



**Scorecards Application
Basic Training
Version 2019.1**

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Introduction

Welcome to Clinical Analytics Basic!

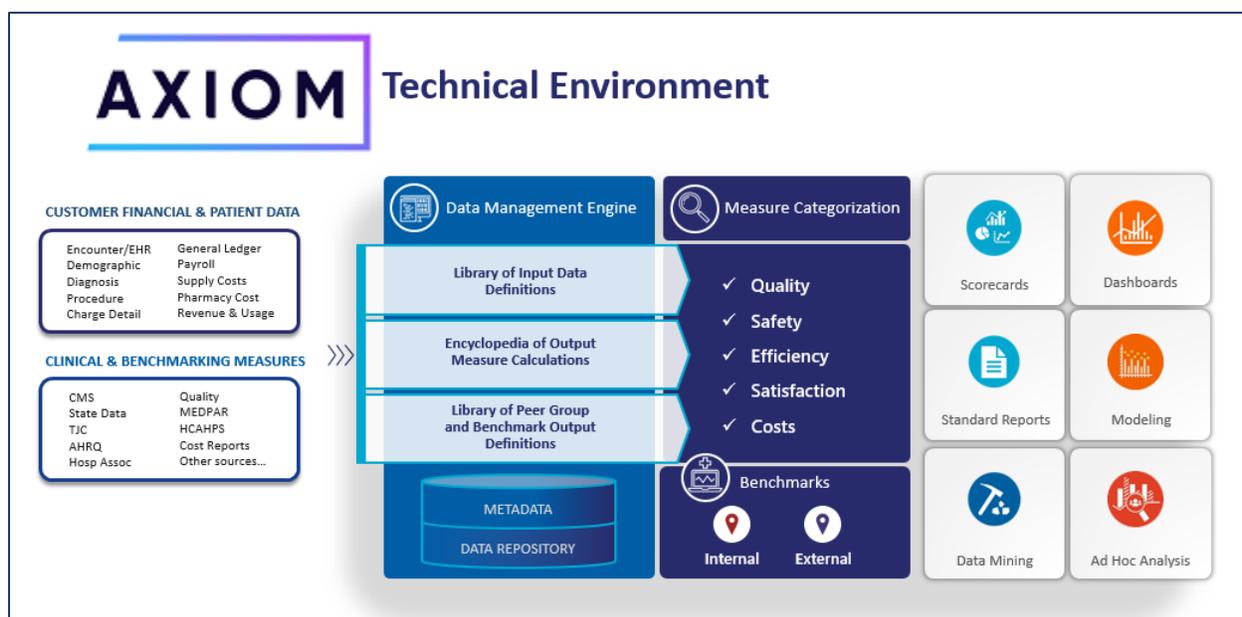
Using Clinical Analytics is a powerful way to look at your data at many different levels and in many different dimensions against numerous benchmarks in search of opportunity for improvement. In order to maximize this opportunity, it will be important to learn the mechanics of using the tool as well as establish a methodical way of progressing through the analysis process.

Clinical Analytics Basic is intended to introduce you to the basic functions in Clinical Analytics, which in many instances are also applicable in some more complex analytic functions. The chapters in this training manual include learning objectives, key concepts, content with step-by-step information, key points to remember, questions to consider, and guided practice exercises. The chapter topics will walk you through logging in, scorecard navigation, customizing scorecards, creating profiles, downloading benchmarks, accessing patient level data, and using a number of basic data analytic tools.

The Clinical Analytics Technical Environment

The Data Management System (DMS) receives client and public data inputs. In addition, the system uses categorizations, definitions, and calculations to arrive at measure reporting that is highly dynamic. Clinical Analytics measure results are both de-identified and secure, while remaining identifiable at the patient level, allowing the data to be actionable (See Figure 1.1). Measure output solutions are packaged in a variety of ways, including interactive scorecards, static reports, ad hoc queries, and flexible data mining formats.

FIGURE 1.1 THE CLINICAL ANALYTICS TECHNICAL ENVIRONMENT



Signing In

Learning Objectives:

Following completion of this session you should be able to:

- Describe two key pieces of information you will need to sign-in.
- Successfully sign in and navigate the Clinical Analytics Home Page.

Key Concepts:

- Initial sign-in will require changing your password once you get into the system.
- Dual authentication is an optional feature for clients.
- Clinical Analytics homepage displays three tabs: Dashboard, Account Settings, and Documentation.
- Use the Account Settings tab for changing password.
- **Your facility may have Single Sign On and not require a unique Clinical Analytics password.**
- Use the Documentation tab to access Clinical Analytics learning resources.

Signing In

Once the Clinical Analytics sign-in page (Figure 2.1) is accessed by typing in your organization's unique Clinical Analytics address, use your email address and the password you received from either your organization's System Administration team member OR a member from the Clinical Analytics training team.

FIGURE 2.1 CLINICAL ANALYTICS EMAIL/PASSWORD SIGN-IN SCREEN

The screenshot shows a sign-in form with the following elements:

- Sign In** (header)
- Email** (input field)
- Password** (input field)
- Sign In** (button)
- [Reset Password](#) (link)

If your facility does not have single sign on activated, once you are signed into Clinical Analytics you will be able to change your password on the Account Settings tab. Click the *Change Password* hyperlink in the User Settings section, and make the password change following the system's direction (See Figure 2.2). The passwords in Clinical Analytics are set to auto expire every 90 days.

If you facility has single sign on activated, then you are only required to enter your facility email address and then the system will point to your active directory password at your organization.

FIGURE 2.2 ACCOUNT SETTINGS TAB: CHANGE PASSWORD SCREEN

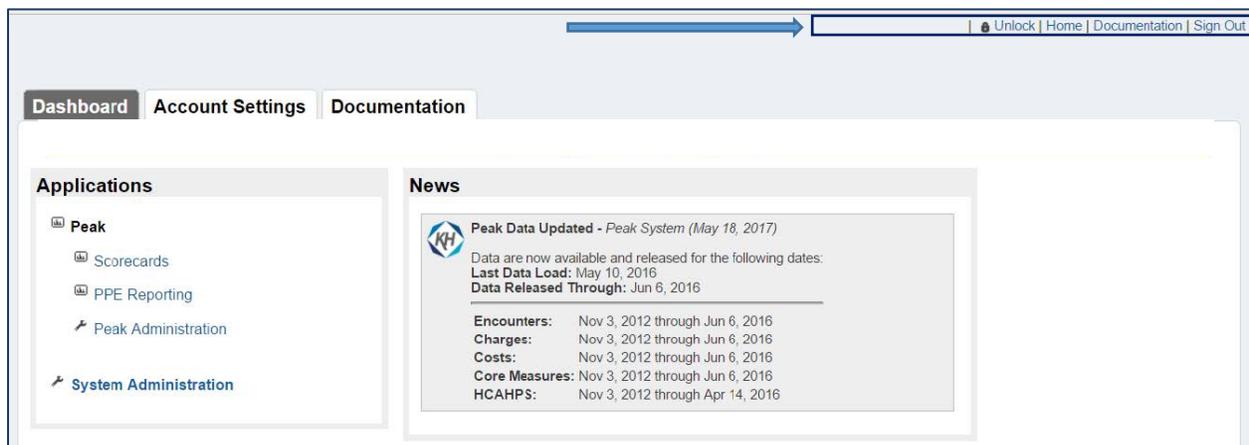
The screenshot shows the 'Change Password' screen with the following elements:

- Navigation tabs: **Dashboard**, **Account Settings**, **Documentation**
- Section title: **Account Settings » Change Password**
- Password requirements:
 - Password must be at least 7 characters
 - Password must be different than your last 3 passwords
 - Password must contain at least:
 - 1 alpha character(s)
 - 1 numeric character(s)
 - 1 special character(s)
- Input fields:
 - Current Password:
 - New Password:
 - Confirm New Password:
- Buttons: **Save**, **Cancel**

Clinical Analytics Home Page

Signing into the Clinical Analytics system takes you directly to the Dashboard tab on the Clinical Analytics Home Page. Here you will be able to access your listing of available Clinical Analytics applications (e.g. Scorecards, Physician Practice Evaluation (PPE) Reporting, and Clinical Analytics Reporting). The Account Settings tab and the Documentation tab are also available from the Clinical Analytics home page. The second tab, Account Settings, allows the user to *change their password or unlock the system with the user assigned encryption key*. We will introduce the Encryption keys later in Chapter 4. The third tab, Documentation, will open a new web-based tab allowing the user to easily navigate Clinical Analytics searchable online resource. Here you will find technical notes describing each of the Clinical Analytics features along with release notes and helpful information such as Clinical Analytics webinar recordings. Finally, in the upper right hand corner you will always see your sign-in email ID (helpful if you will be emulating others in your permissioned role), the Unlock icon, the Home link, the Documentation link and the Sign Out link.

FIGURE 2.3 DASHBOARD TAB ON THE CLINICAL ANALYTICS HOME PAGE



Study Questions (Refer to Appendix B for answers)

1. For traditional sign-on: What two pieces of information do you need to sign in to Clinical Analytics?

2. True or False: The News window is a dynamic field that updates with each data load.
3. Documentation includes:
 - A. FAQs
 - B. Previously recorded webinars
 - C. Measure definitions
 - D. Training materials
 - E. All the above
4. True or False: Clicking the logo in the upper left corner is the one click way to return to the Clinical Analytics Home Screen.
5. List an additional link from Home page that will return you to the Clinical Analytics Home Screen in one click.

Scorecards Navigation and Customization

Navigation

Learning Objectives:

Following completion of this session you should be able to:

- Navigate your way through a Clinical Analytics scorecard, recognizing consistent patterns across scorecards and customizable sections within each scorecard.
- Review the data displayed in pie charts, tables, line charts, and speedometers.

Key concepts:

- The Scorecards tab is your workspace where active Clinical Analytics Scorecards are available to you.
- The Scorecard Templates tab, available to users with Health System Coordinator (HSC) scorecard permissions, lists all scorecards that have been downloaded to your server.
- HSCs are able to access additional Clinical Analytics Scorecards for users on the Clinical Analytics Library tab.
- A scorecard will always have: 1) Time Periods, 2) Tabs, 3) Profiles, 4) Sections, 5) Customizing Function, 6) Profile Build Function, 7) Change Settings Function, and 8) PDF Creation Function. There may be variation in how the data or opportunity is displayed based on how you choose to customize your scorecard.

The Scorecard application represents a dynamic user interface which allows for a magnitude of customization opportunities. Clinical Analytics Scorecard's interactive nature contribute heavily to its analytic power as well as its complexity.

In the next session we will focus specifically on the features and relationship between of a custom scorecard and a template scorecard. For the purposes of basic navigation we will focus on a standard Health System Scorecard listed in the Scorecard Templates section.

When you select the Scorecard application from your Clinical Analytics Home Page, it opens to the Scorecards Dashboard (see Figure 3.1). Depending on your permissions level, you will see up to, or at least three tabs on the Scorecards Dashboard which provide access to:

- Scorecards
- Scorecard Templates
- Clinical Analytics (Peak) Library

FIGURE 3.1 THREE TABS PROVIDE ACCESS TO SCORECARDS:

Scorecards	Scorecard Templates	Performance	LDOS Code Groups	Peak Library	Distributions	Files
My Scorecards						
Scorecard Templates						
Template Name	Template Description	Primary				
Hospital Scorecard	Hospital Scorecard					
Customized Scorecards for Master User						
Customized Scorecard Name	Customized Scorecard Description	Primary	Actions			
Custom Scorecard	Hospital Scorecard		Make Primary			
Customize Hospital Scorecard	Hospital Scorecard		Make Primary			
Details Only	Hospital Scorecard		Make Primary			

The *Scorecards* tab provides a workspace to keep frequently used Scorecards—both Scorecard Templates and Customized Scorecards. (We will discuss Scorecard Templates in greater depth in the next section “Scorecard Customization”). By default, the scorecards on this tab are listed in alphabetical order. On this dashboard, you will see on the far right hand side an *Add a Folder* hyperlink—this allows you to sub-group scorecards in Scorecard Templates or Customized Scorecards sections. Scorecard Templates can be removed from your list by clicking *Unsubscribe* under the Actions column. You can convert a Custom Scorecard to a Scorecard Template by selecting the *Convert to Template* link under the Actions column. Additional change options are available, including the *copy, edit or delete* links under the Actions column.

The *Scorecard Templates* tab provides a dashboard listing of the scorecard templates available on *your local server* (see Figure 3.2). These scorecards have either been downloaded from the Clinical Analytics Library or created by a user and saved as a template. The Scorecard Templates tab allows you to filter and manage templates that are local to your own server.

FIGURE 3.2 SCORECARD TEMPLATES DASHBOARD; NOTE **+ADD** IN THE UPPER RIGHT CORNER

Short Description	Long Description	Category	Creator	Owner	Actions
Hospital Scorecard	Hospital Scorecard		Peak Standard		Default Scorecard Settings Delete
CDI Scorecard	SOI-ROM, LOS, CC and MCC, CMI, Details, Patient List		Peak Standard		Settings Delete
Nursing Unit Scorecard	Nurse Unit Scorecard		Peak Standard		Settings Delete
CMS Readmission Reduction Profiles	CMS Readmission Reduction Profiles		Peak Standard		Settings Delete
Dynamic Physician	Dynamic Physician Scorecard categories: Systems, Charges, Safety, Quality, Knowledge, Satisfaction		Client		Settings Delete
Sepsis Scorecard	Sepsis Scorecard		Peak Standard		Settings Delete
Coding Analytics Scorecard	Coding Analytics, SOI-ROM, LOS, CC and MCC, CMI, Details, Patient List	CDI	Peak Standard		Settings Delete
Advanced Analytics Scorecard	Advanced Analytics Scorecard: Service Details, Treatment Analysis, Clinical Case Summary, Frequent Readmissions, Patient List, Easy Patient Download		Client		Settings Delete
Complications Scorecard	Complications Scorecard: Complication Analysis, Clinical Case Summary		Client		Settings Delete
Quality, Satisfaction, Safety Scorecard	PPC, PPR, Quality, PSIs, HACs, Patient List, Frequent Readmit		Client		Settings Delete

New blank scorecards can be generated by clicking the +Add hyperlink in the upper right hand corner of the Scorecard Templates dashboard (See Figure 3.2). Selecting the +Add hyperlink provides a listing of all users on that server (See Figure 3.3). Scorecard descriptors must be entered into the appropriate fields and the identified user is selected. Clicking save in the bottom right hand corner will populate a new blank scorecard on the selected user(s) Scorecards tab when they sign into Clinical Analytics.

FIGURE 3.3 USER LIST FOR ADDING NEW SCORECARD TEMPLATES

Scorecard Templates » Add

Short Description*

Long Description*

Category

Allowed?	Last Name	First Name	Accessible Clients	Role
<input type="checkbox"/>			KaufmanHall, Saints Health System, St. Lupulin, St. Victorious, Saint Archer, St. Bernardus	Peak Administrator
<input type="checkbox"/>			KaufmanHall, Saints Health System, St. Lupulin, St. Victorious, Saint Archer, St. Bernardus	Peak Administrator
<input type="checkbox"/>			KaufmanHall, Saints Health System, St. Lupulin, St. Victorious, Saint Archer, St. Bernardus	Peak Administrator
<input type="checkbox"/>			KaufmanHall, Saints Health System, St. Lupulin, St. Victorious, Saint Archer, St. Bernardus	Peak Administrator
<input type="checkbox"/>			KaufmanHall, Saints Health System, St. Lupulin, St. Victorious, Saint Archer, St. Bernardus	Peak Administrator
<input type="checkbox"/>			KaufmanHall, Saints Health System, St. Lupulin, St. Victorious, Saint Archer, St. Bernardus	Peak Administrator

Allow access to

The owner of an existing Scorecard template can give access to other users by clicking on the *Settings* hyperlink under the Actions column (See Figure 3.4). The setting link opens an Edit window, allowing the user to select one or multiple users to gain access to the existing scorecard template.

FIGURE 3.4 USER LIST FOR SHARING EXISTING SCORECARD TEMPLATES

Short Description	Long Description	Category	Creator	Owner	Actions
Hospital Scorecard	Hospital Scorecard		Peak Standard		Default Scorecard Settings Delete
CDI Scorecard	SOI-ROM, LOS, CC and MCC, CMI, Details, Patient List		Peak Standard		Settings Delete
Nursing Unit Scorecard	Nurse Unit Scorecard		Peak Standard		Settings Delete
CMS Readmission Reduction Profiles	CMS Readmission Reduction Profiles		Peak Standard		Settings Delete

The *Clinical Analytics (Peak) Library* tab displays scorecards that are only available to be downloaded from the Clinical Analytics Central Server and is accessible to users who have a *Health System Coordinator* level of

permissions for Scorecards. This dashboard allows you to filter and select centrally located template scorecards for downloading. The dashboard displays and can filter by the scorecard's *Template Name, Description, Category, and Date Published* (See Figure 3.5). In most cases, the *Description* will provide a basic indication of what the scorecard analyzes and how it is configured. On the *Clinical Analytics (Peak) Library* tab the dashboard also displays an *Actions* column for each scorecard entry (far right column). There are three possible hyperlinks, *Download new copy, Download Template* and *View documentation*. *Download template* allows you to download the template onto your server and show on the *Scorecard Templates* tab. *Download new copy* allows you to download a copy that will display on the Scorecard Templates tab. With *View documentation* you are able to download a PDF describing the scorecard's inclusion and exclusion criteria as well as its profiles and sections.

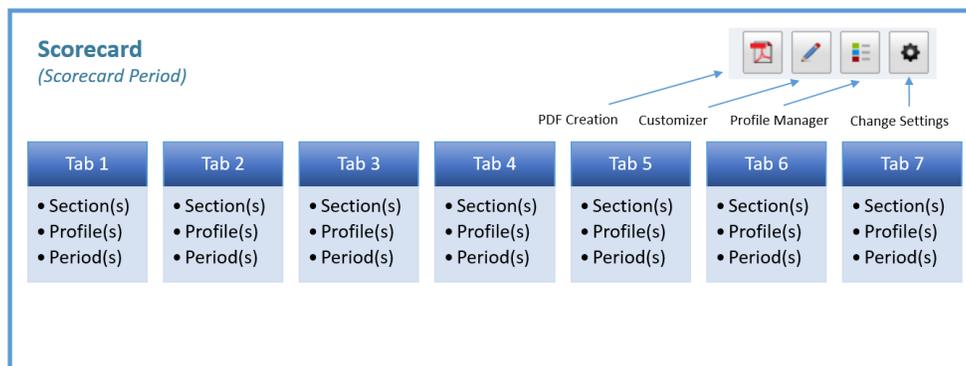
FIGURE 3.5 CLINICAL ANALYTICS (PEAK) LIBRARY DASHBOARD

Download Scorecard Templates				
Available Scorecard Templates				
Template Name	Description	Category	Date Published	Actions
Blood Utilization Scorecard	Details, Treatment Analysis, Physician Service Details, and visuals to analyze blood utilization across patient populations with and without transfusions.	Utilization	2017-05-09	Download new copy View documentation
All Sections Scorecard	Contains all analytic sections, organized onto tabs by category		2017-05-09	Download new copy View documentation
End of Life Scorecard	Contains several profiles for capturing palliative, DNR, and Hospice patients with a variety of sections for analysis		2017-05-09	Download new copy View documentation
Do Not Resuscitate Scorecard	Total Benchmark Solution		2017-01-11	Download new copy View documentation
PSI - AHRQ and TBS	Patient Safety Indicators, AHRQ and TBS		2016-12-16	Download new copy View documentation
Cardiac Services Scorecard	Kaufman Hall		2016-11-01	Download new copy View documentation
CMS Mortality Scorecard - ICD-9 and ICD-10 - AMI	CMS Mortality Scorecard	Quality	2016-07-18	Download new copy View documentation
CMS Mortality Scorecard - ICD-9 and ICD-10 - COPD	CMS Mortality Scorecard	Quality	2016-07-18	Download new copy View documentation
CMS Mortality Scorecard - ICD-9 and ICD-10 - HF	CMS Mortality Scorecard	Quality	2016-07-18	Download template View documentation

What is common across scorecards?

As described earlier Clinical Analytics scorecards are highly interactive with almost every feature allowing for client customization. The purpose of this section is to describe the basic framework of the scorecard and features that are consistent across all scorecards (See Figure 3.6). How these features work will be discussed in greater detail in the next section as we review how to customize the Clinical Analytics scorecard.

FIGURE 3.6 BASIC SCORECARD FEATURES CONSISTENT ACROSS ALL SCORECARDS



For the time being it will be helpful to understand that when you open a scorecard, it will always have:

- ✓ **Time Periods:** You will always see a static time period at the top of your scorecard. It is also possible to modify time periods using the gear icon in the upper right hand corner of your scorecard. Additional time period modification can be accomplished through clicking on a point in the line chart which displays the details table.
- ✓ **Tabs:** You will always have at least one tab on your scorecard, but the system allows up to seven tabs per scorecard. The tab names and associated content is modifiable.
- ✓ **Sections:** The section feature applies measures to your *Tab* in your scorecard. Without at least one *Section*, your *Tab* will be blank and a yellow bar will display at the top of the scorecard. The yellow bar indicates that you don't have any sections included on that particular tab.
- ✓ **Profiles:** When using an existing scorecard template, you will always have *Profiles*, analysis profiles and benchmarks, when you have a *Tab* with *Sections*. However, if you add a blank new scorecard, you will have to create a profile as a first step.
- ✓ **PDF Creation icon:** Scorecards can be converted to a PDF using the PDF icon  in the upper right hand corner of the scorecard screen.
- ✓ **Customization icon:**  Every scorecard can toggle between customization and interactive analysis mode.
- ✓ **Profile Manager icon:** Every scorecard can toggle between *Profile* building  and interactive analysis mode.
- ✓ **Scorecard Settings icon:**  Every scorecard allows adjustment for time period, missing data point connection, and type of data shown (i.e. including data that your IT processing lead has not reviewed yet).

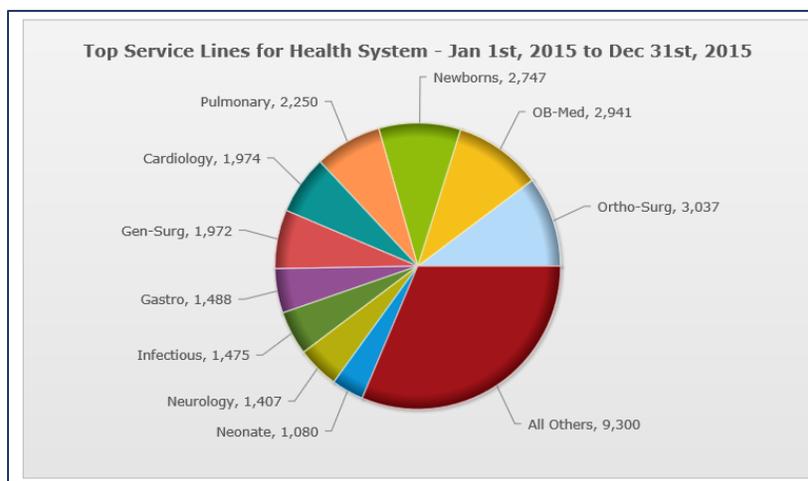
What are the ways data is displayed in Clinical Analytics?

Clinical Analytics displays your data in a multitude of formats. These include pie charts, tables, line charts, speedometers, and SPC control chart analytic section.

Pie Charts

In Clinical Analytics, pie charts are relatively static and generally accompanied by a table (see Figure 3.7). Hovering over the pie chart sections will display additional information about the data, including the complete label, the numerical value, and the percentage.

FIGURE 3.7 CLINICAL ANALYTICS PIE CHART



Tables

The tables in Clinical Analytics are either entirely static or have additional dynamic, interactive features. See the two illustrations below (Figure 3.8) as examples. In example A the data display is static though there is opportunity for modifying the Profile and Time Period. In example B, the table itself allows for column sorting, reflects areas with opportunity for improvement, and is hyperlinked to another sub-level of detail data. In addition, the capability for modifying things such as the *Profile*, *Period*, and selected *Benchmark*. In example C, the details table allows for stratification of data, exporting to Excel for further data analysis and the ability to save settings for future use. The Guided Practice questions for this chapter will illustrate this in more detail.



Documentation

Keyword search:

- Tables**
- Benchmarks**
- Profiles**

FIGURE 3.8 CLINICAL ANALYTICS DATA TABLE DISPLAY

Example A

Top DRGs

Profile: Health System **APR-DRG** Period: All (Jan 1st, 2015 to Dec 31st, 2015)

Description	Code	Cases	Percent
Neonate Birthwt >2499g, Normal Newborn Or Neonate W Other Problem	640	3,361	11.33%
Vaginal Delivery	560	2,743	9.24%
Septicemia & Disseminated Infections	720	1,302	4.39%
Cesarean Delivery	540	855	2.88%
Knee Joint Replacement	302	844	2.84%
Heart Failure	194	686	2.31%
Hip Joint Replacement	301	671	2.26%
Other Pneumonia	139	638	2.15%
Rehabilitation	860	626	2.11%
Pulmonary Edema & Respiratory Failure	133	487	1.64%
All Others		17,458	58.84%
Total		29,671	

Example B

Charges and Costs Detail

Type: Charges **APR-DRG**
 Profile: Health System Period: Jan 15 through Dec 15
 Benchmark Profile: Nationwide Medicare Benchmark Period: Active Benchmark Period

Description	Category	Encounters	Average Charges	Total Charges	Average Benchmark	Total Opportunity	Average Opportunity
Critical Care / Intermediate ICU	Routine	29653	\$4,811	\$142,674,228	\$1,990	\$38,636,509	\$3,328
Pharmacy	Therapeutic	29653	\$4,566	\$135,392,404	\$3,533	\$58,796,504	\$1,713
Medical/Surgical Supplies	Supplies	29653	\$5,395	\$159,968,288	\$5,077	\$47,164,621	\$1,591
Respiratory Therapy	Therapeutic	29653	\$1,976	\$58,605,700	\$707	\$41,211,449	\$1,390
Accommodation - Private, Semi-Private, Ward - Inpatient	Routine	29653	\$4,756	\$141,044,286	\$3,564	\$26,398,037	\$890
Other	Other	29653	\$759	\$22,521,410	\$83	\$19,569,404	\$660
Cardiology	Diagnostic	29653	\$1,754	\$52,009,007	\$1,574	\$16,965,890	\$572
Radiology, CT, Oncology & Nuc. Med.	Diagnostic	29653	\$2,823	\$84,000,000	\$1,946	\$16,402,247	\$553
Operating Room and Labor & Delivery	Therapeutic	29653	\$5,246	\$155,548,458	\$5,100	\$14,560,952	\$491
Blood Administration	Therapeutic	29653	\$322	\$9,536,894	\$96	\$7,356,254	\$248
MRI	Diagnostic	29653	\$302	\$8,962,126	\$100	\$6,651,983	\$224
Occupation Therapy	Therapeutic	29653	\$355	\$10,528,589	\$203	\$5,884,981	\$198

Example C

Profile: Health System Jul 1st, 2014 to Jun 30th, 2016
 Benchmark Profile: Nationwide Medicare **APR-DRG**

Settings
 Details Template: No template selected Save
 Measures: Length of Stay (LOS) ^(x) Add
 Measure Layout: Horizontal
 Results Grouped By: Facility ID ^(x) Add
 Filters: Add
 Excludes: Add
 Measure Filter: Add
 Length of Stay Outlier: Both Not My Patient Cases: Include All Benchmarks: Include All
 Opportunity Cap: 100 %

Facility ID ^(x)	Facility ^(x)	Length of Stay (LOS) - Days ^(x)	Length of Stay (LOS) - (x)	Length of Stay (LOS) - # encounters ^(x)	Length of Stay (LOS) - Opportunity ^(x)	Length of Stay (LOS) - Average Opportunity ^(x)	Length of Stay (LOS) - Benchmark ^(x)	Length of Stay (LOS) - OIE ^(x)
964898	Hospital 4	67,635.00	24.28	2786	59,480.00	21.34	3.48	6.98
432004	Hospital 1	120,841.00	4.65	26002	20,356.50	0.78	4.31	1.08
935025	Hospital 2	73,661.00	4.25	17338	10,774.00	0.62	3.98	1.07
586144	Hospital 3	24,725.00	3.79	6523	2,143.00	0.33	3.63	0.99

Line Charts

Line charts in Clinical Analytics reflect trending data measured over the period of time defined by the scorecard (visible at the top of the screen along with the scorecard name). As described in the above section, this time period can be modified by using the *Scorecard Settings* icon in the right upper corner of the scorecard screen. In considering examples A (Figure 3.9) and B (Figure 3.10) shown below, you will see some similarities as well as differences between these two line charts. In Clinical Analytics, all line chart titles display a definition when you hover over them. In addition each line chart displays a green/red polarity indicator (e.g. which direction is trending favorable) in the top right corner of the line chart and data points which will take you to a detailed view of your data in the chart when selected.

For measures that are grouped by DRG (Diagnosis Related Group), there is an icon in the left upper corner of the line chart (See Figure 3.9, example A) reflecting the risk adjusted grouping assignment selected, either the MS-DRG grouping type or the APR-DRG type. This will be helpful to recognize as we discuss another feature called *details template and details view*, in an upcoming chapter. Line charts may or may not reflect benchmarks. Example A illustrates a line chart that also displays benchmark percentile results. You will be able to select and

remove any of the data groups (either analysis profile or benchmark comparison group) simply by clicking on the profile label in the legend beneath the graph. When there is a gear icon in the upper left corner of the line chart, it can be used to change line chart settings including the *Profile*, *Calculation Method*, and *option for placement of control chart x or p-bars*. One final comment, for measures that are bundled or grouped, you may see a **Drill** icon in the upper right hand corner, as in Figure 3.10, Example B. Selecting this icon will take you to another layer of data which displays the individual measures of the selected bundle or grouping. If there is additional sub-grouping involved, you will see additional Drill icons in those particular line charts. Keep in mind that Drill icons must be manually added if you are creating a blank new scorecard. The Clinical Analytics support team can assist with the Drill icon functionality if needed.

FIGURE 3.93 LINE CHART EXAMPLE A

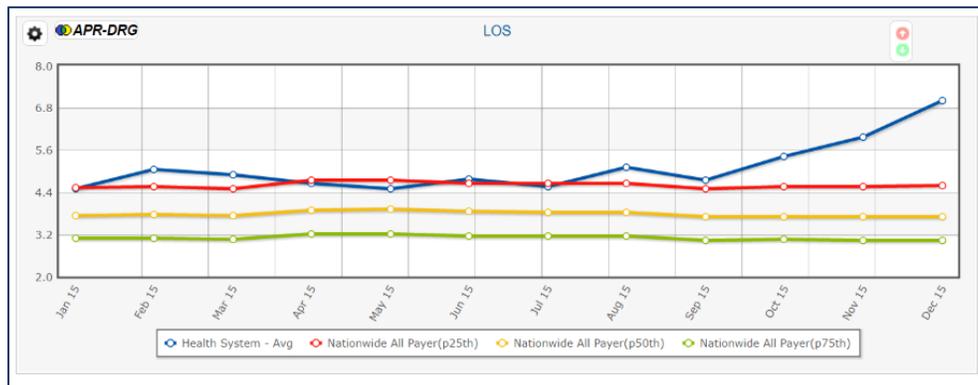


FIGURE 3.10 LINE CHART EXAMPLE B





Documentation

Keyword search:

- Measure Definitions**
- Polarity**
- Inpatient Measures**

Speedometers

In Clinical Analytics, speedometers are used to reflect a stoplight color scheme to provide at-a-glance performance status for any given measure. Percentiles generally default to 75th, 50th, and 25th percentiles. These may be modified, including the addition of the 90th percentile when the scorecard is in customizer mode. Actual percentile values, including the needle value (i.e. the measure value itself) can be obtained from the legend in the lower right hand corner of the graph. As with the *line charts*, all speedometer graphs reflect measure polarity, noted by the red/green arrow icon in the right upper corner of the graph. In addition, similar to the line charts, DRG-Based measures are labeled with an icon in the graph’s upper left hand corner.

Speedometer internal profiles (your analysis profile), benchmarks, and the graph’s profile period are labeled in the legend in the lower left corner. These are also modifiable when the scorecard is in customizer mode. In the Speedometer below (Figure 3.11) we can see that the needle profile (Hospital) is performing between the 25th and 50th percentiles for Length of Stay (LOS) compared to the Nationwide Medicare benchmark. Note in the lower right corner of the speedometer graph the legend reflecting the actual needle value along with percentile cutoffs. The percentile options are pre-selected at the time the speedometer is added as a Block to the Two-Column Section.

FIGURE 3.11 CLINICAL ANALYTICS SPEEDOMETER



Highlighted Opportunity

As described in the Introduction, the primary purpose of Clinical Analytics is to evaluate your data against credible benchmarks and uncover documented opportunities for improvement. “Opportunity” is reflected in Clinical Analytics using a few different displays, such as the red and green opportunity in the Details View tables and Speedometers. As you learn to navigate scorecards, it is important to note the basic concept that *red* opportunity conveys poor performance compared to the benchmark and *green* opportunity conveys improved performance compared to the benchmark. (See Figure 3.12)

FIGURE 3.42 CLINICAL ANALYTICS EXAMPLE OF RED AND GREEN OPPORTUNITY

Facility ID ^(*)	Facility ^(*)	Primary Nursing Unit ^(*)	Primary Nursing Unit Description ^(*)	Staff explained medicines before giving them to the patient (Composite) - Num ^(*)	Staff explained medicines before giving them to the patient (Composite) - Avg ^(*)	Staff explained medicines before giving them to the patient (Composite) - Opportunity	Staff explained medicines before giving them to the patient (Composite) - Benchmark ^(*)
432004	Hospital 4	401100135	ICU - Level 3	16.00	50.00 %	-4.48	64.00 %
580144	Hospital 8	401103960	ICU - Level 1	18.00	54.25 %	-3.12	64.00 %
935025	Hospital 7	423700111	Telemetry 4	5.00	45.45 %	-2.04	64.00 %
935025	Hospital 7	600100114	Intermediate Care - Level 3	3.00	50.00 %	-0.84	64.00 %
935025	Hospital 7	601100115	Med / Surg / Gyn Semi Private 2	7.00	58.33 %	-0.68	64.00 %
935025	Hospital 7	444102614	Rehab	2.00	50.00 %	-0.56	64.00 %
935025	Hospital 7	601900111	Telemetry 9	8.00	61.54 %	-0.32	64.00 %
935025	Hospital 7	602000111	Telemetry 10	1.00	50.00 %	-0.28	64.00 %
935025	Hospital 7	420300115	Med / Surg / Gyn Semi Private 31	2.00	66.67 %	0.08	64.00 %
432004	Hospital 4	603000114	Intermediate Care - Level 2	8.00	66.67 %	0.32	64.00 %
580144	Hospital 8	605100112	OB / Postpartum 2E	1.00	100.00 %	0.36	64.00 %



- When opening a scorecard, remember to look at the time period and make adjustments as needed using the gear icon or at the section level.
- Time periods can be adjusted at the level of the entire scorecard, or at the level of most sections within the scorecard.
- When searching for scorecard templates, remember to use the Filter functionality to help you find items quickly.

Customization

Learning Objectives:

Following completion of this session you should be able to:

- Understand the different ways a Clinical Analytics scorecard can be customized.

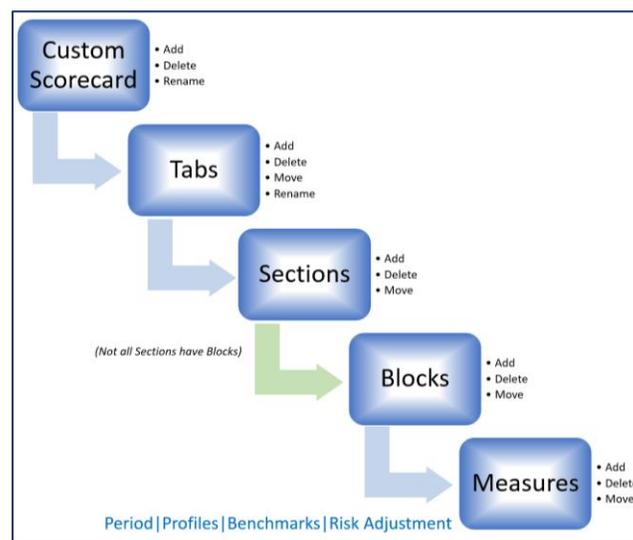
Key Concepts:

- Custom Scorecards, Tabs, Sections, Blocks (with their associated Measures) can all be added, deleted, and moved.
- Populations of interest, for measurement of performance and/or benchmarking, can be defined.
- Clinical Analytics template and custom scorecards have a dynamic relationship where a template can be saved and used as a custom scorecard and a custom scorecard can easily be published as a template scorecard.
- Any place that you see the pencil icon, you can edit or customize.

Customizing your Clinical Analytics Scorecard

As mentioned earlier, customization of Clinical Analytics scorecards plays a significant role in the analytic power that Clinical Analytics is known for as well as its complexity when first starting to learn how to use the scorecard application. Figure 3.13 illustrates at a high-level the degree of variability that exists across the scorecard components.

FIGURE 3.13 THE CASCADE OF CUSTOMIZATION CAPABILITIES

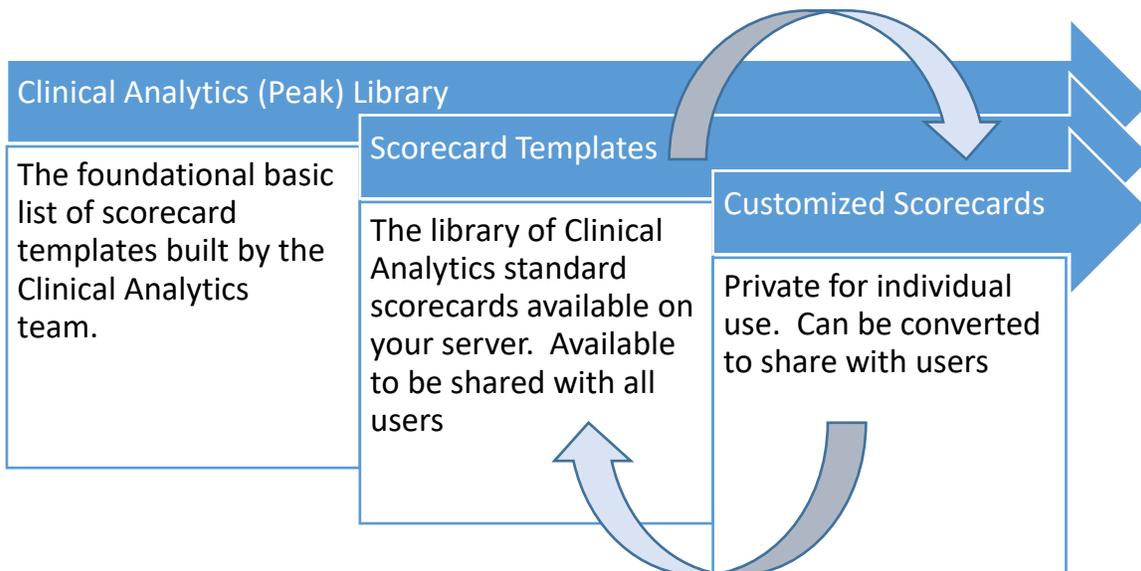


In the Navigation section we introduced at a high level changing a scorecard template to a user customized scorecard as well as converting an existing customized scorecard as a scorecard template. This section will break those steps down further as well as introduce you to customizing tabs and sections within each scorecard. A discussion of Clinical Analytics measures and their application in each scorecard will be reviewed in more depth through the discussion for using the *details template*. Profiles (including Benchmarks) can also be customizable and will be explored in after our review of Scorecards navigation and customization.

Scorecard Templates and Customized Scorecards

The Clinical Analytics (Peak) Library tab, on the scorecard home page, represents the universe of Clinical Analytics template scorecards available to your hospital or health system. The list of available scorecard templates can be downloaded by anyone on your team with Health System Coordinator scorecard permissions. Once the HSC user downloads a copy of the template, they can assign the templates to any given user. Once a user has access to a given scorecard template, the user then saves the scorecard template as a custom scorecard. A scorecard template is available to be shared across users; a custom scorecard exists for modification and analysis by the owner only. (See Figure 3.14)

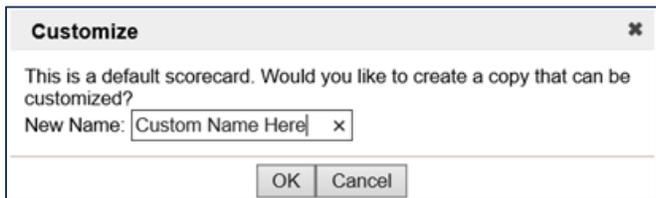
FIGURE 3.54 THE BACK-AND-FORTH RELATIONSHIP BETWEEN SCORECARD TEMPLATES AND CUSTOM SCORECARDS



Creating a Custom Scorecard

When you first open a scorecard template and use the pencil customizer icon, the system will ask you if you want to customize the scorecard (See Figure 3.15). This allows you to name your custom scorecard. This custom scorecard will then show up in the *Customized Scorecards* list on your *Scorecards* tab.

FIGURE 3.15 SCORECARD CUSTOMIZATION SCREEN

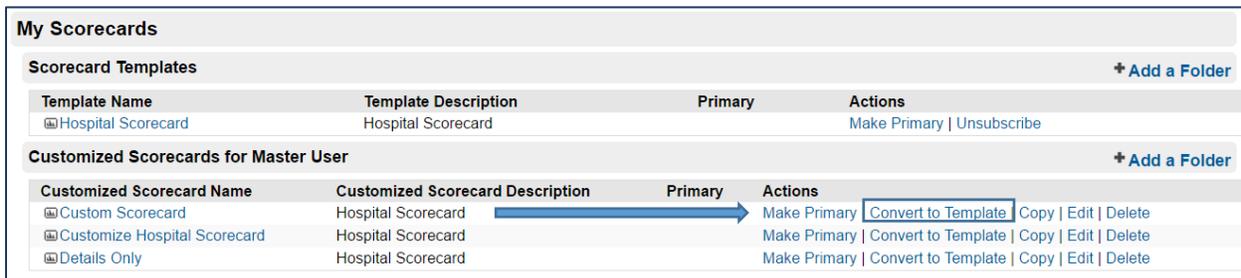


Saving a Customized Scorecard to a Scorecard Template

When you have modified a customized scorecard and want to make it available to other users, go to the scorecard home page, find your custom scorecard in the list of customized scorecard names, click on the *Convert to Template* hyperlink on the right and name the customized scorecard. You should then see the scorecard template in the *Template Name* list. The scorecard with your modifications can now be used as a starting point by other team members.

Before other users can see the shared scorecard in their Scorecard Templates section, you must grant access to the converted template. Scorecard templates are shared using the Settings link found on the Scorecard Templates tab (see Figure 3.16). The owner of the scorecard selects the Settings tab and chooses the users that will need the template on their My Scorecards tab. This is a great tool to help other new users benefit from your knowledge and not have to create useful scorecards from scratch.

FIGURE 3.16 SCORECARD CUSTOMIZATION SCREEN



Tabs

As described earlier, the tabs within each Clinical Analytics scorecard can be added, deleted, moved and renamed. The maximum number of tabs on a Clinical Analytics scorecard is seven. In the customizer view, when there are less than seven tabs on the scorecard, you will see a tab labeled *+Add Tab*, indicating an opportunity to an additional tab. Clicking *+Add Tab* creates anew tab which then has the same modification capabilities as the other pre-existing tabs. Figure 3.17 illustrates the customization functions of Clinical Analytics Tabs.

FIGURE 3.17 CLINICAL ANALYTICS TAB CUSTOMIZATION FUNCTIONS



Tabs may be customized when you:

- ✓ **Name** a new tab or **Rename** a pre-existing tab: Pick any tab and click the customization pencil. **Type** a new name and **select Apply**. If you change your mind, **select Cancel**.
- ✓ **Delete** a Tab: **Click** the trash can icon.
- ✓ **Move** a Tab: **Click** on the two-way arrow to the left side of the tab name; grab the Tab with the arrow cross and slide it into the desired tabular sequence.

Sections

In the Clinical Analytics application, *Sections* provide the functionality for assigning basic or starter data analyses frameworks within any given Tab. In a sense, the naming of a *Tab* assigns a name without a function. The contents of a tab remains blank until a Section is added. (See Figure 3.18)

FIGURE 3.18 A NEW TAB WITHOUT ASSIGNED SECTIONS



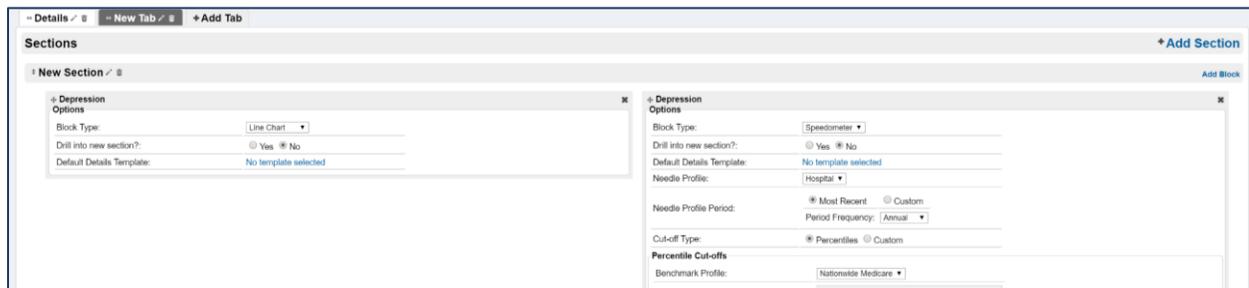
Whenever in customizer mode, it is always possible to select and add a section. This is accomplished by selecting the *+Add Section* on the right upper portion of the Sections screen (See Figure 3.18). This will open a dropdown to use in choosing a Section. Each analytic section provides unique value to the opportunity questions your organization is trying to answer through data analysis. In the next few sections, we will explore how you can use Sections and *details templates* to perform basic or more advanced analytics.

Sections can be organized on your screen by hovering over the two-way arrow on the left end of the gray margin and rearranged similar to the individual tab movement we just discussed. Once you have captured the section you would like to rearrange, move the section and drop it into place signaled by a light yellow highlight strip is visible in the background. The light yellow highlight strip is where the relocated section can be attached. Adding a Section will display the dashboard for whichever analytical tool you would like to use.

Blocks

Just as Scorecards, Tabs, and the assignment of Sections can be modified, the use of one particular type of section, referred to in Clinical Analytics as the *Two-Column Section* allows for the addition, naming and movement of yet one more customizable feature, the *Block* (See Figure 3.19). The addition of the Block on a Two-Column Section offers you the chance to select specific measures and have your data results reflected in either a trending line chart or a speedometer. Blocks in a Two-Column section can be re-arranged on the screen by hovering over the gray margin and grabbing the measure and posting it to the light yellow strip highlighted in the background of the Section screen.

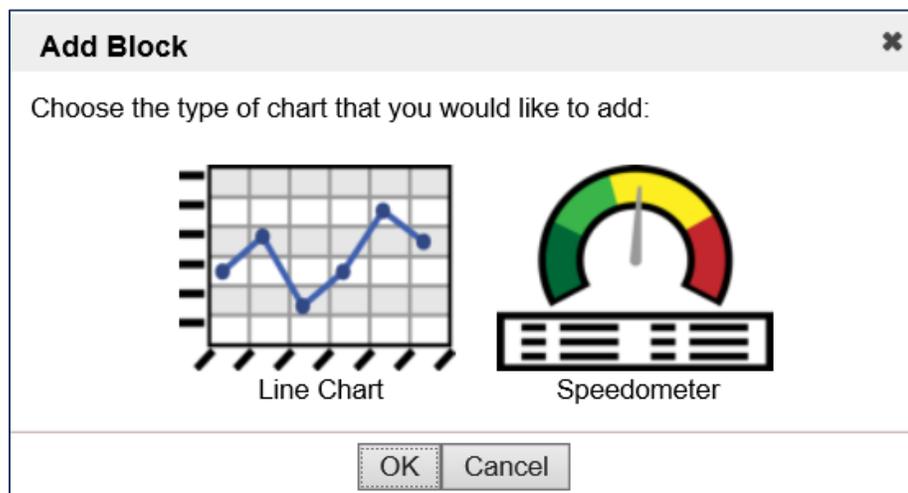
FIGURE 3.19 THE USE OF BLOCKS, ILLUSTRATING BOTH THEIR CUSTOMIZABILITY AS WELL AS ADDITION OF MEASURES



When adding a Block you will want to:

- ✓ **Select** the pencil icon to open to the customizer mode.
- ✓ **Select** or **Add** the tab that you would like the new measure(s) to be displayed.
- ✓ **Select +Add Section** choose the *Two-Column Section* option from the *Select a section* menu.
- ✓ **Scroll down** to the bottom of your screen where the *New Section* has been added.
- ✓ **Click on** the pencil customizer icon. Type the name of your new section. **Click on Apply**.
- ✓ **Click on Add Block**
- ✓ **Choose** the line chart or the speedometer (Figure 3.20). Click on OK.

FIGURE 3.6 ADD BLOCK POP-UP



- ✓ **Select** the measure(s) which you would like to add using the Block (See Figure 3.21). (This screenshot reflects adding a line chart; the same choose measures menu options are available for speedometers.)

FIGURE 3.21 EXAMPLE BLOCK-ASSOCIATED MEASURES

Choose Measures ✕

Each Measure chosen will have a new Line Chart added for it.

	Id	Measure Category	Description	Encounter Types
<input type="checkbox"/>	637	Comorbidities	Alcohol abuse	IP
<input type="checkbox"/>	640	Comorbidities	Blood loss anemia	IP
<input type="checkbox"/>	662	Comorbidities	Chronic Peptic Ulcer Disease (includes bleeding only if obstruction is also present)	IP
<input type="checkbox"/>	642	Comorbidities	Chronic pulmonary disease	IP
<input type="checkbox"/>	643	Comorbidities	Coagulation deficiency	IP
<input type="checkbox"/>	641	Comorbidities	Congestive Heart Failure	IP

OK Cancel

- ✓ **Complete** the addition of the measure(s) to your Two-Column Section by reviewing the default measure options and adjusting, if necessary.
 - *Drilling into new section?*
 - *Noting the Default Details Template*
 - *For speedometers, which internal profile (represented by the Needle Profile), Needle Profile period, Cut-off Type (e.g. Percentile or Custom) to use and, if selecting the Percentile cut-off type, which Benchmark Profile to use.*
- ✓ **Click** on the green checkmark in the upper right hand corner to **Close** the customizer mode. *The changes are automatically saved as you make your selections in customizer mode.*



- **The Health System Scorecard is a simple scorecard to use and customize as you are learning the various tools offered in Clinical Analytics scorecards.**
- **Don't be afraid to delete any tabs that are not relevant to the analysis. Deleting unnecessary tabs will keep your scorecard clean and free up tab space as you customize the scorecard to meet your needs.**

Study Questions (Refer to Appendix B for answers)

1. True or False: When a scorecard is downloaded from the Clinical Analytics (Peak) Library to your server, it becomes a custom scorecard.
2. True or False: Scorecard Home is where I can find lists of all scorecards I have been given access to view.
3. True or False: The scorecard author is the only person who can make edits directly to the scorecard template itself.
4. If I want to edit a scorecard template (for which I am not the author), I can _____.
5. Match each display type with the associated data type:

Column A—Display Type	Column B—Data Type
Pie Chart	At-a-glance overall performance in one value
Table	Percentage of the whole
Speedometer	Trends over time
Line Chart	Opportunity

6. Match each icon with the actions:

Column A--Icons	Column B--Actions
Profile Manager	Change the scorecards, tabs, sections or blocks
Settings (Gear) icon	Export your selected tabs or entire scorecard to PDF
PDF Export icon	Change the encounters included in or excluded from your population of interest
Customizer (Pencil) icon	Change the default date, missing data behavior, or type of data shown in your scorecard

Profiles

Learning Objectives:

Following completion of this session you should be able to:

- Describe what a Profile is in the Clinical Analytics System.
- Distinguish between an internal and external Profile, their uses and how they relate to a benchmark.
- Create an internal profile to use for analysis.
- Create an external (peer group) profile to use for analysis.

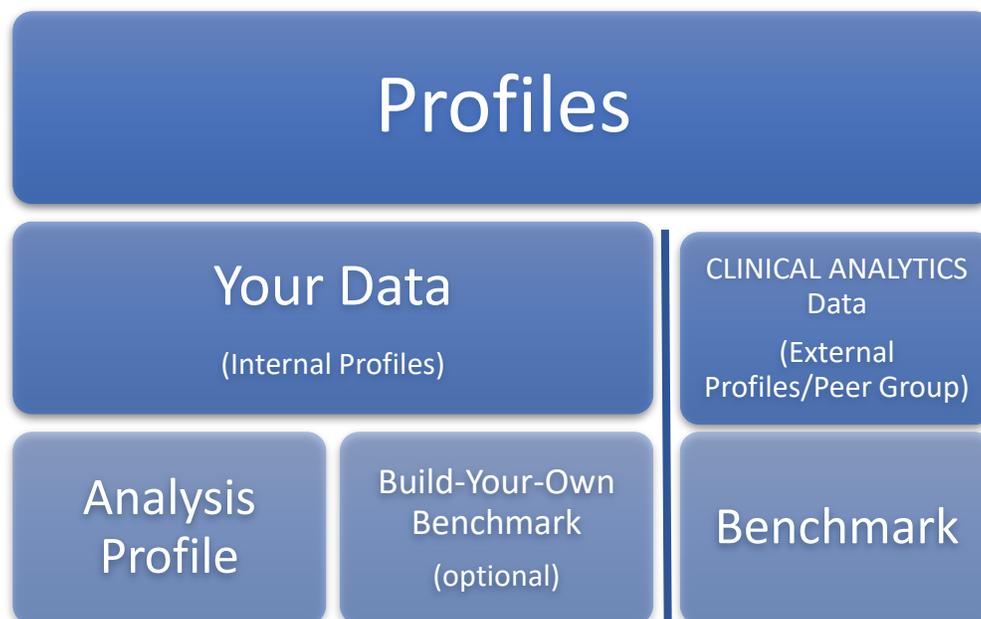
Key Concepts:

- In Clinical Analytics, *Profiles* define a population; either an internal population for analysis, an internal comparison group used for benchmarking, or an external benchmark peer group.
- Profiles are always associated with a unique scorecard. Saving a customized scorecard as a scorecard template allows others to benefit from using the same profiles.
- Profiles are scorecard centric, however once you create a profile you can easily copy and use the same profile in another scorecard.
- Profiles are highly customizable in terms of available filters in addition to grouping types.

Patient Population

Answering the question “What patient population am I looking at?” focuses the user on identifying the commonalities of a group of patients (represented by encounters) receiving services in an associated facility to be used for further analysis. In Clinical Analytics, the creation of this grouping that then can be further analyzed for opportunity is accomplished by building *Profiles*. The creation of *Profiles* can be based on using either your data (referred by Clinical Analytics as “Internal Profiles”) or Clinical Analytics data (referred to as External Profiles/Benchmarks/Peer Groups) (See Figure 4.1).

FIGURE 4.1 PROFILES IN CLINICAL ANALYTICS-THE SOURCE AND RELATIONSHIP BETWEEN INTERNAL PROFILES AND BENCHMARKS



Your Data—Internal Profiles: Building Analysis Profiles

At the most fundamental level, the analysis profiles (or internal profiles) that you are able to build for analysis are based on the standard source data files (e.g. CDM, Charges, and Encounters) that Clinical Analytics receives from your organization. Currently Clinical Analytics can configure internal profile types (e.g. analysis profiles) a number of different ways based on the application of the data elements and filter settings.

Internal Profiles: Analysis Profile Types

Once inside the Profile manager and viewing the *+Add Profile* screen, you will note a data field labeled Type (See Figure 4.2). There are different Profile Types which can be selected when assembling an analysis profile for reporting; some depending on the user’s role assignment in Clinical Analytics or available module(s).

FIGURE 4.2 PROFILE TYPE DROPDOWN DATA FIELD INSIDE +ADD PROFILE

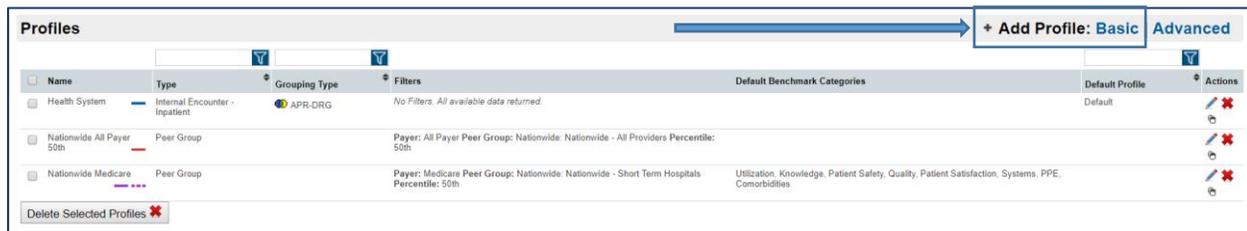


Table 1 outlines the full scope of Profile Types available in Clinical Analytics. The most common types appearing in the dropdown menu for selection are the Inpatient, Facility and Peer Group options. Peer Groups are classified separately and will be discussed in the External Data section of this chapter. The Outpatient Diagnostics and Ambulatory Surgery Center, Emergency Department, and Inpatient and Observation types all belong to the Clinical Analytics Outpatient Module. These three profile types function similarly to the Inpatient and Facility profile types, except for their Grouping Types (further discussed below in the Grouping Types section). The Dynamic profile types are specifically associated with the

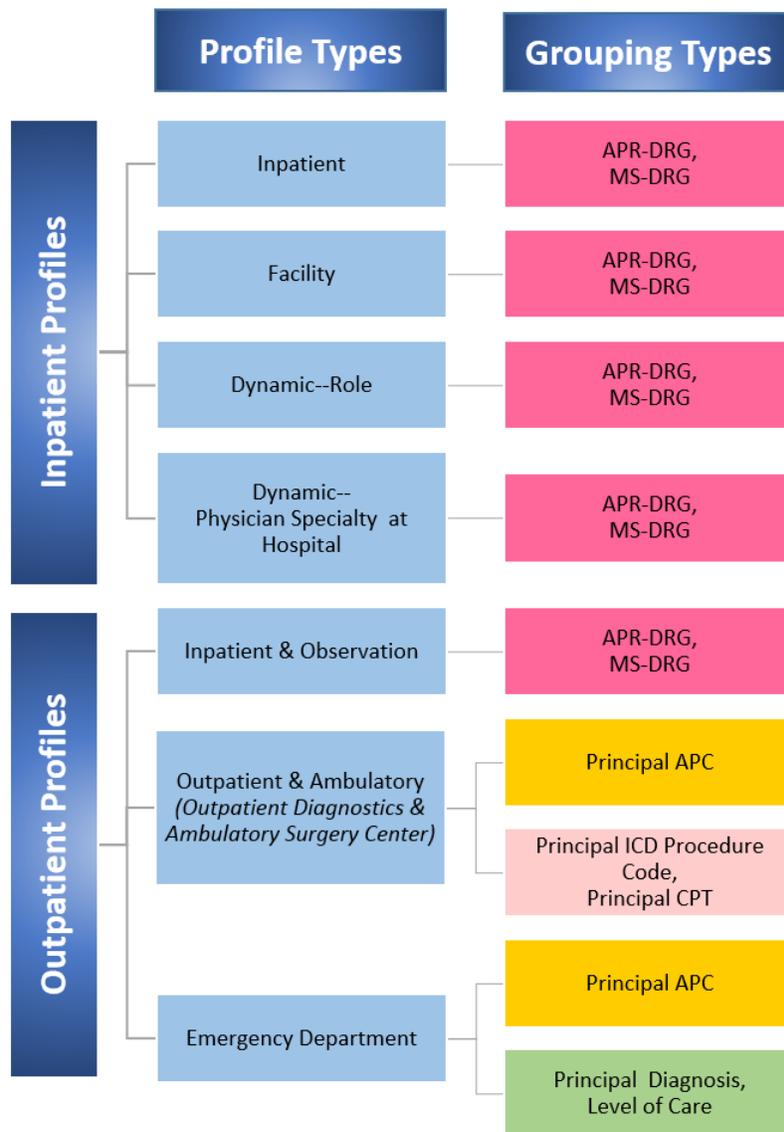
TABLE 1 PROFILE TYPES WITH BRIEF DESCRIPTIONS

Profile Type		Description
Internal Encounter	Inpatient	Profile based on inpatient encounter data
	Outpatient Diagnostics and Ambulatory Surgery Center (add-on)	Profile based on outpatient diagnostic and ambulatory surgery center encounter data
	Emergency Department (add-on)	Profile based on Emergency Department encounter data
	Inpatient and Observation (add-on)	Profile created on Inpatient encounter data; including observation patients
Dynamic	Role	Profile specific to Clinical Analytics physician user role; scales user data view to only include encounters associated with services provided by the physician signed in to Clinical Analytics
	Physician Specialty at Hospital	Profile specific to Clinical Analytics physician user; includes de-identified data for all physicians of the same specialty
Peer Group	Peer Group	Benchmark Profile using external encounter data

Internal Profiles: Grouping Types

The majority of the Grouping Types associated with the profiles are Diagnosis Related Group (DRG)-based; either Medicare Severity DRG (MS-DRG) or All-Payer Revised DRG (APR-DRG)-based. Two profile types, the Outpatient Diagnostics/Ambulatory Surgery Centers and Emergency Department profiles, use non-DRG-based Grouping Types (See Figure 4.3). Under the Medicare Outpatient Prospective Payment System (OPPS), the unit of payment is typically Medicare’s Ambulatory Payment Classification (APC) (<https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/downloads/HospitalOutpaysysfctshst.pdf>) in contrast to the DRG-related payments associated with inpatient services. The Principal APC grouping type is based on CMS’s standard APC weightings which then allows the data to be used for opportunity calculations and other analyses.

FIGURE 4.3 AVAILABLE CLINICAL ANALYTICS PROFILE AND GROUPING TYPES



Internal Profiles: A Step-by-Step Approach to Building Your Analysis Profile

Using the Inpatient profile type as an example, creating an analysis profile will include these steps:

- ✓ **Open** the Clinical Analytics Scorecard application and select your desired scorecard or scorecard template.
- ✓ **Open** your Profile Manager (located after the pencil icon). 
- ✓ **Select +Add Profile.**
- ✓ **Name** your profile and select *Internal Encounter-Inpatient* (for the purposes of this example) as your Profile Type.
- ✓ **Select** your preferred *Grouping Type*; the system defaults to *APR-DRG*. In addition to APR-DRG, you also have the options to select Client MS-DRG or Clinical Analytics MS-DRG.
- ✓ **Determine** your need to make this your *Default Profile* (meaning that the system will default to this Profile throughout the scorecard you are building in, unless you specify otherwise as you are setting up your Sections). Check box, if necessary.
- ✓ **Measure Categories:** This function will pertain to when Profiles are built for the purposes of using them as benchmarks, internal comparison groups.
- ✓ **Select** appropriate Chart Options, such as color selection, line style and line thickness.
- ✓ Move to the right hand side of the screen and open the Filters dropdown. **Select** the appropriate Filter grouping. For example, select the Admit Type filter option. The grouping will be added to the screen. **Set** the Profile's filters by either selecting the values directly from the table or by entering the values directly (see Set Filters By dropdown). The system is also capable of limiting available filters to only those that are represented by data file data elements.
 - Repeat the process for **selecting** additional filters until the filter definition for the Profile has been met.
 - Keep in mind, you have the ability to include or exclude discrete data values in the filter options.

FIGURE 4.4 EXAMPLE LAYOUT INTERNAL PROFILE CUSTOMIZATION SCREEN WITH FILTER SELECTION

Add Profile

Profile Information

Name: Type:

Grouping Type:

Creates a profile based on Patient Encounter data.

Default Profile

Changing this setting will alter any saved Profile choices for this session

Set this profile as the default profile

Measure Categories

Mark which categories will use this profile as the default benchmark:

Utilization Knowledge Patient Safety Quality
 Patient Satisfaction Systems PPE Comorbidities
 Financial Throughput Payment and Adjustments Rev Cycle

Chart Options

Color: Line Style: Line Thickness:

Filters Add:

Admit Type (No Filter) [:]

Set Filters By:

Selected Values: Include Exclude

	ID	Description
<input checked="" type="checkbox"/>	1	Emergency
<input checked="" type="checkbox"/>	2	Urgent
<input checked="" type="checkbox"/>	3	Elective
<input checked="" type="checkbox"/>	4	Newborn
<input checked="" type="checkbox"/>	5	Trauma

- ✓ **Save** your new Profile by **clicking** Save down in the lower left hand corner. See that it appears now on your Profile Dashboard.
- ✓ **Close** your Profile Manager icon by **clicking** on the green check mark in the upper right hand corner.

Your Data—Internal Profiles: Building Your Own Benchmarks

The methodological approach to using a subset of your own internal population members as a benchmark to compare your analysis profile against an internal comparison group involves sorting your initial analysis profile into both high and low performers in specific categories (e.g. measures) related to opportunity and then creating a profile using the results. There will be periodic occasions when you are analyzing your data that this approach will present itself as a more appropriate or acceptable alternative to using the peer groups available to you. You can also use this approach to compare one profile to the whole hospital/ one facility to the whole health system (where applicable). The process for building your own benchmark, or Internal Comparison Group, will be introduced and reviewed in depth in the Clinical Analytics Intermediate training track.

Clinical Analytics Data—External Profiles: Benchmarks--Peer Groups

External Profiles: Benchmark Sources

Clinical Analytics benchmarks are either based on national *MedPAR* (Medicare Provider Analysis and Review) data or state-level *All-Payer* data. The MedPAR files contain claims data for services provided to Medicare beneficiaries admitted to Medicare-certified inpatient hospitals. Data elements include beneficiary demographic characteristics, diagnosis and surgery information, accommodation and departmental charge data, and number of days of care (<https://www.cms.gov/Research-Statistics-Data-and-Systems/Files-for-Order/IdentifiableDataFiles/MedicareProviderAnalysisandReviewFile.html>). There is about a 12 month time lag at the time the annual data set is published by Medicare. All fifty states are represented in this national data set.

State-level *All-Payer* data sets have variable availability based on the policies and restrictions of each state entity holding accountability for the data. In instances where All-Payer data is not available to third-party entities such as Clinical Analytics, the data is secured by the sponsoring organization, forwarded to Clinical Analytics, and Clinical Analytics processes it along with its other benchmarking data. The Clinical Analytics team can also process the state discharge data for specific states on behalf of the hospital for only that hospital to use.

Clinical Analytics has over 2000 standard peer groups, (e.g. Health Grades 100 Best Hospitals, Nationwide-Critical Access, 200-299 Beds, etc.) created from the benchmark data described above; these then make up the benchmark that comparisons can be made against. In addition to the standard peer groups, custom peer groups defined by the organization can also be generated by Clinical Analytics. A complete list of Peer Groups can be accessed in Clinical Analytics Documentation.



Keyword search:

- Profiles**
- Benchmark**
- Calculations**
- Peer Groups**

External Profiles: Creating a Peer Group profile in your Scorecard

A key concept to remember is that profiles, either internal or external, are unique to each scorecard and will require re-building, re-downloading, or saving within a template scorecard in order to be shared across users or scorecards. Unless you are opening a scorecard template that has been saved for these purposes, you will likely need to create a new profile and associate it with a desired peer group into your scorecard after you've saved it as a custom scorecard.

When creating Clinical Analytics Peer Groups you will want to:

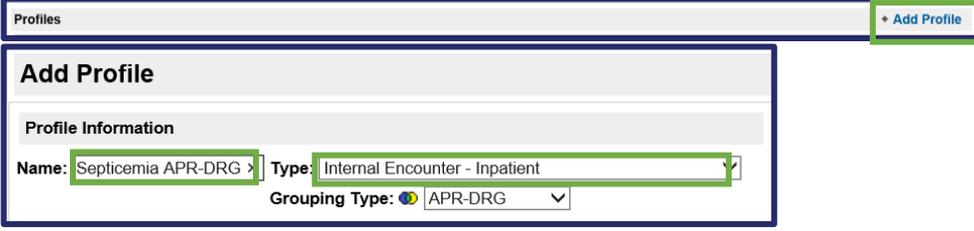
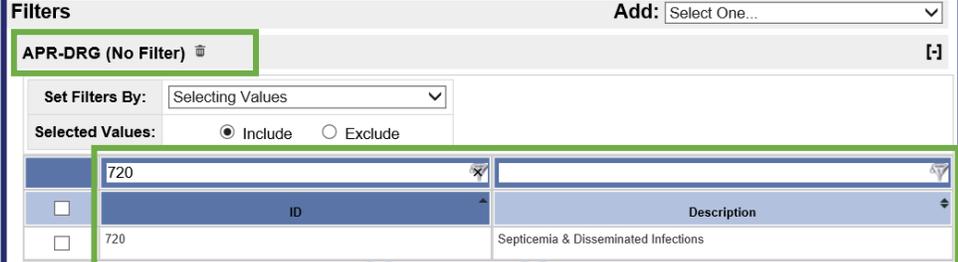
- ✓ **Open** your preferred scorecard that you need to work in and **open** the profile customizer icon. (Hint: Select Home to view the Dashboard home page and access the Scorecard application.)
- ✓ **Select +Add Profile.**
- ✓ Under Profile Information **name** this profile the benchmark peer group you are wanting to use within this particular scorecard. Under Type **select Peer Group.**

FIGURE 4.5 BUILDING A PEER GROUP PROFILE

- ✓ For this Peer Group, **determine** your needs related to the payer, percentile and whether or not the benchmark values should be projected on the chart; in addition **select** the appropriate Peer Group filter from the drop down menu options. Keep in mind, if you select Medicare, and then change the peer group, the radio button defaults back to All Payer.
- ✓ **Select** relevant *Chart Options*. (A solid line and thickness of 3-4 is recommended.)
- ✓ **Close** out of Profile customizer, by clicking on the *Save* button in the lower left hand side of the screen. The new peer group you just created should be in the Profiles list and is now available in measures that have a *Benchmark Profile* dropdown field (e.g. Charges and Cost Detail).

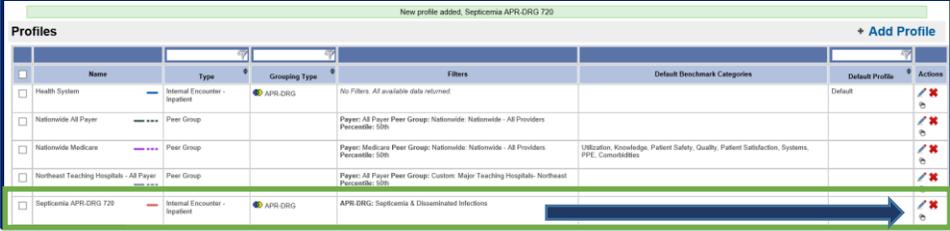
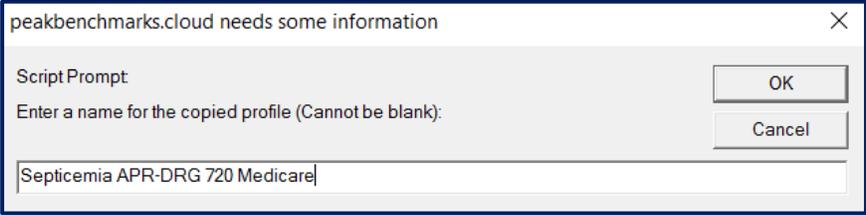
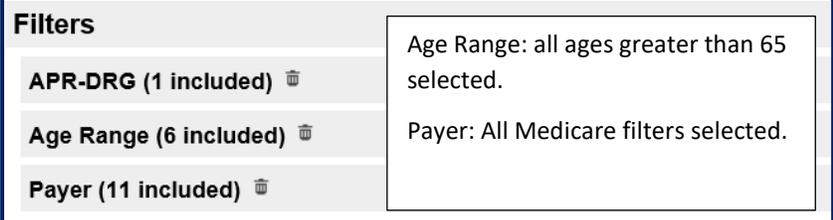
We have reviewed how to create internal and external profiles to help narrow your population of interest as you begin to learn how to run through your analyses. The following pages include various exercises to help you practice what you have learned so far in this training session.

Exercise 1: Create an Internal Profile

Steps	Images
1. Open a Scorecard of choice from My Scorecards and click on the profile manager icon.	
2. Select +Add Profile Create an Internal Profile titled Septicemia APR-DRG 720.	
3. Add a filter on APR-DRGs to only include APR-DRG 720	
4. Select a color line and thickness. Save your selection →	

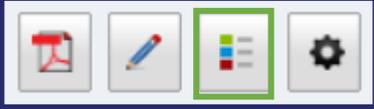
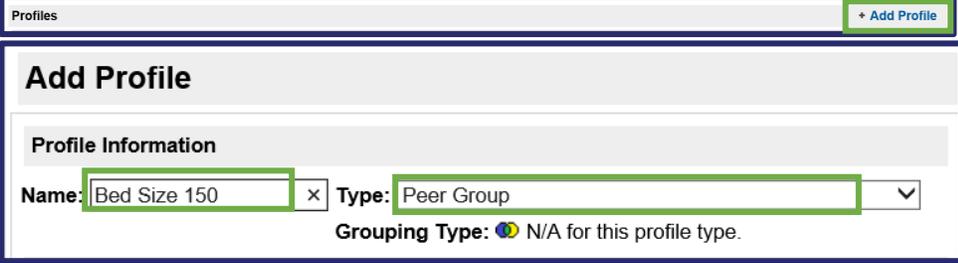
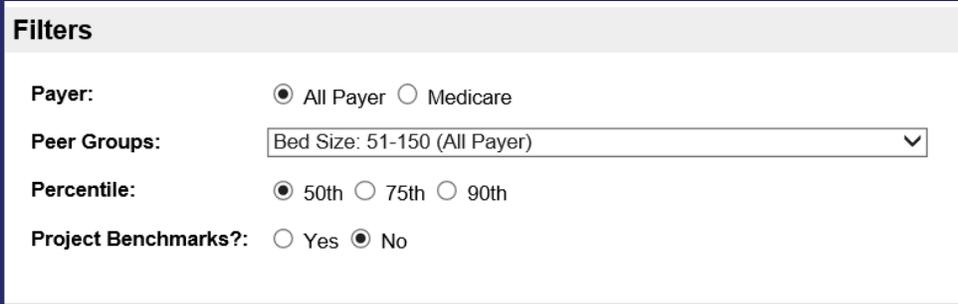
You have completed the Creating an Internal Profile exercise.

Exercise 2: Copy an Existing Profile and Customize

Steps	Images
<p>1. Continue with Exercise 1: Creating an Internal Profile</p> <p>Locate the Septicemia APR-DRG 720 profile in the profile dashboard.</p> <p>Select on the paper icon, under the Actions column to create a copy</p>	
<p>2. Name the copy profile “Septicemia APR-DRG 720 Medicare”, click OK</p>	
<p>3. Select the pencil icon to edit the new profile and modify filters</p>	
<p>4. Add two filters:</p> <ul style="list-style-type: none"> • Payer: Medicare only • Age Range: >65 years old 	
<p>5. Select a color line and thickness. Save your selection</p>	

You have completed the Copy and Existing Profile and Customize exercise

Exercise 3: Create a Peer Group Profile

Steps	Images
1. Open a Scorecard of choice from My Scorecards and click on the profile manager icon.	
2. Select +Add Profile Create a Peer Group profile for your facility's state and bed size.	
3. Create filters for these fields: <ul style="list-style-type: none"> • Payer • Peer Groups • Percentile • Project Benchmarks 	
4. Select a color line and thickness. Save your selection 	

You have completed the Creating a Peer Group Profile exercise.

Study Questions (Refer to Appendix B for answers)

1. True or False: In Clinical Analytics, my *internal profile* is the population of interest for my health system analysis.
2. True or False: In Clinical Analytics, my *benchmark profile* is the population I am comparing my *internal profile* data against.
3. True or False: I can only benchmark my internal data against external (peer group) benchmarks.
4. True or False: I can create an internal profile using external data.
5. A particular profile you have built can be used:
 - A. In any scorecard on your server
 - B. In any scorecard you see on the Scorecards tab
 - C. In any of your custom scorecards
 - D. Only in the scorecard it was built in.
6. If my scorecard does not have the *external* profile I want and I cannot load a new one, I should first contact:
 - A. Clinical Analytics Support
 - B. My facility's Clinical Analytics Administrator
 - C. No one, just use a different benchmark profile
 - D. Bob, because Bob will know what to do.
7. If I want to create a profile _____, I would select the Profile Type _____.

Insert Profile function—Blank 1	Insert Profile Type—Blank 2
To look at overall data for one of the facilities in my health system	Role
Filtered on admission source, service line, and APR-DRG	Facility
To compare my facility to teaching hospitals in the US	Inpatient
To study consulting physicians	Peer Group

Encryption Keys

Learning Objectives:

Following completion of this session you should be able to:

- Identify the process for gaining access to patient level data.
- Set up use of your encryption key.
- Successfully access patient level data.

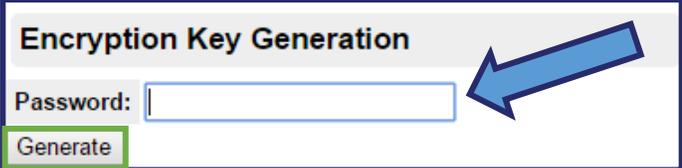
Key Concepts:

- Use of the encryption key allows access to patient level data and full use of Details View analysis functionality.
- You will need assistance from a team member with system administration privileges or a Clinical Analytics Support team member to set up your encryption key.
- You will want to save your encryption key on a drive that is always accessible to you. This is a text file, if it is not saved or accessible on your primary Clinical Analytics machine you will not be able to access patient level data. We recommend saving your key to a system folder that can be accessed from multiple computers.

Security

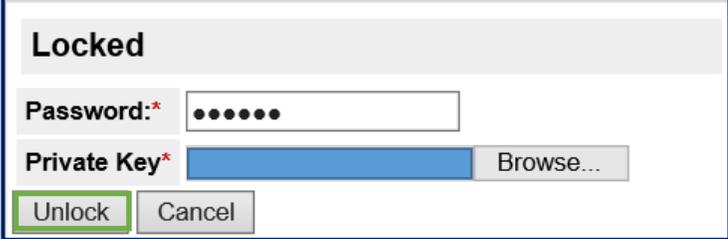
The Clinical Analytics scorecard application requires a second level of authorized access (beyond the system's username and password access) in order to be able to view and use patient level data. In Clinical Analytics this access is obtained by using a downloadable encryption key. Unlocking in Clinical Analytics will allow you to access patient level data in the Clinical Case Summary, Frequent Readmission, and Patient Lists sections. In addition, encryption key access and unlocking is required when using profiles containing Medical Record Number, Patient Account Number, and All DX/All PX fields. Users having the *Health Systems Coordinator* or *Basic* permissions role (for System Administration) will have access to unlocking/locking the scorecard in order to be able to review patient level data.

Exercise 1: Obtaining Encryption Key and Unlocking in Clinical Analytics

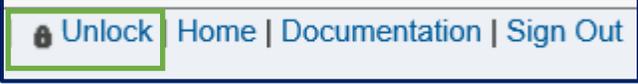
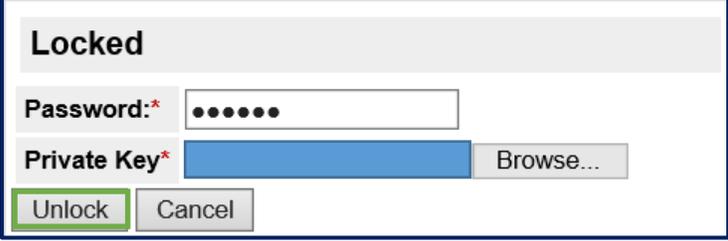
Steps	Images
1. <i>First Time Only:</i> Select the Unlock hyperlink in the upper right corner	
2. Enter a password. This is a user specific password, does not expire and does not require special characters.	
3. Select Generate after you enter a user specific password as described in step 2.	
4. Select Download Private Key and Save the private key text file to a flash drive or local drive that you will always have access to.	
5. Select the Lock Facility button after you have saved the private key text file.	
6. Contact your local Clinical Analytics Administrator or Clinical Analytics Support to grant you privileges.	

You have completed the First Time Obtaining Encryption Key and Unlocking Clinical Analytics exercise.

Exercise 2: Unlocking in Clinical Analytics, general instructions

Steps	Images
1. Unlock Clinical Analytics using your own key	 <p>A screenshot of a 'Sign In' form. It has two input fields for 'Email' and 'Password'. Below the password field is a 'Sign In' button and a smaller 'Reset Password' link.</p>
2. Unlock Clinical Analytics using your key	 <p>A screenshot of a navigation bar. It features a blue 'Unlock' button with a lock icon, followed by links for 'Home', 'Documentation', and 'Sign Out'.</p>
3. Enter password Browse and select the Encryption key file you saved in Exercise 1. Click Unlock	 <p>A screenshot of a 'Locked' dialog box. It contains a 'Password:*' field with masked characters, a 'Private Key*' field with a blue selection bar and a 'Browse...' button, and 'Unlock' and 'Cancel' buttons at the bottom.</p>
4. You will now have access to encounter level patient data and other secure functions in Clinical Analytics that require unlocking.	
<p><i>You have completed the Unlocking Clinical Analytics general instructions exercise.</i></p>	

Exercise 3: System Administration – Granting Unlocking Privileges

Steps	Images
1. Unlock Clinical Analytics using your own key	
2. Enter password and select the Encryption key file. Click Unlock	
3. Click on the System Administration application to access User list	
4. From the Users Tab, Find the user name and Select Manage Encryption Keys, under the Actions column header.	
5. Check the box for the client you wish to give access to. The access should align with the facilities listed as accessible in the user's profile.	
6. Click Submit and Validate that the user can Unlock in Clinical Analytics	

You have completed the System Administration – Granting and Unlocking exercise.

Study Questions (Refer to Appendix B for answers)

1. True or False: Every time I sign in to Clinical Analytics, I must unlock with my encryption key.
2. True or False: The password I use with my encryption key when I unlock Clinical Analytics must be the same password I use when signing in to Clinical Analytics.
3. True or False: My encryption password will expire when my sign-in password expires.
4. When I load a page in Clinical Analytics and see “The scorecard must be unlocked to enable this feature,” this means:
 - A. The page I am trying to view contains PHI
 - B. I must enter my encryption password and key
 - C. My facility has not purchased the license for this feature
 - D. A and B

Clinical Analytics Analytic Tools: The Concept of Sections

Following completion of this session you should be able to:

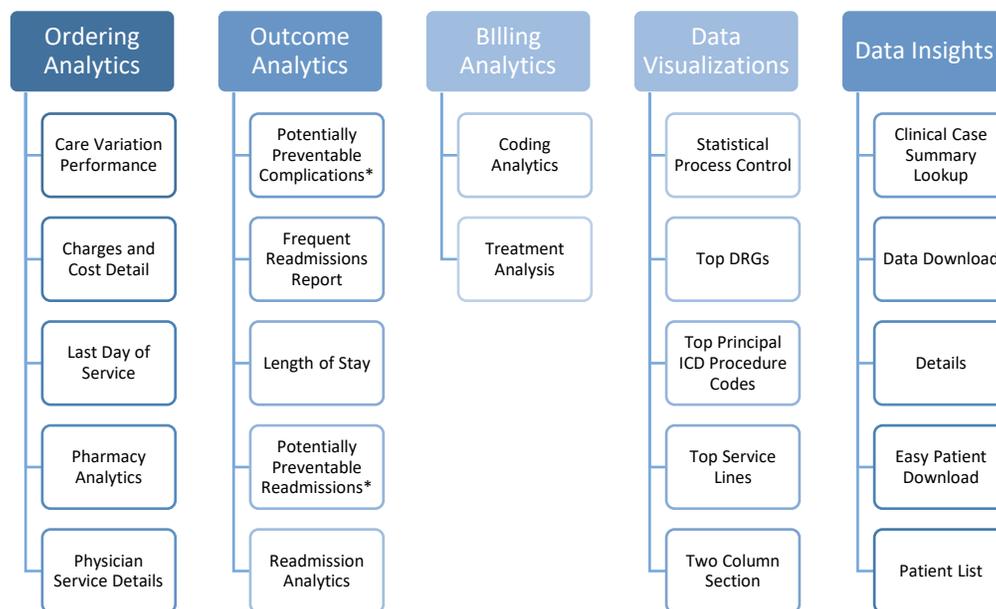
- Recognize the eight different Clinical Analytics Measure categories
- Cite a few examples of the measures grouped in each category and how their use is incorporated in the Clinical Analytics Scorecard application
- Locate additional information in Documentation regarding each measure
- Recognize basic features associated with using analytic tools that have a section-specific template, using the Details Section as an example.
- Customize your scorecard by adding the Data Insights Sections and Two Column Section to it and understand the functionality provided by these tools.

Introduction

The pinnacle of Clinical Analytics customizing capabilities and subsequent analytical power results from the architecture of its analytical tools—or otherwise referenced as its *Sections*. Chapter 3 introduced the mechanics of Sections, including the relationship between Tabs, Sections, and Blocks; and how to use the system’s customizing features to assign a Section to a Tab. Chapter 6 digs deeper into the mechanics of using measures in Clinical Analytics, both as a place to focus an initial visual analysis and also to provide additional information about your Internal Profiles following application of your selected analytic tools. From there this chapter then introduces you to using a primary analytic tool, the Details Section, which shares some basic features with other analytic tools in Clinical Analytics, followed by a discussion of the three different ways to access section-specific detailed information. Finally, Chapter 6 wraps up with a review of the Clinical Analytics features that allow for additional delivery of data insights.

Figure 6.1 illustrates the current analytic tools or Sections in Clinical Analytics and their respective groupings. It is intended to mirror the *+Add Section* dropdown menu options when you have Customizer open. The Sections in Clinical Analytics are organized under six general categories: Ordering Analytics, Outcome Analytics, Billing Analytics, Data Visualizations, and Data Insights.

FIGURE 6.1 CLINICAL ANALYTICS ANALYTIC TOOLS



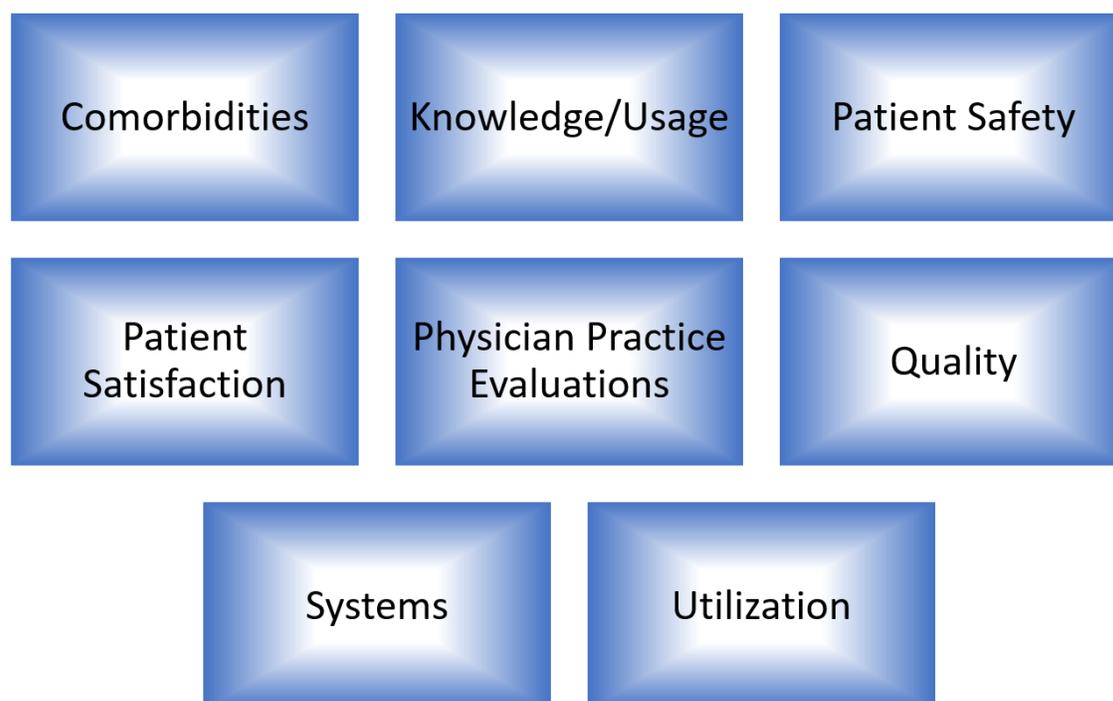
The Ordering Analytics section includes a grouping of Clinical Analytics analytic tools which all focus ordering patterns and their associated opportunity analyses for various inpatient and hospital facility care and services. Outcomes of the patient encounter can be analyzed using the Outcome Analytic set; documentation, coding and billing data can be examined with the Billing Analytics tools. A unique feature of Clinical Analytics is its capability to provide interactive, dynamic representations of the data analysis; this is supported by the Data Visualizations sections. Finally, further insights related to the analyses can be additionally produced, particularly with the use of Excel export functionality available in the Data Insights grouping.

Measures in Clinical Analytics

The Clinical Analytics Scorecard application is designed to apply the use of the system's measures in two separate ways. The first way is to directly visualize individual measure results of a benchmarked analysis profile by setting up a Two-Column Section. This was introduced in Chapter 3 in the *Blocks* discussion and will be further considered later in this chapter. The second way that the use of measures are applied in Clinical Analytics is during the process of moving through a progressive analysis cycle using the system's analytic tools, or *Sections*. A framework for working through this analysis cycle will be presented in Chapter 7.

As outlined in Chapter 1 (See Figure 1.1) the Clinical Analytics system relies on a variety of sources from both your organization's data and public input data in producing measure performance results and benchmarks. As illustrated in Figure 6.2, Clinical Analytics measures are grouped into eight categories. Across each category the measures can be characterized in terms of favorable polarity, whether or not benchmarks are available, and finally, whether or not the measures are DRG-based values.

FIGURE 6.2 CLINICAL ANALYTICS MEASURES SORTED INTO EIGHT CATEGORIES



- **Comorbidities:** These measures help identify patients with additional health factors; encounters are flagged by the AHRQ grouper.
- **Knowledge:** These measures help monitor the usage levels of certain services.
- **Patient Safety:** These measures flag encounters with adverse events, such as HACs or PSIs.
- **Patient Satisfaction:** These measures are populated based on the HCAHPS data from your 3rd-party vendor.
- **Physician Practice Evaluation:** These are physician-level measures requiring additional data feeds for use in PPE Reporting.
- **Quality:** These measures help you track typical patient outcomes, such as readmissions and mortality.
- **Systems:** These measures are summary statistics of your patient populations, like gender and admission source.
- **Utilization:** These measures help you analyze patient days throughout your facility.

For a detailed categorical listing of current Clinical Analytics measures including reference to its favorable polarity, whether or not it is benchmarked, and its recognition as a DRG-based measure refer to Clinical Analytics, utilize the internal virtual knowledge and documentation resource center.

Using Analytic Tools with a Section-Specific Template

Key Concepts:

- Section-Specific Template elements and the use of them to manipulate performance data is common across many of the analytic tools in Clinical Analytics Scorecard making it of high importance to become familiar with using them. The template for the Details Section is a great place to start because it is relatively simple yet highly flexible.
- You can get to the Details Template several different ways; by way of a profile data point on a line chart, a Speedometer needle, linked data from a table, or by creating a Details tab and attaching a Details Section.
- Details Template relies on user modification of the Profile, Benchmark, DRG type, Measures, and Groupings.
- In Details Template, Custom Section-Specific Templates can be saved which makes them accessible across users. This makes very specific groups of data found by customized Templates easy to recover and replicate.

In Clinical Analytics, the functions of the section-specific template is foundational to a majority of the analytic tools available to use for analyzing your data. These section-specific templates are dynamic and highly interactive. We will continue to use the Details Section template during Clinical Analytics Basic Refresher to build upon the skills you learned in Clinical Analytics Basic. You learned in Clinical Analytics Basic that the Details template organizes custom data reports defined by selected Profiles, Benchmarks, Time Periods, Measures, and Grouping parameters as well as additional filters and exclusions. In Clinical Analytics Basic Refresher we introduce using additional analytics tools which will build on a basic understanding of how to use the section-specific template adding additional parameters and/or more complex comparisons.

Navigating Around the Section-Specific Template:

As you become familiar with navigating around in Clinical Analytics and setting up for data analysis, it will be useful to keep in mind the four different ways to access a Detail Template. These four access options, briefly introduced in Chapter 3, include:

✓ **Tables:**

Of the two types of tables represented in Clinical Analytics, the dynamic, interactive tables reflect opportunity and allow further drill down into the Detail Template where there is access to additional analytic elements including filters such as the Clinical Analytics Encounter ID. Selecting a hyperlinked data value (such as a value in the Average Charges column in Figure 6.4) brings you to a Details Section screen similar to the screen your Details Scorecard, created in Exercise 2 of Chapter 3.

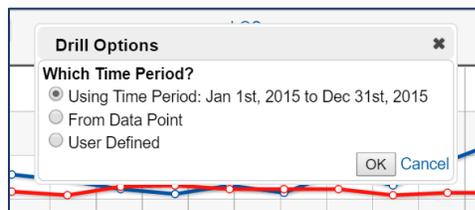
FIGURE 6.4 EXAMPLE DYNAMIC TABLE PROVIDING AN ACCESS POINT TO A DETAIL TEMPLATE

Charges and Costs Detail							
Type:	Charges						
Profile:	Hospital		Period:	Jan 15		through Dec 15	
Benchmark Profile:	Nationwide Medicare		Benchmark Period: Active Benchmark Period				
Description	Category	Encounters	Average Charges	Total Charges	Average Benchmark	Total Opportunity	Average Opportunity
Critical Care / Intermediate ICU	Routine	29653	\$4,811	\$142,674,228	\$1,975*	\$99,025,818	\$3,339
Pharmacy	Therapeutic	29653	\$4,566	\$135,392,404	\$3,534*	\$50,774,193	\$1,712
Medical/Surgical Supplies	Supplies	29653	\$5,395	\$159,968,288	\$5,044*	\$47,895,103	\$1,615
Respiratory Therapy	Therapeutic	29653	\$1,976	\$58,605,700	\$677*	\$41,877,325	\$1,412
Accommodation - Private, Semi Private, Ward - Inpatient	Routine	29653	\$4,756	\$141,044,286	\$3,422*	\$29,522,408	\$996
Operating Room and Labor & Delivery	Therapeutic	29653	\$5,246	\$155,548,458	\$4,782*	\$21,549,611	\$727
Other	Other	29653	\$759	\$22,521,410	\$79*	\$19,658,496	\$663
Cardiology	Diagnostic	29653	\$1,754	\$52,009,007	\$1,510*	\$18,371,567	\$620
Radiology, CT, Oncology & Nuc. Med.	Diagnostic	29653	\$2,023	\$59,977,984	\$1,906*	\$17,208,898	\$583
Blood Administration	Therapeutic	29653	\$322	\$9,536,894	\$93*	\$7,211,384	\$243

✓ **Line Charts:**

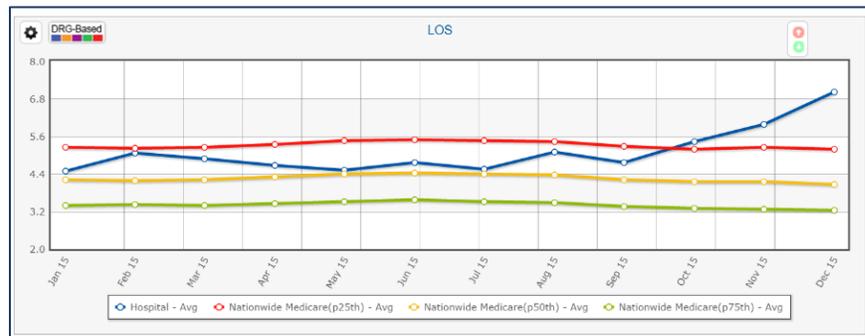
A second way to easily access the Detail Template when setting up an analysis is by way of a measure’s line chart (See Figure 6.5).

FIGURE 6.5 TIME PERIOD SELECTION FOR DETAIL TEMPLATE WHEN ACCESSING THROUGH LINE CHART DATA POINT



The different features for how to modify line charts were introduced in Chapter 3. Selecting any one of the analysis profile data points on the line chart will open a screen for time period selection (Figure 6.6) including the default scorecard time period, the time period for a selected data point, or a custom user-defined time period. Once this selection is made, a Details Section opens up, similar to the view in the Details Scorecard created in Chapter 3.

FIGURE 6.6 EXAMPLE OF A LINE CHART IN CLINICAL ANALYTICS WITH DYNAMIC DATA POINTS



✓ **Speedometers:**

The speedometer represents a different way to view the measures in Clinical Analytics. Though it is not a trended graph with individual data points as is the line chart, it still allows for access to a Details Section for additional data analysis. Hovering over and clicking on the speedometer needle will open up a similar dialogue box as illustrated in the line chart discussion above, again taking the user to a Details Section following selection of a desired measure time period.

FIGURE 6.7 EXAMPLE MEASURE REPRESENTED BY A SPEEDOMETER. THE NEEDLE IS A DATA ENTRY POINT



✓ **Details Section:**

Many Clinical Analytics users find that having a scorecard designated as a “Details Scorecard” with just a Details tab and a Details Section attached provides easy access to ad hoc data analysis or querying capability. Because application of a section-specific template is fundamental to most of the analytic tools in Clinical Analytics Scorecard, let’s take a closer look at how it is constructed.

FIGURE 6.8 EXAMPLE OF A DETAILS SECTION AND TEMPLATE IN CLINICAL ANALYTICS

The screenshot shows the 'Details' section of a clinical analytics interface. It features a 'Details Section' with several modifiable fields: Profile (Hospital), Benchmark Profile (Hospital), and time periods (Jan 1st, 2015 to Dec 31st, 2015). Below these are 'Template Settings' including a 'Detail Template' (No template selected), 'Add Measure', 'Results Grouped By' (Facility ID), 'Filters', 'Excludes', 'Length of Stay Outlier' (Both), 'Not My Patient Cases' (Include All), and 'Opportunity Cap' (100%). At the bottom, there are two tables: 'Facility ID(x)' and 'Facility(x)', each with a list of facility IDs and names.

Take a look at Figure 6.8. The Details Section attached to this tab opens with four modifiable fields including Profile, Benchmark Profile and their respective time periods. The Profile and Benchmark Profile fields default to categories set in the profile customizer. As in other scorecard Sections, the time periods are modifiable within the timeframe set by the Scorecard Time Period. An Excel icon is located in the upper right corner, which allows you to export the data, in the Details Section table, to Excel allowing you to further manipulate the data once you've achieved grouping and filtering to your satisfaction. Clicking and grabbing any of the column headers allows you to arrange column order across the screen. Column filtering is a standard function in Clinical Analytics. In the right hand corner of each column header is a toggle arrow which allows you to sort the items in that column in ascending or descending order. In addition, in the right hand corner, below the Excel icon, is an alternative for column filtering and arranging, labeled *Columns*. Finally, selecting the superscript x by any data element `Facility ID(x)` will remove that element.

The Detail Template:

When using the Detail Template (or any of the other section-specific templates), you have several options. You may choose to use the default Clinical Analytics Standard template, a Custom template created by another user, or create your own template and save it for future use.

To access a Clinical Analytics Standard or a Custom template:

- Underneath Template Settings **select** the Details Template hyperlink named *No Template Selected* or the saved default.
- In the dialogue box that opens, **select** either the Clinical Analytics Standard or the Custom radio button.

The screenshot shows the 'Details Template Types' dialog box. It has a title bar with a close button (x). The 'Category' section has two radio buttons: 'Peak Standard' (unselected) and 'Custom' (selected). Below this is a 'Templates' section with a dropdown arrow. At the bottom is a 'Done' button.

Use the dropdown arrow to show your alternatives for selection.

Customization changes to the section-specific template, in this case the Details Template, allows you to progress through the analysis and make modifications based on results. Data elements which you may customize vary with the Section (or analysis tool) which you are working with.

Details Template elements include:

- **Add Measures:** You will recognize the categories and their measures. Selecting *Add* will open an Add Measures menu with a list of Clinical Analytics measures for you to select.

Category	Measure	Encounter Types
<input type="checkbox"/>	Comorbidities Alcohol abuse	IP
<input type="checkbox"/>	Comorbidities Blood loss anemia	IP
<input type="checkbox"/>	Comorbidities Chronic Peptic Ulcer Disease (includes bleeding only if obstruction is also present)	IP
<input type="checkbox"/>	Comorbidities Chronic pulmonary disease	IP
<input type="checkbox"/>	Comorbidities Coagulation deficiency	IP
<input type="checkbox"/>	Comorbidities Congestive Heart Failure	IP
<input type="checkbox"/>	Comorbidities Deficiency anemias	IP
<input type="checkbox"/>	Comorbidities Depression	IP
<input type="checkbox"/>	Comorbidities Diabetes with chronic complications	IP
<input type="checkbox"/>	Comorbidities Diabetes without chronic complications	IP

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OK Cancel

Select Columns:

- Num
- Den
- Score
- Count
- Opportunity
- Benchmark
- Average Opportunity
- O/E

At End
 At Beginning
 After Facility ID

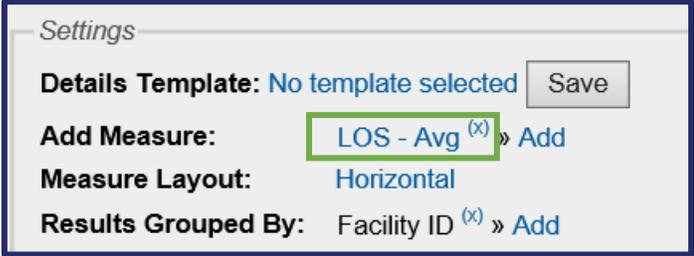
Once you've selected your measure(s) then use the radio buttons at the bottom of the list to choose whether you want the measure(s) to be added at the end or the beginning of your Details display or following a column specified by you. The columns list is available for selection at the same time you are selecting measures.

- **Results Grouped By:** Selecting *Add* will open a Group Options menu with available groupings. This list will mirror the Filters list within the active Profile for which this analysis was based on.
- **Filters:** In a Details Template, you may specify filters either by adding filters or using the filter fields above each column. Remember, you can only filter on the group bys you have selected.
- **Excludes:** Use this function to specify exclusions from the analysis; functions in the inverse of adding Filters. You can only exclude based on your group by selections.
- **Length of Stay Outlier:** Allows selection of Inliers, Outliers, or Both. The definition of an outlier as being two standard deviations from the mean.
- **Not My Patient Cases:** This feature allows for the filtering or exclusion of patients that have been manually identified at the individual encounter level as not being attributed to a given physician.
- **Benchmarks:** Use this field to specify the inclusion or exclusion of individual encounters when a matching benchmark encounter is not available.
- **Opportunity Cap:** This caps the opportunity value at the specified percentage. For those Template settings which you would like to use again, click Save and name the template. Use the Custom radio button and dropdown to find and use it again in the future. It is important to note that each individual Section (e.g. Charges and Costs Detail) that incorporates the use of the Detail

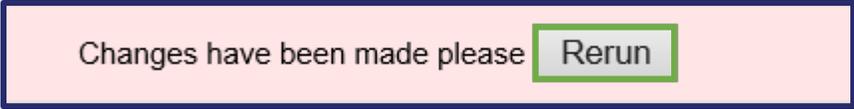
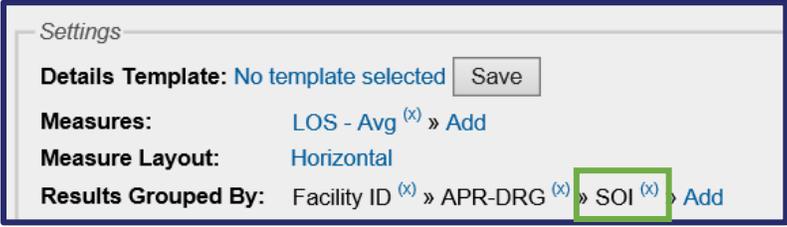
Template (refer back to Figure 6.3) has its own list of Standard and Custom Detail Templates associated with it.

For those Template settings which you would like to use again, click Save and name the template. Use the Custom radio button and dropdown to find and use it again in the future.

Exercise 1: Comparison of your Hospital’s LOS to the Nationwide All-Payer LOS

Steps	Images
<p>1. Open the Details View Scorecard from My Customized Scorecards list</p>	<p>*If you don’t have this Scorecard, contact Clinical Analytics Support for access. Another option: Add a Details section to any existing scorecard.</p>
<p>2. Add the LOS measure in the Details Template Settings box.</p>	
<p>3. Click the Rerun button to view the filter results.</p> <ul style="list-style-type: none"> • What is the LOS opportunity for your facility? 	
<p>4. Add the APR-DRG in the Results Grouped By filter</p> <ul style="list-style-type: none"> • What is the APR-DRG has the highest opportunity for your facility? 	
<p>5. Export this data to Excel</p>	
<p><i>You have completed the Comparison of your hospital’s LOS to the Nationwide All-Payer LOS exercise.</i></p>	

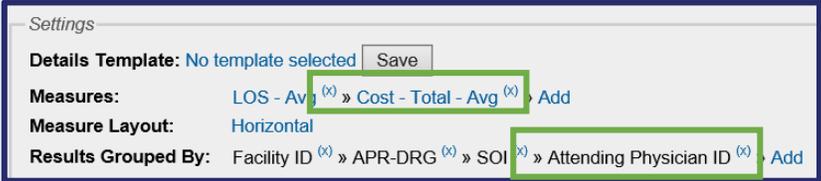
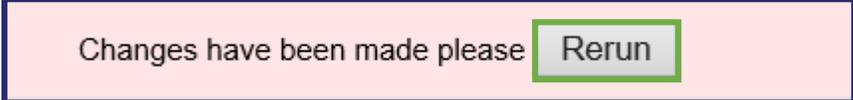
Exercise 2: Comparison of Septicemia APR-DRG 720 profile to the State by Bed Size benchmark

Steps	Images
1. Open the Details View Scorecard from My Customized Scorecards list	*If you don't have this Scorecard, contact Clinical Analytics Support for access. Another option: Add a Details section to any existing scorecard.
2. Select the Septicemia profile in the Profile menu Select your State by Bed Size profile in the Benchmark Profile menu	
3. Click the Rerun button to view the filter results. <ul style="list-style-type: none"> What is the overall LOS opportunity for the Septicemia APR-DRG? 	
4. Add SOI in the Results Grouped By filter <ul style="list-style-type: none"> Which SOI has the highest LOS opportunity within the Septicemia APR-DRG for your hospital? 	
<p><i>You have completed the Comparison of your Septicemia profile to the State by Bed Size benchmark exercise.</i></p>	

Exercise 3: Comparison and Cost Opportunity of Septicemia against the Hospital benchmark

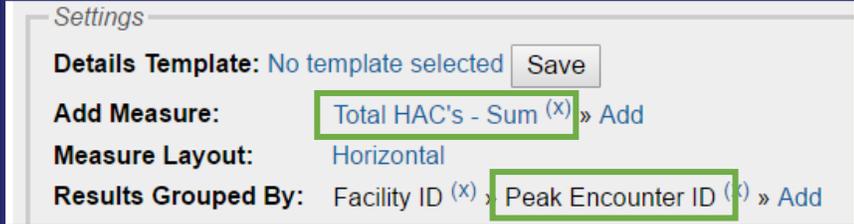
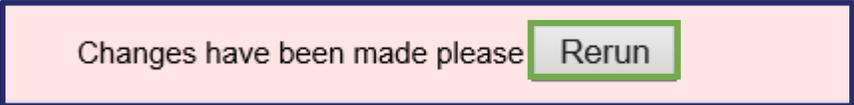
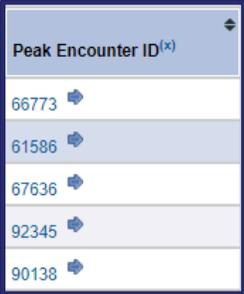
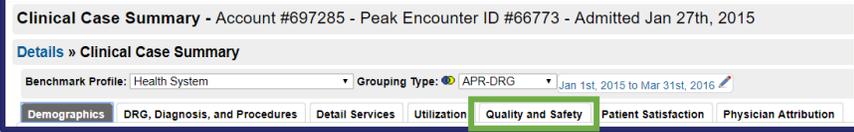
Steps

Images

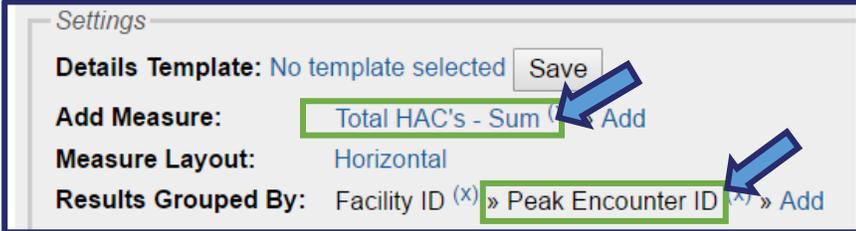
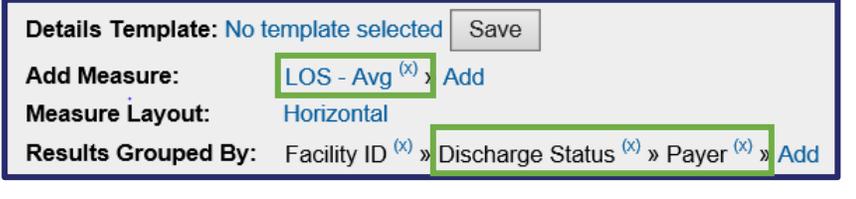
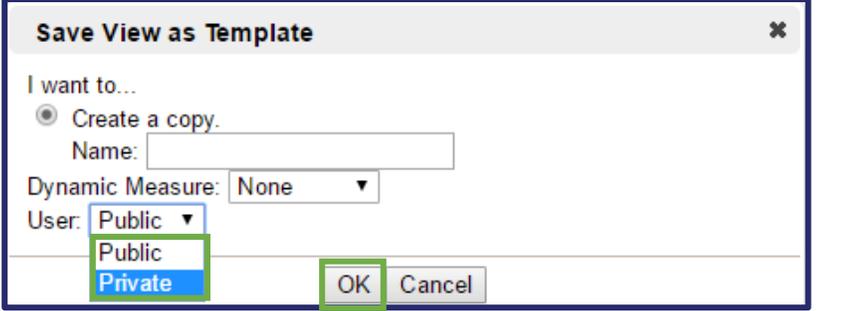
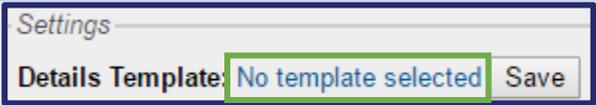
1. Open the Details View Scorecard from My Customized Scorecards list	*If you don't have this Scorecard, contact Clinical Analytics Support for access. Another option: Add a Details section to any existing scorecard.
2. Unlock your scorecard	
2. Add the Total Cost measure in the Measures field Add Attending Physician ID in the Results Grouped By filter	
3. Click the Rerun button to view the filter results.	
4. Add Clinical Analytics Encounter ID in the Results Grouped By filter <ul style="list-style-type: none"> Which encounter has the highest/lowest cost opportunity? 	

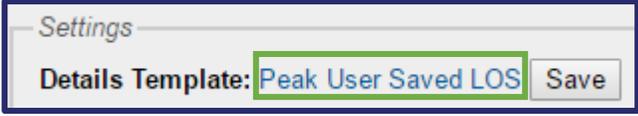
You have completed the Comparison of your Septicemia profile to the State by Bed Size benchmark exercise.

Exercise 4 – Comparison of Total HACs at the patient encounter level

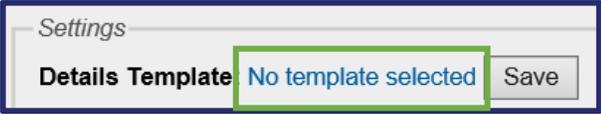
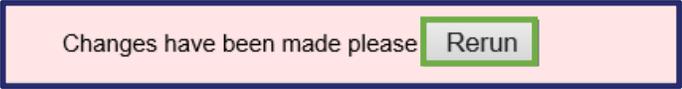
Steps	Images
1. Open the Details View Scorecard from My Customized Scorecards list	*If you don't have this Scorecard, contact Clinical Analytics Support for access. Another option: Add a Details section to any existing scorecard.
2. Unlock your scorecard if you haven't done so already. Keep in mind that you are unlocking patient level data everywhere, not just on this specific scorecard.	
2. Add the Total HACs measure in the Measures field Add Clinical Analytics Encounter ID in the Results Grouped By filter	
3. Using the Columns dropdown, in the top right corner of the Settings box, Add Account Number, Attending Physician ID, Discharge Date MM YYYY, and Medical Record Number.	
4. Click the Rerun button to view the filter results.	
5. Find an encounter with a HAC and drill into the Clinical Analytics Encounter ID.	
6. Using the Clinical Case Summary, which HAC did the patient have? (Hint: Use the Quality and Safety tab in the clinical case summary.)	
<p><i>You have completed the Comparison of Total HACs at the patient encounter level exercise.</i></p>	

Exercise 5—Comparison of Hospital LOS by Discharge Status against Nationwide All Payer benchmark

Steps	Images
1. Open the Details View Scorecard from My Customized Scorecards list	*If you don't have this Scorecard, contact Clinical Analytics Support for access. Another option: Add a Details section to any existing scorecard.
2. Unlock your scorecard if you haven't done so already. Keep in mind that you are unlocking patient level data everywhere, not just on this specific scorecard.	
2. Remove previously added Measures and Results Grouped By filter, by clicking on the blue X next to each filter item.	
3. Add LOS in the Measures filter and Add Discharge Status in the Results Grouped By filter. Add Payer in the Results Grouped By filter.	
4. Save the details template, by selecting the Save button.	
5. Name the details template, [your initials] LOS by Discharge Status. Choose public or private from the User menu, and click on OK to save the changes. <ul style="list-style-type: none"> Public allows users to view and use your details template. Private blocks users from accessing your details template. 	
6. Do not perform this step, FYI only: The No templates selected hyperlink is the default. To access the list of previously created Clinical Analytics or Custom templates available, you can click	

	on the No templates selected hyperlink.
<p>7. Using your saved LOS template:</p> <ul style="list-style-type: none"> • Which discharge status had the largest LOS opportunity? • Which discharge status and payer combination has the largest LOS opportunity? • Note: These results may be affected by the Payer group. 	
<p><i>You have completed the Comparison of LOS by Discharge Status using Hospital Profile against Nationwide All Payer benchmark exercise.</i></p>	

Exercise 6—Comparison of APR-DRGs across LOS, Total Cost, Mortality Rate, and Risk Adjusted PSI

Steps	Images
1 <i>Open</i> the Details View Scorecard from My Customized Scorecards list	*If you don't have this Scorecard, contact Clinical Analytics Support for access. Another option: Add a Details section to any existing scorecard.
2 <i>Unlock</i> your scorecard if you haven't done so already. Keep in mind that you are unlocking patient level data everywhere, not just on this specific scorecard	
2 <i>Select</i> the saved Details Template from Exercise 5. Note the blue arrow in step 4.	
3 <i>Add</i> LOS, Total Cost, Mortality Rate, and Risk-Adjusted PSI in the Measures filter.	
4 <i>Add</i> APR-DRG in the Results Grouped By filter. <ul style="list-style-type: none"> Which APR-DRG performed best across these metrics? (Hint: Use the column headers to sort the different opportunity columns.) 	
5 <i>Click</i> the Rerun button to view the filter results.	
6 <i>Change</i> the measure layout to Vertical for a different view. (Hint: Use the column filters to filter on an individual APR-DRG.)	
7 <i>Save</i> the view as a custom Detail Template by <i>selecting</i> Save in the Details Template settings box. Name your copy and determine public or private access. <i>Click</i> OK.	
<p><i>You have completed the Comparison of APR-DRGs across LOS, Total Cost, Mortality Rate, and Risk Adjusted Patient Safety Index exercise.</i></p>	

Additional Data Insights Sections

Clinical Case Summary

Key Concepts:

- Clinical Case Summaries display all patient level data which Clinical Analytics has for any given Encounter ID.
- Accessing Clinical Case Summaries requires that you unlock your Clinical Analytics session.
- Using Clinical Case Summary allows you to directly access patient level Clinical Summary data with the Encounter ID number or Account Number.

Clinical Case Summary Lookup
Search By:

Basic Features:

- Downloadable into a formatted PDF report or to an Excel file
- Summary content sorted into six tabs:
 - Demographics
 - DRG, Diagnosis, and Procedures
 - Detail Services
 - Utilization
 - Quality and Safety
 - Patient Satisfaction
 - Physician Attribution
- Links to other Encounters for the specific Medical Record Number
- Lists familial records (i.e. mom/baby)
- Identifies coder of record
- Interactive Detail Services tab

Clinical Case Summary - Account #630563 - Peak Encounter ID #51 - Admitted Jan 27th, 2015

Clinical Case Summary Lookup » Clinical Case Summary

Benchmark Profile: Health System | Grouping Type: APR-DRG | Jan 1st, 2015 to Dec 31st, 2015

Demographics | DRG, Diagnosis, and Procedures | Detail Services | Utilization | Quality and Safety | Patient Satisfaction | Physician Attribution

Demographics

Short Description	Value	Measure	Benchmark Value
Peak Encounter ID	51		
Patient Account Number	630563		
Medical Record Number	189401		
Patient Type	Inpatient		
Gender	Female		
Patient Age	0		
Payer ID	137		
Payer	Medicaid		
Facility ID	432004		
Facility Name	St. Lupulin		
LOS	1		1.67

Easy Patient Download

Key Concepts:

- Easy Patient Download allows for a Profile-based, patient download grouped by Clinical Analytics Encounter ID which can then be exported to Excel. The export to Excel automatically includes the patient diagnosis, associated procedures and physicians associated with the encounter, in addition to the standard Details View export.
- Definition of the group of patient allows for selection based on profile and benchmark, additional measures, DRG type, grouping of results, filters and exclusions, and time period.
- Easy Patient Download requires that you unlock your Clinical Analytics facility or session.

Easy Patient Download

Profile: Chapter 4 Test | Jan 1st, 2015 to Dec 31st, 2015 (Detail Charges) [Excel] [PDF]

Benchmark Profile: Health System | Jan 1st, 2015 to Dec 31st, 2015

APR-DRG

Settings

Easy Patient Download Template: No template selected [Save] [Columns]

Add Measure: [Add]

Results Grouped By: Peak Encounter ID

Filters: [Add]

Excludes: [Add]

Length of Stay Outlier: Both | Not My Patient Cases: Include All | Benchmarks: Include All

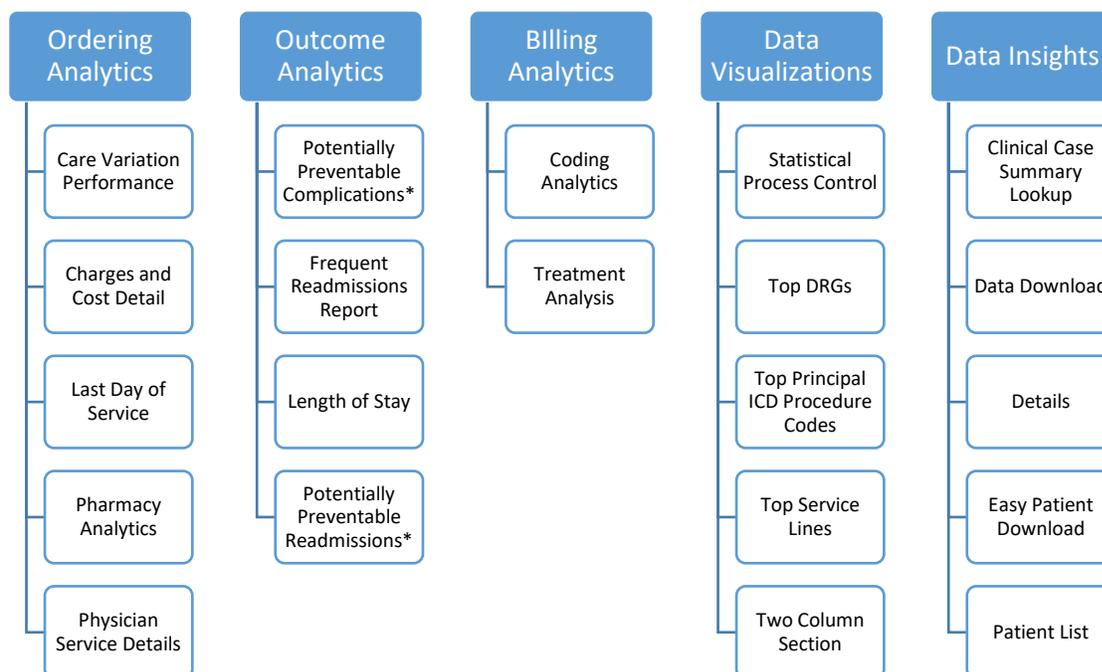
Opportunity Cap: 100 %

Peak Encounter ID	Facility ID ^(*)	Facility ^(*)
51	432004	St. Lupulin
136	432004	St. Lupulin
181	432004	St. Lupulin

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Data Visualizations, Ordering Analytics, and Outcome Analytics

FIGURE 6.1 CLINICAL ANALYTICS ANALYTIC TOOLS BY GROUPING



At this point the material has introduced use of the Clinical Case Summary, Easy Patient Download and Details Section from the Data Insights Grouping. The next three additional sections are briefly reviewed to round out the discussion regarding Clinical Analytics analytic tools which present access to the Details section described above.

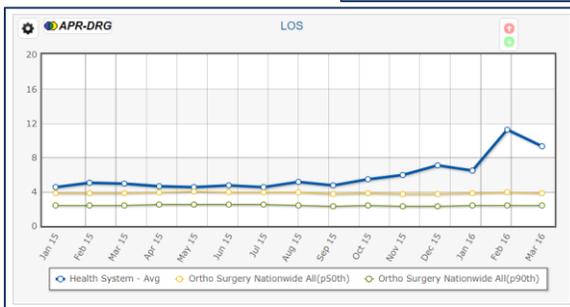
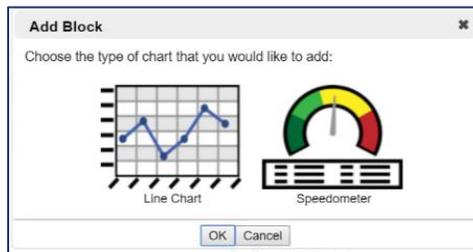
Learning Objectives related to the review of the Two Column Section, Charges and Costs Detail, and Length of Stay. Following completion of this portion of the session, you should be able to:

- Locate and apply the Charges & Cost Detail and Length of Stay sections to a tab on either your template scorecard or your custom scorecard.
- Identify the appropriate profile, benchmark and time period for use on the sections that have been applied to the tab on your template scorecard or custom scorecard.
- Use the hyperlinked data in either table represented by these customizable sections to access the Details Template that sits behind either of the tables.

Two Column Section

Key Concepts:

- In Clinical Analytics, while in customizer mode, measures that are assigned within in a *Block* are attached to a *Section*.
- Flexibility in assigning specific Measures to any given *Section* allowing for visual representation of results—either by a line chart or a speedometer.
- The *Two-Column* section allows for side-by-side placement of individual blocks, choosing from the line chart and the speedometer.



+ LOS Options

Block Type:

Drill into new section?: Yes No

Default Details Template:

Line Chart type: Internal Benchmark

Internal Profile:

Show Regression Fit Line?:

Benchmark Profile:

Percentiles to use?: 25 50 75 90

Include Custom Benchmarks?: Yes No

+ LOS Options

Block Type:

Drill into new section?: Yes No

Default Details Template:

Needle Profile:

Needle Profile Period: Most Recent Custom

Period Frequency:

Cut-off Type: Percentiles Custom

Percentile Cut-offs

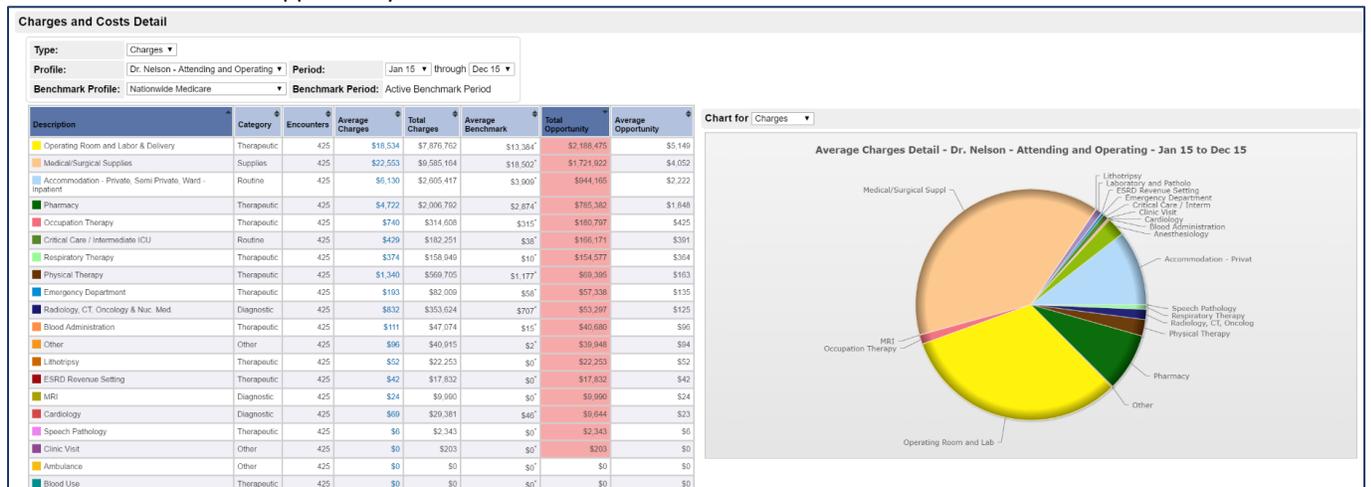
Benchmark Profile:

Percentiles to use?: 25 50 75 90

Charges & Costs Detail

Key Concepts:

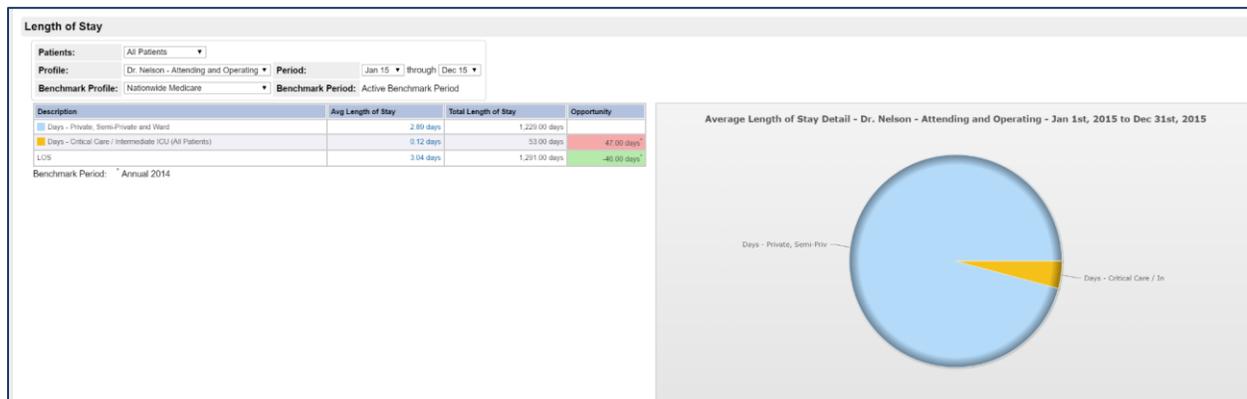
- Charges and Costs Detail section is typically found on the Utilization tab in Clinical Analytics but can be added to any preferred tab.
- Quick way to visually and numerically review revenue code groupings and associated opportunity in terms of charges or cost.
- Data are represented by both an interactive table and pie chart.
- Charges and Costs Detail are sorted into revenue code groupings and then benchmarked in order to reflect areas of opportunity.



Length of Stay

Key Concepts:

- A modifiable section using both a table and pie chart to reflect the LOS in days between both critical care and non-critical care beds and associated opportunity.
- Provides a swift way to visually and numerically sort between regular inpatient and ICU LOS overage.
- The section requires the selection of an LOS details template in order to display the above values.
- The actual details template is accessed by selecting the associated days for either critical care, non-critical care, or total LOS days.



- **When assessing measures, remember to reference the red/green polarity icons and the DRG-based icons as quick reference tools.**
- **Consider adding Clinical Case Summary as a *Section* in a scorecard tab, if you need to find individual patient information frequently.**

Study Questions (Refer to Appendix B for answers)

1. When beginning a specific analysis into one or more measures and I don't know of a specific section designed for this type of analysis, I should start by:
 - A. Adding every section until I find something close to what I'm looking for
 - B. Adding a Details section
 - C. Unlocking the facility
 - D. Calling Clinical Analytics support

2. The Details section offers the capability to:
 - A. Add several measures to a table
 - B. Group data by a variety of characteristics
 - C. Filter results but column values
 - D. All of the above

3. True or False: When contacting Clinical Analytics Support regarding a specific question about an encounter I'm seeing in Clinical Case Summary, I should send a screen shot over email so they can see what I'm referring to.

4. When looking at the Charges and Costs Detail section, clicking on a hyperlinked value in the Average Charges column will allow me to see:
 - A. A line chart of the data in that table
 - B. A pie chart of the data in that table
 - C. A Details View table of the cost/charge category
 - D. None of the above

5. To see a Details section, I can:
 - A. Click on the needle of a speedometer
 - B. Click on a data point in a line chart
 - C. Add a Details section to my scorecard
 - D. All of the above

6. True or False: I can export any Details table to an Excel spreadsheet for further analysis.

7. True or False: If I want to use my Details section parameters again later, I can save them as a Details Template.

8. True or False: With Clinical Case Summary, I can pull multiple Clinical Case Summaries all at the same time.

Chapter 7 Putting It All Together: The Tool and the Analysis

Fully leveraging the Clinical Analytics system requires two things; mastering the mechanics of the Clinical Analytics software, and using its customizability in an orderly way. Chapters 2 through 6 provided a broad exposure to the basics in using the Clinical Analytics system. Clinical Analytics Intermediate and Advanced will continue to build on the foundation of Clinical Analytics Basic and will cover the other Clinical Analytics analytic tools and reporting features (See Appendix A).

The intention of this chapter is to introduce the new user to an analytical framework that supports a critical thinking process which is compatible with Clinical Analytics design and facilitates an orderly progression through the data analysis process (See Figure 7.1). For those with a background in the quality disciplines, the framework will ring familiar with the PDSA (Plan, Do, Study, Act) cycle. As with PDSA cycles, analysis in Clinical Analytics benefits from having a well-thought through question and a hypothesis. You will know when you are done with iterative cycles of analysis when you have answered your question.

FIGURE 7.1 A BASIC FRAMEWORK FOR ANALYZING DATA IN CLINICAL ANALYTICS.

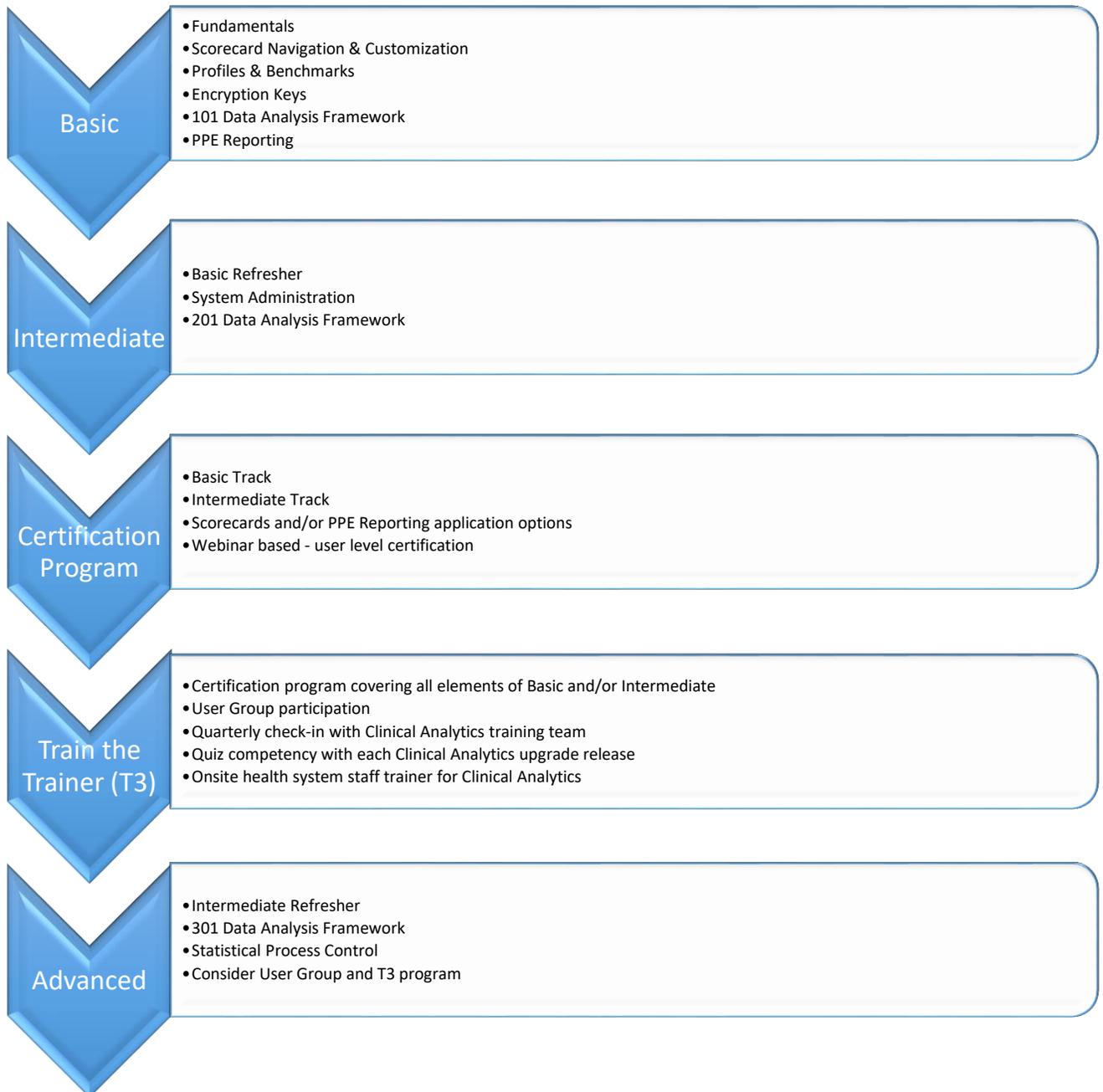


The systematic analysis framework will be applicable through most of the content we will cover in Intermediate and Advanced. As you move through applying what you have learned in Clinical Analytics and become increasingly familiar with the tool, you may find your own individual nuances for adapting the framework. Let's explore additional thoughts associated with each step in the step wise approach shown in Figure 7.1 above.

- Step 1: This is the most important step. Taking time to thoughtfully frame your question sets you up for an efficient and productive data analysis run. Do you have a hypothesis? If accurate, your results should either confirm other findings/observations or vice versa.
- Step 2: Think about the available scorecard templates in the Clinical Analytics (Peak) Library tab, can you use any of these as a starting point for your analysis?
- Step 3: Most often, you will be choosing some variation which relies on a Detail Template. Interestingly most every analysis can be completed by applying and using the Detail Section. It is well worth the time to learn how to use it and become comfortable with it.
- Step 4: You have learned that there are many ways to group, or characterize your preferred patient population, and/or your benchmark group. How you define your population greatly influences your analysis results.
- Step 5: What are key events, initiatives, or revenue cycles that you want to be sure to capture? Or avoid? Does this need to synchronize with quality reporting timelines? Adjust your scorecard time period settings accordingly.
- Step 6: You have a question, a scorecard, a focused population, and a time period. Time to analyze.

Appendices

Appendix A. Clinical Analytics Tiered Training Approach



Appendix B. Study Question Answers

Chapter 2: Sign In

1. For traditional sign-on: What two pieces of information do you need to sign in to Clinical Analytics?
 Facility Email
 Unique User Password (expires every 90 days)
2. **True** or False: The News window is a dynamic field that updates with each data load.
3. Documentation includes:
 - A. FAQs
 - B. Previously recorded webinars
 - C. Measure definitions
 - D. Training materials
 - E. All the above**
4. **True** or False: Clicking the logo in the upper left corner is the one click way to return to the Clinical Analytics Home Screen.
5. List an additional link from Home page that will return you to the Clinical Analytics Home Screen in one click.
 The blue Home hyperlink in the upper right hand corner.

Chapter 3: Scorecards

1. True or **False**: When a scorecard is downloaded from the Clinical Analytics (Peak) Library to your server, it becomes a custom scorecard.
2. **True** or False: Scorecard Home is where I can find lists of all scorecards I have been given access to view.
3. True or **False**: The scorecard author is the only person who can make edits directly to the scorecard template itself.
4. If I want to edit a scorecard template (for which I am not the author), I can Copy/Save As .
1. Match each display type with the type of data you'd find there:

• Pie chart:	2. Percentage of the whole
• Table:	4. Opportunity
• Speedometer:	1. At-a-glance overall performance in one value
• Line chart:	3. Trends over time

2. Match each icon with the actions:

- | | |
|---|--|
| • Profile Manager
population of interest | 3. Change the encounters included in or excluded from your |
| • Settings (gear) icon
shown in your scorecard | 4. Change the default date, missing data behavior, or type of data |
| • PDF Export icon | 2. Export your entire scorecard to PDF |
| • Customizer (pencil) icon | 1. Change the scorecard tabs, sections, or block |

Chapter 4: Profiles

1. True or False: In Clinical Analytics, my internal profile is the population of interest for my health system analysis.
TRUE
 2. True or False: In Clinical Analytics, my *benchmark profile* is the population I am comparing my *internal profile* data against.
TRUE
 3. True or False: I can only benchmark my internal data against external (peer group) benchmarks.
FALSE: internal or external profiles can be used for benchmarking
 4. True or False: I can create an internal profile using external data.
FALSE: internal profiles can only be built on internal data.
 5. A particular profile you have built can be used:
D. only in the scorecard it was built in.
 6. If my scorecard does not have the *external* profile I want and I cannot load a new one, I should first contact:
B. my facility's Clinical Analytics Administrator
 7. If I want to create a profile _____, I would select the Profile Type _____.
- | | |
|--|---------------|
| • To look at overall data for one of the facilities in my health system... | 2. Facility |
| • Filtered on admission source, service line, and APR-DRG... | 3. Inpatient |
| • To compare my facility to teaching hospitals in the US... | 4. Peer group |
| • To study consulting physicians... | 1. Role |

Chapter 5: Encryption Keys

1. True or False: Every time I sign in to Clinical Analytics, I must unlock with my encryption key.
FALSE: only when accessing patient-level data
2. True or False: The password I use with my encryption key when I unlock Clinical Analytics must be the same password I use when signing in to Clinical Analytics.
FALSE: the two passwords are unrelated and there are no requirements for the encryption password

3. My encryption password will expire when my sign-in password expires. True/False
FALSE: the encryption password is specific for the encryption key and never expires
4. When I load a page in Clinical Analytics and see “The scorecard must be unlocked to enable this feature,” this means:
D: A and B
 - The page I am trying to view contains PHI
 - I must enter my encryption password and key

Chapter 6: Sections

1. When beginning a specific analysis into one or more measures and I don’t know of a specific section designed for this type of analysis, I should start by:
B. adding a Details section: if you don’t know exactly where to find the information you’re looking for, usually the best approach is to use a Details section to specify the parameters for your analysis.
2. The Details section offers the capability to:
D. All of the above
 - Add several measures to a table
 - Group data by a variety of characteristics
 - Filter results but column values
3. True or False: When contacting Clinical Analytics Support regarding a specific question about an encounter I’m seeing in Clinical Case Summary, I should send a screen shot over email so they can see what I’m referring to.
FALSE! NEVER email PHI! Instead, generally describe the issue in an email or call us; if we need to see the data, we can emulate your account or set up a GoToMeeting to see what you’re looking at.
4. When looking at the Charges and Costs Detail section, clicking on a hyperlinked value in the Average Charges column will allow me to see:
C. a Details View table of that cost/charge category
5. To see a Details section, I can:
D. all of the above
 - click on the needle of a speedometer
 - click on a data point in a line chart
 - add a Details section to my scorecard
6. True or False: I can export any Details table to an Excel spreadsheet for further analysis.
TRUE
7. True or False: If I want to use my Details section parameters again later, I can save them as a Details Template.
TRUE

8. True or False: With Clinical Case Summary Look-Up, I can pull multiple Clinical Case Summaries all at the same time.

FALSE: encounters must be searched for one at a time. Easy Patient Download may be a better option for this task, depending on the purpose of the analysis.

Appendix C. Contact Clinical Analytics Support

We love to hear from our clients! Located in beautiful Colorado, support staff is in the office Monday-Friday 8am-5pm Mountain Time.

- Reach out to us if you have questions about:
 - Add-on modules
 - Accessing your account
 - Your specific analysis
 - New ideas for Clinical Analytics
 - Anything else!
- Email: peaksupport@syntellis.com
- Call: (847) 441-0022