Population Health Project Request

Requestor Name: James Ritter	**E-mail Address: jritter@sandiego.edu** **Phone: 9497349663**	Request Date: 4/8/24
Name of Request: **Preventive Care and Screening: Screening for Depression and Follow-Up Plan**		Metric/s Impacted by Request 00672-07-E-MSSP | Process

CLINICAL LEAD SPONSOR: (Name/Title, Group or Committee)

XYZ Health

Specific Request Brief Description:

What is needed?

Clinical Decision Support tools and PCP training to identify patients for Depression screening, CDS to additionally provide tools to assist administration of said screenings.

SITUATION, BACKGROUND, ASSESMENT, RECOMMENDATION (SBAR)

Situation: What is the justification for this new metric and/or registry. Primary Care Providers are the first line of defense against depression screening.	*Background: What relevant factors or challenges led up to this request?* Depression has a high disease burden and is very prevalent. Regular screenings and follow-up care can improve outcomes dramatically.
Assessment: How will this metric and/or registry improve the current situation and quality performance? By screening patients for depression and providing follow-up care, PCPs can target patients that would otherwise and potentially catch depression in its earliest stages.	*Recommendation: Please attach and additional information that will help in describing/scoping the effort.* Please see Yang et al., 2019

Date Required / Reason: May 1, 2024 / CDS and training start date.

SERVICE AREA	*IMPLEMENTATION IMPACT/EFFORT*
☐ **Information Services - Yes CDS development** ☐ **Reporting – Yes, Data Mining and Aggregation** ☐ **Project Management – Yes CDS Dev and Training** ☐ **Other** ☐	**# & Types of people Impacted by this Project**: **Training Effort**: ☐ **None – Front Office Staff** ☐ **Written Communication – CDS Programmers** ☐ **Classroom Training – Super Users How Many? - 7** ☐ **Classroom Training – All – 30**

PROJECT SERVICE LINE IMPACT

(Choose All that Apply)

☐ **Quality** ☐ **Patient Experience**
☐ **Safety** ☐ **Data Integrity**
☐ **Efficiency** ☐ **Effectiveness**

Explanation: CDS alerts (Efficiency), CDS assessment (Quality), Recommendation for further screening (Effectiveness),

SIGNATURES (Required)

Requestor: James Ritter Title: Screening for Depression & Follow Up Date: 4/8/24

Approval by Sponsoring Committee Representative

Name: _____ Title:_____ Date:_____

Population Health Intervention Checklists (One for each intervention)

Justification Checklist

1	**Quality Measure(s):** What measure(s)are you planning to change with this intervention?	The target measure aims to quantify the proportion of patients (12 or older) that have been screened for depression AND if positive, recommended for follow-up care.
2	**Rationale** What are the clinical, quality, and/or financial grounds and supporting evidence for the intervention? Please attach any guidelines, studies, etc.	Due to the high prevalence and disease burden of depression, it is imperative to identify and treat the disorder in its earliest stages. Primary care providers are the first line of defense in detecting mood disorders, and without them, many individuals' symptoms go undetected. The purpose of this measure is to increase screenings and treatment planning for depressions.
3	**Baseline Data:** Describe your plans for baseline data	Baseline data will be collected by generating a registry of active patients based on (1) age and (2) no previous diagnosis of depression or bipolar disorder (3) no recent depression screening (last 14 days). These patients will be targeted for screening. Additionally, collect data on the proportion of all patients (active or not) that have ever been screened for depression in PCP setting, and what proportion of those patients were recommended for follow-up care.
4	**Measure Target:** What is the definition of success in terms of the quality measure(s)?	Success is defined as >90% screening of eligible patients during the measurement period, and >90% follow-up care administered for those positive with depression.

Intervention Checklist

1	**The Who** (Denominator) Define the selection criteria for the cohort of patients to be included in this intervention	Registry Inclusion	>12yo, no history of MDD, active pt.
		Inpatient	No
		Ambulatory	Yes
		Primary Care	Yes
		Age Start	12
		Age End	N/A
		Gender	N/A
		Social Determinants	N/A
		Diagnoses	N/A
		Lab Values	N/A
		Medication	N/A
		Procedures	N/A
		Exclusions	N/A No history of MDD or Bipolar Disorder

2	**The What** (Numerator) What value in the patient chart with indicate that the measure is complete	Lab Order Medication Procedure Order Outreach Questionnaire Assessment Immunization Examination Chart Documentation Other	N/A N/A N/A N/A PHQ-9 Completed PHQ-9 Completed N/A N/A If positive, PT recommended for follow-up care N/A
3	**The When** (Timing) If the intervention to be repeated, what is the schedule or trigger for repeating?	Screening must occur on date of encounter (or 14 days prior) If positive, a follow-up plan must be documented on day of administration	
4	**How** (EHR tools) Which EHR tools will be required to move the measure?	Intervention scheduler Intervention order Dynamic order set Bulk order Bulk message Risk score Report Alert Work queue Other	Yes No No No Yes, Remind PT and Providers of Screening Yes, for each patient Yes, for each patient, esp. If positive Yes, for identified patients No No
5	**By Whom:** Will this create new work? For whom? Does it automate an existing task?	MD PharmD Registered Nurse Lic.Vocational Nurse Front Office Scheduler Care Manager Patient Automation Other	Possibly (Assessment) No Possibly (Assessment) Possibly (Assessment) No Yes (Follow-up appointments) Yes (Coordinated Care) Yes, if positive, needs to go to follow-ups Yes, CDS to automate provider notification and assessment tools

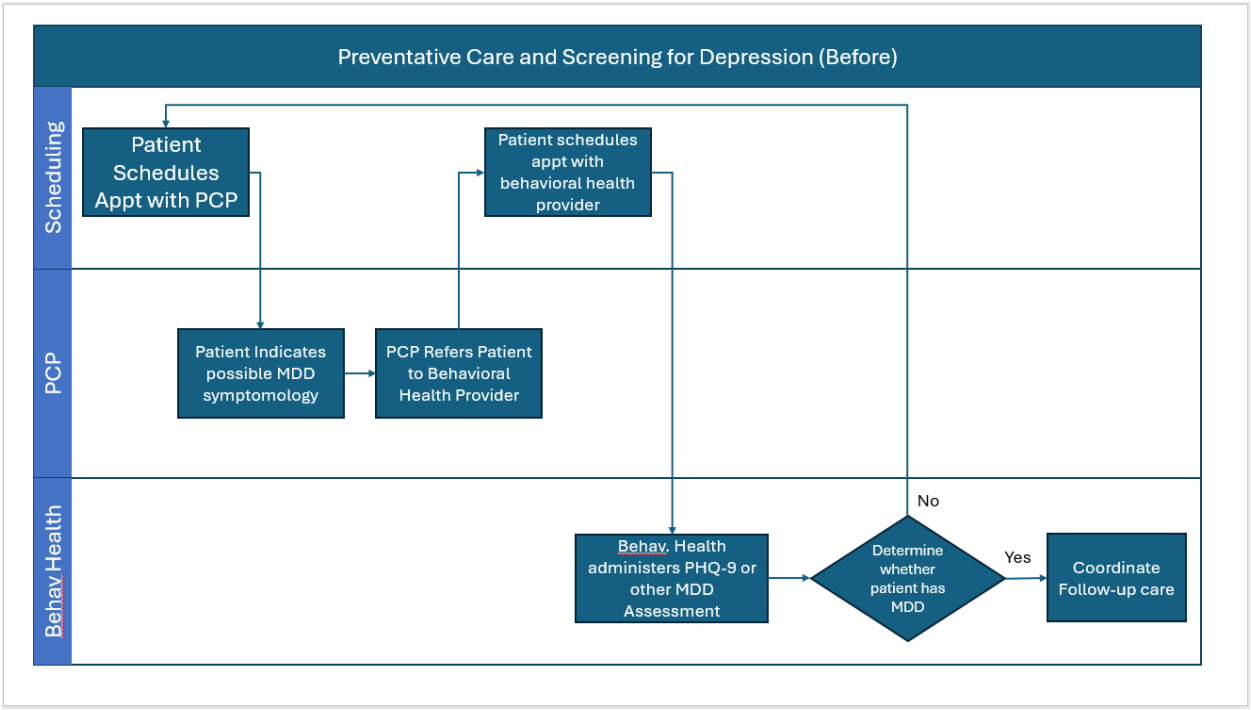
Project Management checklist

1	Primary stakeholders: Who are the primary group(s) or committee(s) that have a stake in this new workflow?	Administration, Behavioral Health Coordinators, Providers
2	Established level of consensus? Do stakeholders all agree on need and priority?	Yes, due to low complexity and high patient volume, and importantly, importance of depression screening!

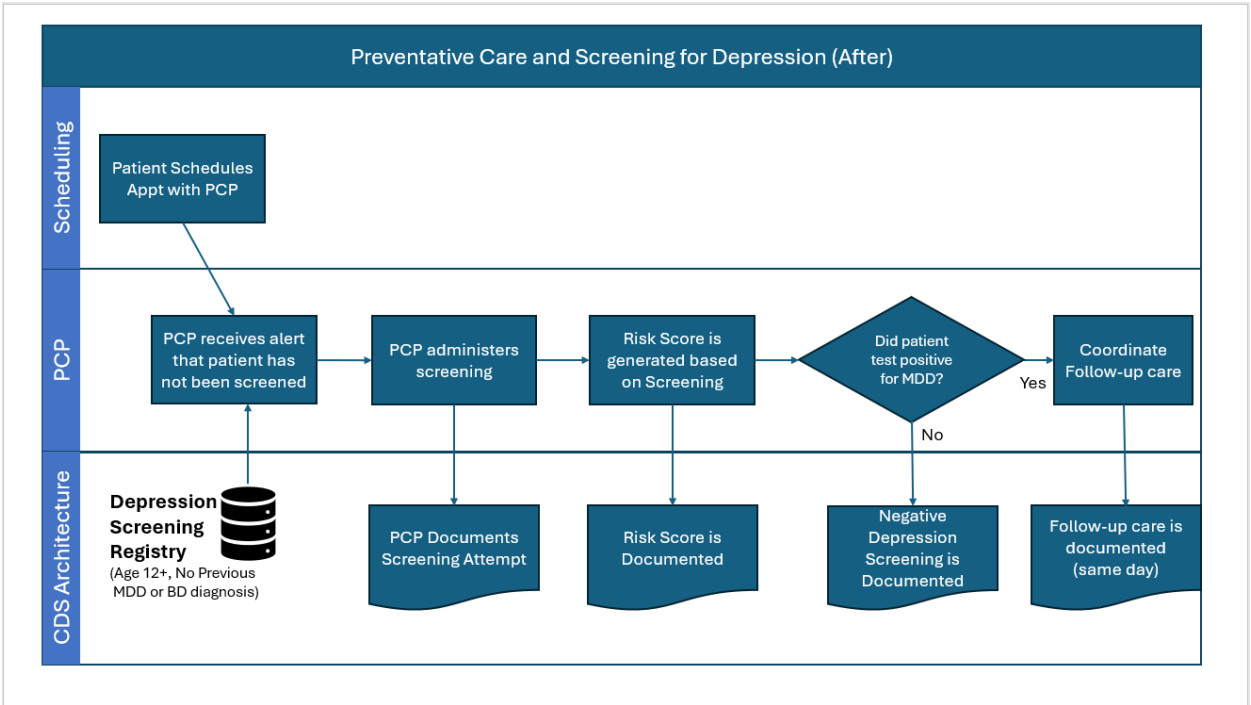
3	Impact on patient experience? What change will the patient be aware of?	Patient may notice an increased focus on mental health care
4	Impact on provider/caregiver experience? +/- tasks, efficiency, usability, etc.	Adds an extra screening that must be done, increasing overall patient time during that visit. If administered properly, can improve Provider-patient relationship
5	Financial Cost?	Yes, due to CDS development time, project management, and staff training requirements
6	Financial Benefit?	Possibly, not significant

Workflow Diagrams

Before



After


Preventative Care and Screening for Depression (After)
Scheduling
PCP
CDS Architecture
Patient Schedules Appt with PCP
PCP receives alert that patient has not been screened
PCP administers screening
Risk Score is generated based on Screening
Did patient test positive for MDD?
Yes
No
Coordinate Follow-up care
Depression Screening Registry
(Age 12+, No Previous MDD or BD diagnosis)
PCP Documents Screening Attempt
Risk Score is Documented
Negative Depression Screening is Documented
Follow-up care is documented (same day)

Risk Assessment Score

Providers would use the (Patient Health Questionnaire) PHQ-9 to generate a risk assessment score for patients, determining how to proceed with the measure. According to Kroenke et al., "the…[PHQ-9]…is a new instrument for making criteria-based diagnoses of depressive and other mental disorders commonly encountered in primary care (2001, p. 606)." This assessment scores patients based on the severity of symptoms for each of the nine criteria presented in the DSM-IV. The authors conclude, "in addition to making criteria-based diagnoses of depressive disorders, the PHQ-9 is also a reliable and valid measure of depression severity (p. 606)." See Appendix A for a sample PHQ-9 assessment (Stanford Medicine, 2005).

A patient's PHQ-9 score will function as this measure's risk assessment score and determine whether/how follow-up care will proceed. PHQ-9 severity scores can be classified using the criteria presented in Table 1. Patients with minimal depression severity (PHQ-9 score 1 – 4) will not be selected for follow-up care. Patients with mild to severe depression (PHQ-9 score 5 – 27) will be selected for follow-up care, with patients experiencing Moderately Severe to Severe depression (PHQ-9 score 15 – 27) receiving priority over those experiencing Mild to Moderate depression (PHQ-9 score 5 – 14).

Table 1

PHQ-9 Depression Severity Scores

Depression Severity	PHQ-9 Score Range
Minimal	1 – 4
Mild	5 – 9
Moderate	10 – 14
Moderately Severe	15 – 19
Severe	20 – 27

References

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9: validity of a brief depression severity measure. *Journal of general internal medicine*, *16*(9), 606–613. https://doi.org/10.1046/j.1525-1497.2001.016009606.x

Stanford Medicine. (2005). PATIENT HEALTH QUESTIONNAIRE (PHQ-9). https://med.stanford.edu/fastlab/research/imapp/msrs/_jcr_content/main/accordion/accordion_content3/download_256324296/file.res/PHQ9%20id%20date%2008.03.pdf

Yang, M., Loeb, D. F., Sprowell, A. J., & Trinkley, K. E. (2019). Design and Implementation of a Depression Registry for Primary Care. American journal of medical quality : the official journal of the American College of Medical Quality, 34(1), 59–66. https://doi.org/10.1177/1062860618787056

Appendix A

PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

ID #: _____ DATE: _____

Over the last 2 *weeks*, how often have you been bothered by any of the following problems? *(use "✓" to indicate your answer)*	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself—or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or the opposite — being so figety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead, or of hurting yourself	0	1	2	3
		add columns	+	+
		TOTAL:		

(Healthcare professional: For interpretation of TOTAL, please refer to accompanying scoring card).

10. If you checked off *any problems*, how *difficult* have these problems made it for you to do your work, take care of things at home, or get along with other people?	Not difficult at all _____ Somewhat difficult _____ Very difficult _____ Extremely difficult _____

A2663B 10-04-2005

(Stanford Medicine, 2005)

Appendix A (continued)

PHQ-9 Patient Depression Questionnaire

For initial diagnosis:

1. Patient completes PHQ-9 Quick Depression Assessment.
2. If there are at least 4 ✓s in the shaded section (including Questions #1 and #2), consider a depressive disorder. Add score to determine severity.

Consider Major Depressive Disorder

- if there are at least 5 ✓s in the shaded section (one of which corresponds to Question #1 or #2)

Consider Other Depressive Disorder

- if there are 2-4 ✓s in the shaded section (one of which corresponds to Question #1 or #2)

Note: Since the questionnaire relies on patient self-report, all responses should be verified by the clinician, and a definitive diagnosis is made on clinical grounds taking into account how well the patient understood the questionnaire, as well as other relevant information from the patient.
Diagnoses of Major Depressive Disorder or Other Depressive Disorder also require impairment of social, occupational, or other important areas of functioning (Question #10) and ruling out normal bereavement, a history of a Manic Episode (Bipolar Disorder), and a physical disorder, medication, or other drug as the biological cause of the depressive symptoms.

To monitor severity over time for newly diagnosed patients or patients in current treatment for depression:

1. Patients may complete questionnaires at baseline and at regular intervals (eg, every 2 weeks) at home and bring them in at their next appointment for scoring or they may complete the questionnaire during each scheduled appointment.
2. Add up ✓s by column. For every ✓: Several days = 1 More than half the days = 2 Nearly every day = 3
3. Add together column scores to get a TOTAL score.
4. Refer to the accompanying **PHQ-9 Scoring Box** to interpret the TOTAL score.
5. Results may be included in patient files to assist you in setting up a treatment goal, determining degree of response, as well as guiding treatment intervention.

Scoring: add up all checked boxes on PHQ-9

For every ✓ Not at all = 0; Several days = 1;
More than half the days = 2; Nearly every day = 3

Interpretation of Total Score

Total Score	Depression Severity
1-4	Minimal depression
5-9	Mild depression
10-14	Moderate depression
15-19	Moderately severe depression
20-27	Severe depression

A2662B 10-04-2005

(Stanford Medicine, 2005)

Project Request: Preventative Care & Screening for Depression

REQUESTOR: JAMES RITTER

SPONSOR: CLINICAL SYSTEMS DIRECTOR AT XYZ HEALTH

HCIN 600: POPULATION HEALTH ANALYTICS

APRIL 13, 2024

Requesting Project Approval for:

1. Registry Creation
    - Comprising eligible patients for depression screening
    - Identifying patients in need of follow-up care

2. Clinical Decision Support Tools
    - Alerting and reminding clinicians to screen eligible patients
    - Assisting providers with depression assessment (PHQ-9)
    - Facilitating scheduling for follow-up care

3. Staff Training
    - Providing clinicians with necessary tools and information to administer PHQ-9 assessments

S.B.A.R

Situation: PCPs are the first line of defense in identifying and targeting depression	**Background:** Depression has a high prevalence and high disease burden. Depression screening is not ubiquitous or standardized in primary care, where providers have the greatest access to a patient
Assessment: Through screening for depression and recommending patients for follow-up care, PCPs can help catch depression in its earliest stages	**Recommendation:** Create a registry to identify patients eligible for depression screening, develop clinical decision support tools to assist providers in assessing patients for depression and coordinate follow-up care, and train staff on identifying mental health issues and administering assessments

Justification

Quality Measures	Quantify the proportion of patients, aged 12 or older, without a history of the disease, who have been screened for depression. If positive, coordinate follow-up care.
Rationale	Depression is highly prevalent and can be caught in its earliest stage through regular screenings with PCPs
Baseline Data	Capture the percentage of patients that have been screened for depression, in the year before the measurement period
Measure Target	Increase in depression screening to >90% of eligible patients screened during the measurement period

Intervention

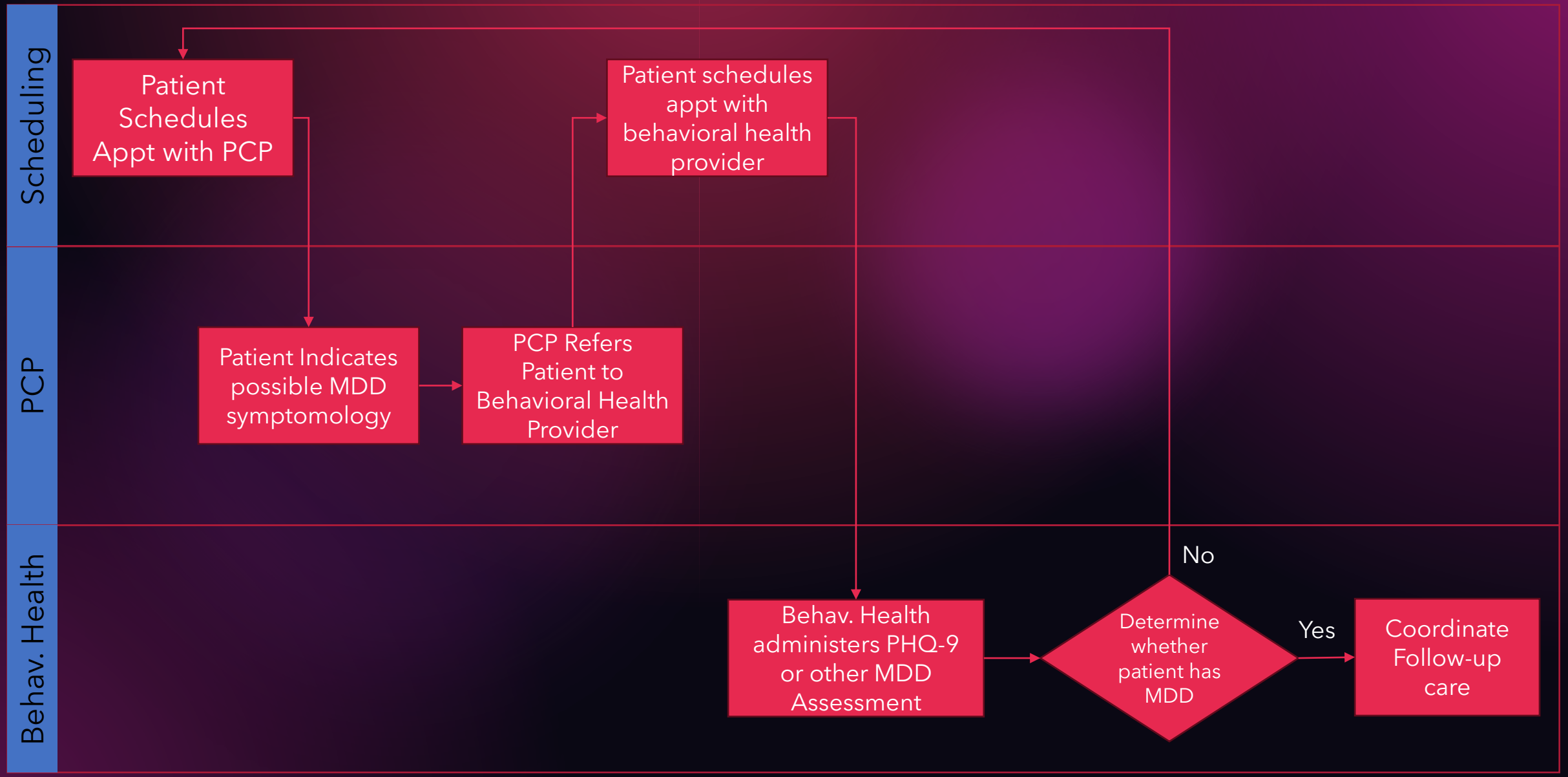
The Who Denominator	Active patients who: • >12 years old • No previous Depression or Bipolar Disorder diagnoses
The What Numerator	Eligible patients who: • Received the PHQ-9 Depression Screening • If Positive: recommended for follow-up care
The When Timing	Screenings must occur: • At patient's visit during measurement period (or 14 days prior) • Follow-up care must be documented on the same day

Process Changes

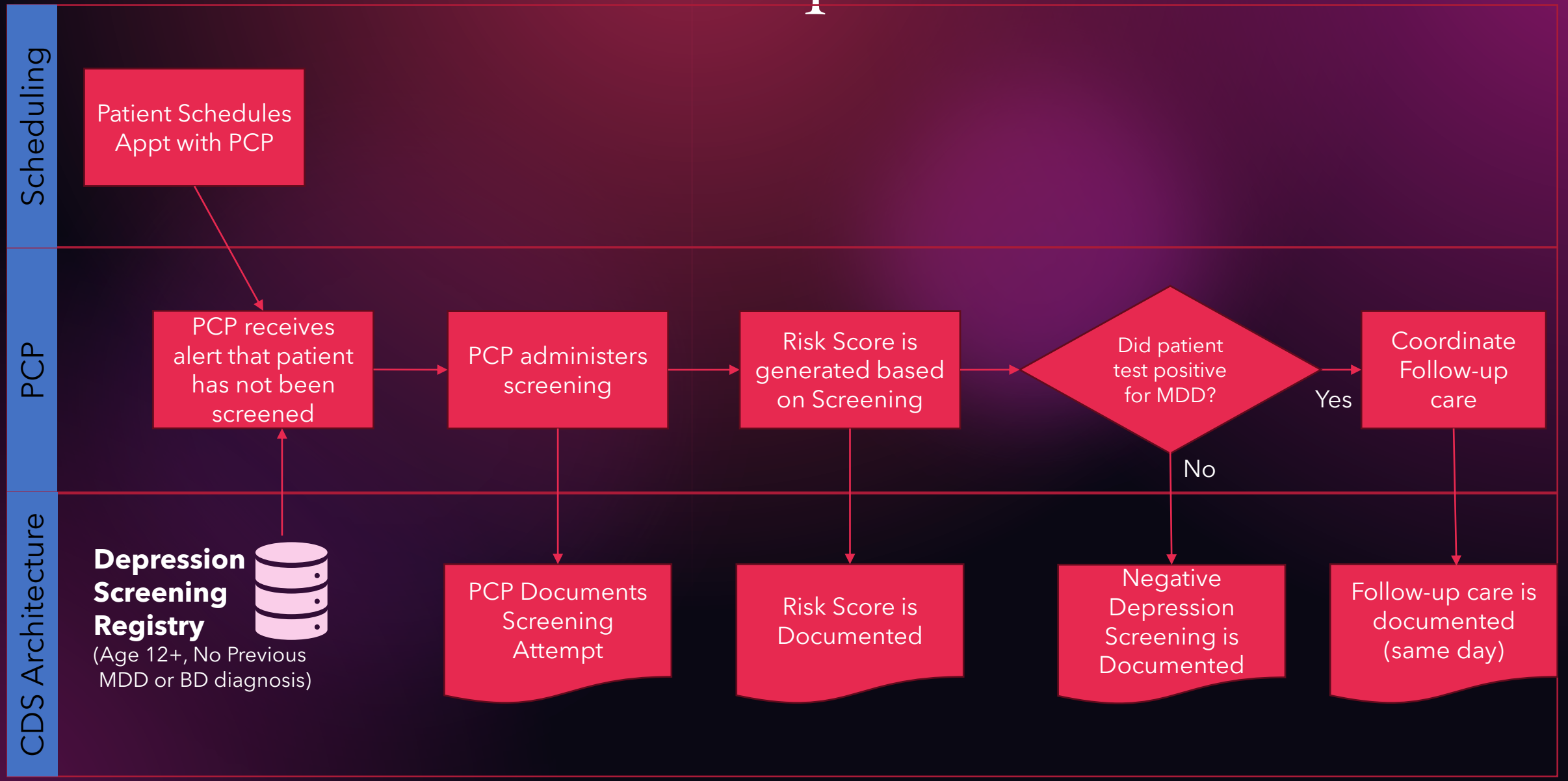
How	By Whom:

• Eligible Patients identified through registry
• Dynamic order set
• Alert provider of incomplete screening
• Best Practice Alert for assessment administration, follow-up care and case management
• Risk score generated based on screening
• Intervention scheduler to schedule follow up care
	• New Work Created for:
	  • Primary Care Providers (MD, RN, LVN)
	  • Schedulers
	  • Case Managers
	• Automation
	  • CDS assist with assessment administration
	  • CDS to automate scheduling and referral to case management

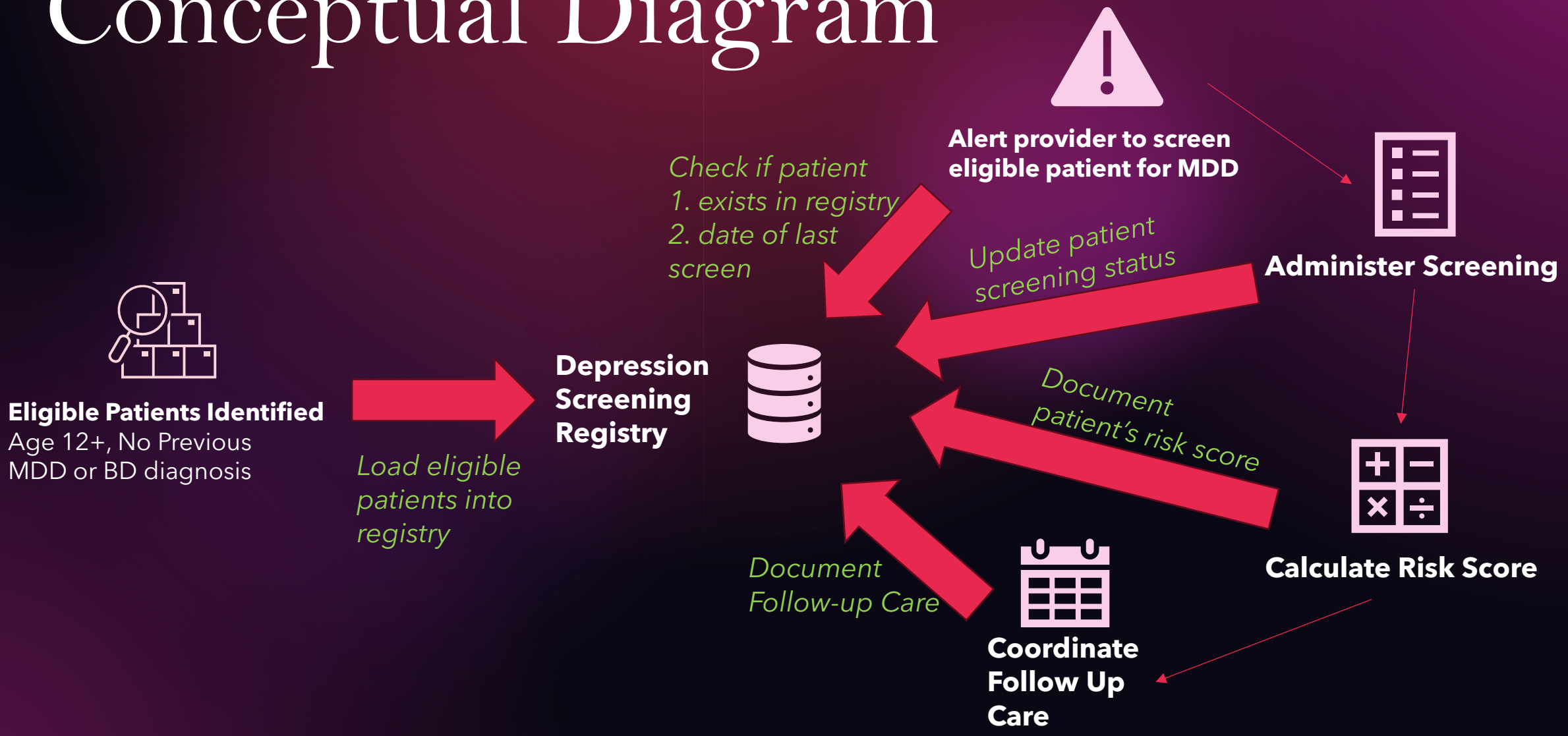
Process Flow – As Is



Process Flow – Proposed



Conceptual Diagram



Project Management

Primary Stakeholders	Clinical staff are primary stakeholders • PCPs (MD, RN, LVN) • Case Managers
Consensus	Stakeholders agree on need and priority • Early stage MDD is easier/cheaper to treat • Low complexity & High patient volume
Patient Experience Impact	Patients may feel a greater focus on mental health • Increased conversations around mental health • Follow up care may prove challenging for some
Impact on Provider Experience	Adds extra assessment to PCP's workflow • Requires significant training • Increases patient time per visit • Automation can reduce clinician burden

See Notes Below

Cost Analysis

- Treatment Costs
  - Severe depression is approximately $16,000 - $32,000 more expensive to treat annually, per patient, than subthreshold mild depression
  - Estimate 95‡ patients are at risk for depression: Possible saving of $1.5 million - $3 million

Assessment Rating	Therapy Costs (Monthly)	Medication Costs (Monthly)	Total Monthly Costs	Total Annual Costs	Cost Saved vs. Severe
Dysthymia*	$200 - $400	$0	$100 - $200	$1,200 - $2,400	$18,960 - $32,400
Mild MDD**	$400 - $800	$60 - $100	$460 - $900	$5,520 - $10,800	$15,840 - $26,400
Severe MDD***	$200 - $400	$180 - $1,500	$1,780 - $3,100	$21,360 - $29,280	$0

- Development & Implementation Costs
  - Software Development Costs: 12 Hours @ $100/hour = **$1,200**
  - Staff Training: 8 hours @ $50/hour x 10 staff = **$4,000**
- CBA = (Total Program Benefit / Total Program Cost) = ($1.5M – $3 M / $5200) =

When preventing severe depression: $288 - $576 is saved for every $1 spent!

References

- Forbes. (2024, March 1). How Much Does Therapy Cost? Forbes. https://www.forbes.com/health/mind/how-much-does-therapy-cost/#:~:text=The%20average%20cost%20of%20psychotherapy,to%20be%20billed%20per%20session.
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- K Health. (n.d.). How Much Do Antidepressants Cost? K Health. https://khealth.com/learn/antidepressants/how-much-do-antidepressants-cost/