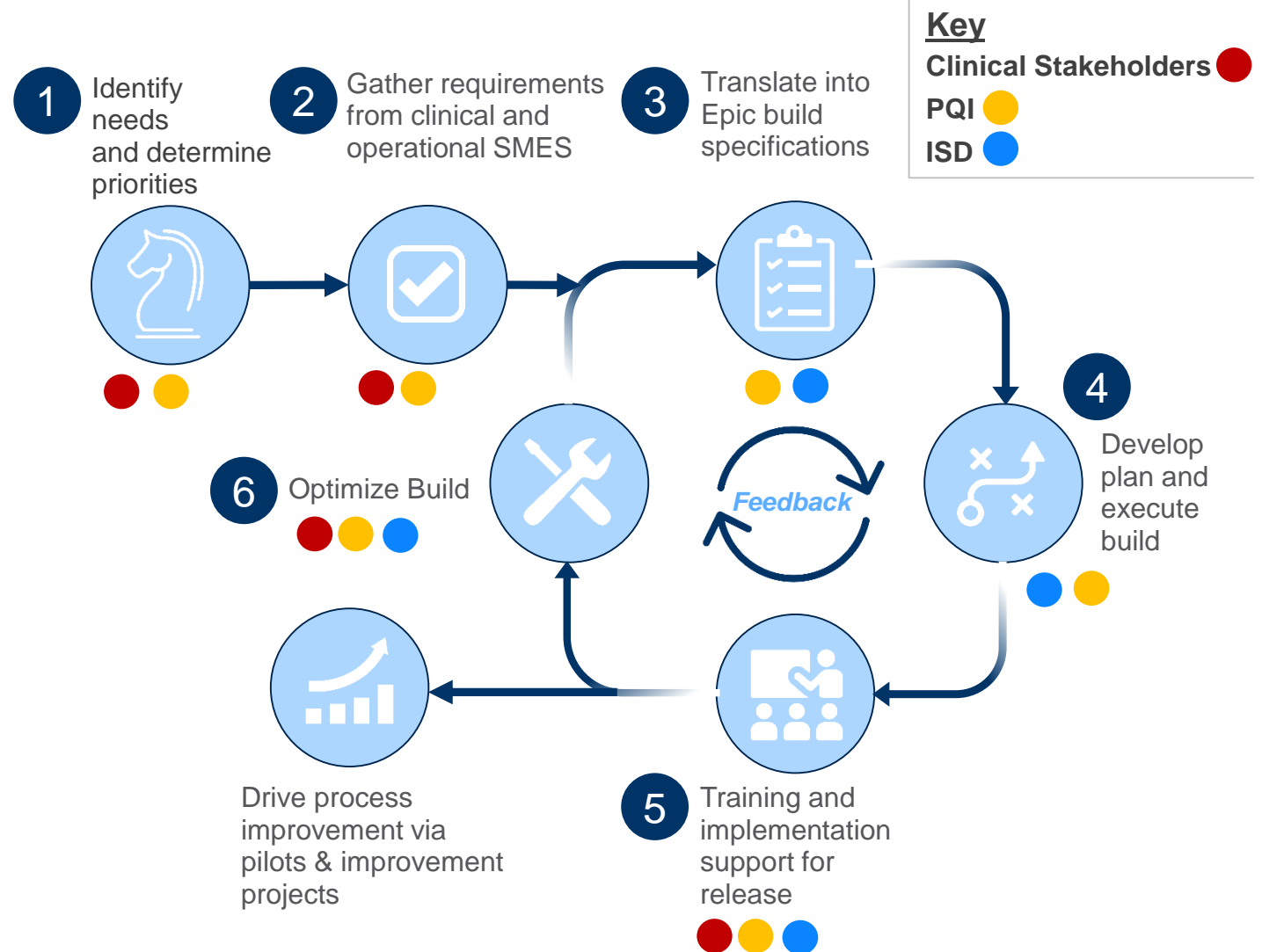
Practice Quality Innovation (PQI)

- Gathers requirements for analysts
- Works with analysts to deploy new content

Information Services Division (ISD)

- Application analysts
- Develop, plan, and execute Epic build

Process to Identify, Develop, and Deploy IT Solutions



First, we built Best Practice Advisories (BPAs) to promote screening & monitoring

Design and Implementation (6 of 16)

Identifying Patients Due for Depression Screening and Monitoring

- 1 Alerts users if a depression screening (PHQ-2) has not been performed within a year
- 2 Alerts users if a depression screening (PHQ-9) has not been performed on a patient in the depression registry within the appropriate timeframe based on the last PHQ-9 score

1 Intervention, Depression Screening: No PHQ-2 or PHQ-9 documented in the past year. Administer paper 'Depression screen' then click Doc Flowsheets and document results.

Add HM Modifier Cognitive Impairment

[DocFlowsheet: PHQ-2](#)

[Printable PHQ-2](#)

Acknowledge Reason _____

Intervention 1 - Depression Screening BPA
 Prompting Staff & Providers to administer PHQ-2

2 Depression: PHQ-9 monitoring due. Click "DocFlowsheets" to access PHQ-9 flowsheet.

Cognitive Impairment

[DocFlowsheets: PHQ-9](#)

[Printable PHQ-9](#)

Acknowledge Reason _____

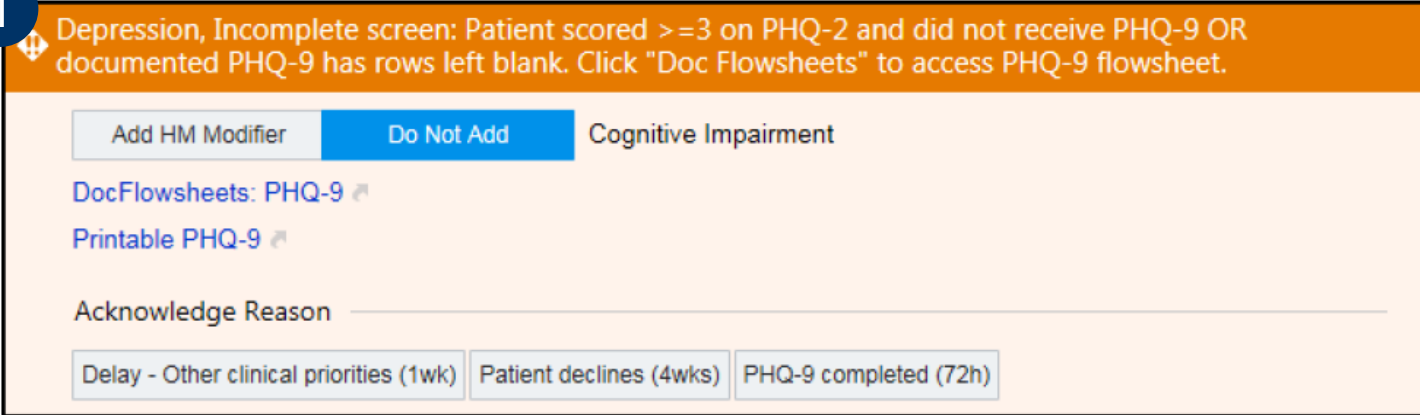
Intervention 2 – Depression Monitoring BPA
 Prompting Staff & Providers to administer PHQ-9

Then, we created a BPA for incomplete screens

Design and Implementation (7 of 16)

Ensuring that depression screening process is complete

- 1 Alerts users that the patient screened ≥ 3 on the PHQ-2 but no PHQ-9 was documented. This is considered an incomplete screen.



1

Depression, Incomplete screen: Patient scored ≥ 3 on PHQ-2 and did not receive PHQ-9 OR documented PHQ-9 has rows left blank. Click "Doc Flowsheets" to access PHQ-9 flowsheet.

Add HM Modifier Do Not Add Cognitive Impairment

[DocFlowsheets: PHQ-9](#)

[Printable PHQ-9](#)

Acknowledge Reason _____

Delay - Other clinical priorities (1wk) Patient declines (4wks) PHQ-9 completed (72h)

Intervention 3 – Incomplete Screen BPA

Prompting Staff & Providers that the PHQ-2 was 'positive' and a full PHQ-9 is needed

Next, a BPA was built to support the completion of the suicide risk assessment

Design and Implementation (8 of 16)

Identifying and Completing the Suicide Risk Assessment

- 1 A *critical pop-up* alerts all users that patient answered positive to 9th question of PHQ-9 but did not answer additional 'thoughts of self-harm' question to assess passive vs. active suicidal thoughts.
- 2 A *critical pop-up* alerts all users to perform additional suicide risk assessment for patients indicating active 'thoughts of self-harm'.

1 Incomplete Screen: Patient answered positive to the 9th question on PHQ-9 and the final 'self-harm' question is blank. Click "Doc Flowsheets" to access PHQ-9 flowsheet to complete

Last PHQ-9 Assessment Date	4/16/2018
Thoughts that you would be better off dead, or of hurting yourself in some way	3

[DocFlowsheets: PHQ-9](#)

Acknowledge Reason _____

PHQ-9 completed (72h)

2 Critical Priority (1) Suicide risk screening due: Positive response to thoughts of self-harm. Administer the P4 suicide risk screen, utilize SmartSet documentation in visit note, or use .SUICIDERISKASSESSMENT dot phrase.

Last PHQ-9 Question 10 Assessment Date	8/17/2017
Have you had thoughts of actually hurting yourself?	Y

[Suicide Risk Assessment Documentation](#) [Preview](#)

[Complete P4 Suicide Risk Screen](#)

Acknowledge Reason _____

P4 screen completed (72h)

Intervention 4 – Passive vs. Active Suicidal Thoughts
Incomplete Screen

Intervention 5 – Suicide Risk Assessment BPA
Suicide Risk Screening Assessment Due

Identified Gaps - Why are patients with active depression not in treatment?

Design and Implementation (9 of 16)

Now that we can identify patients with depression, we need to ensure the right patients are getting the right care

Gaps	Details	Possible Solutions
Provider lack of awareness of depression severity	Depression is often overlooked due to more pressing medical needs. Nurse may administer PHQ-9 and not communicate with provider.	<ul style="list-style-type: none"> Alert provider to patients with moderate to severe depression who are not in treatment. Encourage nurse-provider communication about PHQ-9 scores
Lack of awareness of outside behavioral health or psychiatry visit	Many patients get behavioral health counseling with providers outside our system. We can't 'capture' that information.	<ul style="list-style-type: none"> Create field to document outside behavioral health or psychiatry visits Work to capture outside behavioral health visits
Underuse of internal behavioral health resources	Some providers underusing LCSWs in managing patients with depression	<ul style="list-style-type: none"> Increase awareness and comfort utilizing LCSWs (Project UPLIPHT, workgroups)
Patient resistance	Some patients are resistant to antidepressant medications or counseling.	<ul style="list-style-type: none"> Reinforce patient education about treatment options and shared decision-making.
Lack of coordinated care	Some patients may have their depression managed by a psychiatrist.	<ul style="list-style-type: none"> Encourage communication between PCP and psychiatrist; and other good co-management practices.

We then developed a BPA to identify patients not being treated for depression

Design and Implementation (10 of 16)

Identifying Patients with Moderate to Severe Depression Not in Treatment

- 1 A BPA was developed to alert providers to patients with moderate to severe depression (PHQ-9 ≥ 10) that are not currently in treatment (antidepressants, behavioral health counseling, or psychiatry)

1 Depression: Moderate to severe depression (last PHQ-9 ≥ 9) and not on antidepressant, or no completed visit with psychiatry or behavioral health in the past 6 months, scheduled visit in the next 6 months, or referral in the past 30 days. Order antidepressant and/or referral in SmartSet.

Acknowledge reason:

Delay - Other clinical priorities Patient declines Risk outweighs benefits
Shared decision

Open SmartSet: Depression Intervention and Plan preview

[External Behavioral Health Care: Document Date](#)

Collecting External Treatment Data

Care Mgmt
Care Mgmt Encounter Level General (Enc)

General (Encounter)

General Care Management - Encounter Level

External Psychiatrist (MD) Visit

Date of most recent visit with psychiatrist (required): ⚠

Reason for most recent psychiatrist visit:

Visit provider of most recent psychiatrist visit:

Location of most recent psychiatrist visit:

External Behavioral Health (non-MD) Visit

Date of most recent behavioral health visit (required): ⚠

Reason for most recent behavioral health visit:

Visit provider of most recent behavioral health visit:

Location of most recent behavioral health visit:

Depression Intervention and Plan

Depression Intervention and Plan*

✓ From BestPractice
Depression: Moderate to severe depression (last PHQ-9 ≥ 9) and not on a in the past 6 months, scheduled visit in the next 6 months, or referral in t

Medications - Antidepressants

- SSRIs
- SNRIs
- Misc Antidepressants

Referrals

- Referrals

Self-Monitoring

- MyChart Flowsheet Orders
 - Exercise Flowsheet Routine

Follow-up

- Follow-up visit

Reports were developed to support ongoing monitoring and action

Design and Implementation (11 of 16)

Monitoring Trends and Taking Action at the Population Level

Once in the registry, providers and clinics can run registry reports to monitor and take action on high risk patients. Additional reports allow users to find patients who are failing depression measures.

4

Age	DOB	PCP	DEPRESSION SCORING	Has Depression Prob List?	1st Appt Provider IM/F	Last Appt
Female 47 y.o.	01/01/1970	Samuel Stucker Weir, MD	10	N		
Female 47 y.o.	01/01/1970	Samuel Stucker Weir, MD	6	Y		
Female 47 y.o.	01/01/1970	Samuel Stucker Weir, MD	0	Y		
Female 47 y.o.	01/01/1970	Samuel Stucker Weir, MD	4	N		
Female 80 y.o.	02/26/1937		6	N	Barnhouse [MD]	
Male 50 y.o.	01/01/1967		2	Y	Marco A Aleman [MD]	
Female 45 y.o.	03/10/1972	Anna Tinga White, NP	6	Y	Kathleen K Barnhouse [MD]	09,
Male 56 y.o.	12/01/1960	Samuel Stucker Weir, MD	8	N	Kathleen K Barnhouse [MD]	04,

10 Depression Composite Score

This score indicates how many of the standard goals for living well with depression a patient is achieving.

Points Metrics

- 6 Most Recent PHQ-9 Score: 19
- 0 Last PHQ-9 Completed Date: 3/7/2017
- 4 Positive History of Self-Harm: 4/6/2017
- 0 P4 Suicide Risk Level Past 3 Months: **Not on File**
- 0 Inpatient Psych Admission Past 5 Years: **Not on file**
- 0 Inpatient Admission Past 6 Months: **Not on file**

Depression Composite Score

!! 10

8 - 999 Points: High Risk
4 - 7 Points: Medium Risk
0 - 3 Points: Low Risk

This score indicates how many of the standard goals for living well with de

Points Metrics

- 6 Most Recent PHQ-9 Score: 19
Last updated 13 minutes ago
- 0 Last PHQ-9 Completed Date: 3/7/2017
Last updated 13 minutes ago
- 4 Positive History of Self-Harm: 4/6/2017
Last updated 13 minutes ago
- 0 P4 Suicide Risk Level Past 3 Months: **Not on File**
Last updated 13 minutes ago
- 0 Inpatient Psych Admission Past 5 Years: **Not on file**
Last updated 13 minutes ago
- 0 Inpatient Admission Past 6 Months: **Not on file**
Last updated 13 minutes ago

Reporting Workbench Depression Screening Report
Composite Scores Help Identify Patients That Would Benefit from Additional Follow-up

Depression Composite Score
A Score Based on Multiple Depression Components

Workgroups Supported Integrated Behavioral Health Model

Design and Implementation (12 of 16)

Workgroups brought together LCSWs to develop and spread population-based interventions utilizing reports

✓ Workgroups brought together LCSWs from primary clinics to learn how to run and use depression reports.

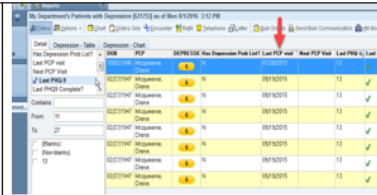
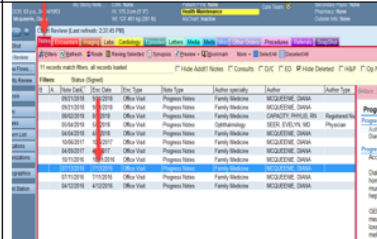
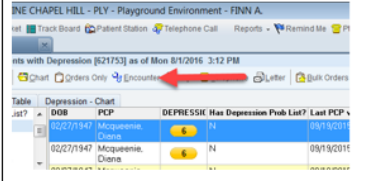
✓ Standard Work was developed to help LCSWs target patients for intervention and outreach such as:

- Lost to follow-up: Patients with high PHQ-9 scores and no scheduled follow-up visits.
- Follow-up Provider Visit: Review provider visit notes and follow-up with treatment changes

Standard Work for Depression Outreach and Patients lost to Follow-up

Trigger: Outreach for depressed patients
 Purpose: Ensure needs/access of all depressed patients met
 Performed by: Nurse, Care Manager, LCSW

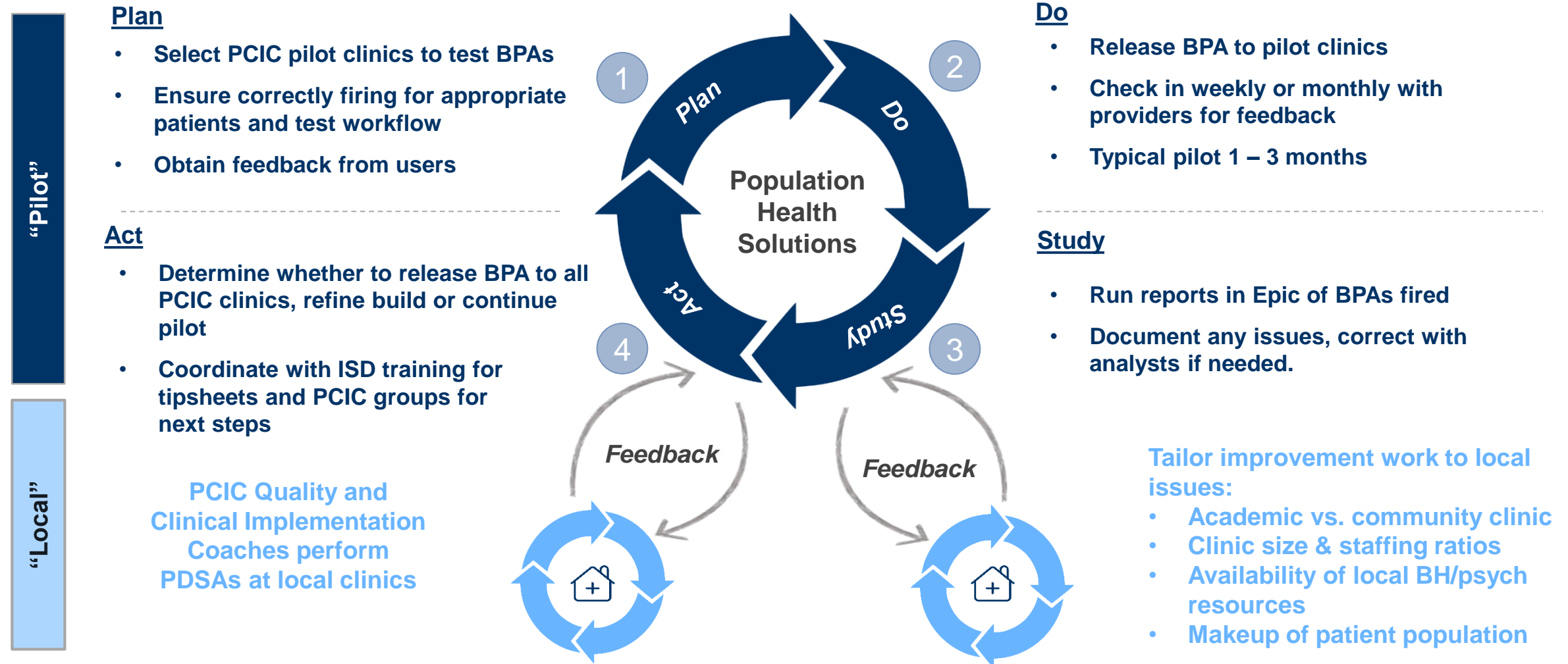
Owner: Beth Caviness
 Last Updated: 8/4/16

4	Prioritize these patients for return calls	<p>-You should now see a narrowed list of patients</p> <p>- Click on the Last PCP visit column to place patients in order of furthest visit out to catch those who have not had depression follow-up.</p> <p>-Schedule appts for those who have not been seen.</p> <p>-follow clinic workflow for scheduling appts. Skip to Step 7.</p> <p>-For those patients who have had follow-up but not recently, proceed to step 5.</p>	
5	Preform chart review to know patients care plan	<p>-Double click on a patient row to open chart review for that patient.</p> <p>-Click notes tab and find provider note for last visit and when follow-up is desired.</p>	
6	Call and document patient progress in Patient Outreach Encounter	<p>-Open Patient Outreach encounter</p> <p>-click encounter in the patient specific tool bar with patient highlighted below</p> <p>-Click New Encounter</p> <p>-Fill in encounter type with Patient Outreach and click accept</p> <p>-Fill in Contacts and Track Pt Outreach Section</p> <p>-Move to Care Management Tab and fill out Depression Pat and Enc sections with information you gather from patient telephone call.</p>	

PDSA cycles were used to evaluate and improve our new BPAs

Design and Implementation (13 of 16)

“Pilot” Plan-Do-Study-Act (PDSA) cycles were performed to ensure that these new BPAs were working as expected. “Local” PDSAs were performed by clinic quality coaches to improve utilization and adherence to the defined workflow.



Coaches performed local PDSAs to help improve depression care in our PCIC clinics

Design and Implementation (14 of 16)

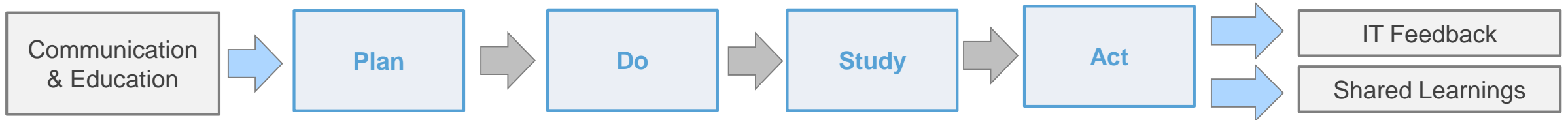
Improving Depression Care at our Local PCIC Clinics

Our PCIC quality and implementation coaches support local improvement work in PCIC clinics. Focusing on:



- Communication and education around Epic Functionality
- Work with clinics to identify local needs and test PDSA cycles
- Share what works and funnel user feedback for optimization

Local PDSA Cycles



PRACTICE QUALITY & INNOVATION

Epic Super User HOT TOPIC

New Tools Coming October 12th for Depression Management and Suicide Risk Assessment

Depression Screening and Monitoring

- To accurately monitor depression and possible suicidal ideation, all questions on the PHQ-9 must be complete. If the PHQ-9 is started but not completed, there are 3 BPA's that may fire depending on what information is missing.
 - For clinics that have the patient answer these questions on paper, this information must be documented in Epic during the encounter to satisfy the BPA.

BPA Active Depression and No Treatment

- Internal Medicine, Family Medicine, Psych/Behavioral Health departments will see this BPA
 - This was piloted at Highgate Family Medicine and Carolina Advanced Health
- Will fire if the patient:
 - Is a 12 years old AND
 - Is in the depression registry AND
 - Last PHQ-9 score is >9
 - Does not have an antidepressant medication on their active medication list

Education

Depression and Case Management Workflow

Nikki Kana

- Runs dep
- Spoke w
- up within
- Identified when it's

How did CHIM do?

During FY17, we improved our Depression Management rate from 59.4% to 85.9% through:

- Care team engagement
- Patient education
- Community partnerships
- PCIC Dashboard review

Criteria: Patients on the Depression Registry, 18+ at time of visit, whose most recent PHQ-9 > 9
CHIM Performance = 85.9%

3/11

Currently at 80.7%, with only 3 patients away from goal!

The FY18 PCIC goal is 84%. The measure criteria is slightly different, defining Depression Treatment as the percentage of adult patients in the Depression Registry with most recent PHQ-9 score > 9 who are currently taking an antidepressant or have been seen by a Psychiatrist or behavioral health provider in the past six months.

Presentations

**Improving Behavioral Health Metrics
A Collaborative Approach
UNC Internal Medicine Clinic**

Submitted by:
Deanna Zolfo
Quality Improvement Coach
Practice Quality, Innovation, and Population Health Services
UNC Health Care

Story Contributors: Wesley Stepp, PhD, MS3, Sarah Smithson, MD, Clinical Assistant Professor, and Deanna Zolfo

Third year medical student, Wesley Stepp, PhD, began a 16-week rotation late in October 2017 at UNC Internal Medicine at Chapel Hill as part of the CBLC program. He was assigned a behavioral health quality improvement project and established a goal of improving the current PCIC Depression Treatment metric from 82% to 84% or higher by the end of his rotation in February 2018.

Approach

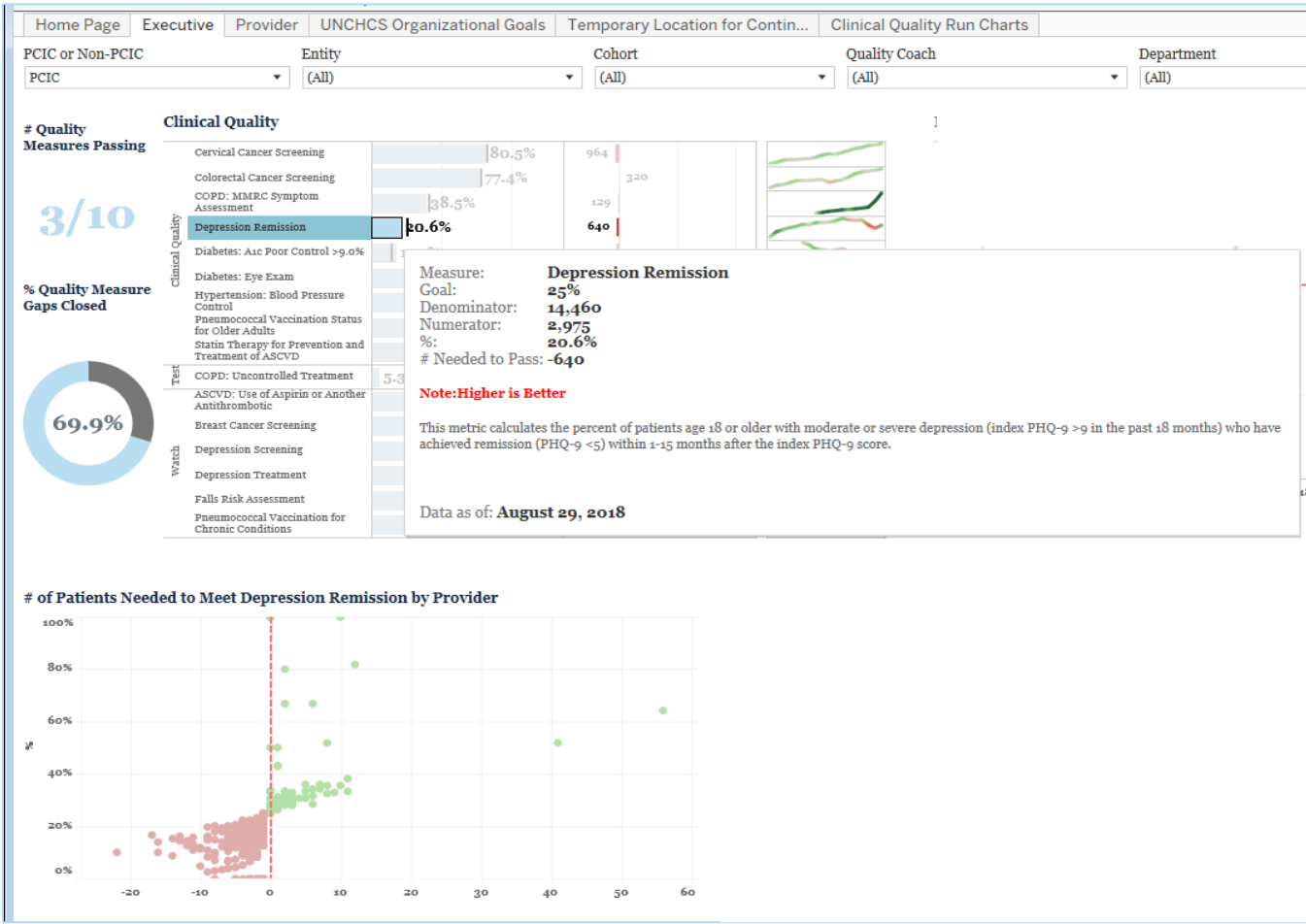
- Check-in weekly with preceptor and quality coach to discuss the project and

Newsletters

Our PCIC dashboard helps clinics and providers “drill” into their depression care data

Design and Implementation (15 of 16)

Epic@UNC Quality Measures are displayed in a Tableau Dashboard. Allows more advanced views of the data like number needed to meet goal and trend lines. Providers have unblinded data available to compare performance between clinics, providers and entities.



Our aim – identify patients with depression, treat depression, improve symptoms

Design and Implementation (16 of 16)

Intended Goals

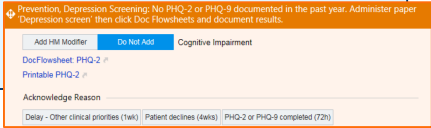
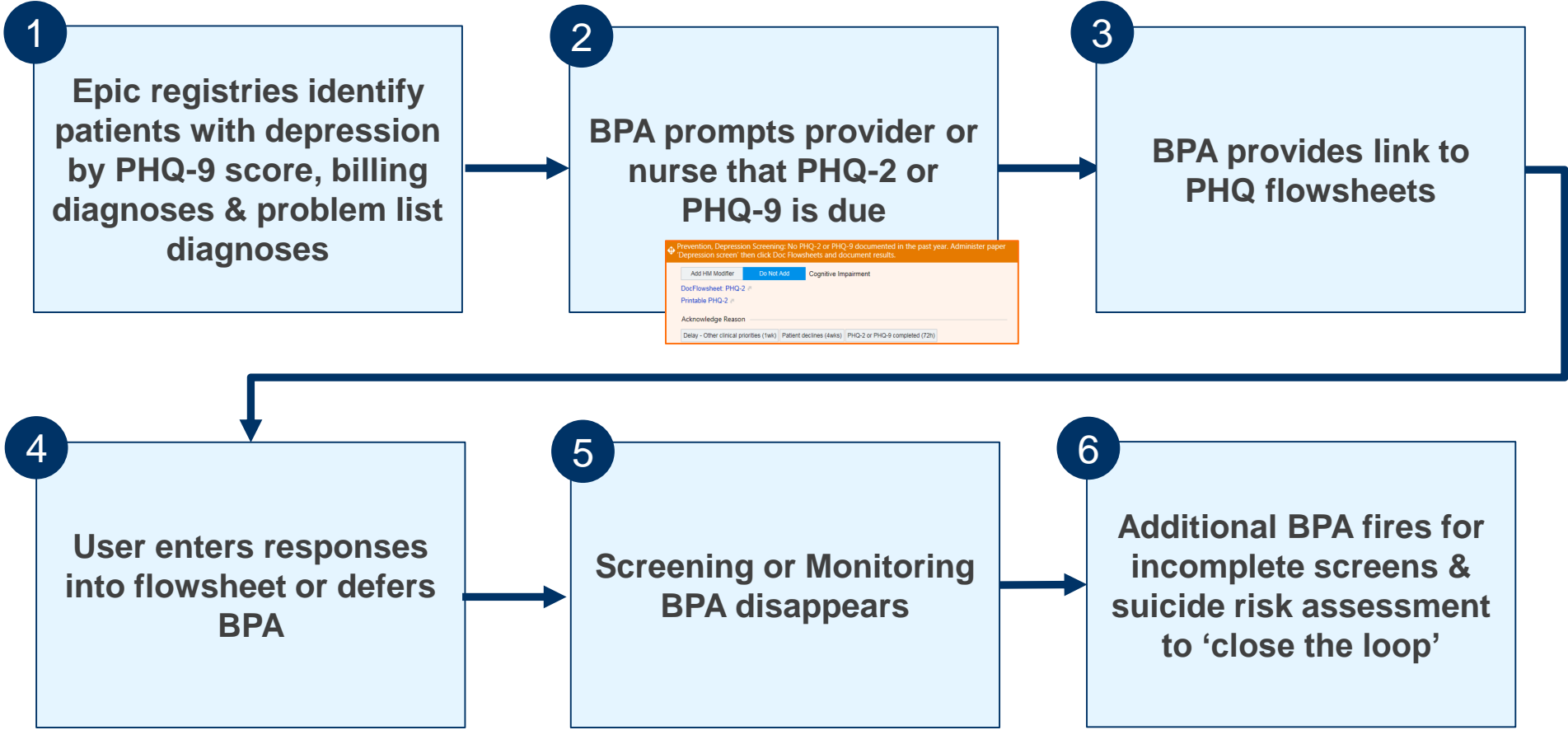
- 1** Increase depression screening rates for patients not already in the depression registry
- 2** Increase depression monitoring rates for patients in the depression registry to ensure monitoring of depressive symptoms
- 3** Increase the percentage of patients with moderate to severe depression who are actively being treated for depression with antidepressant medication, counseling and/or psychiatry follow-up.
- 4** Our primary aim is to leverage our depression care tools and improvement efforts to help decrease depressive symptoms and improve quality of life for our patients.

Leveraging Health IT

Depression Screening tools were embedded into the clinical workflow

Leveraging Health IT (1 of 7)

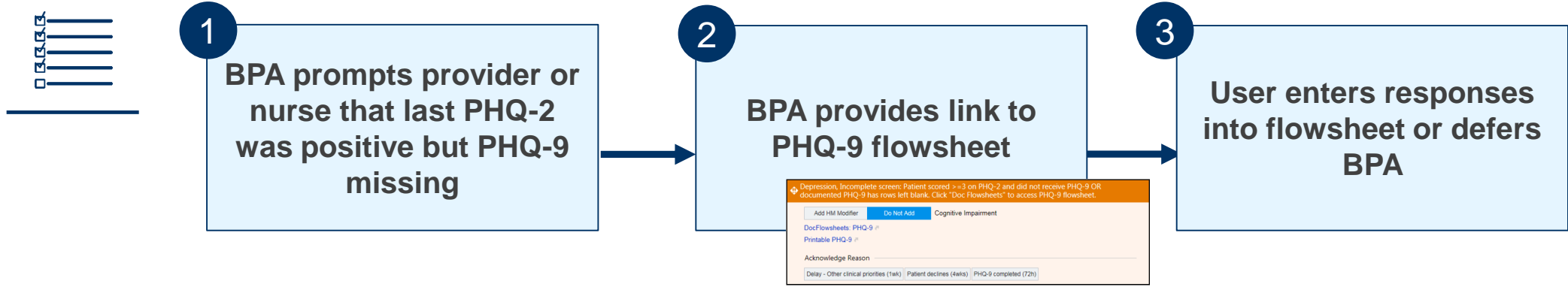
Screening Process



“Closing the loop” on depression screening (1 of 2)

Leveraging Health IT (2 of 7)

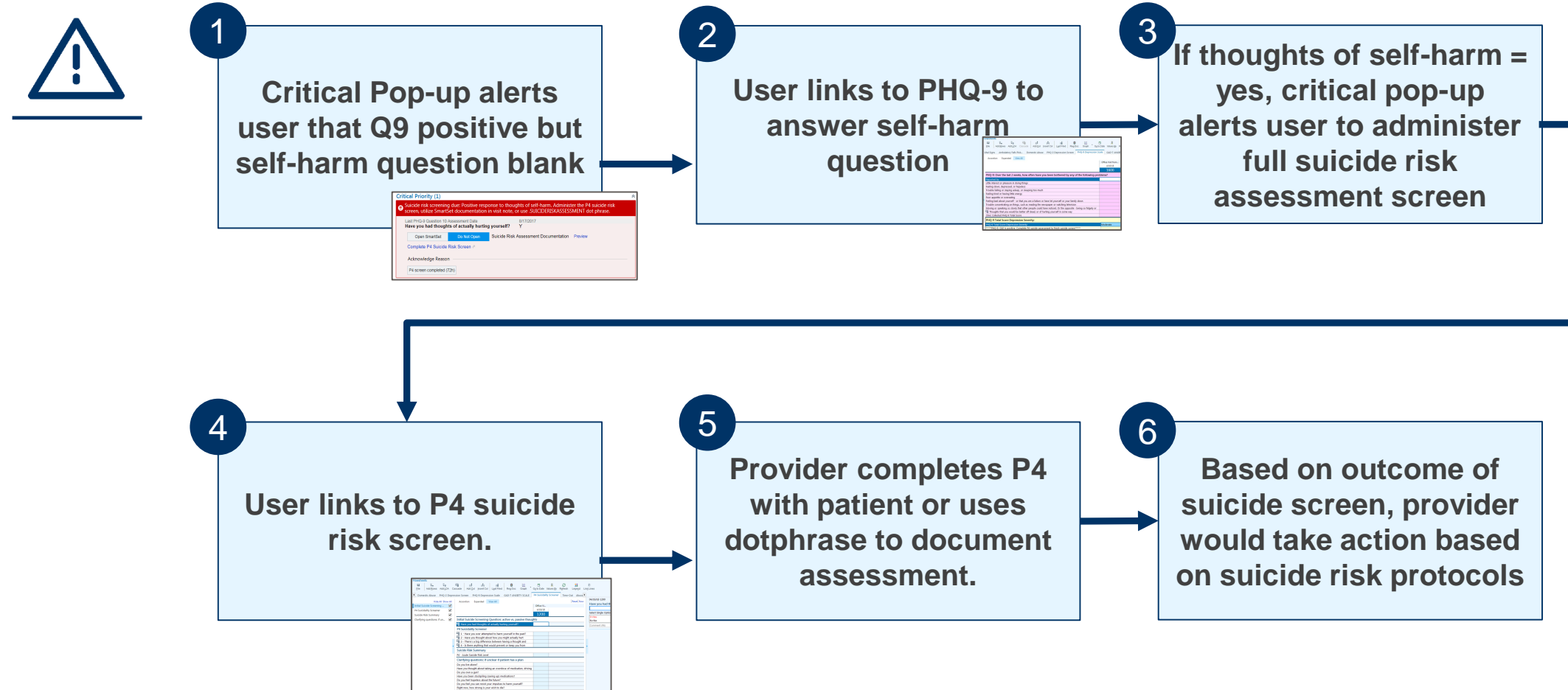
Incomplete Screen



“Closing the loop” on depression screening (2 of 2)

Leveraging Health IT (3 of 7)

Suicide Risk Assessment – Positive Q9, But Missing Value for Self-Harm Question



How “Closing the Loop” saved a patient’s life

Leveraging Health IT (4 of 7)

A Testimonial From an Internal Medicine Physician

I was precepting in my clinic. A resident went into the patient’s room to perform a procedure. When the resident and I were reviewing the chart together, the **red P4 suicide risk assessment BPA popped up**

We reviewed the last note. She had been referred to outside psychiatric resources at her visit. She had a PHQ9 done at her last visit with a **positive question 10, but no P4 was completed.**

We returned to the patients room to perform the suicide risk assessment. I said hello to a smiling, cheerful woman sitting with her husband.

20 minutes later, the resident and nurses returned to the precepting room. They were shocked. This woman with no indication of depression reported that since a major illness 3 months prior, **she thought about suicide daily**

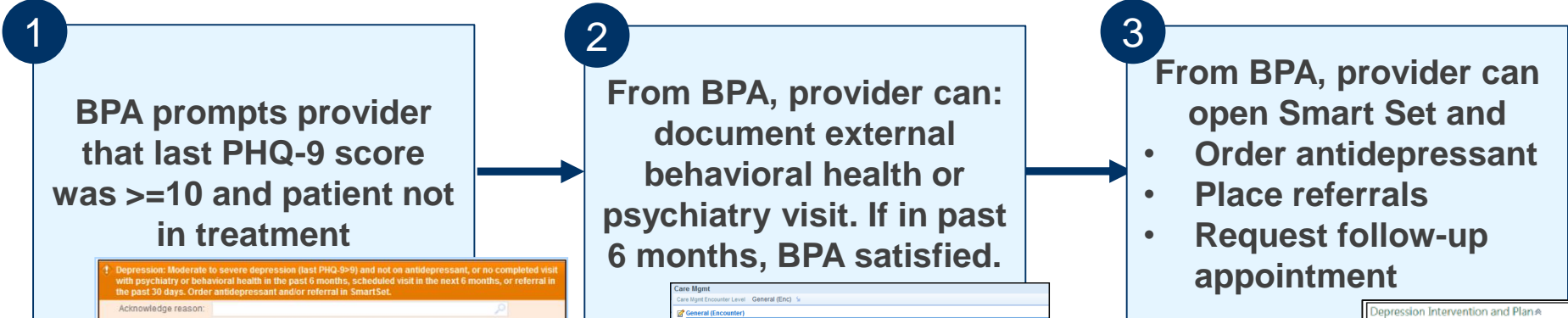
She had a plan for self-harm. She was crying in the exam room – she was scared for her safety, and she was asking for help. No one saw it coming. There were no clues or signs. **There was only the P4 BPA.**

Because of the BPA, we were able to provide her with the help she needed – likely preventing a suicide attempt.

Closing the gap on depression treatment

Leveraging Health IT (5 of 7)

Depression Treatment



↑ Depression: Moderate to severe depression (last PHQ-9>=9) and not on antidepressant, or no completed visit with psychiatry or behavioral health in the past 6 months, scheduled visit in the next 6 months, or referral in the past 30 days. Order antidepressant and/or referral in SmartSet.

Acknowledge reason: Delay - Other clinical priorities Patient declines Risk outweighs benefits Shared decision

Open SmartSet: Depression Intervention and Plan A [preview](#)

External Behavioral Health Care: Document Data

Care Mgmt
Care Mgmt Encounter Level: General (Enc) v

General (Encounter)

General Care Management - Encounter Level

External Psychiatrist (MD) Visit

Date of most recent visit with psychiatrist (required):

Reason for most recent psychiatrist visit:

Visit provider of most recent psychiatrist visit:

Location of most recent psychiatrist visit:

External Behavioral Health (non-MD) Visit

Date of most recent behavioral health visit (required):

Reason for most recent behavioral health visit:

Visit provider of most recent behavioral health visit:

Location of most recent behavioral health visit:

Depression Intervention and Plan A

✓ From BestPractice

Depression: Moderate to severe depression (last PHQ-9>=9) and not on a in the past 6 months, scheduled visit in the next 6 months, or referral in

- Medications - Antidepressants
 - SSRIs
 - SNRIs
 - Misc Antidepressants
- Referrals
 - Referrals
- Self-Monitoring
 - MyChart Flowsheet Orders
 - Exercise Flowsheet Routine
- Follow-up
 - Follow-up visit

BPA's are prioritized by color and presented in the visit navigator

Leveraging Health IT (6 of 7)

Overall BPA Framework

- 1 BPA's are presented in the visit navigator in Plan section
- 2 Color-coding indicates priority level
- 3 Critical suicide BPA's pop-up in addition to navigator view
- 4 User can choose whether to address today, defer by clicking acknowledge reason or leave BPA to address at another visit

The screenshot displays the 'Plan' section of an EHR system, specifically the 'BestPractice' tab. It shows a list of 'BestPractice Advisories' (BPAs) categorized by priority level:

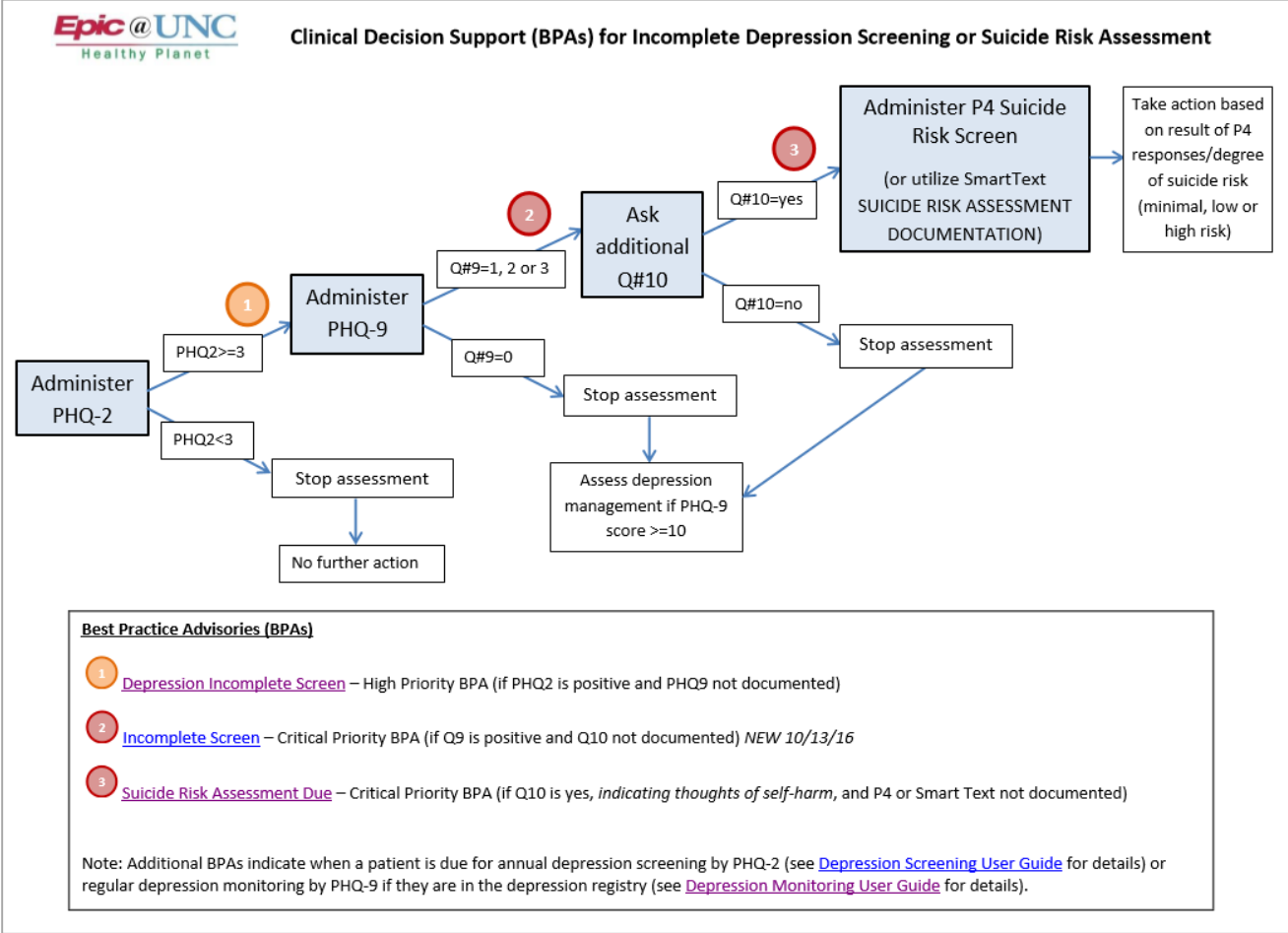
- Critical Priority (1):** A red-bordered advisory with a warning icon. The text reads: "Incomplete Screen: Patient answered positive to the 9th question on PHQ-9 and the final 'self-harm' question is blank. Click 'Doc Flowsheets' to access PHQ-9 flowsheet to complete". It includes a "Collapse" button and a close icon. A pop-up window is overlaid on this advisory, showing: "Last PHQ-9 Assessment Date: 8/6/2017", "Thoughts that you would be better off dead, or of hurting yourself in some way: 3", and a "DocFlowsheets: PHQ-9" link. Below this, there is an "Acknowledge Reason" field with a dropdown menu currently set to "PHQ-9 completed (72h)" and an "Accept" button.
- High Priority (2):** Two orange-bordered advisories. The first is "Prevention: Influenza vaccine due. Order immunization from preference list or document outside administration in Immunizations activity or document previous severe allergic reaction to influenza vaccine." The second is "Prevention, Depression Screening: No PHQ-2 or PHQ-9 documented in the past year. Administer paper 'Depression screen' then click Doc Flowsheets and document results." Both have "Expand" and close icons.
- Medium Priority (2):** Two yellow-bordered advisories. The first is "Diabetes: Annual eye exam due. Order fundus photos (if clinic has retinal camera) or Ophthalmology referral below or document if done elsewhere." The second is "Diabetes: Urine albumin/creatinine ratio due. Order urine albumin/creatinine ratio. If applicable, select 'Add to Problem List' diagnosis to suppress HM and BPA." Both have "Expand" and close icons.
- Low Priority (1):** One green-bordered advisory: "Tobacco use: No education/counseling provided or smoking deterrents prescribed in past year or active cessation goal. Provide and document counseling, referral to cessation program/quitline, prescribe deterrent or set cessation goal." It has a checkmark icon, "Expand", and close icons.

Two blue arrows point to the red-bordered advisory and the orange-bordered advisories, indicating their visibility in the navigator.

Overview of Screening and Treatment Workflow

Leveraging Health IT (7 of 7)

High-Level Process Map - Clinical Decision Support (CDS)



Value Derived

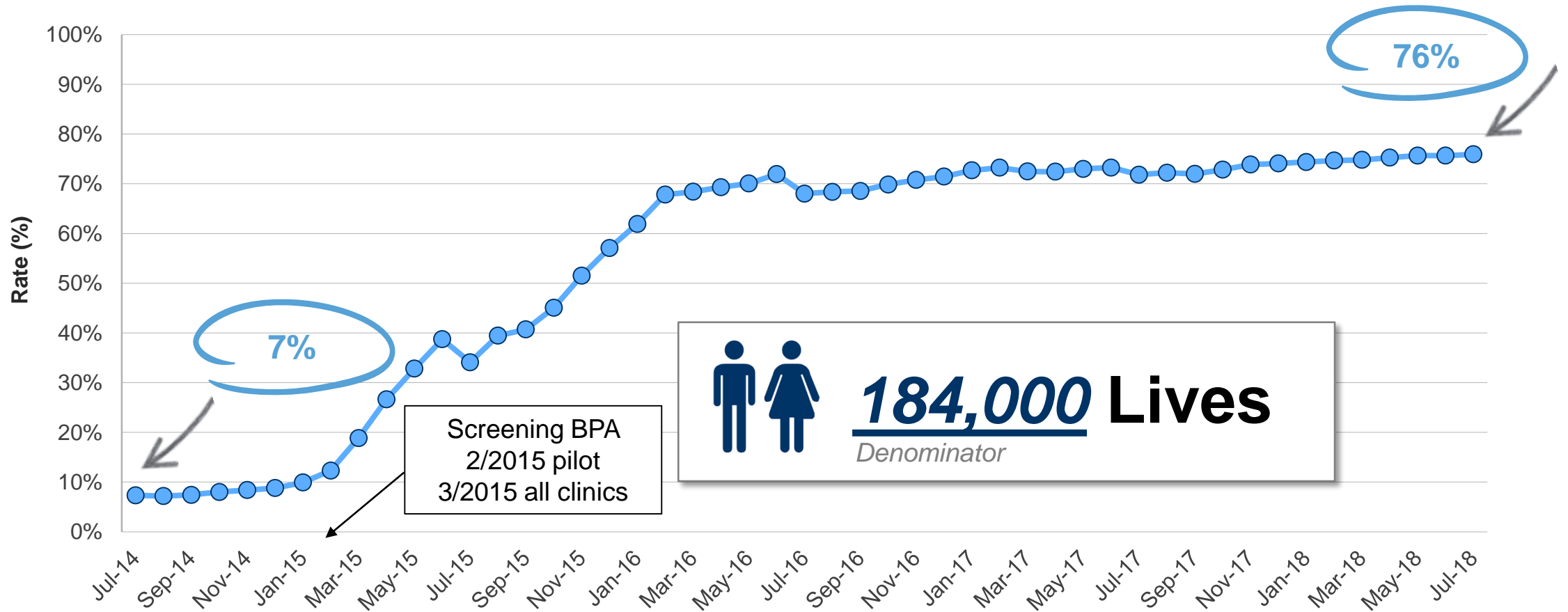
As a result, we've seen a significant increase in our depression screening rate

Value Derived (1 of 3)



Depression Screening rates across all primary care practices have **increased from 7% (July 2014) to 76% (July 2018)**. July 2018 data covers 49 practices and 184,000 patient lives.

Screening Rate



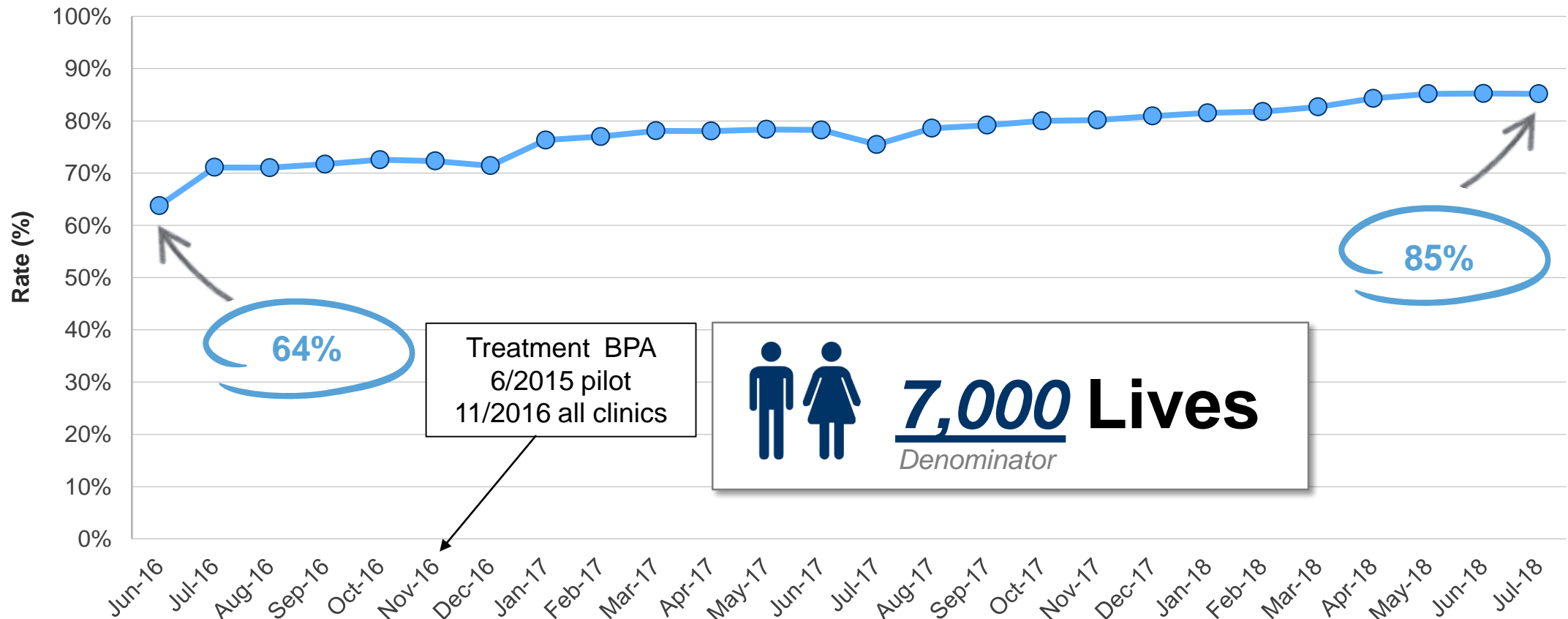
...and a rise in the percentage of patients being treated for depression

Value Derived (2 of 3)



Depression Treatment rates **increased from 64% (June 2016) to 85% (July 2018)**. More patients with moderate to severe depression are being treated for 'active' symptoms of depression.

Treatment Rate



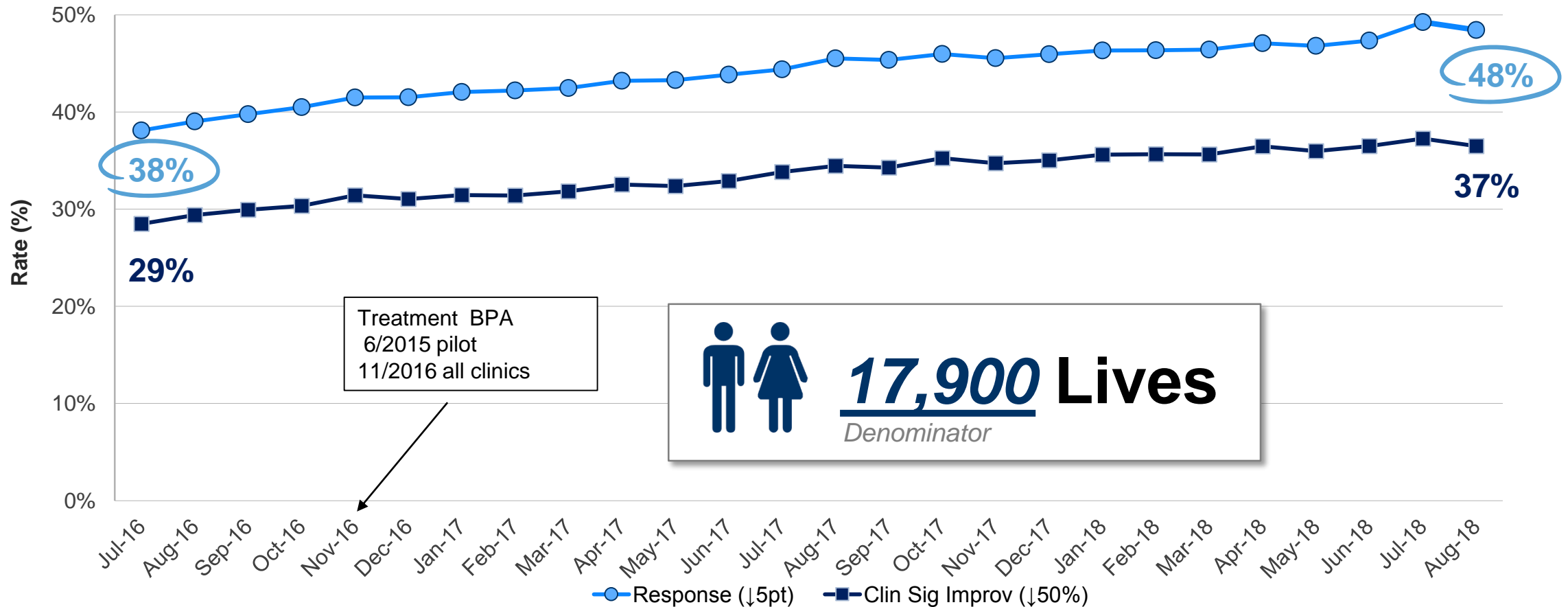
As a result, we are doing better at decreasing depression symptom burden

Value Derived (3 of 3)



Response rates **increased from 38% (July 2016) to 48% (July 2018)**. Clinically significant improvement rates increased from **29% (July 2016) to 37% (July 2018)**. Improving the quality of life for depression patients

Response Rate (Outcome)

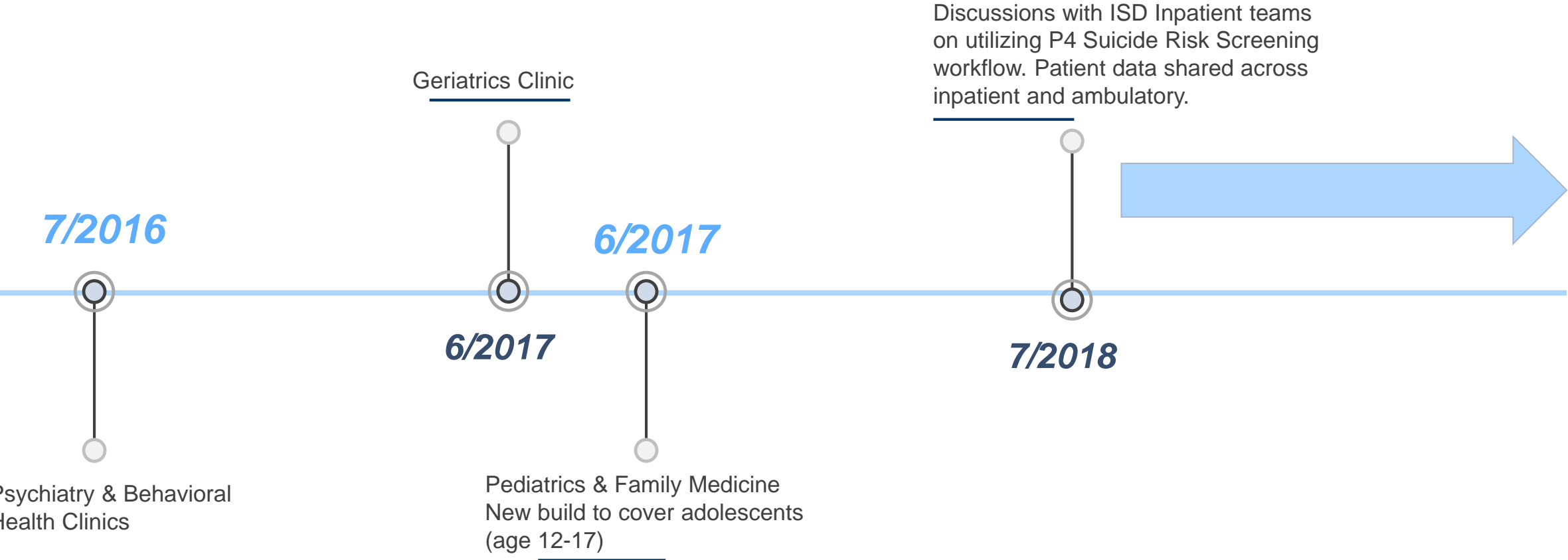


Next Steps

Going beyond primary care

Continuous Improvement (1 of 3)

**Depression Screening, Monitoring and Treatment BPAs released to additional specialties.
Patients seen in the UNC Health Care System more likely to get systematic quality depression care**



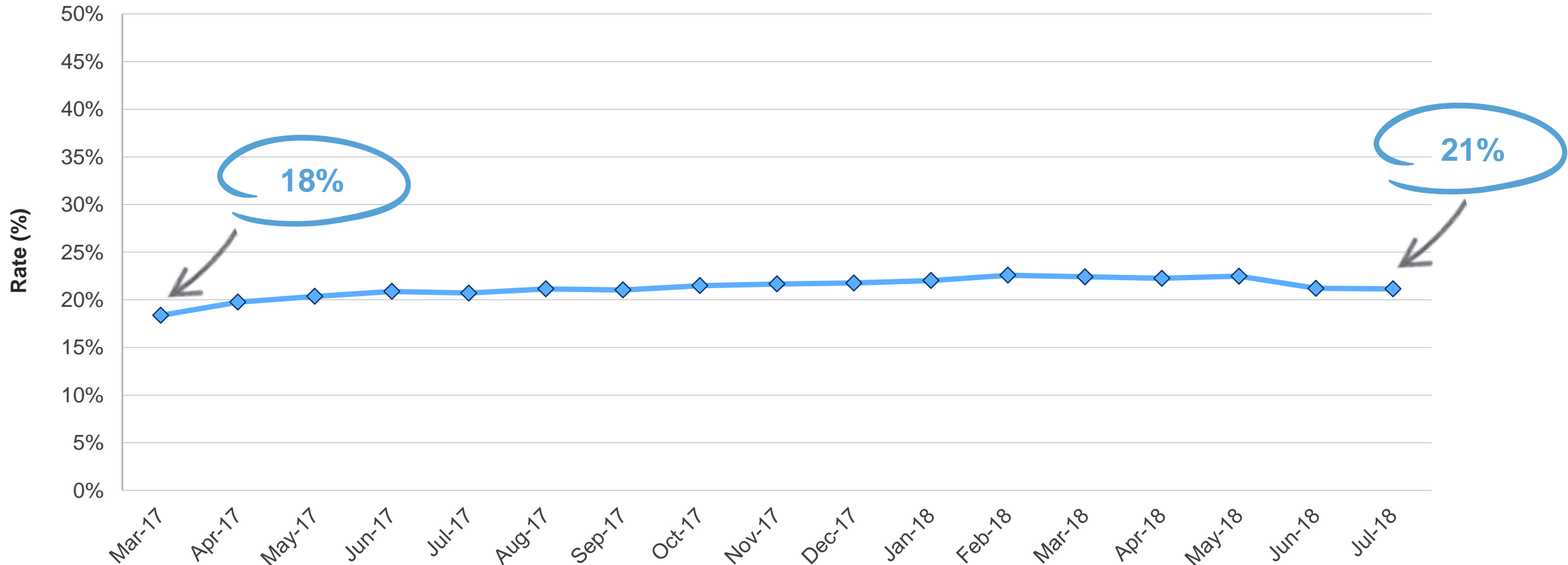
Now we are focused on depression remission

Continuous Improvement (2 of 3)



Depression Remission has been elevated to a FY19 PCIC core measure and also a UNC system organization goal. Groups are actively engaged in developing/piloting IT solutions and optimizing clinic processes. **We have seen modest increase from 18% (March 2017) to 21% (July 2018).**

Depression Remission (Outcome)



Next Steps – Continue to focus on improving depression remission

Continuous Improvement (3 of 3)

- 1 Have held strategy session with clinical advisors and Healthy Planet team to brainstorm IT solutions to support continued depression remission improvements. Areas identified for intervention:**
 - Addressing clinical inertia
 - Addressing patients with comorbid conditions (e.g., chronic pain, substance abuse, anxiety, etc.)
 - Ensuring appropriate follow-up scheduled
- 2 Currently investigating possible IT solutions**
 - Summarized views of patient's depression care – recent PHQ-9 scores, current medications, medications discontinued, date of last medication change, date of visits with behavioral health and/or psychiatry.
 - Alerting providers to patients 'failing depression' with link to treatment algorithm
 - Reminders to get PHQ-9s "off-schedule" to assess whether patient is in remission
 - Further slicing population to better target intervention (high vs. low PHQ-9 score, scheduled vs. not scheduled)
- 3 Then will enlist PCIC clinics to pilot test potential solutions using PDSA cycles to determine which solutions warrant further testing and/or implementation.**

Also investigating population level solutions with ambulatory care management group