Evidence2Practice Ontario
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Major Depression & Anxiety Oracle Toolkit

NORTH YORK GENERAL
Making a World of Difference
CEP Centre for Effective Practice
eHealth

Summary

The purpose of this toolkit is to guide Oracle hospitals in Ontario to implement the Evidence2Practice Ontario (E2P) Major Depression & Anxiety use case. The E2P program is a cross-sector collaborative in partnership with North York General Hospital, the Centre for Effective Practice, and Amplify Care. The goal of this program is to provide clinicians with access to digitized evidenced-based tools at the point of care, leading to improvements in the provider and patient experience, clinical outcomes, and care coordination.

This toolkit equips hospitals with guidance for digitizing foundational elements of measurement based care, based on Ontario Health's Depression Quality Standard and Anxiety Quality Standard. The goal of this documentation is to reduce work effort required by other Oracle hospitals to build and implement these digital enhancements.

Before You Start

This toolkit can be useful for mental health clinicians, clinical informaticians, and/or project managers who may be involved in reviewing and implementing the PHQ-9, GAD-7, and dashboard at their respective hospitals. The goal surrounding this, is to support improved care for patients experiencing major depression and/or anxiety, by adopting practices aligning with measurement-based care.

Implementation timelines may vary depending on an organization’s resources, state of readiness, and health information system (HIS) maturity. The hospitals that implemented the PHQ-9, GAD-7, and trended-scores dashboard went live within 5 months of initiation. Due to the localization of clinical workflows, your organization may find that not all the suggestions in this toolkit apply to you.

Table of Contents

Implementation Overview

Implementation Scope

Quality standards outline what high-quality care looks like for conditions where there are variations in how care is delivered, or where there are gaps in how patients receive care across Ontario. The standards have Quality Statements that look to address those gaps and describe what high quality care looks like across the broader healthcare continuum (in primary care, acute care, and community care).

One of the goals of Evidence2Practice is to support hospitals in implementing digital enhancements that enable clinicians to deliver on the quality standard. However, not all statements apply to acute care, and the relevance can vary based on the setting (e.g. inpatient, outpatient, emergency department, specialty clinics, etc.). To scope this work, a formal governance group was established with clinical and digital leaders from varying hospitals to outline the initial focus for implementations given typical hospital maturity, resources, and overall timelines for E2P support.

The details below outlines the recommended scope for the E2P program:

- Electronic documentation of the PHQ-9 and GAD-7, two screening tools whose scores can be used to support measurement-based care
- Digital dashboard which can trend these scores overtime, allowing clinicians to see the progress after repeated measurement for a patient with major depression or anxiety and use it to inform decision making
- Enhanced patient and provider after-visit summaries
    - Including aligning patient summaries with the PODs model and ensuring appropriate information is displayed in the provider summaries to support transitions in care

Organizations can implement this in the inpatient setting and/or the outpatient setting, however more benefit may be realized in the outpatient setting due longer program durations, and more points of measurement.

Although the goal is to consistently implement the scope above, the E2P team works with each hospital to customize/localize the implementation to support adoption of measurement-based care within each organization. When considering the scope, the clinical teams would work with E2P to outline their approach and setting (e.g. inpatient/outpatient, and which units/clinics/programs to focus on). Some hospitals elected to take a phase approach with rolling out enhancements, whereas others decided to have a consolidated effort to push out the changes.

Mobilize your implementation team

To successfully implement these digital enhancements, you will need a clinician champion (e.g., psychiatrist, psychologist, social worker), clinical informaticians (e.g., Orders Analyst) and a project lead (e.g., project manager). The clinician champion is best positioned to speak to the importance of measurement-based care tools to their colleagues and will design the clinical workflow. The clinical informaticians will build and customize the digitized PHQ-9 and GAD-7 forms, dashboard, and reports in Epic. The project lead's role is to facilitate discussions and decisions between the clinicians and clinical informaticians – ensuring that the technical design supports the desired clinical workflow.

Define the clinical workflow and dashboard layout

The clinician champion will outline the steps for administering and collecting the PHQ-9 and GAD-7. Although the PHQ-9 and GAD-7 are patient-facing questionnaires, organizations can vary in what systems they have in place to distribute and collect the questionnaires and ensure the data is available in Oracle. Thus, teams would need to discuss and decide on the appropriate workflow (e.g. electronic distribution for patients, transcription into the system in scenarios where patients do not have access to a portal, etc.).

Take this time to also define the content that would be useful for clinicians to see on the trended scores dashboard. The trended scores dashboard is a single view to track and trend the PHQ-9 and GAD-7 across multiple encounters. The E2P program suggests starting with the minimum requirements (e.g., utilizing an HIS functionality that will pull all the documented scores onto one page), and then adding additional useful content based on clinical champion priorities, clinical informatics capacity, and HIS capabilities (e.g. tying medications or interventions to the scores seen on the dashboard).

Build the technical components within Epic

The clinical informaticians will mock-up the PHQ-9, GAD-7 and dashboard within Oracle. During the clinical workflow and content conversations, consider having clinical informaticians present so that they can hear first-hand the desired end state, and also provide feedback on feasibility.

Conduct end-user testing and seek feedback

With each mock-up and new iteration, ensure you are seeking feedback from the end-users for both digital and workflow changes. Appropriate documentation of decisions and updated workflows are essential to support change management and training.

Execute change management strategies

Engage end-users at a broader level (e.g., department meetings, morning huddles) to encourage adoption and utilization of the digital enhancements. The E2P team will work with the organization to create education materials or documentation that supports end-users in finding and using the digital enhancements within Epic.

The PHQ-9 and GAD-7

Background

The PHQ-9 is a validated tool for assessing the severity of symptoms and degree of functional impairment. It is one component of a comprehensive assessment.[1] Consistent measurement of symptoms using the PHQ-9 allows providers gather data about a patient's depression symptoms, which then informs treatment decisions and care planning. This approach utilizes the PHQ-9 to track symptom severity over time and to facilitate collaborative discussions between clinicians and patients. There are no strict guidelines on how often the PHQ-9 should be re-administered in an inpatient or outpatient setting.[2]

The GAD-7 is both a screening and validated severity-rating tool. By itself, identification does not provide a diagnosis of an anxiety disorder; however, it does provide preliminary documentation of symptoms and quantify severity in a time-limited setting, and it indicates who may need further assessment.[3] The GAD-7 is a validated severity-rating tool that can be used as one component of a comprehensive assessment. The E2P program focuses on the administration of the GAD-7 as it can be used for general anxiety disorder, and often a starting point for measurement-based care in people with other anxiety disorders. The Anxiety Quality Standard has a list of other validated severity-rating tools that can be used for other anxiety disorders in conjunction with the GAD-7.

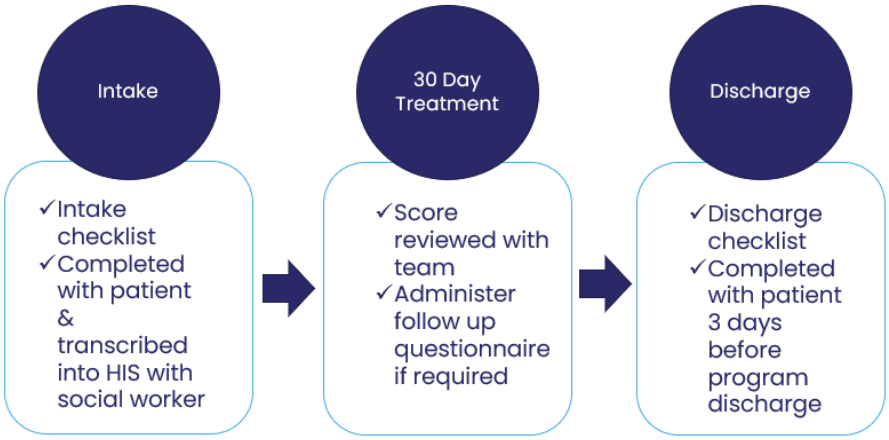
Frequency of Administration

With input from the Evidence2Practice Ontario Topic Expert Group and the initial pilot site hospitals, the E2P program recommends that the PHQ-9 and GAD-7 be completed at least once every six weeks. There are no strict guidelines on how frequently these scales should be readministered, but there is some guidance on re-administering the PHQ-9 at 4-6 weeks to measure response to treatment.[2] Therefore, the E2P program suggests that in the outpatient setting, the PHQ-9 and GAD-7 be re-administered at 4-6 weeks-in accordance with organizational policies and clinical judgment. For the inpatient setting, most organizations administer questionnaires early in admission to support screening and baseline documentation. Additional questionnaires have been added to support evaluation of electroconvulsive therapy (ECT).

Clinical Workflow
It is expected that the clinical workflows for administering the PHQ-9 and GAD-7 be unique to each organization, but here is an example below:

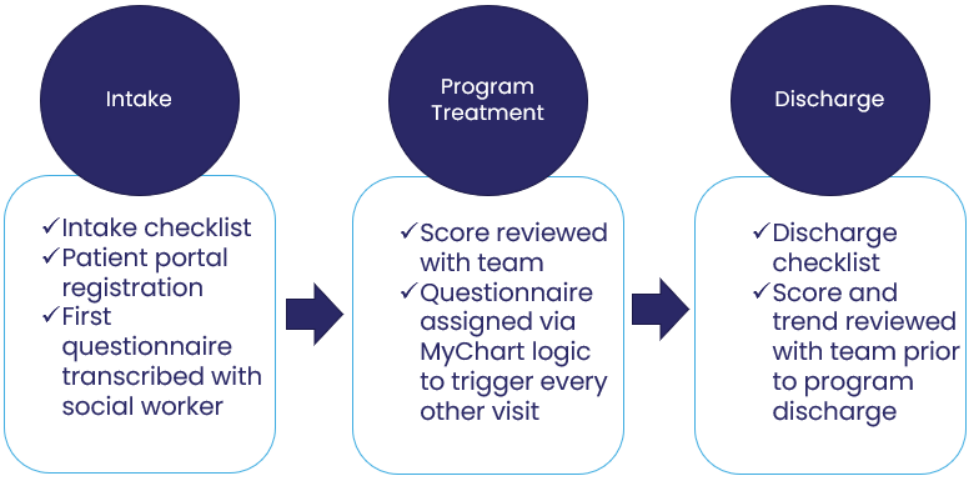
Example 1.

Outpatient Mental Health Adult Day Hospital
Average treatment cycle: 4 weeks
Documentation: HIS PHQ-9, GAD-7 Flowsheet, transcribed by clinician, score trended by dashboard



Example 2.

Outpatient Mental Health Adult Clinic
Average treatment cycle: 12 weeks
Documentation: Patient Portal MyChart email distribution 3 days prior to visit for assigned clinicians with email reminder, registration alert if questionnaire incomplete & tablet available for patient documentation, HIS PHQ-9, GAD-7 Flowsheet available for transcription, score trended by dashboard.

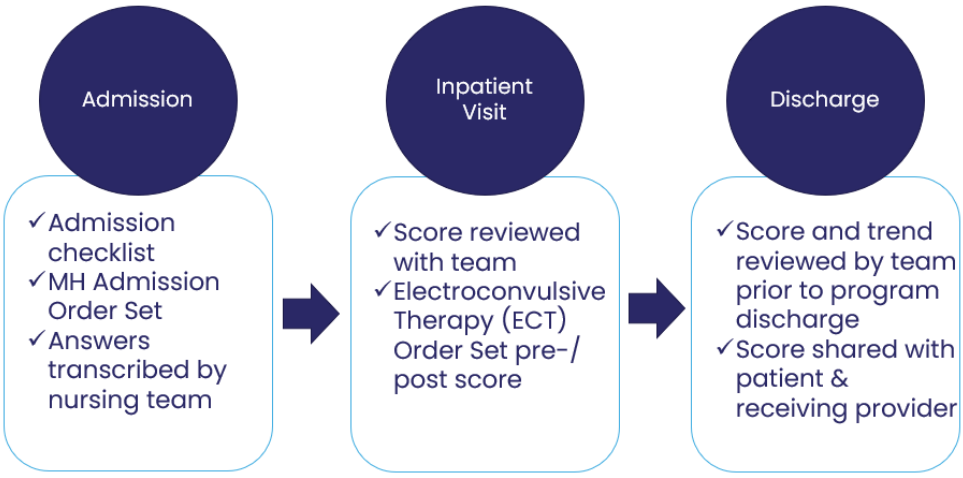


Example 3.

Inpatient Adult & Geriatric Mental Health Units
Average length of stay: <10 days
Documentation: PHQ-9/GAD-7 answers transcribed by MH RN/RPN into HIS flowsheet. PHQ-9/GAD-7 flowsheet available under nursing admission/assessment/discharge flowsheets to reduce navigation. PHQ-9/GAD-7 documentation score can be viewed on nurse worklist and global results review to support discussion during rounds.

MH Admission Order Set includes pre-checked PHQ-9/GAD-7 order to promote screening & baseline documentation for all patients (if appropriate).

Electroconvulsive Therapy (ECT) includes pre-checked pre-/post- questionnaire order. MH RN/RPN transcribes answers into HIS flowsheet.



Trended Scores Dashboard

The purpose of the trended scores dashboard is to support clinicians in using measurement-based care to track the patient's progress on one page. Some examples of how this can be achieved are line graphs that visually display the change in scores, or by having a table that shows the multiple scores for the specific patient. The content and design of the dashboard should be defined by the clinical champion. Some hospitals opted for a one-pager that displayed the scores across multiple encounters and used colours to trigger the most responsible provider to pay attention to high scores. Other hospitals implemented a dashboard that also highlights specific questions related to thoughts about self-harm.

The Enhanced Patient & Provider Discharge Summary

Background

Through a review of the literature (e.g., Patient Oriented Discharge Summary Checklist) and consultation with the Evidence2Practice (E2P) Topic Expert Group, 7 Evidence2Practice Anxiety and Depression pilot site organizations, and Patient Family Advisors (PFAs), key principles of a patient and provider discharge summary were identified.

The following key principles of a quality patient and provider discharge summary outline the crucial components of both documents. These elements should be incorporated in the enhanced Patient and Provider Discharge Summary to improve communication with patients and receiving clinicians and enable seamless transitions in care. Note that the following key principles and recommendations were developed through the approach outlined above; hospitals may connect with local PFAs to ensure that enhancements are appropriate.

Patient Discharge Summary Key Principles

The Patient Discharge Summary must be a comprehensive document with literacy appropriate instructions and patient education materials. A completed Patient Discharge Summary helps patients successfully transition from the outpatient setting. The following elements will need to be incorporated in the Patient Discharge Summary:

Most Important Information at the Top

To support successful transition, include elements of the discharge that are most important at the top of the document. For example, information about follow-up appointments and/or safety plans should be included first where the patient or support persons can quickly access the information.

Simple Description of the Medical Condition/ Diagnosis

At the time of discharge, the patient should be provided with a document that explains why they were receiving care. Periods during inpatient or outpatient treatment can be an overwhelming time for patients and having a clear description of the main problem and why the patient was receiving treatment is important.

Medication Reconciliation

Including an updated list on new, changed, and discontinued medications with a rationale on what these medications are for and/or why they were changed is important for the patient to know upon transitioning home (Transition from Hospital to Home – Quality

Standard) (source). This is consistent with what is being highlighted in the Patient Oriented Discharge Summary practice guide (source).

Follow-up Appointments
Follow up appointments including location, date, time, and a contact number if the patient has any questions about the appointment enables a seamless transition in care (Ontario Health Quality Standard 12: Transitions in Care). In a survey, patients reported that often it is unclear whether they are to call the clinic and book the appointment, or if the clinic will contact them. Sites are encouraged to make this distinction clear in the discharge summary and during the discharge process.

Guidance on How to Manage Condition at Home
Transitioning to home or other community settings after receiving mental health care will require educational support that focuses on wellness, social support, safety resources, and a crisis and/or relapse prevention plan. This education can be incorporated within the discharge summary, or as a separate pamphlet/booklet. According to E2P Topic Expert Groups (including psychologists, psychiatrists, mental health clinicians, patients with lived experience) and Health Quality Ontario [source], some key items to include on the discharge documentation and discuss with the patient are:

- Normal expected symptoms, danger signals, and what to do
- Safety/ crisis plan
- Relapse prevention plan
- Pre and post outcome measures [PHQ-9 and GAD-7]
- List of lifestyle changes to be made and timeline to resume normal activity
- Phone numbers, community resources, and online resources

Provider Discharge Summary Key Principles

The primary function of a Provider Discharge Summary is to provide a complete summary of a patient's visit and enable transitions in care by providing a discharge plan to receiving clinicians. This must be distributed in a timely manner to ensure a seamless transition to providers outside the hospital. The following elements must be incorporated in the provider discharge summary:

Date of Admission and Discharge
According to the primary care provider representatives in the E2P Topic Expert Group, University Health Network (UHN), and a systematic review that looked at optimizing the quality of hospital discharge summaries, an admission date and discharge date are key information to include in the provider discharge summary. This helps inform the receiving clinician on how long the patient's length of stay was and when the patient was discharged from the hospital so subsequent follow up can be arranged in a timely manner.

Primary Discharge Diagnosis

The E2P Topic Expert Group identified that it is helpful to have one primary discharge diagnosis or most responsible diagnosis clearly highlighted on the discharge document. This is in accordance with suggestions and evidence from UHN and HIM. As per feedback from primary care providers, it is important to have the main discharge diagnosis clearly indicated in the beginning of the Provider Discharge Summary.

Medication Reconciliation

Literature consistently suggested that a full medication reconciliation is essential to include in the discharge summary. CPSO encourages physicians to include any changes to ongoing medications and the rationale for these changes. This was also echoed by the E2P Topic Expert Group.

Follow-up Plan

Having a clear follow up plan for the receiving clinician is crucial for a seamless transition in care. UHN suggests an itemized follow up plan with instructions for the receiving clinician, as well as a list of follow up arrangements and referrals scheduled/ to be scheduled. This is echoed by the HIM key principles and CPSO. Safe and effective transitions can be facilitated by standardized communication between settings.

Significant Labs, Diagnostic Imaging, Treatment and Outcome Measures

Including labs, diagnostic imaging, and pertinent results that are related to the patient's mental health diagnosis and stay in the hospital can help the receiving clinician better understand the admission, care provided, and patient's post discharge needs. E2P recommends scores from validated tools for assessing the severity of symptoms and degree of functional impairment also be added. For example, the GAD-7 and PHQ-9 scores and trends can quantify symptom monitoring for treatment adherence and response.

Implementing Changes to a Patient After Visit Summary and Provider Discharge Summary in Epic

Modifications were made to the After Visit Summary and Provider Discharge Summary to better align with the key principles. See below for guides on how different elements of the patient-facing and/or provider discharge summaries were modified in Epic to incorporate key principles and other feedback. Please note, you may find that your organization already has certain key principles embedded within your discharge summary templates

Change Management Strategy

To support change management associated with the implementation, it's important to execute the strategy below alongside implementation. Identifying the current state, the changes to both the system and the subsequent workflow, can help drive the tactics that will support clinicians in feeling comfortable with adopting measurement-based care. The steps below provide an overview of change management principles, and the E2P team will work alongside your team to further detail tactics that work for your organization.

Step 1. Assessment of Current State: Conduct a comprehensive assessment of the current mental health assessment procedures at the hospital site. Identify existing assessment tools, workflows, and any challenges or gaps in the current system

Step 2. Stakeholder Identification and Engagement: Identify key stakeholders involved in the implementation process, including clinicians, administrators, IT staff, and patient representatives. Engage stakeholders early to gain their buy-in, address concerns, and involve them in decision-making processes. Successful E2P sites have had executive and department leadership (e.g., Chief of Psychiatry, Mental Health Director) included in project activities or acting as project leader.

Step 3. Identify Overall Vision and Goal Setting. Develop a clear vision for the integration of PHQ9/GAD7 assessments and measurement-based care, along with specific goals objectives. Communicate the vision and goals to all stakeholders to ensure alignment and commitment to the change process. Successful E2P sites have aligned project activities with their organization's internal priorities such as annual Quality Improvement Plans.

Step 4. Identify Change Champions: Identify and empower change champions within the hospital who will advocate for the adoption of measurement-informed care, provide support to peers, and drive adoption across different departments and teams.

Step 5. Training and Education: Provide comprehensive training and education sessions for clinicians and staff on the purpose, use, and administration of PHQ9/GAD7 assessments. Ensure that staff are proficient in administering the assessments, interpreting the results accurately, and teaching patients about the purpose of the PHQ9/GAD7.

Step 6. Workflow Design or Redesign: Collaborate with clinicians and staff to redesign workflows to incorporate PHQ9/GAD7 assessments seamlessly into existing processes. Ensure that the integration does not disrupt clinical workflows and that assessments are administered at appropriate intervals in the patient care pathway. Successful E2P sites have automated questionnaire distribution where possible via patient portals or aligned with standardized intake/discharge processes.

Step 7. Technology Implementation: Work closely with IT staff to implement any necessary devices to support the integration of the PHQ9/GAD7 assessments. This may include deploying tablets to allow for patients to fill out the assessments in the waiting room, or for the clinical staff to easily capture this information when discussing with the patient.

Step 8. Communication Plan: Develop a comprehensive communication plan to keep all stakeholders informed and engaged throughout the implementation process. Communicate regularly through various channels, such as standing meetings, email progress updates, address concerns, and celebrate successes.

Step 9. Monitoring and Evaluation: Establish metrics and key performance indicators (KPIs) to monitor the success of PHQ9/GAD7 adoption. Continuously evaluate the impact of change on patients, clinician satisfaction, and operational efficiency. Use feedback from stakeholders to identify areas for improvement and make adjustments as needed. See separate reporting toolkit for more information.

E2P Recommended KPIs- Outpatient

- Percentage of patients with a registered visit at [outpatient clinic] who received a PHQ-9 in the last 6 weeks. *Denominator: #* of people who had a registered visit at the [outpatient clinic] during the month of reporting. *Numerator: #* of people who received a PHQ-9 at least once in the past 6 weeks.
- Percentage of patients with a registered visit at [outpatient clinic] who received a GAD-7 in the last 6 weeks. *Denominator: #* of people who had a registered visit at the [outpatient clinic] during the month of reporting. *Numerator: #* of people who received a GAD-7 at least once in the past 6 weeks

E2P Recommended KPIs- Inpatient

- Percentage of people with major depression or anxiety disorder who receive a minimum of one PHQ-9 during their hospital visit
- Percentage of people with major depression or anxiety disorder who receive a minimum of one GAD-7 during their hospital visit
- Percentage of people with major depression or anxiety who have a patient discharge summary upon transitioning from one care provider to another

- Percentage of people with major depression who have their provider discharge summary completed within 48h of discharge
- Percentage of people with major depression who transition from the inpatient setting to the community who have a booked follow-up appointment with a GP or MH clinician within 7 days of discharge
- Percentage of people with major depression who receive a minimum of two suicide risk assessments during the hospital visit
- Percentage of people with major depression who are offered information regarding community supports or crisis services during their hospital visit

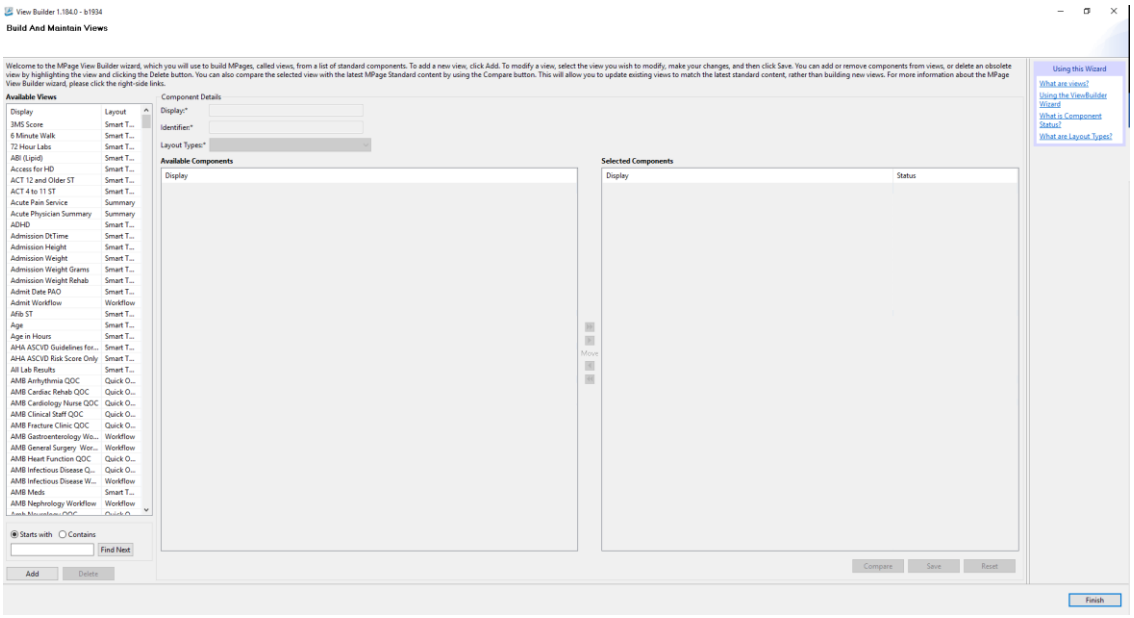
Step 10. Sustainability and Continuous Improvement. Develop strategies to ensure the sustainability of measurement-based care in the long term. Successful E2P sites have included the workflow changes into ongoing operations, such as PHQ9/GAD7 clinician training in orientation, standardized intake/discharge checklists, and quarterly metric reporting.

Technical Build

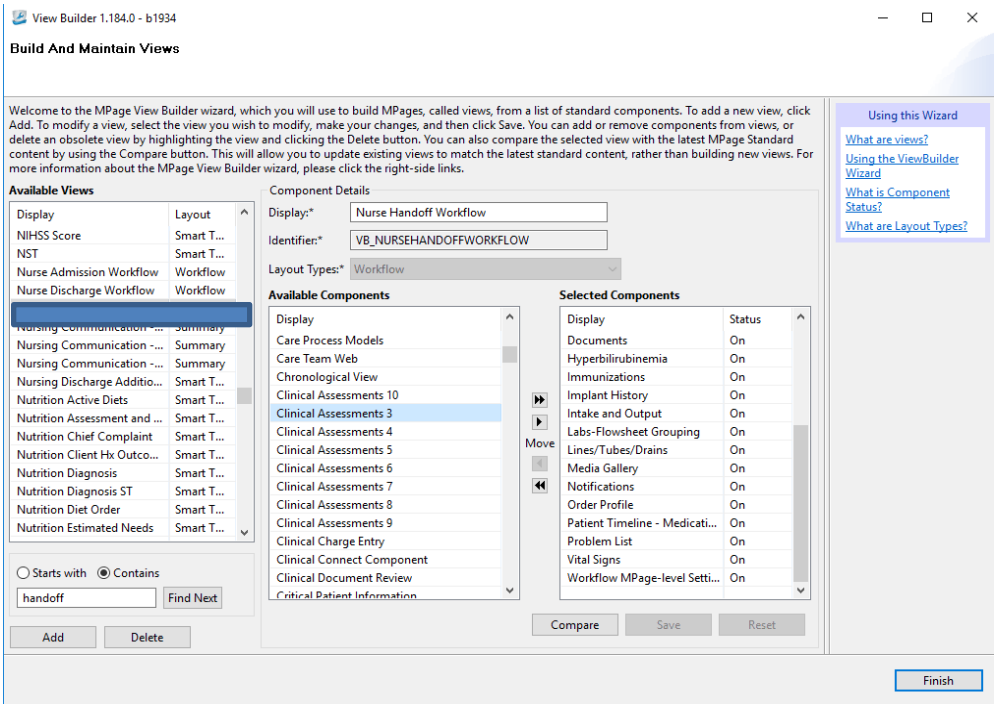
PHQ-9/GAD-7 Dashboard

Listed below are examples and build steps of how one Oracle hospital built the PHQ-9, GAD-7 dashboard

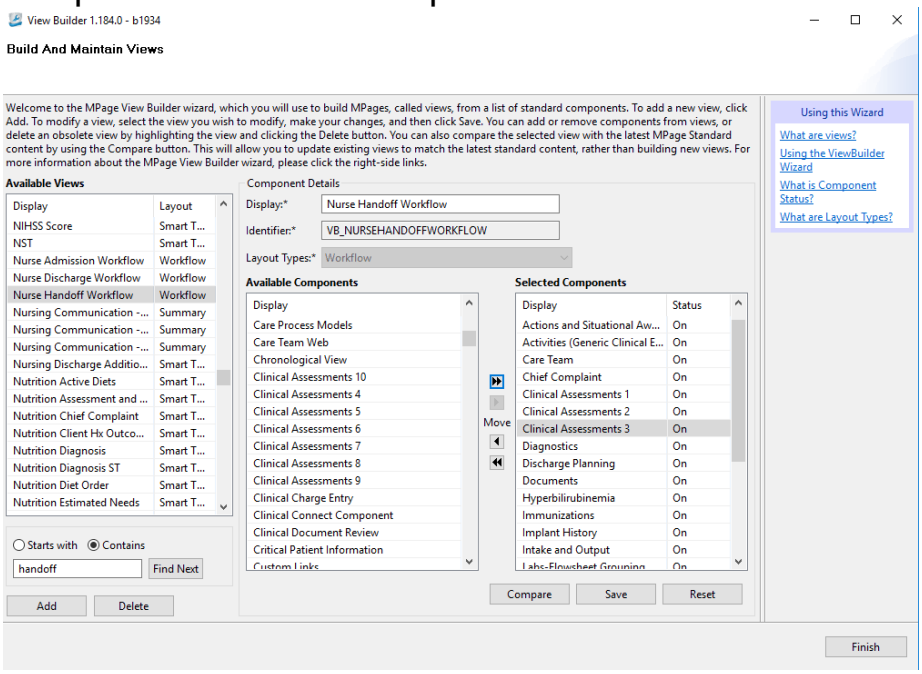
Access Bedrock→ Viewbuilder



Select the MPage dashboard will be applied to. Dashboard must be applied to a workflow MPage(s). In this example Nurse Handoff Workflow was chosen.



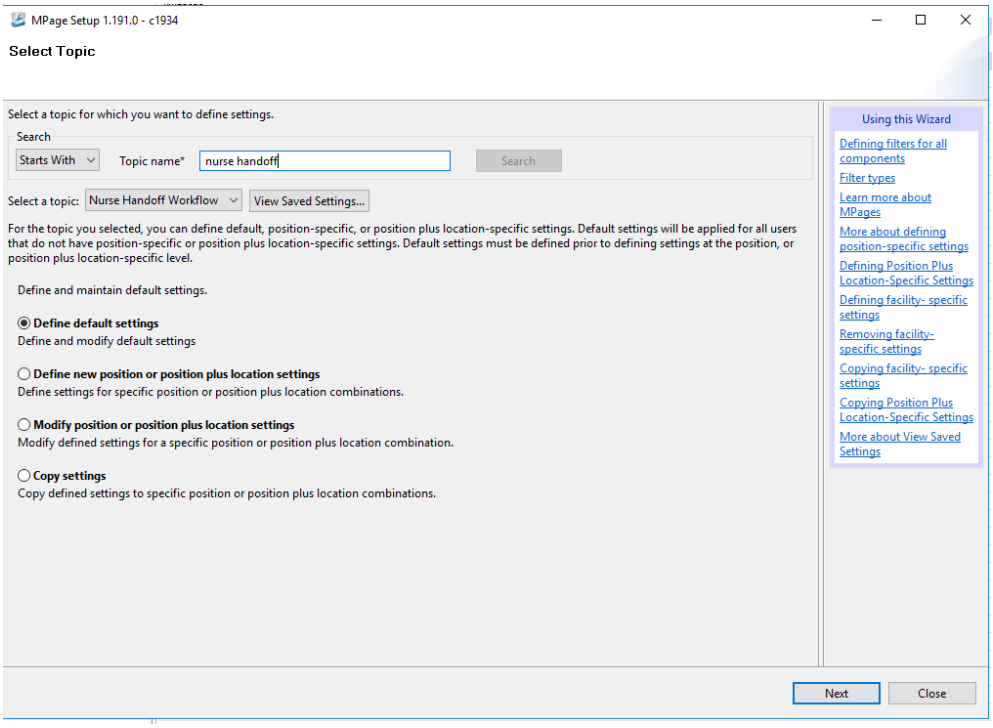
Move Clinical Assessments (choose lowest number) from available to selected components. In this example Clinical Assessments 3 was chosen. Click Save&Finish



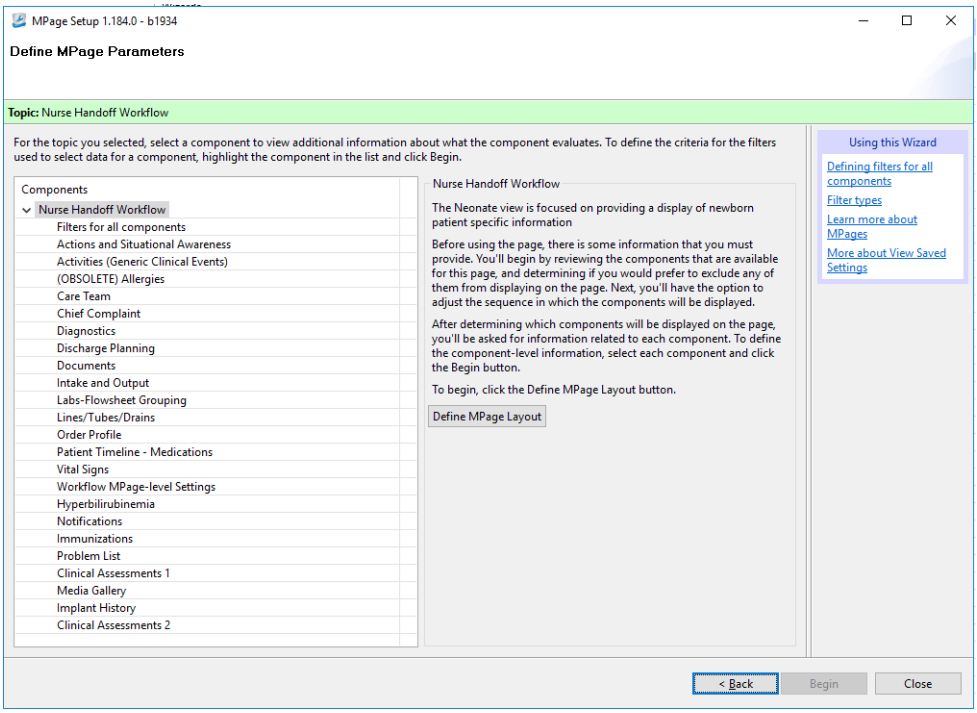
Navigate to Bedrock MPage setup. Load chosen MPage (Nurse Handoff Workflow is used

in this example) Next

- MPages can be customized at the position level. in this example we are updating the default settings by selecting Define default settings.

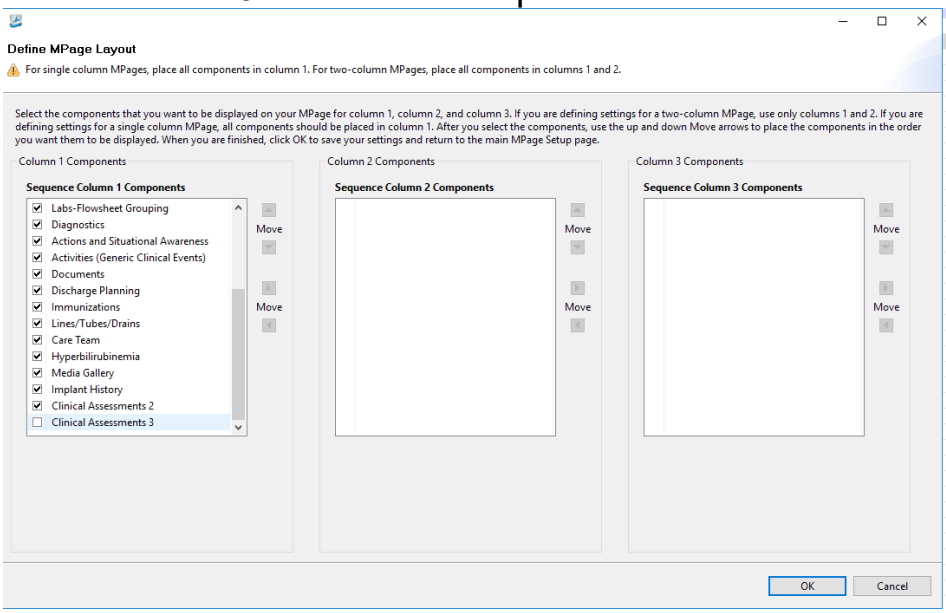


Select Define MPage Layout

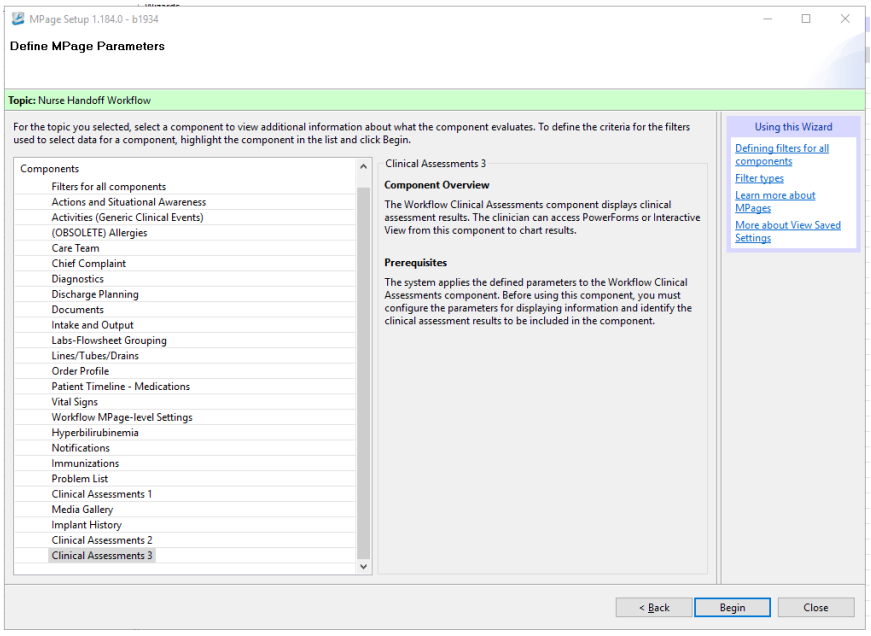


Select the newly added clinical assessment component. Select OK. In this example Clinical

Assessments 3 is the new component.

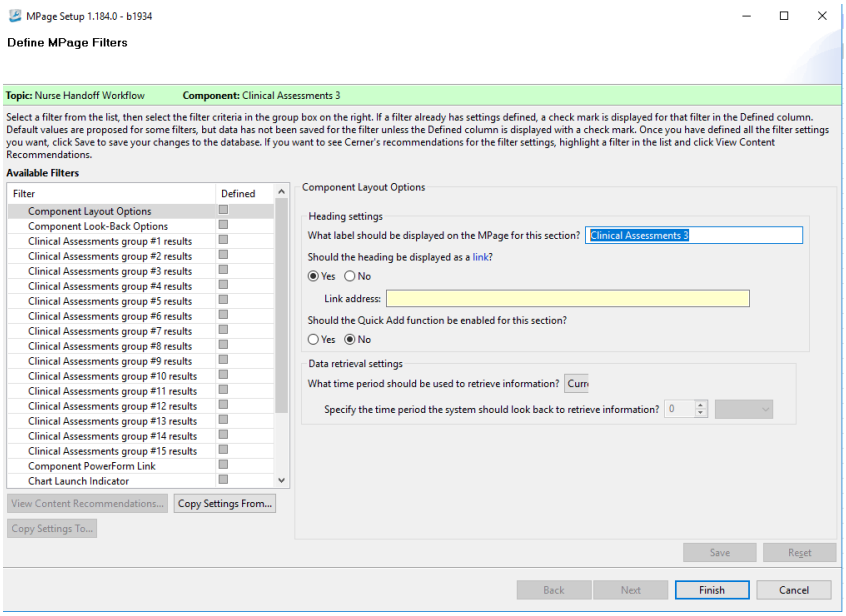


Select newly added components Begin



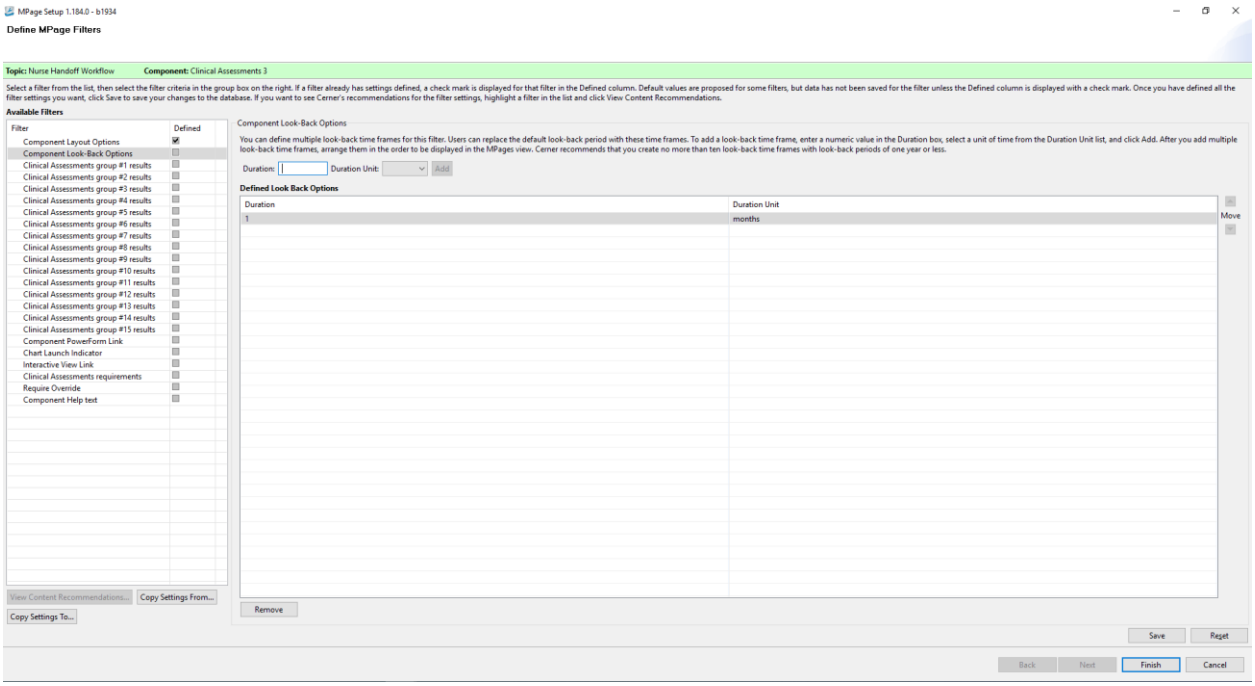
In Component Layout Options à Heading settings, name Component as per Organization standards. This is the name that will be displayed in PowerChart. Configure any additional settings. Select save.

- Under Data retrieval settings, select what time period should be used to retrieve information
    - Set to all encounters (if required by E2P)



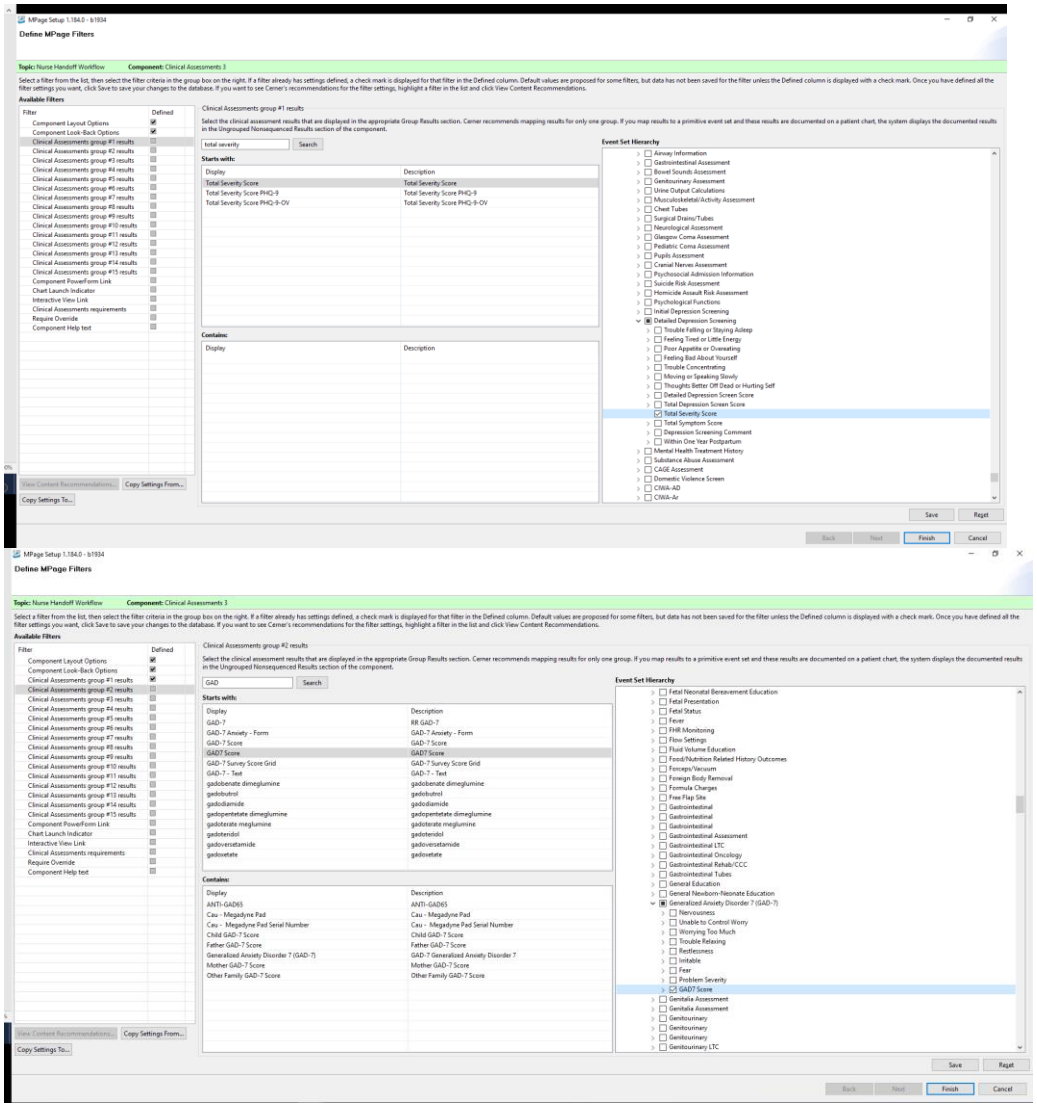
Select Component Look-Back Options. Configure additional look back periods as required. Select save.

- This allows it to be selectable directly from the MPage. Recommended to default to a shorter duration to improve load times/system performance.



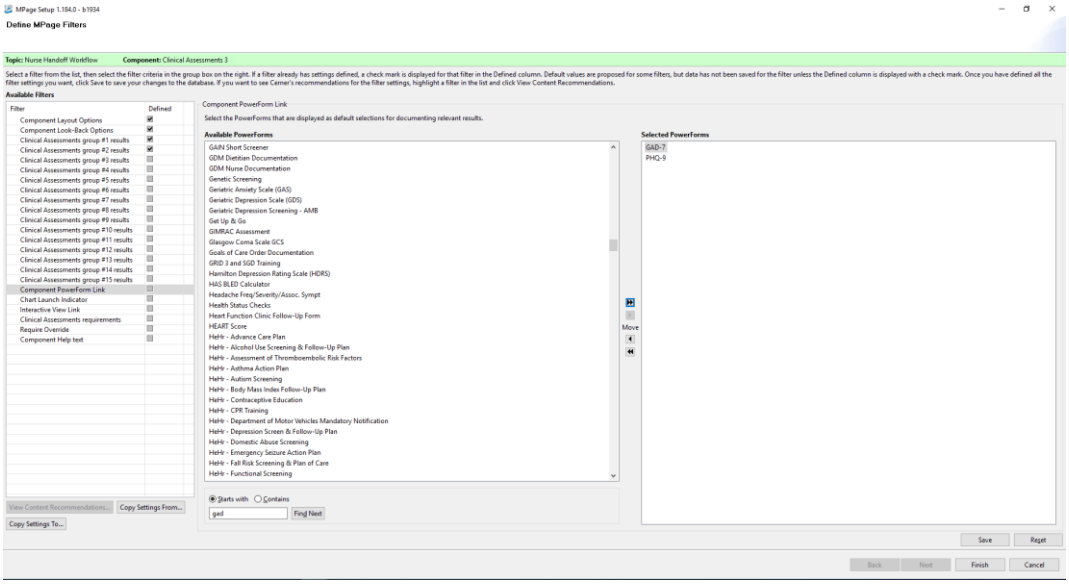
Select Clinical Assessment group #1 results Search for defined event code used for PHQ-9 and/or GAD-7 qualification. Select Save.

- If event codes are not in same event set it is best to utilize group 1 and group 2. If in same event set, both code values can be grouped together in Clinical Assessment group #1

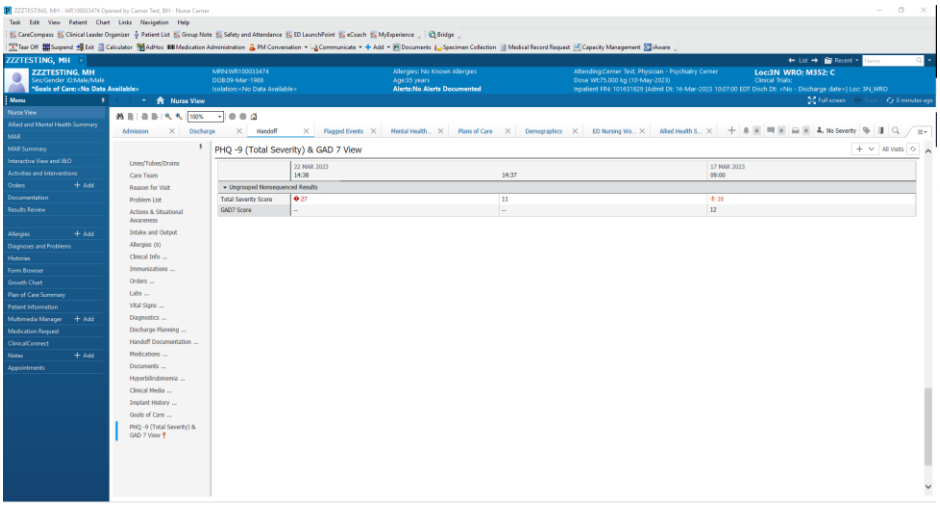


Select Component PowerForm Link and/or Interactive View Link. Configure quick charting for PowerForms and/or Interactive view if needed. Select Saveà Finish

- Allows users to chart a PHQ-9 or GAD-7 directly from the dashboard



Cycle Servers 535 and 72
View configuration on front end by navigating to the MPage this component has been added to.



Patient and Provider Discharge Summary

Listed below are examples and build steps of how one Oracle hospital built the patient and provider discharge summary

Navigate to Oracle Wiki
https://wiki.cerner.com/display/public/reference/Understand+Dynamic+Documentation+EMR+Content+-+Cerner+Basic+Content
Identify pieces of EMR content that could be used to meet requirement.
Scheduled Appointments and Follow ups example below

Scheduled Appointments (Physician-Facing)

Any appointments currently scheduled for the patient and accompanying information documented in the scheduling tables.

Scheduled Appointments

Appointment Type	When	Where	Contact Information
Generic Check up Appt	04/19/2016 20:30 CDT	Baseline West Primary Care Clinic 1234 Main	+91-8885552222

Technical Information

Example Markup

```
<div class="ddemrcontent" dd:contenttype="FUTURE_APPTS" dd:referenceuuid="18AF1EC5-77AB-4303-B720-E0006FBFA22F"></div>
```

Follow-Up Instructions (Physician-Facing)

A version of the patient's follow-up instructions that is displayed in the physician-facing reference templates. Information shown to the physician regarding necessary follow-up care is displayed in a table that includes columns for With, When, and Contact Information. Any additional instructions given by the physician are displayed beneath the columns. If information is not available, the text **No qualifying data available** is displayed instead.

Follow Up Instructions

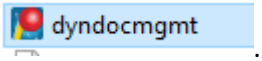
With	When	Contact Information
Eric Siciliano	01/28/2016 11:30 CST	4115 Carondelet Drive Overland Park, KS 66223-
Additional Instructions: Take Visit Summary with you to the appointment.		
Follow up with primary care provider	Within 3 to 5 days	
Additional Instructions: No appointment scheduled.		
Austin Brown	Within 1 to 2 weeks, only if needed	64137 Seattle Grace Way Kansas City, MO 64108-
Additional Instructions:		

Technical Information

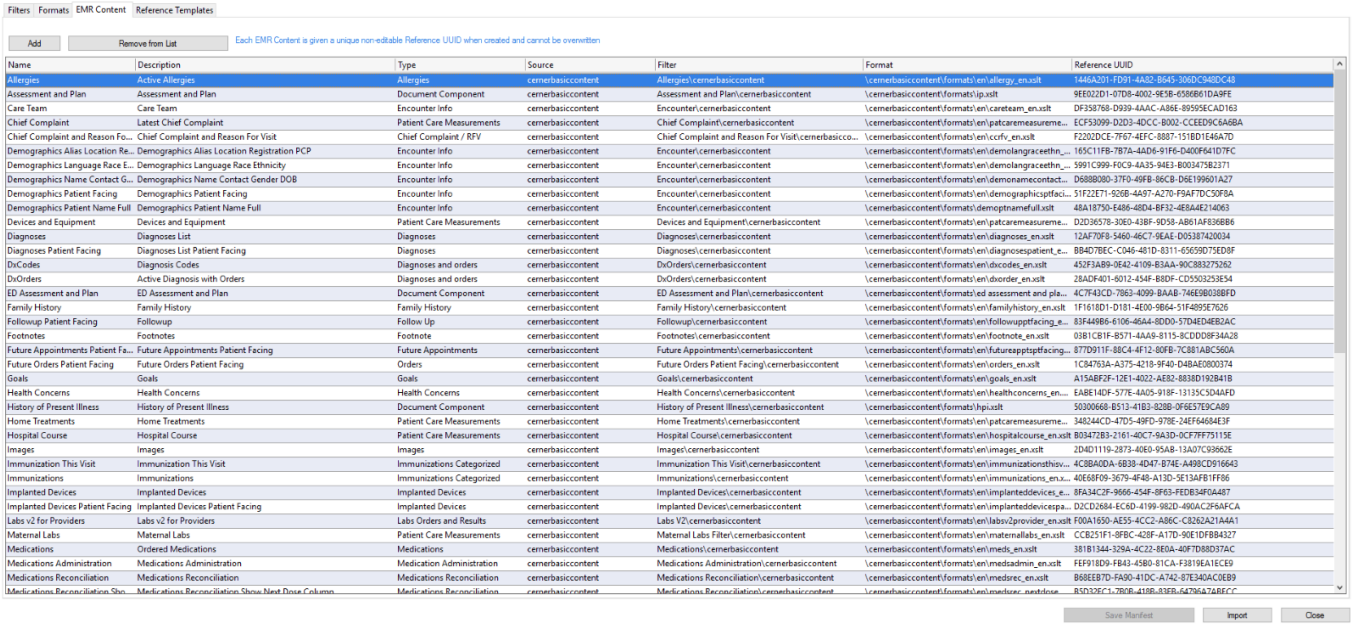
Example Markup

```
<div class="ddemrcontent" dd:contenttype="FOLLOW_UP" dd:referenceuuid="9DC024E8-603C-4A6A-83EA-8A96FE7EB9D2"></div>
```

Note- If including scheduled appointments AND follow up instructions it is recommended to use the Physician Facing version of EMR content as it matches more closely together than the patient facing versions.

Access dyndocmgmt tool 

. Load manifest. Navigate to EMR content.

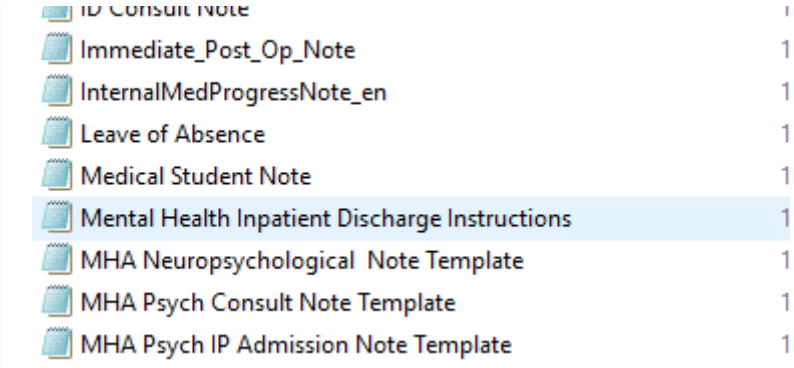


Find equivalent EMR content in manifest.

*Note**

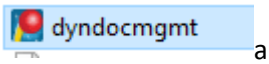
- *UUID might be different than CernerWiki.*
- *If unable to find a piece EMR content found on CernerWiki, then it may not be in your files. Please follow organizational policy for bringing items from Cerner into your manifest. This may require building new filter and format files in the dyndocmgmt tool.*

Navigate to dynamic documentation files. Open with code editor (ie. Notepad, notepad++, etc..)

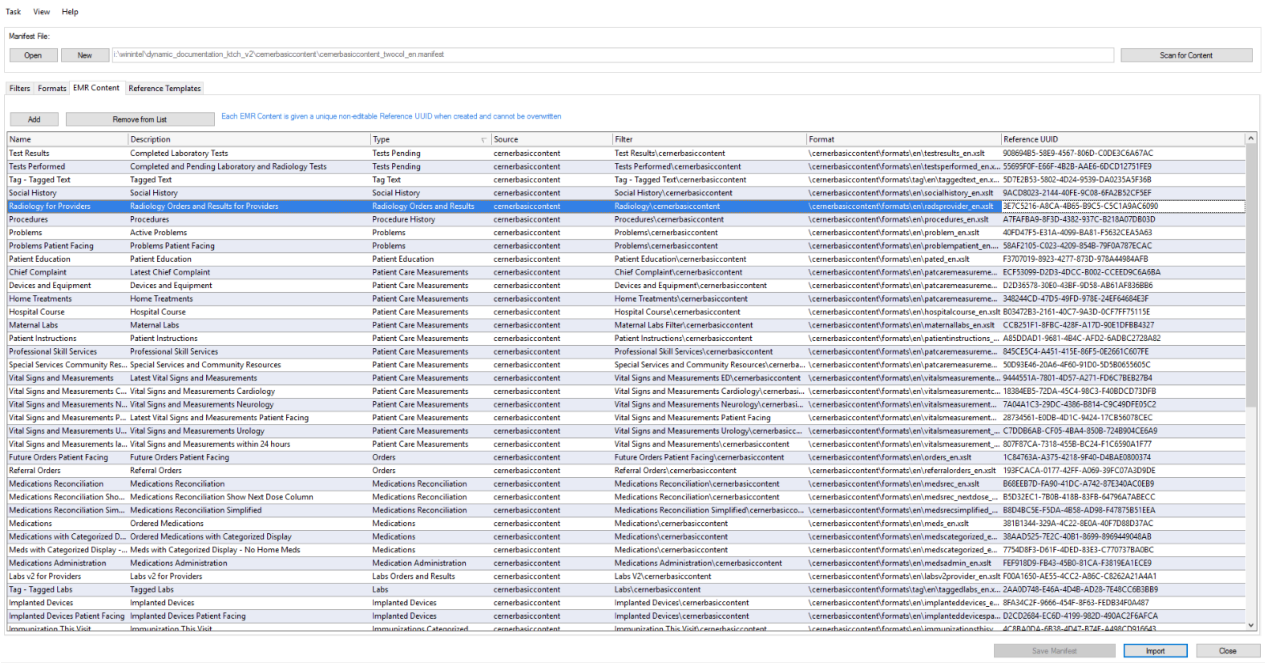


Identify where new section(s) need to be positioned and build in HTML. Example below of scheduled hospital appointments and follow up sections.

```
        <span class="ddsectiondisplay">What to do next</span>
</h1>
<div class="ddsubsection ddrefreshable ddinsertfreetext ddremovable" style="border-bottom: 1px solid #999; margin-top: 10px;" dd:sectioncode="LOINC!18776-5">
        <span class="ddsectiondisplay">
                <span style="font-weight: bold; font-size: 15pt;">Scheduled Hospital Appointments</span>
                <br/>
        </span>
        <div class="ddemrcontent" style="margin-top: 10px;" dd:contenttype="FUTURE_APPTS" dd:referenceuuid="BD8A9803-517A-4C6B-B45E-C76CEADC4285"/>
</div>
<div class="ddsubsection ddrefreshable ddinsertfreetext ddremovable" style="border-bottom: 1px solid #999; margin-top: 10px;" dd:sectioncode="LOINC!69730-0">
        <span class="ddsectiondisplay">
                <span style="font-weight: bold; font-size: 15pt;">Follow Ups</span>
                <br/>
        </span>
        <div class="ddemrcontent" style="margin-top: 10px;" dd:contenttype="FOLLOW_UP" dd:referenceuuid="6EFDFE3E-6074-49A7-AB97-05CAA4954EF1"/>
</div>
```

Save File. Open 

and select Import



For the provider discharge summary, the same organization made the following enhancements:

- Added in free text section titled “Follow up for Receiving Provider”
- Added in EMR content for DI Tests done on that encounter
- Added a spot to place tagged images

Navigate to Cerner Wiki
https://wiki.cerner.com/display/public/reference/Understand+Dynamic+Documentation+EMR+Content+-+Cerner+Basic+Content
Identify pieces of EMR content that could be used to meet requirement.
Diagnostic imaging example below

Radiology Results (Physician-Facing)

A physician-facing list of results for radiology exams performed on the patient during the current encounter. The interpretation is displayed along with the test name. If there are linked radiology orders, the interpretation is displayed once.

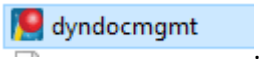
Note
To obtain radiology results, you must verify that your radiology documentation is present in the Radiology Event Set grouper in the Event Set hierarchy.

Radiology Results
MRI Abdomen w/ + w/o Contrast - 12/13/2015 19:58 CST, MRI Abdomen w/ Contrast - 12/13/2015 19:58 CST
_JH Interp
MRI Ankle w/ Contrast Left - 12/13/2015 19:50 CST, MRI Ankle w/ Contrast Right - 12/13/2015 19:57 CST
_O5 and O6
MRI Brain w/o Contrast - 12/13/2015 17:44 CST
asfdadsfadsf
MRI Pelvis w/o Contrast - 01/19/2016 18:00 CST
_one

Technical Information

Example Markup

```
<div class="ddemrcontent" dd:contenttype="RADIOLOGY" dd:linkedrefresh="TESTS" dd:referenceuuid="607EB264-E5AA-4E18-9EBB-436AF1DAF0EF"></div>
```

Access dyndocmgmt tool 

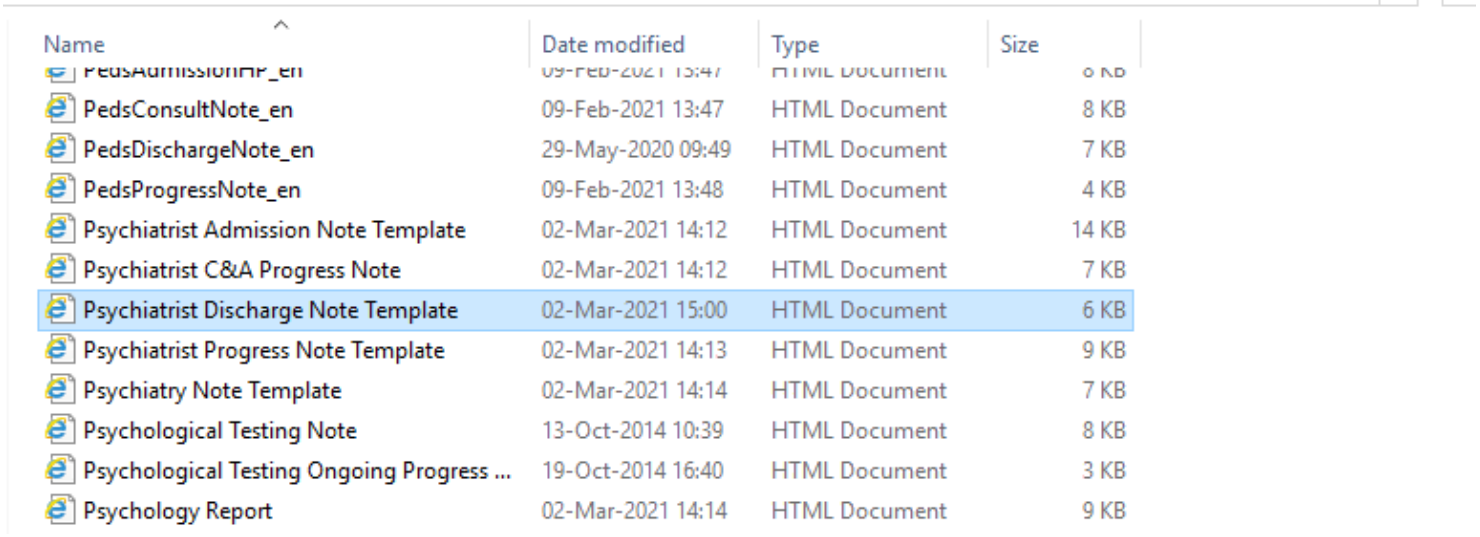
. Load manifest. Navigate to EMR content.

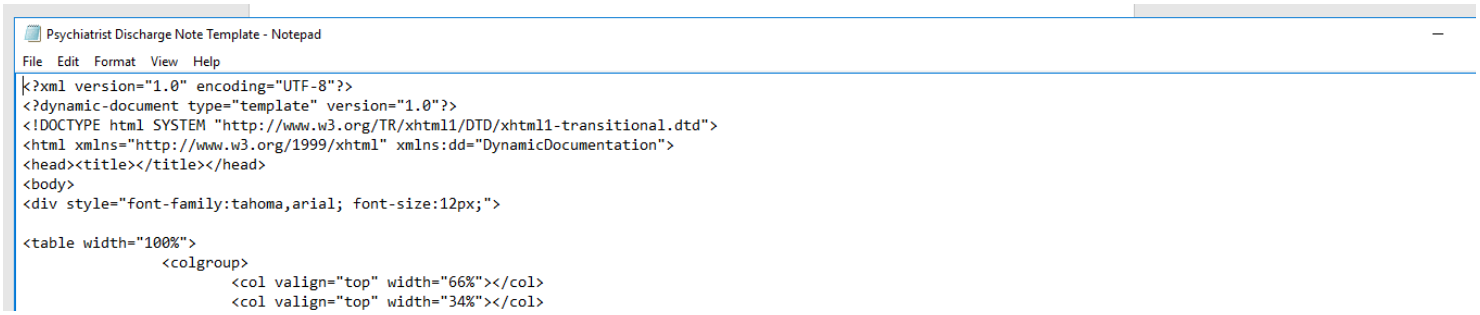
Find equivalent EMR content in manifest.

*Note**

- *UUID might be different than CernerWiki.*
- *If unable to find a piece EMR content found on CernerWiki, then it may not be in your files. Please follow organizational policy for bringing items from Cerner into your manifest. This may require building new filter and format files in the dyndocmgmt tool.*

Navigate to dynamic documentation files. Open with code editor (ie. Notepad, notepad++, etc..)





Identify where new section(s) need to be positioned and build in HTML. Example below

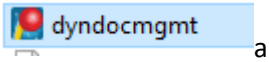
```
</div>

<div class="ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;" dd:sectioncode="LOINC!10164-2">
<span class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Diagnostics</span></span>
<div class="ddemrcontent" dd:contenttype="RADIOLOGY" dd:linkedrefresh="TESTS" dd:referenceuuid="3E7C5216-A8CA-4B65-B9C5-C5C1A9AC6090"
</div>
```

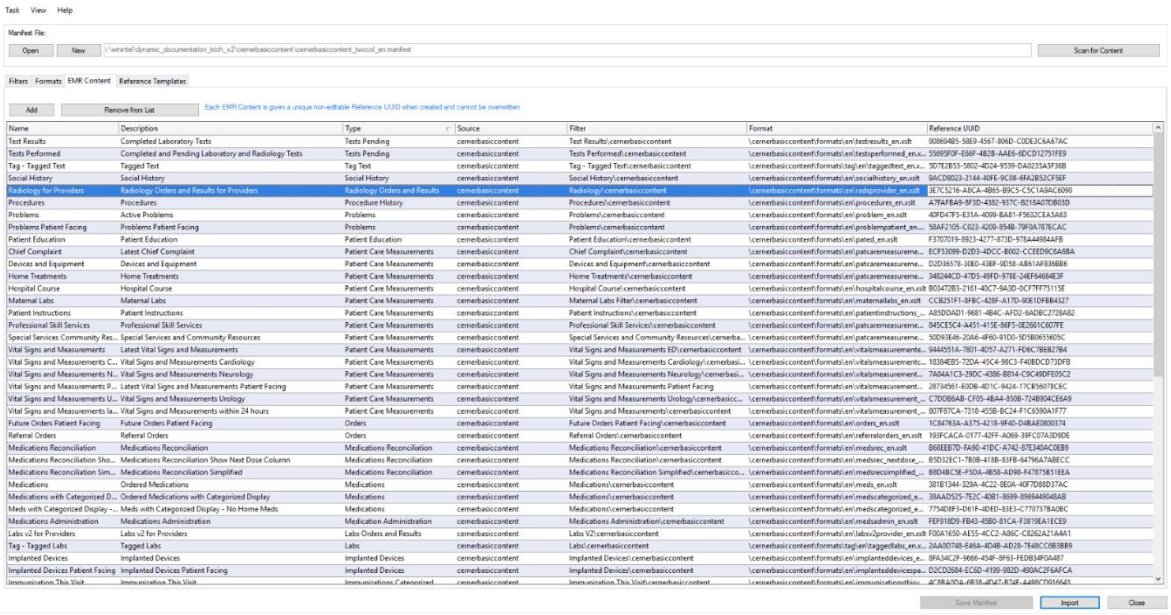
If non EMR content is required, such as the Follow up for Receiving Provider, see below for HTML code.

```
</div>

<div class="ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;">
        <span class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Follow Up For Receiving Provider</span></span>
        <div class="ddfreetext ddremovable" dd:btnfloatingstyle="top-right"></div>
</div>
```

Save File. Open 

and select Import



Major Depression Indicators – Inpatient

Overall approach

The below includes a compilation of process indicators that can be measured for people with a main diagnosis of **major depression**. These indicators focus on the **inpatient setting** and were created based on the Major Depression Quality Standard. These indicators are relevant to the main quality statements implemented, or E2P Ontario pilot sites have deemed that the indicator is measurable within Health Information Systems and valuable to collect for quality improvement opportunities. Reasons for not including indicators include them being patient self-reported, beyond the time frame of this project, not documented in HIS' and more.

Major depression denominator inclusion criteria:

- For diagnosis type, use Q2A with DSM-V to reflect the principal diagnosis.
- Age ≥ 18 years
- Within the hospital visit: between registration and discharge
- Your indicator denominator/patient cohort can be pulled from the data captured in the RAI

Diagnosis	**DSM-V ICD-10-CM**
Major depressive disorder, Recurrent episode	
Major depressive disorder, Recurrent episode, In full remission	F33.42
Major depressive disorder, Recurrent episode, In partial remission	F33.41
Major depressive disorder, Recurrent episode, Mild	F33.0
Major depressive disorder, Recurrent episode, Moderate	F33.1
Major depressive disorder, Recurrent episode, Severe	F33.2
Major depressive disorder, Recurrent episode, Unspecified	F33.9

Major depressive disorder, Recurrent episode, With psychotic features	F33.3
Major depressive disorder, Single episode	
Major depressive disorder, Single episode, In full remission	F32.5
Major depressive disorder, Single episode, In partial remission	F32.4
Major depressive disorder, Single episode, Mild	F32.0
Major depressive disorder, Single episode, Moderate	F32.1
Major depressive disorder, Single episode, Severe	F32.2
Major depressive disorder, Single episode, Unspecified	F32.9
Major depressive disorder, Single episode, With psychotic features	F32.3
Persistent depressive disorder (dysthymia)	F34 *(see note*)*

*Note: Dysthymia is coded as ICD-10 CM F34.1, however, all of F34 may be used for a broader definition of depression.

Comprehensive assessment	**E2P Process Indicator**	**Percentage of people with major depression who receive a minimum of one PHQ-9s during their hospital visit**
	Numerator and Denominator	Numerator: # of patients with major depression who have 1 PHQ9 completed within the visit Denominator: # of patients with a main diagnosis of major depression See *"Major depression denominator inclusion criteria"* for details. **E2P Update:** Beginning December 2024, E2P sites have elected to include a minimum of 'one' PHQ-9 during the hospital visit (previously 2 included). This update reflects the preference by clinical teams to utilize the PHQ-9 for screening (all patients) and establish a baseline in relation to shorter inpatient length of stay and likelihood of community-based care following admission.
	Definitions	The PHQ-9 is a validated tool for assessing the severity of symptoms and degree of functional impairment. It is one component of a comprehensive assessment.[1] Frequent measurement of symptoms using the PHQ-9 allows providers to know when the patient is having a full response, partial response, or no response to treatment. This information helps in making decisions about how to adjust treatment. There are no strict guidelines on how often the PHQ-9 should be re-administered in an inpatient setting.[2] The Evidence2Practice Ontario program suggests that the PHQ-9 be completed at least once during the person's hospital stay.

	E2P Process Indicator	**Percentage of people with major depression who receive a minimum of one GAD-7 during their hospital visit**
	Numerator and Denominator	Numerator: # of patients with major depression who have 1 GAD-7 completed during their hospital visit Denominator: # of patients with a main diagnosis of major depression See *"Major depression denominator inclusion criteria"* for details. **E2P Update:** Beginning December 2024, E2P sites have elected to include a minimum of 'one' PHQ-9 during the hospital visit (previously 2 included). This update reflects the preference by clinical teams to utilize the PHQ-9 for screening (all patients) and establish a baseline in relation to shorter inpatient length of stay and likelihood of community-based care following admission.
	Definitions	The GAD-7 is both a screening and validated severity-rating tool. As people with depression may have anxiety as a co-occurring diagnosis, it is recommended that the GAD-7 be administered to people with depression in conjunction with the PHQ-9. The Evidence2Practice Ontario program suggests that the GAD-7 be completed at least once during the person's hospital stay.
Transitions in Care	**E2P Process Indicator**	**Percentage of people with major depression who have a patient discharge summary upon transitioning from one care provider to another**
	Numerator and Denominator	Numerator: # of patients with major depression who have a patient discharge summary completed Denominator: # of patients with a main diagnosis of major depression See *"Major depression denominator inclusion criteria"* for details
	Definitions	It is important for people with depression transitioning from hospital to home to have a care plan that is shared with them[3]. A patient discharge summary is a form of written communication that accompany the patient after discharge from the hospital[4]. The Evidence2Practice Ontario program mental health discharge summaries sought to align with the principles as outlined by the Patient Oriented

		Discharge Summary (PODS) best practice guidelines[5]. PODS is endorsed by Health Quality Ontario as a recommendation for innovative practices and evidence-informed best practices to improve transitions between hospital and home[4].
	E2P Process Indicator	**Percentage of people with major depression who have their provider discharge summary completed within 48h of discharge**
	Numerator and Denominator	Numerator: # of patients with major depression who have a provider discharge summary completed within 48h of discharge Denominator: # of patients with a main diagnosis of major depression See *"Major depression denominator inclusion criteria"* for details
	Definitions	It is important for people with depression to have a care plan that is shared between providers[3]. A provider discharge summary is a form of written communication for care providers that will provide follow-up care. Created by the most responsible physician (MRP) from the inpatient stay, discharge summaries should be available to the primary care provider (PCP) within 48 hours of hospital discharge. This communication is critical to a patient's transition because it is relied upon to make ongoing clinical recommendations in their care[4].
	E2P Process Indicator	**Percentage of people with major depression who transition from the inpatient setting to the community who have a booked follow-up appointment with a GP or MH clinician within 7 days of discharge**
	Numerator and Denominator	Numerator: # of patients with major depression who have a booked follow up with a primary care provider or mental health clinician within 7 days of discharge Denominator: # of patients with a main diagnosis of major depression See *"Major depression denominator inclusion criteria"* for details
	Definitions	A follow-up appointment after hospitalization helps support the transition to the community. It is especially important for people with major depression who are admitted to hospital with a

		high risk of suicide to be followed up soon after discharge[3]. Given long wait times to see a GP or psychiatrist across the province, the E2P Ontario program has included mental health clinicians in the process indicator. Also, the program seeks to measure whether the patient has a follow-up appointment scheduled instead of whether the patient went to the appointment due to the availability and feasibility of data collection.
Suicide risk assessment	**E2P Process Indicator**	**Percentage of people with major depression who receive a minimum of two suicide risk assessments during the hospital visit**
	Numerator and Denominator	Numerator: # of patients with major depression who have a minimum of 2 suicide risk assessments completed during the hospital visit Denominator: # of patients with a main diagnosis of major depression See *"Major depression denominator inclusion criteria"* for details
	Definitions	People with major depression have an increased lifetime risk of suicide and should be assessed for suicide risk on initial contact and throughout treatment[6]. A suicide risk assessment includes questions about: • Suicidal thoughts, intent, plans, means, and behaviours (hopelessness) • Specific psychiatric symptoms (e.g., psychosis, severe anxiety, substance use) or general medical conditions, as well as psychiatric treatment that may increase the likelihood of acting on suicidal ideas • Past and, particularly, recent suicidal behaviours • Current stressors and potential protective factors (e.g., positive reasons for living, social support) • Family history of suicide or mental illness Suicide risk assessment scales can be used by trained professionals to guide assessment.

Treatment after initial diagnosis	**E2P Process Indicator**	**Percentage of people with major depression who receive evidence-based psychotherapy during their hospital visit (optional).**
	Numerator and Denominator	Numerator: # of patients with major depression who receive evidence-based psychotherapy during their hospital visit Denominator: # of patients with a main diagnosis of major depression See *"Major depression denominator inclusion criteria"* for details **E2P Update:** This process indicator has been updated as 'optional' to reflect differences in treatment availability during inpatient admissions and documentation feasibility.
	Definitions	Both antidepressant medications and evidence-based psychotherapies (such as cognitive behavioural therapy or interpersonal therapy) can be effective treatments for major depression. This indicator measures the percentage of people who receive evidence-based psychotherapy during their hospital stay[7]. **Evidence-based psychotherapy:** includes cognitive behavioural therapy and interpersonal psychotherapy (see below). Other psychotherapies that may be effective include behavioural activation therapy, short-term dynamic psychotherapy, and mindfulness-based cognitive therapy. **Cognitive behavioural therapy and interpersonal therapy:** • Delivered on a one-to-one or group basis • Delivered over 16 to 20 sessions over 3 to 4 months • Delivered by an appropriately trained therapist in accordance with a treatment manual
Education and support	**E2P Process Indicator**	**Percentage of people with major depression who are offered information regarding community supports or crisis services during their hospital visit**

	Numerator and Denominator	Numerator: # of patients with major depression who are offered information regarding community supports or crisis services during their hospital visit Denominator: # of patients with a main diagnosis of major depression See *"Major depression denominator inclusion criteria"* for details
	Definitions	People with major depression and their family members and caregivers can benefit from information on services and local supports available in their communities and information on signs and symptoms of relapse[3]
	E2P Process Indicator	**Percentage of people with major depression who are offered education about major depression during their hospital visit (optional).**
	Numerator and denominator	Numerator: # of patients with major depression who are offered information regarding community supports or crisis services during their hospital visit Denominator: # of patients with a main diagnosis of major depression See *"Major depression denominator inclusion criteria"* for details **E2P Update:** This process indicator has been updated as 'optional' to reflect differences in treatment availability during inpatient admissions and documentation feasibility.
	Definitions	Education includes the following topics[3]: • Signs and symptoms of depression • Treatment options and their side effects • Self-management strategies such as monitoring symptoms and suicide risk, participating in meaningful activity, eating well, practicing sleep hygiene, performing physical activities, and reducing tobacco and alcohol use • Family self-care and resilience • Local resources for support • Risk of relapse, and early signs and symptoms of relapse

Anxiety Indicators – Inpatient

Overall approach

The below includes a compilation of process indicators that can be measured for people with a main diagnosis of **an anxiety disorder**. These indicators focus on the inpatient setting and were created based on the Anxiety Disorders Quality Standard. These indicators are relevant to the main quality statements implemented, or E2P Ontario pilot sites have deemed that the indicator is measurable within Health Information Systems and valuable to collect for quality improvement opportunities. Reasons for not including indicators include them being patient self-reported, beyond the time frame of this project, not documented in HIS' and more.

Anxiety disorders denominator inclusion criteria

- For diagnosis type, use Q2A with DSM-V to reflect the principal diagnosis.
- Age ≥ 18 years
- During the hospital visit: between registration and discharge
- Your indicator denominator/patient cohort can be pulled from the data captured in the RAI

Diagnosis	**ICD-10-CA**
Phobic anxiety disorders	F41.0
Generalized anxiety disorder	F41.1
Mixed anxiety and depressive disorder:	F41.2
Anxiety Disorder, unspecified	F41.9

Screening **Comprehensive assessment**	**E2P Process Indicator**	**Percentage of people with an anxiety disorder who receive a minimum of one PHQ-9 during their hospital visit**
	Numerator and Denominator	Numerator: # of patients with an anxiety disorder who have 1 PHQ9s completed Denominator: # of patients with an anxiety disorder as their main diagnosis See "Anxiety Disorder Denominator" for details. **E2P Update:** Beginning December 2024, E2P sites have elected to include a minimum of 'one' PHQ-9 during the hospital visit (previously 2 included). This update reflects the preference by clinical teams to utilize the PHQ-9 for screening (all patients) and establish a baseline in relation to shorter inpatient length

		of stay and likelihood of community-based care following admission.
	Definitions	The PHQ-9 is a validated tool for assessing the severity of symptoms and degree of functional impairment. As people with anxiety have depression as a co-occurring diagnosis, it is recommended that the PHQ-9 be administered to people with an anxiety disorder in conjunction with the GAD-7. The PHQ-9 is one component of a comprehensive assessment[1]. Frequent measurement of symptoms using the PHQ-9 allows providers to know when the patient is having a full response, partial response, or no response to treatment. This information helps in making decisions about how to adjust treatment. There are no strict guidelines on how often the PHQ-9 should be re-administered in an inpatient setting[2]. The Evidence2Practice Ontario program suggests that the PHQ-9 be completed at least once during the person's hospital stay.
	E2P Process Indicator	**Percentage of people with an anxiety disorder who receive a minimum of one PHQ-9 during their hospital visit**
	Numerator and Denominator	Numerator: # of patients with an anxiety disorder who have 1 PHQ9s completed during their hospital visit Denominator: # of patients with an anxiety disorder as their main diagnosis See "*Anxiety disorders denominator inclusion criteria"* for details. **E2P Update:** Beginning December 2024, E2P sites have elected to include a minimum of 'one' PHQ-9 during the hospital visit (previously 2 included). This update reflects the preference by clinical teams to utilize the PHQ-9 for screening (all patients) and establish a baseline in relation to shorter inpatient length of stay and likelihood of community-based care following admission.
	Definitions	The GAD-7 is both a screening and validated severity-rating tool. By itself, identification does not provide a diagnosis of an anxiety disorder; however, it does provide preliminary documentation of symptoms and quantify severity in a time-limited setting, and it

		indicates who may need further assessment[7]. The GAD-7 is a validated severity-rating tool that can be used as one component of a comprehensive assessment. The E2P Ontario program focuses on the administration of the GAD-7 as it can be used for general anxiety disorder, and often a starting point for measurement-based care in people with other anxiety disorders. The Anxiety Quality Standard has a list of other validated severity-rating tools that can be used for other anxiety disorders in conjunction with the GAD-7. The Evidence2Practice Ontario program suggests that the GAD-7 be completed at least once during the person's hospital stay.
Transitions in Care	**E2P Process Indicator**	**Percentage of people with an anxiety disorder who have a patient discharge summary upon transitioning from one care provider to another**
	Numerator and Denominator	Numerator: # of patients with an anxiety disorder who have a patient discharge summary completed Denominator: # of patients with an anxiety disorder as their main diagnosis See "*Anxiety disorders denominator inclusion criteria"* for details
	Definitions	It is important for people with an anxiety disorder transitioning from hospital to home to have a care plan that is shared with them. A patient discharge summary is a form of written communication that accompany the patient after discharge from the hospital[4]. The Evidence2Practice Ontario program mental health discharge summaries sought to align with the principles as outlined by the Patient Oriented Discharge Summary (PODS) best practice guidelines[5]. PODS is endorsed by Health Quality Ontario as a recommendation for innovative practices and evidence-informed best practices to improve transitions between hospital and home[4].
	E2P Process Indicator	**Percentage of people with an anxiety disorder who have their provider discharge summary completed within 48h of discharge**
	Numerator and Denominator	Numerator: # of patients with an anxiety disorder who have a provider discharge summary completed within 48h

		Denominator: # of patients with an anxiety disorder as their main diagnosis See "*Anxiety disorders denominator inclusion criteria"* for details
	Definitions	It is important for people with an anxiety disorder to have a care plan that is shared between providers. A provider discharge summary is a form of written communication for care providers that will provide follow-up care. Created by the most responsible physician (MRP) from the inpatient stay, discharge summaries should be available to the primary care provider (PCP) within 48 hours of hospital discharge. This communication is critical to a patient's transition because it is relied upon to make ongoing clinical recommendations in their care[4].
Cognitive behavioural therapy	**E2P Process Indicator**	**Percentage of people with GAD who receive cognitive behavioural therapy during their hospital visit (Optional)**
	Numerator and Denominator	Numerator: # of patients with an anxiety disorder who receive cognitive behavioural therapy during their hospital visit Denominator: # of patients with an anxiety disorder as their main diagnosis See "*Anxiety disorders denominator inclusion criteria"* for details
	Definitions	Psychological treatments play an important role in the management of anxiety disorders. Cognitive behavioural therapy (CBT), a type of psychotherapy, is an effective treatment for anxiety disorders when delivered by a trained health care professional. See Quality Statement 6: Cognitive Behavioural Therapy, for a more detailed description of CBT[7]. **E2P Update:** This process indicator has been updated as 'optional' to reflect differences in treatment availability during inpatient admissions and documentation feasibility.

Depression & Anxiety Process Indicators – Outpatient

The below includes a compilation of process indicators that can be measured for people with an anxiety disorder or mood disorder. These indicators focus on the **outpatient setting** and were created based on the Major Depression Quality Standard and Anxiety Quality Standard. These indicators are relevant to the main quality statements implemented and are relevant for people with anxiety disorders and/or other mood disorders. The outpatient setting does not leverage the Resident Assessment Intake form or use CIHI's coded diagnoses, so the patient cohort will include all patients who had an outpatient visit at a clinic that supports people with anxiety and/or mood disorders. These metrics will provide insight into clinic services as a whole, instead of being stratified according to people with major depression and anxiety disorders.

Outpatient clinic inclusion criteria:

- Clinic supports people with anxiety and/or mood disorders
- The total number of unique patients who had a registered visit at the outpatient clinic
- Use the most recent visit for the unique patient

Comprehensive assessment	**E2P Process Indicator**	**Percentage of people who had a registered visit for the [outpatient clinic] that received a PHQ-9 at least once in the past 6 weeks**
	Numerator and Denominator	Numerator: # of people who received a PHQ-9 at least once in the past 6 weeks Denominator: # of people who had a registered visit at the [outpatient clinic] during the month of reporting See *outpatient clinic inclusion criteria* for more details
	Definitions	The PHQ-9 is a validated tool for assessing the severity of symptoms and degree of functional impairment. It is one component of a comprehensive assessment.[1] Repeated measurement of symptoms using the PHQ-9 allows providers to know when the patient is having a full response, partial response, or no response to treatment. This information helps in making decisions about how to adjust treatment. There are no strict guidelines on how often the PHQ-9 should be re-administered in an outpatient setting. However, there is some guidance on re-administering the tool at 4-6 weeks to measure response to treatment.[2] The PHQ-9 may be administered more frequently based on

		organizational policies and clinical judgment, but the Evidence2Practice program will measure that a PHQ-9 score has been done within 6 weeks of the patient's outpatient appointment.
	E2P Process Indicator	**Percentage of people who had a registered visit for the [outpatient clinic] that received a GAD-7 at least once in the past 6 weeks**
	Numerator and Denominator	Numerator: # of people who received a GAD-7 at least once in the past 6 weeks Denominator: # of people who had a registered visit at the [outpatient clinic] during the month of reporting See *outpatient clinic inclusion criteria* for more details
	Definitions	The GAD-7 is both a screening and validated severity-rating tool. As people with depression may have anxiety as a co-occurring diagnosis, it is recommended that the GAD-7 be administered to people with depression in conjunction with the PHQ-9. The Evidence2Practice program will measure that a GAD-7 score has been done within 6 weeks of the patient's outpatient appointment.
Transitions in Care	**E2P Process Indicator**	**Percentage of people discharged from the [outpatient clinic] who have a patient discharge summary/patient treatment plan upon completion of treatment (Optional)**
	Numerator and Denominator	Numerator: # of people who have a patient discharge summary/patient treatment plan upon completion of treatment Denominator: # of people discharged from the outpatient clinic during the month of reporting See *outpatient clinic inclusion criteria* for more details **E2P Update:** This process indicator has been updated as 'optional' for organizations who may not have outpatient discharge summaries.
	Definitions	It is important for people with depression transitioning from hospital to home to have a care plan that is shared with them, and the E2P program recommends that patients who complete treatment in an outpatient setting receive a patient discharge summary or patient

		treatment summary as well [3]. Though there will be nuanced differences between an outpatient discharge summary and inpatient discharge summary, the document is still a form of written communication that accompanies the patient after they complete their treatment. The Evidence2Practice Ontario program outpatient mental health discharge summaries sought to align with the principles as outlined by the Patient Oriented Discharge Summary (PODS) best practice guidelines[5]. PODS is endorsed by Health Quality Ontario as a recommendation for innovative practices and evidence-informed best practices to improve transitions between hospital and home[4].
	E2P Process Indicator	**Percentage of people discharged from the [outpatient clinic] who have their provider discharge summary completed within 7 days of discharge (Optional)**
	Numerator and Denominator	Numerator: # of people who have a provider discharge summary completed within 7 days of completion of treatment Denominator: # of people discharged from the outpatient clinic during the month of reporting See *outpatient clinic inclusion criteria* for more details **E2P Update:** This process indicator has been updated as 'optional' for organizations who may not have outpatient discharge summaries.
	Definitions	The guidelines state clearly that it is important for people with depression to have a care plan that is shared between providers[3]. A provider discharge summary is a form of written communication for care providers that will provide follow-up care. In an outpatient setting, this practice is less standardized. As transitions in care have been identified as an area of focus and a pain point for people with anxiety and depression, the E2P program encourages outpatient settings to standardize the practice of completing provider discharge summaries.

Reporting CCL Templates

Inpatient:

1_XV_e2p_IP_prg.txt

1_XV_e2p_IP_dpb.txt

Outpatient:

1_XV_e2p_OP_prg.txt

1_XV_e2p_OP_dpb.txt

SNOMED Summary

The following report guide is intended to support Oracle hospitals in Ontario to map clinical concepts to Systematized Nomenclature of Medicine — Clinical Terms (SNOMED CT) and develop a report to measure adherence to the process indicators.

SNOMED CT is a systemically organized computer processable collection of medical terms. These coded terms can be used within Health Information Systems to capture, record, and share clinical data. Standardized reporting that pulls from clinical concepts mapped to SNOMED CT codes enables comparison of standard adherence across different hospitals and different health information systems, equips organizations with valuable data that drives quality improvement initiatives, and provides the opportunity to learn from peer hospitals.
As hospitals have different Health Information Systems (e.g., Oracle, EPIC, and Meditech) that have different concepts for clinical terms that have the same (or similar) meaning, mapping clinical concepts to the same SNOMED CT code provides a common link that enables comparison.

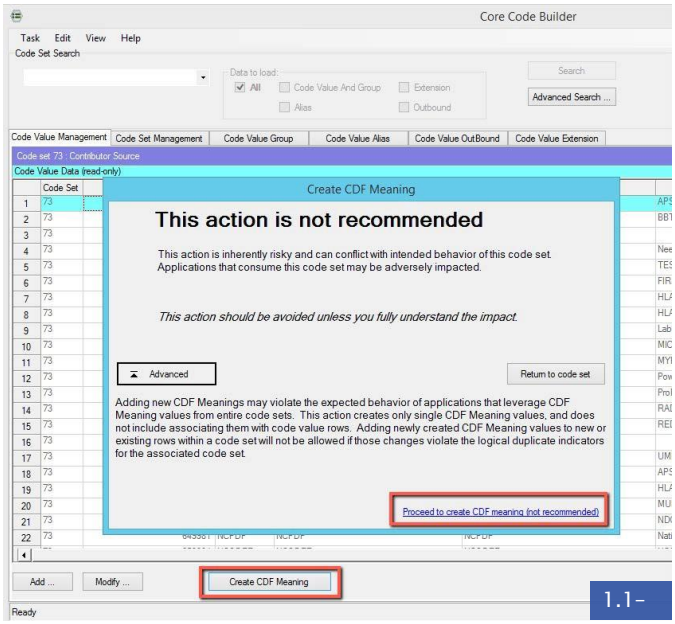
Depending on the organization, this toolkit will serve as a guide for Oracle database administrators responsible for codesets and Cerner Command Language (CCL) report writing. Modifications may need to be made to the report at each hospital level. The project timeframe may vary across hospitals depending on available resources and state of readiness. The hospitals that participated in the initial SNOMED CT Mapping and Reporting went live within 6 months of initiation.

Terminology Mapping Pre-Setup

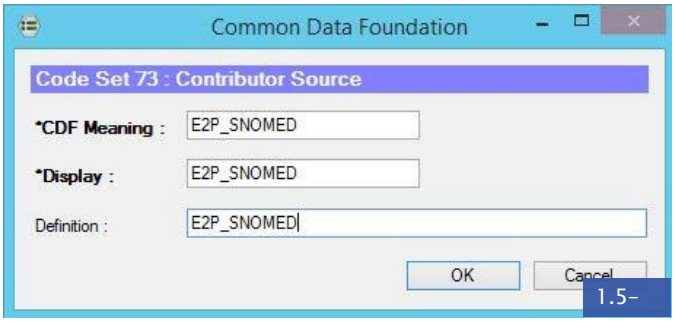
Purpose
Contributor source alias and semantic tags are to be used in translation reports

IDEA
Design drawn from how NHS structured their SNOMED CT mapping

CONTRIBUTOR SOURCE Alias (E2P_SNOMED): used to map the SNOMED CT code



1.1-



1.5-

[HOW TO CREATE THE CONTRIBUTOR SOURCE ALIAS: E2P_SNOMED]

Step 1: Create CDF Meaning

1.1 Open Core Code Builder

1.2 Search for code set 73

1.3 Select Create CDF Meaning
This opens a new window with a Create CDF meaning warning

1.4 Select Proceed to create CDF meaning (not recommended)

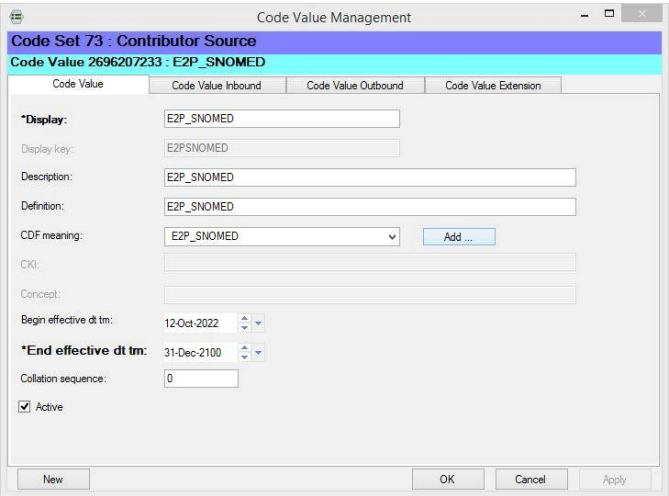
1.5 Enter **E2P_SNOMED** for CDF Meaning, display and definition.

1.6 Select OK

Terminology Mapping Pre-Setup

Codesets used

72 Event



2.1-2.2

Step 2: Create a new alias codevalue in codeset 73: Contributor Source

Open Corecodebuilder 2.1

Create the codevalue **E2P_SNOMED** and attach the created CDF meaning of **E2P_SNOMED** 2.2

HOW TO CREATE THE CODE VALUE EXTENSION: E2P

Open Corecodebuilder

Load the codeset (i.e., 72)

Click on the **Code Value Extension** tab

Click **Code Set Extension** button

Type:
Field Name: **E2P**
Field Type: **AlphaNumeric**

Select OK

Terminology Mapping

Codesets used

72 Event 72 Event 4001

PRE-REQUISITE

Step 1: See table with the terminology, corresponding SNOMED CT code, and semantic tags

MAPPING STEPS

Step 2: Follow the steps below to execute terminology mapping to SNOMED CT in Cerner

1.1 Open CoreCodeBuilder

1.2 Load the codeset where the term is found (e.g., 72)

1.3 On the **Code Value Management** tab:

1.4 Search for the code value that requires SNOMED CT code mapped and double click to open the Code Value Management window

1.5 Click on **Code Value Outbound** tab

Terminology Mapping

MAPPING STEPS continued on page 8

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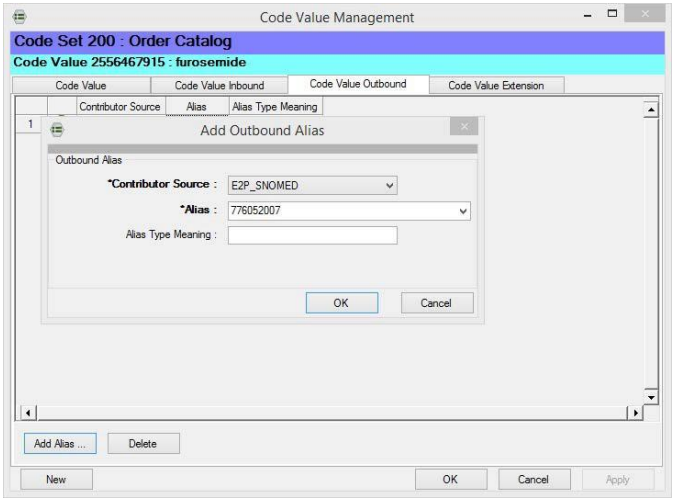
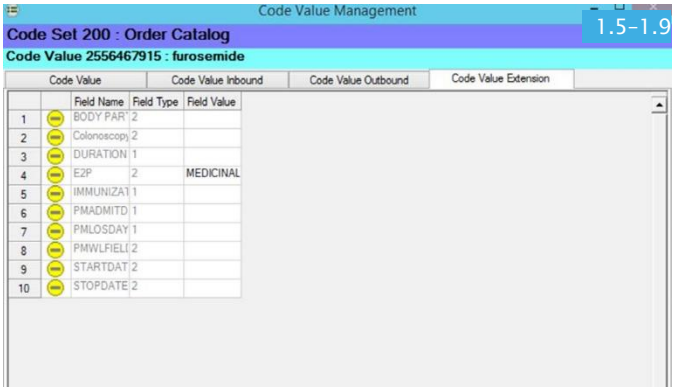
Codesets used

72 Event 200 4001





1.10-1.11

MAPPING STEPS (continued)

Click **Add Alias** 1.6

Contributor Source: Select E2P_SNOMED 1.7

Alias: type in the SNOMED CT Code 1.8

Select OK 1.9

Click on the **Code Value Extension** tab 1.10

Se On the E2P row, map the semantic tag on the Field Value 1.11

Value Management window 1.12

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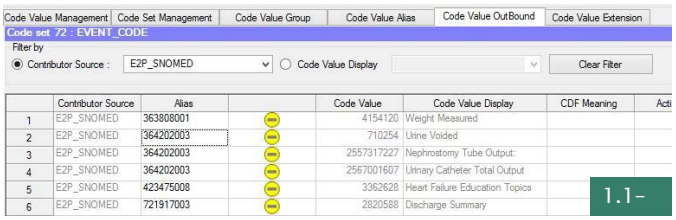
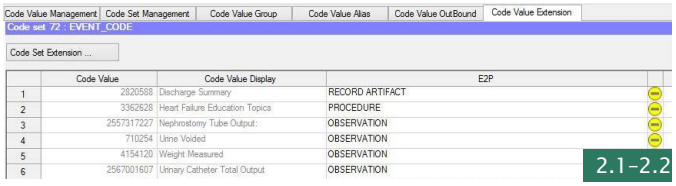
Viewing Mapped SNOMED CT code and Semantic Tags[9]

Viewing mapped codes and semantic tags can be easily viewed in the main window of corecodebuilder





VIEWING SNOMED CT CODE

1.1 Load the codeset

1.2 Click on the **Code Value Outbound** tab

1.3 Filter by Contributor Source: **E2P_SNOMED**

1.4 Click on the Alias column to sort the codes to the top

VIEWING SEMANTIC TAG

2.1 Click on the **Code Value Extension** tab

2.2 Click on the E2P Column to sort the semantic tags to the top

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Choosing the SEMANTIC tag

Consulted with Canada Health Infoway (CHI) and referenced 2-ELP0025_ContentHierarchyIntroduction to understand each hierarchy's content for correct semantic tag use. **See appendix** for the guide to understand the hierarchy

Choosing the CODESET

Selected codesets based on clinical workflow and report output

QUALIFIER

Qualifier values represent the values of some of the SNOMED CT attributes, where those values are not subtypes of another top-level concept. For example, 'left', 'severe', or 'capsule'. Qualifier values are used in health record to define the laterality of a diagnosis or procedure (such as 'left', 'right' or 'bilateral'), the severity of a condition (for example, 'severe'), the priority of a procedure (for example 'emergency'), a medication dose form (like 'tablet' or 'capsule') and a route of administration (such as 'oral' or 'topical').

MEDICINAL_PRODUCT

Pharmaceutical/biologic products are medication products or drugs. They include concepts that describe a type of medication at various levels of detail. The MEDICINAL_PRODUCT hierarchy falls under the Pharmaceutical/biologic products hierarchy.

PROCEDURE

Procedures represent activities performed in the provision of health care. This includes not only surgical procedures (such as Appendectomy), but also the administration of medicine (such as the administration of anesthesia) , imaging (such as 'x-rays' and 'ultrasounds'), education (such as diabetic care education), therapies (like physiotherapy) and administrative procedures (like 'admission' or 'discharge'). Procedures are frequently documented in a health record. The most common reasons to do so are to record the procedures that have been performed (for example during a hospital stay), to record the procedures that are planned (such you may find in a care plan), or to record a procedure that is being ordered or requested.

OBSERVATION

Observable entities are things that can be observed. They represent a question or an assessment, which can produce an answer or result. Observable Entities and Clinical Findings often work together, because the Observable Entity represents the question, while the Clinical Finding represents the answer. Examples of observable entities include 'systolic blood pressure', 'color of iris', and 'gender'. Concepts in this hierarchy are used to represent the name or type of an observation. Other code systems, such as LOINC, can also be used for this purpose.

THERAPY

Regime/therapy (subtype of procedure): set of procedures focused on a single purpose on one patient over time (e.g. repeated administration of drug in a small dose for an indefinite period of time).

RECORD_ARTIFACT

Record artifacts represent content that is created to provide people with information about record events or states of affairs. Examples include a 'patient held record', a 'discharge summary', a 'record entry', a 'family history section on a report', and a 'birth certificate'. Record artifact concepts are used in health records to document the type of identification used by a patient, or to specify the type of document used or required.

Item or Concept	SNOMED CT (EP2)	Sample HIS Term	CODESET	Code Value Extension or Semantic Tag
PHQ-9	720433000	PHQ-9 score Total severity score	72	Observable entity
GAD-7	445455005	GAD7 score	72	Observable entity
Patient discharge summary	38451000087100	Patient discharge note Discharge instructions Inpatient patient summary	72	Record artifact
Provider discharge summary	373942005	Discharge summary (MH) Discharge summary, psychiatry discharge note	72	Record artifact
Follow up appointment	1156892006	TBD	72	Procedure
Suicide risk assessment	3161000175102	Suicide Ideation	72	Observable entity
Evidence-based psychotherapy	75516001	Therapy name (inpatient) Social work documentation (form)	72	Regime/therapy
Community supports	710822009	Special services and community resources Recommended supports team	72	Procedure
Crisis services	408904007	Crisis safety plan (form)	72	Procedure
Mental health care education	410224008	Education provided during encounter Ed - depression	72	Procedure
Cognitive behaviour therapy	228557008	Social work documentation (text)	72	Regime/therapy

References

1. https://www.hqontario.ca/Evidence-to-Improve-Care/Quality-Standards/View-All-Quality-Standards/Major-Depression/Quality-Statement-1-Comprehensive-Assessment
2. https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/2016-07-01_phq_2_and_9_clean.htm#ix.
3. https://www.hqontario.ca/Portals/0/documents/evidence/quality-standards/qs-anxiety-disorders-quality-standard-en.pdf

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