



Release Notes
Axiom Decision Support
Version 2019.4.5



KaufmanHall

AXIOM

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Contents

Summary	4
Product upgrade notes	5
New features summary	6
Axiom Clinical Performance Measures	6
Axiom Decision Support and Axiom Intelligence data dictionary report	17
Expanded variable columns	18
Data model enhancements	18
Dimension tables updates	19
Issues resolved in 2019.4	21
Issues resolved in 2019.4.1	22
Issues resolved in 2019.4.2	23
Issues resolved in 2019.4.3	24
Issues resolved in 2019.4.4	25
Issues resolved in 2019.4.5	26
Manual setup instructions	27

Summary

Kaufman Hall is pleased to announce the 2019.4 release of Axiom Decision Support. Each product release provides new features, enhancements, and configuration options to meet your needs. Many of these features and enhancements are a direct result of your feedback and suggestions.

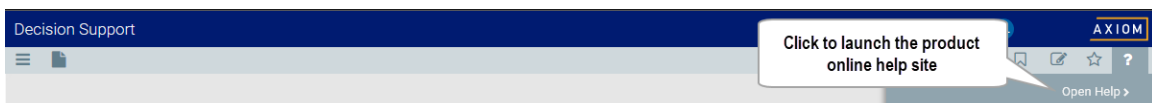
Summary of the upgrade process:

1. **Review product release notes** – Review this document to familiarize yourself with the new features and functionality.
2. **Schedule an installation date** – Contact support@kaufmanhall.com or your implementation consultant, and they will confirm an installation period with you.
3. **Complete manual updates** – After installing the upgrade, if needed, review any manual setup steps needed to enable features for this version.

Help and Training

Kaufman Hall provides world-class resources at your fingertips directly within the Axiom Software system. Axiom Help provides topics, knowledge base articles, documents, webinar/training announcements, and videos to guide you through managing your system. To access these resources, do any of the following:

- **Online help** - From the Main, Help, or Admin ribbon tab, click **Online Help**, and then select the product. Axiom Help opens in a new browser window. The online help will only open for products you are licensed to use.
- **Contextual help** - Form/web-enabled features include contextual help directly within the user interface. This information provides a quick summary and/or instructions specifically related to the screen you are using. You can access this information by clicking the question mark in the upper right corner of the screen. For more detailed information, open Axiom Help by clicking **Open Help** at the top of the contextual help dialog.



Escalating to Axiom Support

As always, we appreciate your commitment to Kaufman Hall. If you have any questions about your upgrade, please contact us by logging into Axiom, navigating to the online help for your product, and clicking the Support at the top of the home page.

Product upgrade notes

IMPORTANT: You must apply the Axiom Software 2019.4 upgrade before applying any 2019.4 Axiom product upgrades. Axiom Software upgrades are backwards compatible so you can upgrade different products at different times, but you must upgrade to the Axiom Software 2019.4 *before* the first product upgrade. Refer to the **Axiom Software 2019.4 Release Notes** and **Axiom Healthcare Suite 2019.4 Release Notes** for considerations before upgrading. Apply this update **ONLY** if you have already applied the 2019.4 release and completed all the manual setup steps from the corresponding release notes.

When upgrading to the 2019.4 version of Axiom Decision Support, keep in mind the following:

- This product upgrade contains new tables, columns, updated templates, reports, scripts/imports and remediated defects.
- KHA delivered reports may be replaced. Any report that you saved under a different name or created new will remain untouched. Replaced reports are available in Document History, if needed.
- Any KHA delivered report that you moved to a new location since the last upgrade will automatically move back to its original location.
- KHA product templates and calculation method libraries will be replaced.
- Product task panes will be replaced.
- Process definitions will not be replaced.
- Security roles and sub-systems will be reset to their configured settings. All user security exceptions you may have made will remain intact.
- Specific items configured as part of your company or organization's implementation such as imports, exports, driver files, and process management files, will remain as is. Any required modifications to these areas are covered in the release notes, if required.

New features summary

Axiom Decision Support 2019.4 provides the tools you need to assist with the timely analysis needed to make data-driven decisions regarding your service lines. The new features provide a mechanism to easily monitor service line performance to help drive strategic expansion and go-forward business decisions. They also provide accurate and timely cost accounting information to drive efficiencies.

This section includes a description for each new feature included in this release.

Axiom Clinical Performance Measures

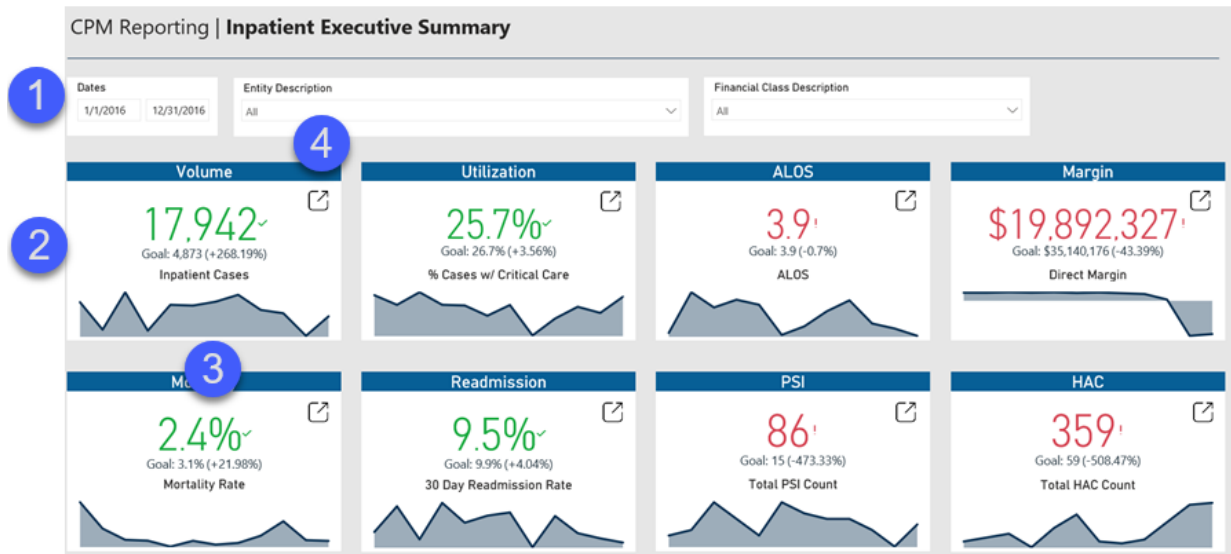
Axiom Decision Support with Clinical Performance Measures (CPM) helps organizations establish a comprehensive view of service line performance across financial and clinical performance measures. Reports and analytics facilitate the conversation between finance and clinical process improvement teams, highlighting opportunities where quality and cost outcomes could be improved. CPM provides an executive inpatient dashboard and multiple supporting reports.

NOTE: The Clinical Performance Measures features are only accessible if your organization has a license for Axiom CPM.

► Inpatient Executive Summary dashboard

This dashboard displays KPI views of clinical and financial data to help inform and drive decision making for executives.

1. **Slicers** - Allows for filtering of all KPI cards and area charts in the dashboard.
2. **KPI cards** - Indicates health in that area, including goal set in the previous year.
3. **Area charts** - Provides additional details regarding trend on the KPI card.
4. **Open report** - Provides a link to open and view the source report for the KPI card to review more details.

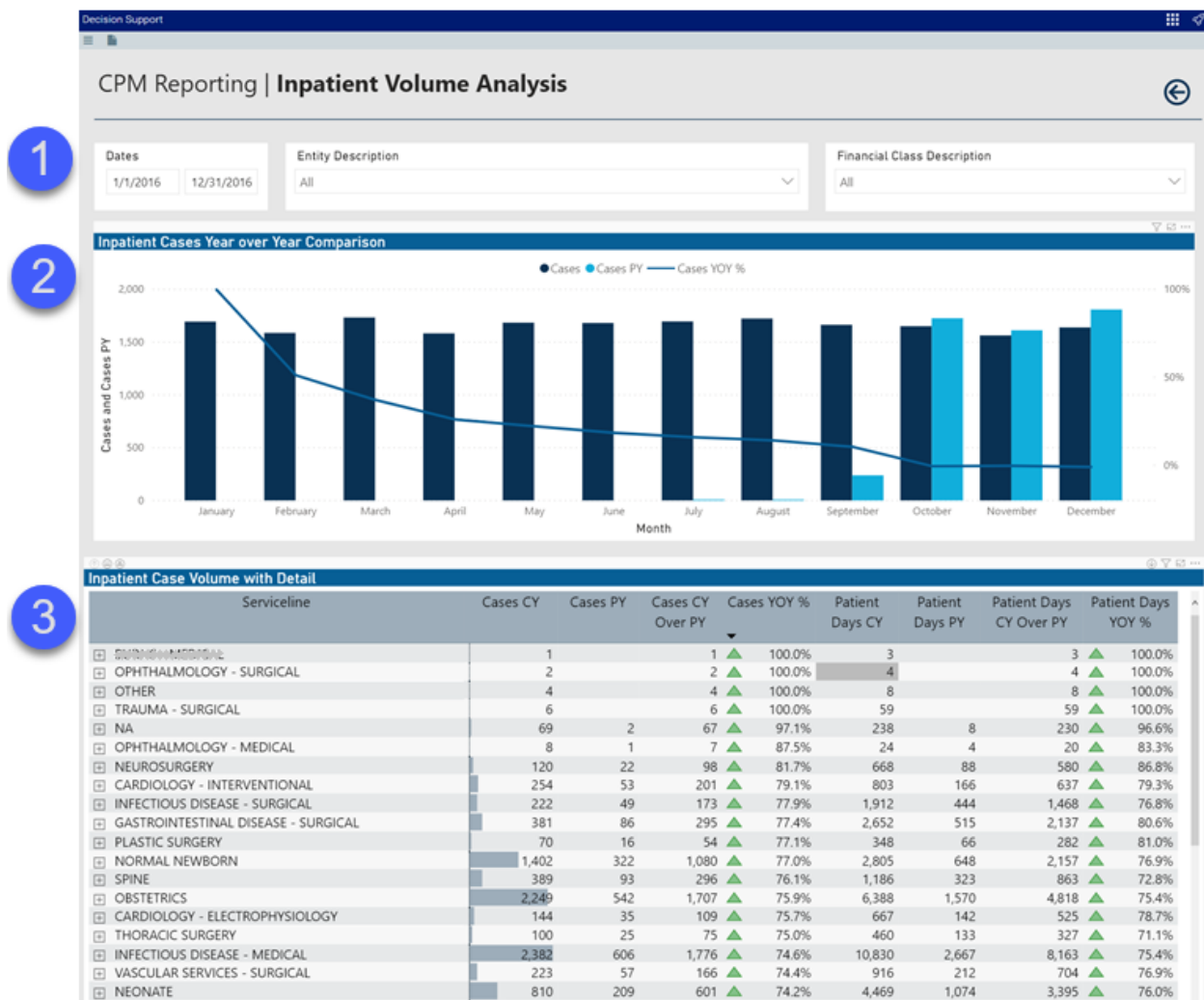


For more information and instructions, see "Inpatient Executive Summary dashboard" in the online help.

► Inpatient Volume Analysis report

This report provides volume trends and details for inpatient cases.

1. **Slicers** - Allows for filtering of visualizations within the report.
2. **Bar and line chart** - Provides a line and clustered column chart that displays current year and prior year case volumes by month. The line indicates year over year percentage change in volume.
3. **Table** - Displays a matrix visualization that includes drill path set from service line to MSDRG to admitting provider. This visualization compares current year and prior year case volume and patient day volume.

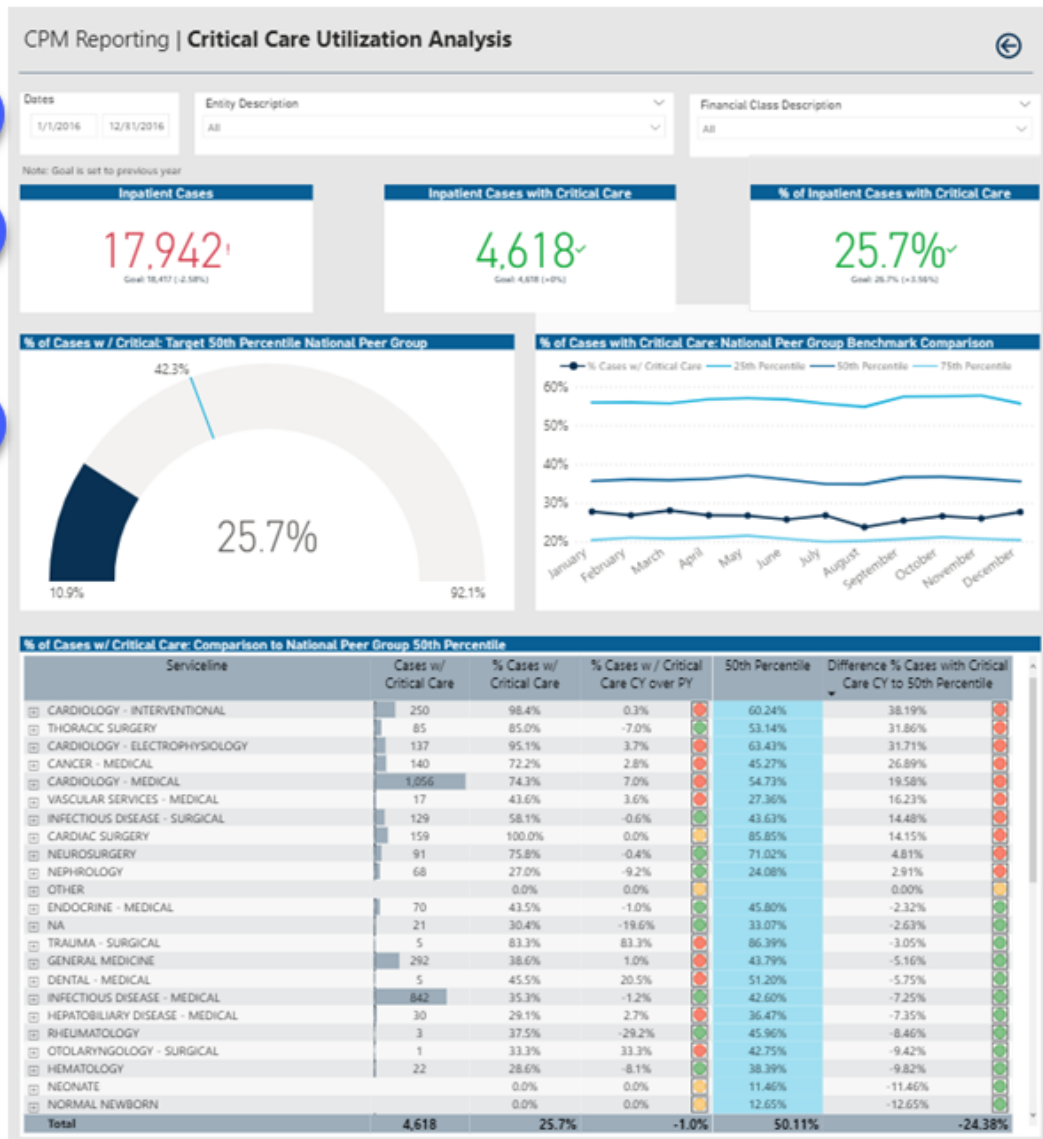


For more information and instructions, see "Inpatient Volume Analysis report" in the online help.

► Critical Care Utilization Analysis report

This report provides benchmarking data regarding inpatient cases that required critical care.

1. **Slicers** - Allows for filtering of the visualizations within the report.
2. **KPI cards** - Indicates health in that area, including goal set in the previous year.
3. **Gauge chart** - Shows the measure values that target the 50th percentile benchmark. The minimum value is set to the 95th percentile benchmark and the maximum is set to the 5th percentile.
4. **Line chart** - Illustrates measure by month compared to benchmarks.
5. **Table** - Displays a matrix visualization with a service line to MSDRG drill path that compares measure value for current year and prior year as well as the 50th percentile benchmark.



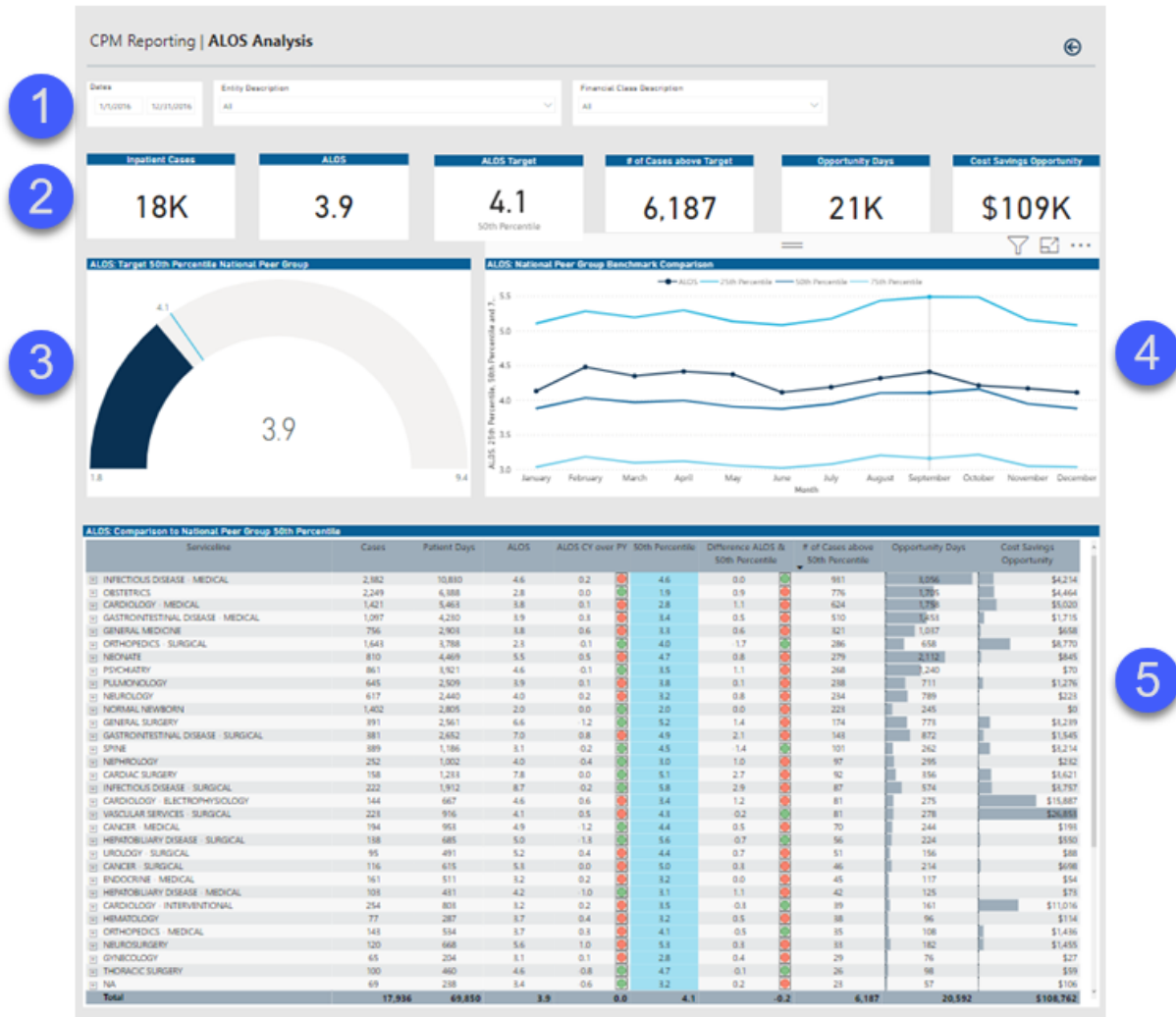
For more information and instructions, see "Critical Care Utilization Analysis report" in the online help.

► ALOS Analysis report

This report provides benchmarking data regarding the Average Length of Stay for your organization.

1. **Slicers** - Allows for filtering of visualizations within the report.
2. **KPI cards** - Indicates health in that area, including goal set in the previous year.
3. **Gauge chart** - Shows measure values that target the 50th percentile benchmark. The minimum value is set to 95th percentile benchmark and the maximum is set to 5th percentile.
4. **Line chart** - Illustrates measure by month compared to benchmarks.

5. **Table** - Displays a matrix visualization with service line to MSDRG drill path that compares measure value current year and previous year as well as the 50th percentile benchmark. This matrix also includes an opportunity days and cost savings opportunity metric.



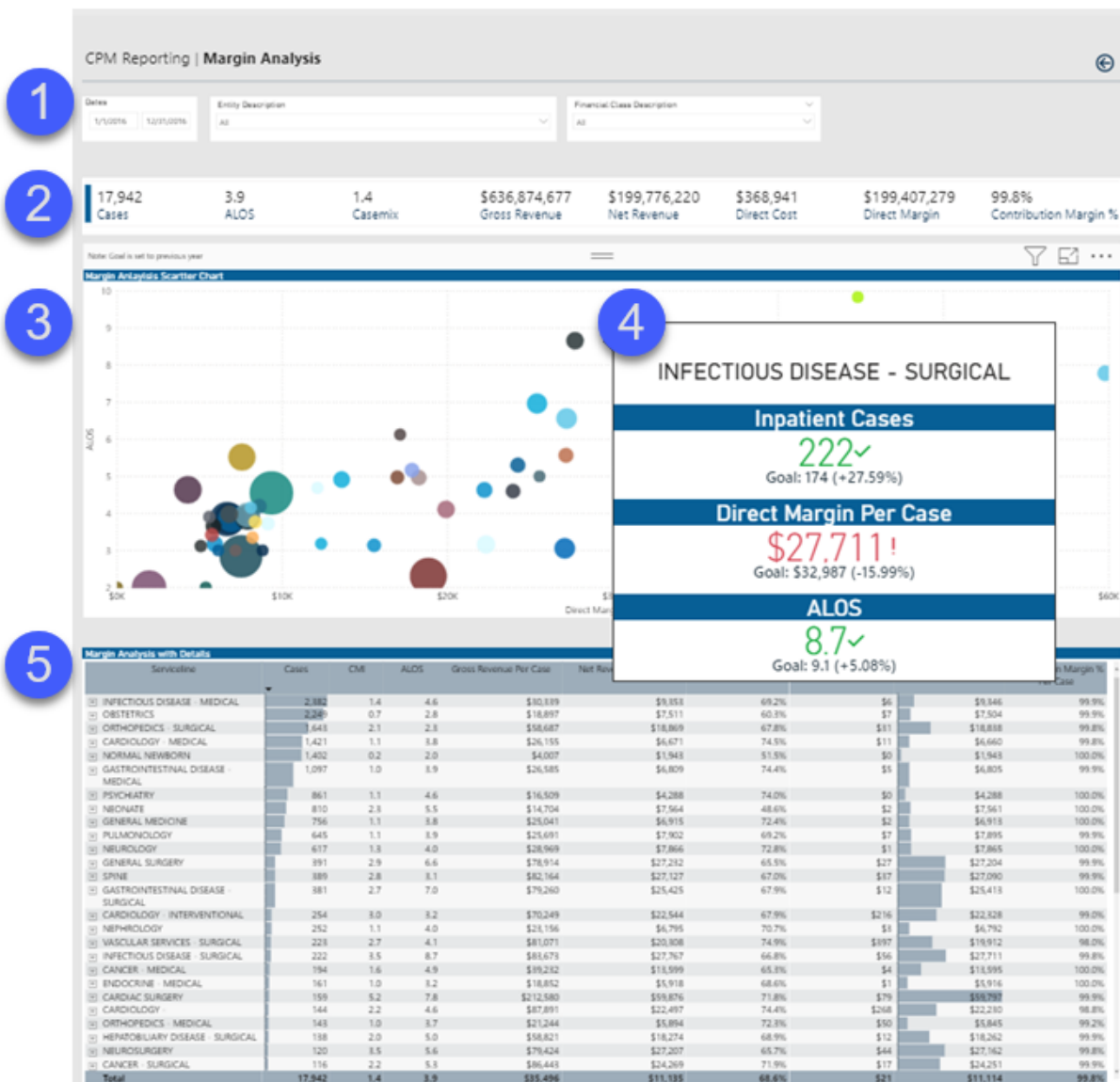
For more information and instructions, see "ALOS Analysis report" in the online help.

► Margin Analysis report

This report provides regarding details regarding margin analysis across service lines.

1. **Slicers** - Allows for filtering of all the visualizations within the report.
2. **KPI cards** - Indicates health in that area, including goal set in the previous year.
3. **Scatter chart** - Displays ALOS on Y axis and Direct Margin per Case on X axis. The circles represent case volume for specific service lines.

4. **Tool tip** - Shows KPIs related to cases compared to previous year, direct margin per case compared to previous year, and ALOS compared to previous year.
5. **Table** - Displays a matrix visualization with service line to MSDRG drill path that shows relevant profitability metrics.

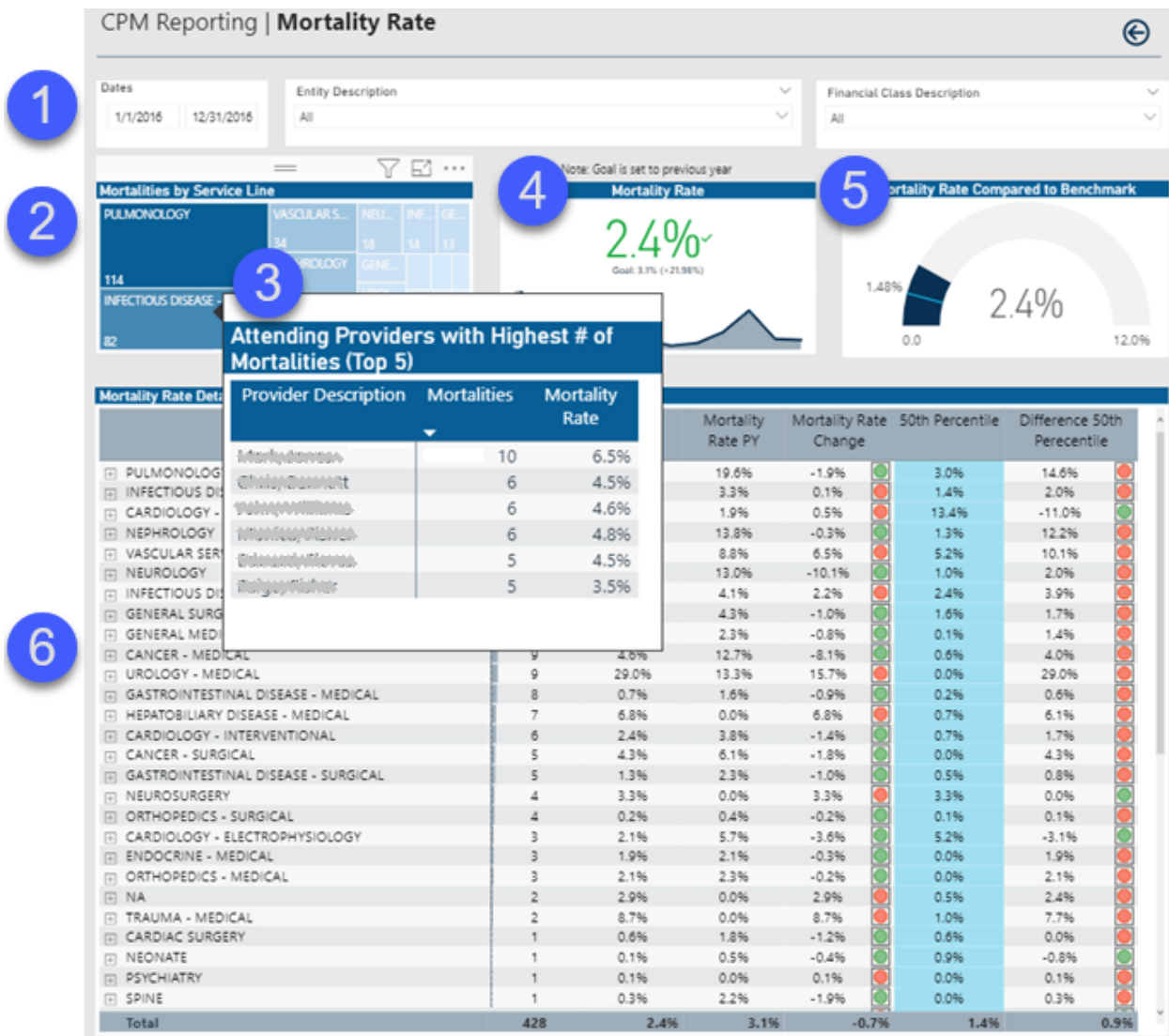


For more information and instructions, see "Margin Analysis report" in the online help.

► Mortality Analysis report

This report provides KPI metrics and details regarding mortality rates at your organization and across service lines.

1. **Slicers** - Allows for filtering of visualizations within the report.
2. **Tree map visualization** - Shows the number of mortalities by service line.
3. **Tool tip** - Shows a matrix of attending providers with the top five highest number of mortalities.
4. **KPI card** - Shows KPIs related to mortality rate compared to the previous year.
5. **Gauge chart** - Shows measure values that target the 50th percentile benchmark. The minimum value is set to 95th percentile benchmark and maximum is set to 5th percentile.
6. **Table** - Displays a matrix visualization with service line to drill path that compares measure value current year and prior year as well as the 50th percentile benchmark.

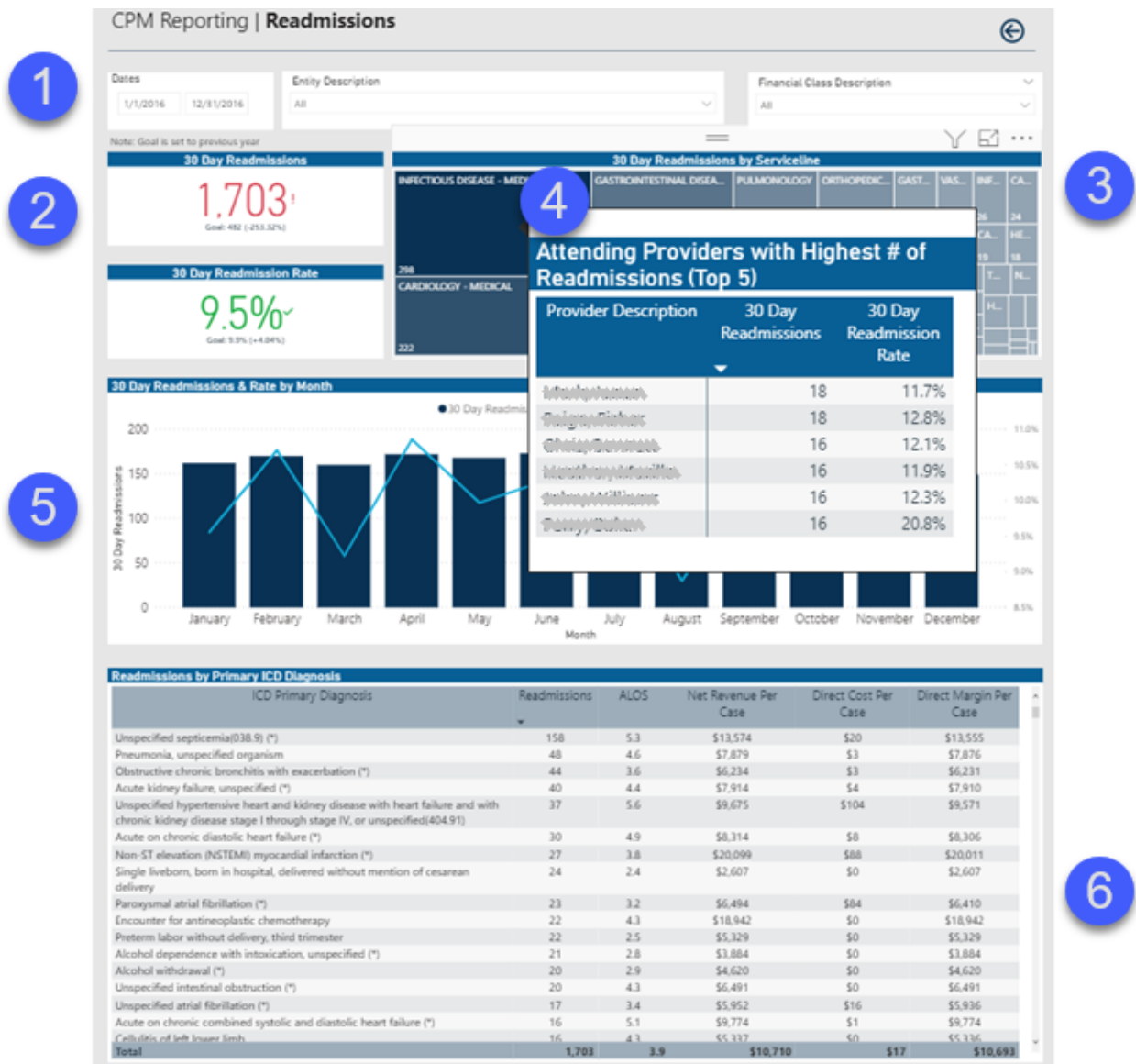


For more information and instructions, see "Mortality Analysis report" in the online help.

► Readmission Analysis report

This report provides KPI metrics and details regarding readmission rates at your organization and across service lines.

1. **Slicers** - Allows for filtering of all the visualizations within the report.
2. **KPI card** - Indicates health in that area, including goal set in the previous year.
3. **Tree map visualization** - Shows the number of 30-day readmissions by service line.
4. **Tool tip** - Shows a matrix of attending providers with top five highest number of 30-day readmissions.
5. **Bar and line chart** - Displays 30-day readmissions by month and the line representing monthly readmission rate.
6. **Table** - Matrix visualization with the primary diagnosis of the readmission with other pertinent metrics.

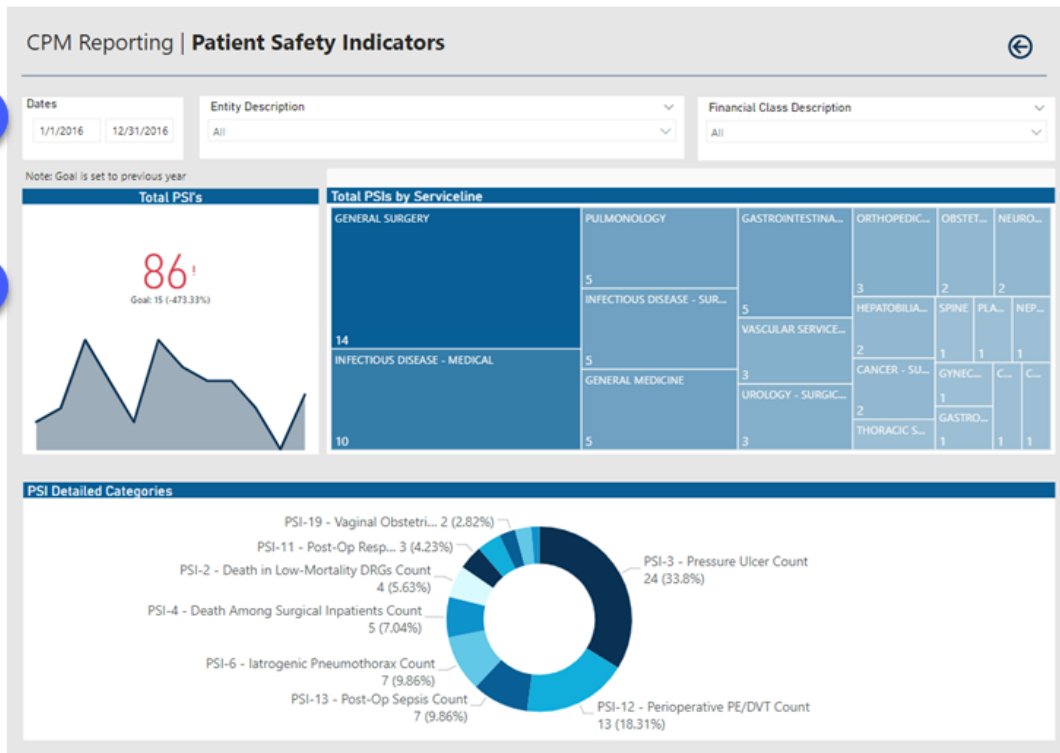


For more information and instructions, see "Readmission Analysis report" in the online help.

► Patient Safety Indicator (PSI) Analysis report

This report provides metrics and details regarding PSI at your organization and across service lines.

1. **Slicers** - Allows for filtering of all the visualizations within the report.
2. **KPI card** - Indicates health in that area, including goal set in the previous year.
3. **Tree map visualization** - Shows the number of PSIs by service line.
4. **Donut chart** - Displays the number and percentage of PSI types.



For more information and instructions, see "Patient Safety Indicator (PSI) Analysis report" in the online help.

► Hospital Acquired Condition (HAC) Analysis report

This report provides metrics and details regarding HAC at your organization and across service lines.

1. **Slicers** - Allows for filtering of all the visualizations within the report.
2. **KPI card** - Indicates health in that area, including goal set in the previous year.
3. **Bar and line chart** - Displays HACs by month and the line representing HAC rate by month.
4. **Donut chart** - Displays the number and percentage of HAC types.
5. **Tree map visualization** - Shows the number of HACs by service line.



For more information and instructions, see "Hospital Acquired Condition (HAC) Analysis report" in the online help.

► Cost of Quality Variation report

This report provides KPI measurements and other details related to determining potential cost savings opportunities.

1. **Slicers** - Allows for filtering of all the visualizations within the report.
2. **KPI Card** - Indicates health in that area, including goal set in the previous year.
3. **Tree map visualization** - Shows the number of Quality Indicators by service line.
4. **Table** - Shows a matrix visualization with Quality Indicator to MSDRG to attending provider drill path that compares the cost of cases with and without the indicator present and provides a cost

savings opportunity projection if these cases no longer had the quality incident.



For more information and instructions, see "Cost of Quality Variation report" in the online help.

Axiom Decision Support and Axiom Intelligence data dictionary report

This new report allows visibility to any changes made between the Axiom Database model and the Axiom Intelligence Analysis Services data model - including table or column name changes as well as denormalization of columns onto different tables.

Axiom DSS / Axiom Intelligence Data Dictionary

Axiom DSS Table Name	Axiom Intelligence Table Name	Axiom DSS Column Name	Axiom Intelligence Column Name	DeNormalized Columns
APDRG	APDRG	MDC	MDC	MDC.MDC AS MDC, MDC.Description AS Description
APDRG	APDRG	Med_Surg	Med_Surg	
APDRG	APDRG	ALOS	ALOS	
APDRG	APDRG	APDRG	APDRG	
APDRG	APDRG	Code	Code	
APDRG	APDRG	Description	Description	
APDRG	APDRG	GeomLOS	GeomLOS	
APDRG	APDRG	LongDescription	LongDescription	
APDRG	APDRG	ReportDescription	ReportDescription	
APDRG	APDRG	SOI	SOI	
APDRG	APDRG	Weight	Weight	
CostDetail	Cost Detail	CostItem	Cost Item	
CostDetail	Cost Detail	CPT	CPT	
CostDetail	Cost Detail	DayOfStay	Day Of Stay	
CostDetail	Cost Detail	DayType	Day Type	
CostDetail	Cost Detail	DEPT	Dept	
CostDetail	Cost Detail	Diagnosis1	Diagnosis 1	
CostDetail	Cost Detail	Diagnosis2	Diagnosis 2	
CostDetail	Cost Detail	Diagnosis3	Diagnosis 3	
CostDetail	Cost Detail	Diagnosis4	Diagnosis 4	
CostDetail	Cost Detail	Diagnosis5	Diagnosis 5	
CostDetail	Cost Detail	EncounterSeq	EncounterSeq	
CostDetail	Cost Detail	ExcessDays	Excess Days	
CostDetail	Cost Detail	HCPCS	HCPCS	

For instructions, see "Running the Axiom Decision Support and Axiom Intelligence Data Dictionary report" in the online help

Expanded variable columns

The following grouping columns have been added for expanded Axiom Intelligence report generation:

- MSDRG
- APRDRG
- ICDDiag
- ICDProc
- Insplan
- FinClass

For instructions, see "Creating or modifying custom columns in dimensions" in the online help.

Data model enhancements

Data model enhancements support new Clinical Performance Measures integration.

- Added all Clinical Performance Measures required fields from Universal File Spec that were tied to Encounter and Cost Detail tables and made them part of standard Axiom Decision Support data model.
- Fixed a significant data model issue within Axiom Decision Support related to sequencing of ICD Diagnosis, ICD Procedure, and CPT codes caused by an additional composite key, which allowed for the duplication of sequence ones.

Dimension tables updates

To prevent the possibility of duplicate sequence records, the key column has been turned off for the following columns:

- Enc_Diag.ICDDiagnosis
- Enc_Proc.ICDProcedure
- Enc_CPT.CPT

Edit Table

Edit the columns contained in table Enc_Proc.

General | Table Properties | Columns | Aliases | Sequences | Calculated Fields | Data Conversion

ColumnName	ICDProcedure
Description	Procedure Code
Data Type	String
Numeric Type	Number
Max String Length	20
Unicode	True
Key Column	False
Alternate Key	False
Lookup Column	ICDPROC.ICDPROCID
Is Variable Column	False

ColumnName

Apply OK Cancel

Also, the Encounter dimension table now includes a new NDC code column to support the Axiom Clinical Analytics data model.

IMPORTANT: Please review your imports to these tables to ensure they are working correctly.

Issues resolved in 2019.4

The following table lists the issues resolved in 2019.4, released on December 16th, 2019:

Issue	Description
PFB-07007 - Inpatient Period Comparison [TFS 31178]	<p>Issue: The header in the Inpatient Period Comparison report should toggle/update between Actual and Estimated Net Revenue, as selected in the refresh variables. Currently, it displays Estimated no matter which option the user selects. The data updates correctly, so it is simply a header issue.</p> <p>Resolution: Corrected by updating the cell to =CONCATENATE(Variables!G15, " Net Patient Rev"), which will pull in either the word Actual or the word Estimated in front of Net Patient Rev, depending on their refresh variable selection.</p>
DSS User role allows access to authoring mode for BI reports [TFS 38547]	<p>Issue: Any users assigned the DSS User role can access the Axiom Intelligence authoring mode where they can create and see all data in the BI model.</p> <p>Resolution: Corrected by removing access to the My Documents folder for the DSS User and CPM User roles.</p>
PFB-08162 - Allow Client Admins to modify Filters in Intelligence Reports [TFS 40157]	<p>Issue: Ensure that the filter for the year filter is set to show the last five years (2015-2019) for each DSS Axiom Intelligence Report (standard delivered reports -Example 1-5, plus the three service line dashboards).</p> <p>Resolution: Corrected by updating the options in the year slicer.</p>

Issues resolved in 2019.4.1

No client facing issues were addressed in 2019.4.1, released on January 27th, 2020.

Issues resolved in 2019.4.2

No client facing issues were addressed in 2019.4.2, released on February 10th, 2020.

Issues resolved in 2019.4.3

No client facing issues were addressed in 2019.4.3, released on March 9th, 2020.

Issues resolved in 2019.4.4

No client facing issues were addressed in 2019.4.4, released on May 12th, 2020.

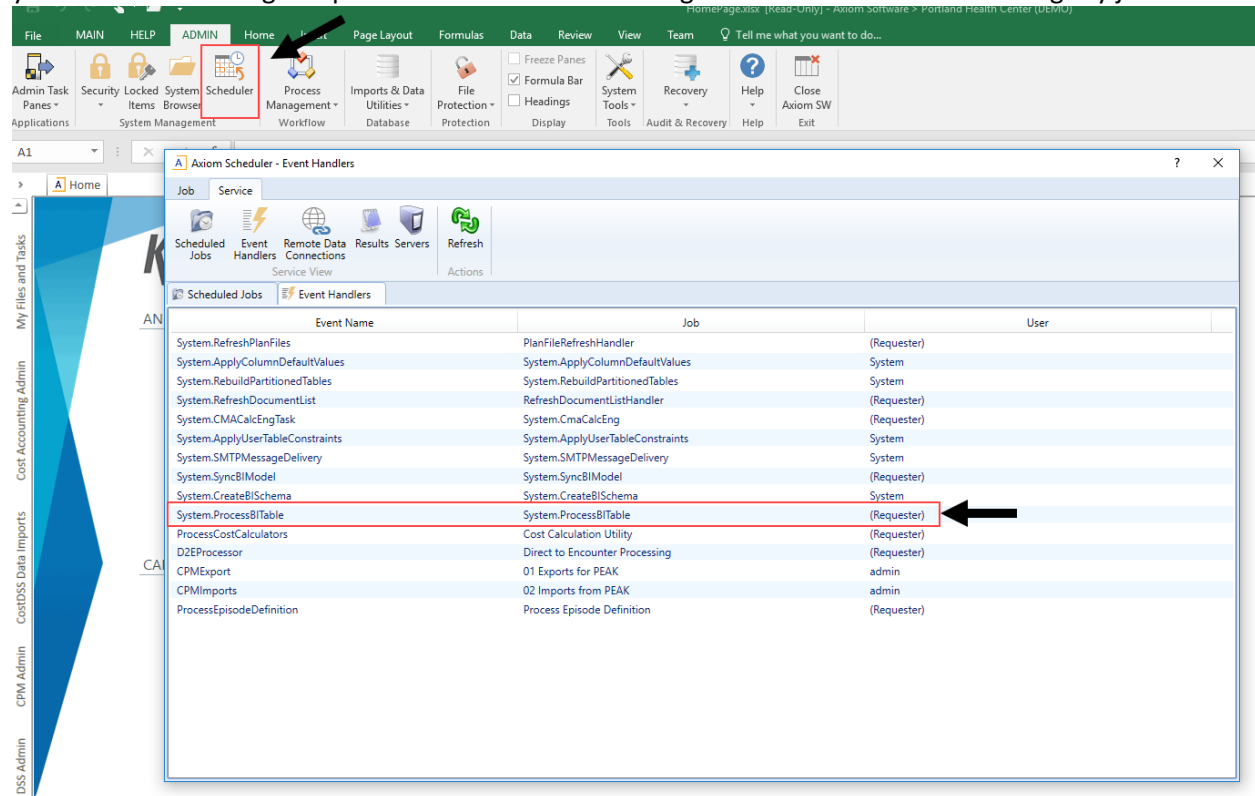
Issues resolved in 2019.4.5

The following table lists the resolutions for issues addressed in 2019.4.5, released on January 11th, 2021:

Issue	Description
IsNumeric() method not found error on 2019.4 Costing dashboard on 2020.3 platform [TFS 73671]	<p>Issue: When upgrading to platform version 2020.3.16, several cost assignment pages in the Axiom Cost Accounting dashboards display an IsNumeric() method error.</p> <p>Resolution: Corrected by creating a build of the existing Axiom Cost Accounting 2019.4 version to be compatible with the latest Axiom platform software. This allows a client to upgrade to the Axiom Cost Accounting 2019.4 without actually changing the behavior of the product and to allow clients to upgrade to the latest Axiom platform.</p> <p>Keep in mind the following:</p> <ul style="list-style-type: none">• The package install will update packaged assets. This means any "fix in field" changes, such as packaged documents, etc., <i>may be overwritten</i> by this update.• Clients do not need to and should not take this update if they are not also upgrading the Axiom platform software.

Manual setup instructions

The System.SyncBIModel job runs nightly on a scheduled job to ensure that the Axiom database and Axiom Intelligence Reporting database stay in sync. If you modify a table in Axiom that is part of the Axiom Intelligence Reporting data model, you will need to run the job named **System.ProcessBITable** if you want those changes represented in the Axiom Intelligence data model before the nightly job runs.



You will also need to run the job named **System.SyncBIModel** when you want to apply or edit security changes to user roles or subsystem that specifically affect Axiom Intelligence Reporting.

