

Cento Office Hours – Advanced Concepts

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Click [here](#) to watch the recording of Cento Office Hours – Advanced Concepts.

How to Calculate Data – (such as length of stay on a report)

Step 1) To calculate the LOS (Length of Stay) on a new report, select **New Report** from the dashboard. Under the **Report Fields** header, you can select your report fields. The example below shows **Report Fields** from the STS Adult Cardiac Surgery v4.20 form.

1 Report Type 2 **Report Fields** 3 Filters 4 Time Frame 5 Finish

- Sample New Data Form
- Sean Creation Test
- STS Adult Cardiac 2.9 + CCORP 7.0
- STS Adult Cardiac 4.20 + CCORP 8.3
- STS Adult Cardiac Stock Question Bank
- STS Adult Cardiac Surgery v2.35
- STS Adult Cardiac Surgery v2.41
- STS Adult Cardiac Surgery v2.52
- STS Adult Cardiac Surgery v2.61
- STS Adult Cardiac Surgery v2.73
- STS Adult Cardiac Surgery v2.81
- STS Adult Cardiac Surgery v2.9
- **STS Adult Cardiac Surgery v4.20**
 - STS Adult Cardiac Surgery v4.20
 - STS Adult Cardiac Surgery v4.20
 - A. Administrative
 - B. Demographics
 - C. Hospitalization
 - Hospital Name [205: HospName]
 - Hospital ZIP Code [210: HospZIP]
 - Hospital Region [215: HospStat]
 - Hospital National Provider Identifier [220: HospNPI]
 - Hospital CMS Certification Number [221: HospCMSCert]
 - Primary Payor [291: PayorPrim]
 - Commercially Managed Medicare Plan - Primary [292: ComMngMedPlnPrim]
 - HICN / MBI Group - Primary [293: HICNMBIKGroup]

Selected Report Fields

- Patient Last Name [50: PatLName]
- Patient Last Name [50: PatLName] (2)
- Hospital Name [205: HospName]
- Admit Date [305: AdmitDt]
- Date of Surgery [310: SurgDt]
- Hospital Discharge Date [7006: DischDt]
- Surgeon [1955: Surgeon]
- Risk Model Population (ProclD)

Step 2) Under the **Filters** header, select the STS Adult Cardiac Surgery v4.20 to make sure the data is limited to that data form only.

1 Report Type 2 Report Fields 3 **Filters** 4 Time Frame 5 Finish

- Sample New Data Form
- Sean Creation Test
- STS Adult Cardiac 2.9 + CCORP 7.0
- STS Adult Cardiac 4.20 + CCORP 8.3
- STS Adult Cardiac Stock Question Bank
- STS Adult Cardiac Surgery v2.35
- STS Adult Cardiac Surgery v2.41
- STS Adult Cardiac Surgery v2.52
- STS Adult Cardiac Surgery v2.61
- STS Adult Cardiac Surgery v2.73
- STS Adult Cardiac Surgery v2.81
- STS Adult Cardiac Surgery v2.9
- STS Adult Cardiac Surgery v4.20
 - STS Adult Cardiac Surgery v4.20
 - STS Adult Cardiac Surgery v4.20
 - A. Administrative
 - B. Demographics
 - C. Hospitalization
 - Hospital Name [205: HospName]
 - Hospital ZIP Code [210: HospZIP]
 - Hospital Region [215: HospStat]
 - Hospital National Provider Identifier [220: HospNPI]
 - Hospital CMS Certification Number [221: HospCMSCert]
 - Primary Payor [291: PayorPrim]
 - Commercially Managed Medicare Plan - Primary [292: ComMngMedPlnPrim]
 - HICN / MBI Group - Primary [293: HICNMBIKGroup]

Selected Filters

- STS Adult Cardiac Surgery v4.20 is Yes

Step 3) You can select your desired time under the **Time Frame** header and select specific values as well.

New Report

1 Report Type 2 Report Fields 3 Filters 4 Time Frame 5 Finish

Choose Time Frame

The value of
Date of Surgery [310: SurgDt]

Time Frame type

Fixed
 Relative

Custom period

Was on or after
mm/dd/yyyy

Was on or before
mm/dd/yyyy

Standard periods

- 2022
- 2021
- 2020
- 2019
- 2018
- 2017
- 2016
- 2015
- 2014
- 2013
- 2012
- 2011
- 2010
- 2009
- 2008
- 2007
- 2006

Step 4) Under the **Finish** header, you can name and save the report template, then run the report.

New Report

1 Report Type 2 Report Fields 3 Filters 4 Time Frame 5 Finish

Report Summary

Type
Simple

Report Fields

- Patient Last Name [50: PatLName]
- Patient Last Name [50: PatLName] (2)
- Hospital Name [205: HospName]
- Admit Date [305: AdmitDt]
- Date of Surgery [310: SurgDt]
- Hospital Discharge Date [7006: DischDt]
- Surgeon [1955: Surgeon]
- Risk Model Population (Proclid)

Filters

- STS Adult Cardiac Surgery v4.20 is Yes

Time Frame
Date of Surgery [310: SurgDt]

Graphs

Graph Type
 none

Save Template

Report Template Name
STS 4.20 - LOS

Save Template

Run Report

Output Format
Same Window

Run report

Import template Export template

Step 5) The screenshot below is what the report will look like based on the fields and filters that were selected.

Cento All Report Templates New Report Administration DEXTER2\mstockton Log Off

Home All Report Templates Run report

Ad Hoc: STS 4.20 - LOS

Executed 11/11/2022 8:54 PM

Report Filters

- STS Adult Cardiac Surgery v4.20 Is Yes

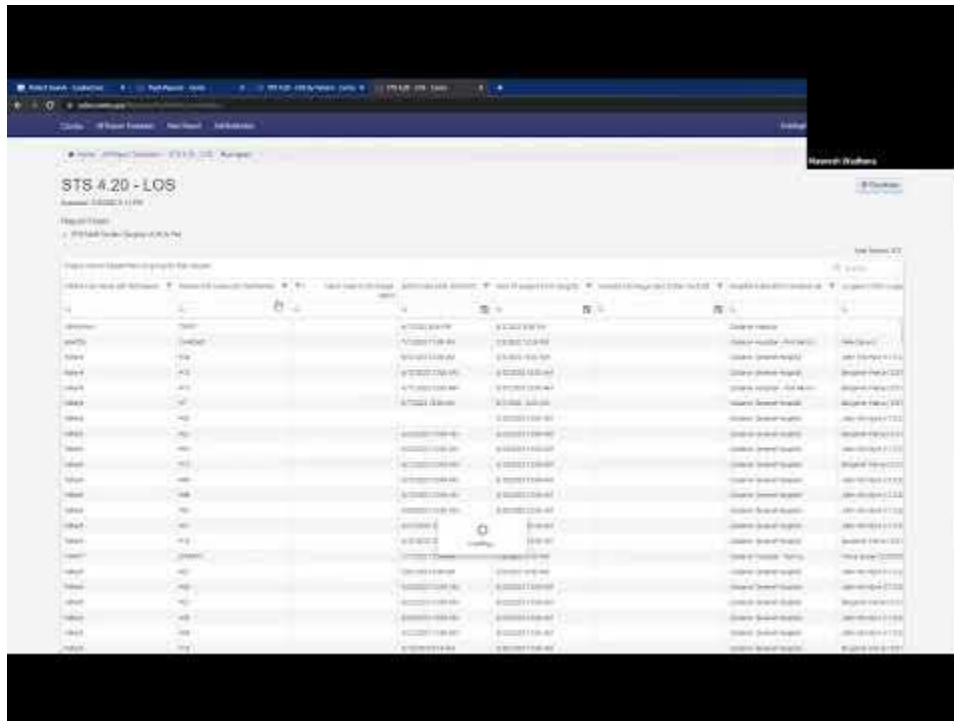
Total Results: 52

Drag a column header here to group by that column

Search...

| Patient Last Name [50: PatLName] | Patient Last Name [50: PatLName] (2) | Hospital Name [205: HospName] | Admit Date [305: AdmitDt] | Date of Surgery [310: SurgDt] | Hospital Discharge Date [7006: DischDt] | Surgeon [1955: Surgeon] |
|----------------------------------|--------------------------------------|--|---------------------------|-------------------------------|---|---------------------------|
| test | test | NCDR Test Facility (Submission) | 11/3/2022 8:12 AM | 11/3/2022 8:12 AM | | |
| NEW | NEW | Hospital Inc. | 12/7/2021 5:31 PM | 12/7/2021 5:31 PM | | |
| Patient | Patient | Cedaron Medical | 8/13/2022 3:10 PM | 8/14/2022 3:11 PM | 8/15/2022 12:00 AM | |
| Smith | Smith | Alpha Hospital | 10/28/2022 8:42 AM | 10/28/2022 8:42 AM | 10/28/2022 12:00 AM | |
| ACOSTA | ACOSTA | Cedaron Heart Health | 4/28/2021 4:34 PM | 4/29/2021 4:34 PM | 4/29/2020 12:00 AM | |
| ACOSTA | ACOSTA | Hospital Inc. | 6/8/2022 4:00 AM | 6/8/2022 5:04 PM | 9/28/2022 12:00 AM | |
| BRITT | BRITT | Harvest Test - Cath/CPMI/ICD/AFib | 1/24/2022 7:05 AM | 1/24/2022 7:05 AM | 1/27/2022 12:00 AM | Practitioner Test (12345) |
| ABRAMS | ABRAMS | Hospital Inc. | 8/14/2021 11:05 AM | 8/15/2021 11:05 AM | 8/16/2021 12:00 AM | |
| ABRAMS | ABRAMS | Cedaron Heart Health | 7/23/2020 1:23 PM | 7/29/2020 1:23 PM | 8/13/2020 12:00 AM | Jay Jacker (231451253) |
| ACEVEDO | ACEVEDO | Cedaron Heart Health | 6/6/2022 12:00 AM | 6/5/2022 3:40 AM | 6/6/2022 12:00 AM | |
| ACOSTA | ACOSTA | Facility for Harvest Submission Test (fstst) | 2/10/2021 12:00 AM | 2/10/2021 12:51 AM | 9/13/2022 12:00 AM | LOIS HANSON (1386607) |
| ACOSTA | ACOSTA | Cedaron Heart Health | 9/11/2020 12:00 AM | 9/11/2020 8:58 AM | | |
| ACOSTA | ACOSTA | Cedaron Heart Health | 7/8/2020 2:46 PM | 7/10/2020 2:46 PM | | |

To calculate the LOS from the admit date to discharge date, you can go back to the **Filters** header to input the required **Report Fields/Filters**. Click on the video below for more information. (Use the back arrow to return to the document).



How to Calculate the Start Time and Create Shortcuts

You can calculate the time frame on a report as well. The example below shows the *OR Entry Date* and *OR Exit date Report Fields* selected.

The screenshot shows a configuration interface with five steps: 1 Report Type, 2 Report Fields, 3 Filters, 4 Time Frame, and 5 Finish. The 'Report Fields' step is active. On the left, a list of fields is shown, with the last three items highlighted in a red box: '+ Add', 'OR Entry Date And Time [2245: OREntryDT]', 'OR Exit Date And Time [2250: ORExitDT]', and 'OR Time'. On the right, the 'Selected Report Fields' list includes: Patient Last Name [50: PatLName], Patient First Name [55: PatFName], Admit Date [305: AdmitDt], Date of Surgery [310: SurgDt], Hospital Name [205: HospName], Surgeon [1955: Surgeon], Risk Model Population (Procid), OR Entry Date And Time [2245: OREntryDT], and OR Exit Date And Time [2250: ORExitDT].

If you hover over the OR Entry Date and Time field and select “Edit”, it will bring up the box in the screenshot below. If you select x^2 Edit Formula, you can copy this information to calculate the values and create an optional shortcut. (See more details on the **Cento Office Hours – Advanced Concepts recording-Time Stamp 14:30**).

The dialog box is titled 'OR Entry Date And Time [2245: OREntryDT]'. It contains the following fields: 'Type' set to 'Date and time', 'Column title' set to 'OR Entry Date And Time [2245: OREntryDT]', 'Date format' set to '11/11/2022', and 'Time format' set to '12 hour'. At the bottom, there are three buttons: 'x² Edit Formula', 'Cancel', and 'Apply'.

How to change your Report Type

If you build a report under one **Report Type** but would like to change it to a different **Report Type**, you can do this by selecting your report and editing the report.

Home / All Report Templates / **Report (22)** Run report

Report (22)

Executed 11/11/2022 10:00 PM Download

Total Results: 2912

Drag a column header here to group by that column Search...

| Patient Last Name [50: PatLName] | Patient First Name [55: PatFName] | Admit Date [305: AdmitDt] | Date of Surgery [310: SurgDt] | Hospital Name [205: HospName] | Surgeon [1955: Surgeon] | Risk Model Population (Proclid) | OR Ent |
|----------------------------------|-----------------------------------|---------------------------|-------------------------------|-------------------------------|-------------------------|---------------------------------|--------|
| Cindy | Frank | | | | | | |
| Robin | Redd | | | | | | |
| Herpson | Harry | | | | | | |
| TomsTestLast | TomsTestFirst | | | | | | |
| Rocket | Johnny | | | | | | |
| Patient | MrPCI | | | | | | |
| Robin | Redd | | | | | | |
| Robin | Redd | | | | | | |
| Cath | Follow-up | | | | | | |
| Test | Feb25Test | | | | | | |
| double | double | | | | | | |
| Test | T | | | | | | |

Home / All Report Templates / Report (22)

Report (22)

Report Type

- Simple
- Sharing state:** Private Report

Report Tags

Report Fields

- Patient Last Name [50: PatLName]
- Patient First Name [55: PatFName]
- Admit Date [305: AdmitDt]
- Date of Surgery [310: SurgDt]
- Hospital Name [205: HospName]
- Surgeon [1955: Surgeon]
- Risk Model Population (Proclid)
- OR Entry Date And Time [2245: OREntryDT]
- OR Exit Date And Time [2250: ORExitDT]

Report Filters

(none)

Output Format

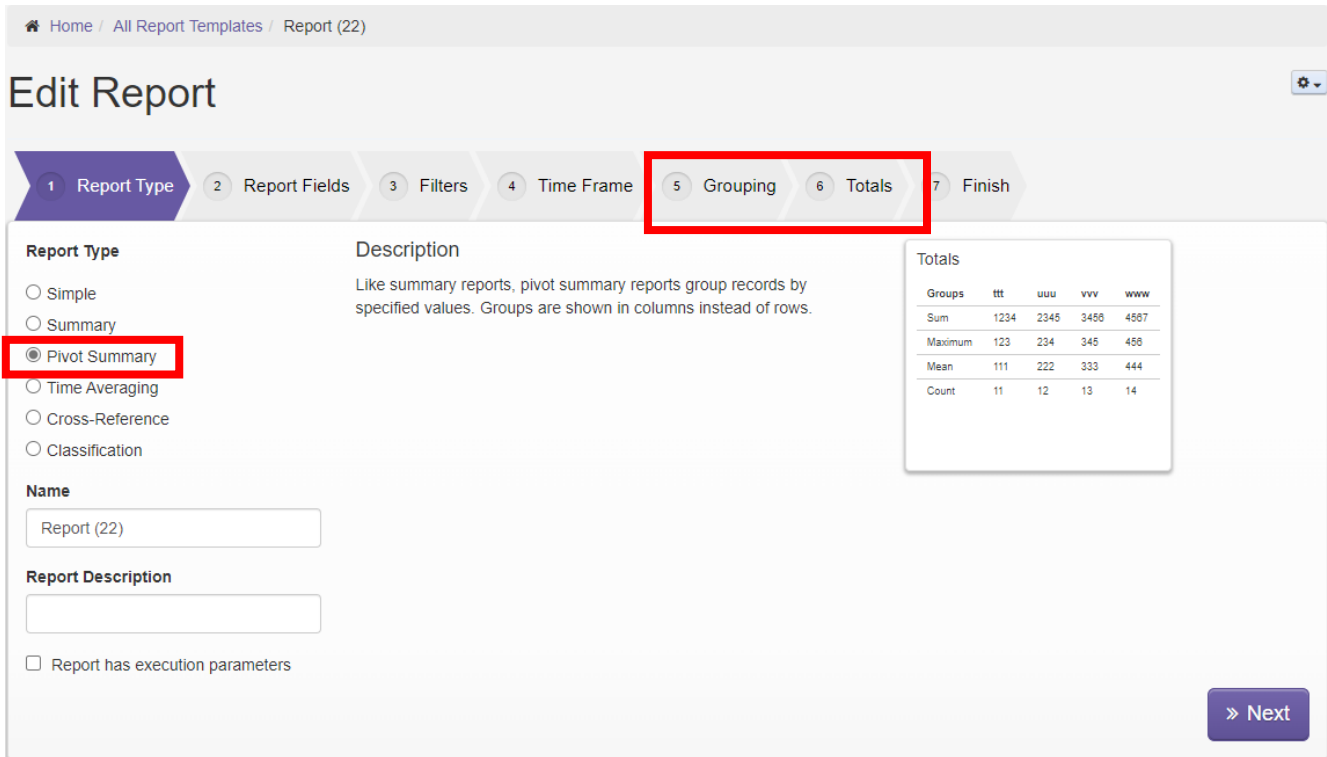
Same Window

Run Report

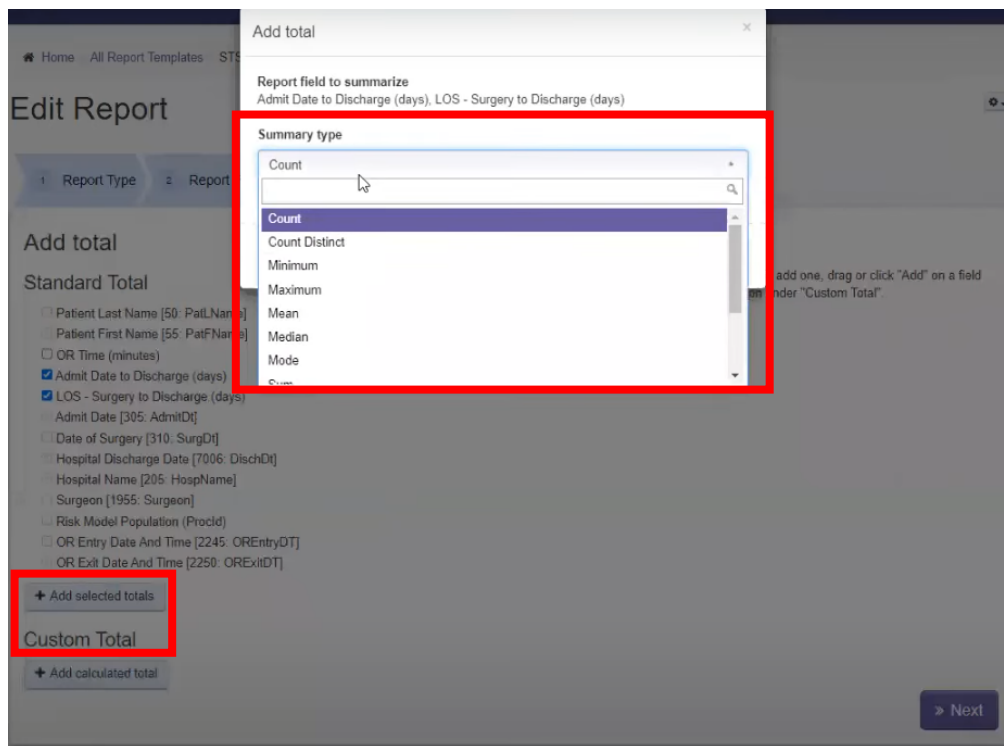
Edit Report
Copy report template
Delete report template

This will bring you to the **Edit Report** headers. The example below shows a **Pivot Summary** being selected from an existing **Simple** report. Selecting the **Pivot Summary** will display two more headers (**Grouping** and **Totals**). **Grouping**

determines what group you want to display the data. This can be summarized by surgeon, risk model, or whatever is required by your workflow.



Under the **Totals** header, you can check information under the standard total for specific calculations. You can select **+ Add selected totals** and it will give you the option to choose your **Summary type**.



Under the **Finish** header you can review everything in your report, as well as adding a **Graph Type** and selecting your **Bar Labels**.

Edit Report

1 Report Type 2 Report Fields 3 Filters 4 Time Frame 5 Grouping 6 Totals 7 Finish

Report Summary

Type
Pivot Summary

Report Fields

- Patient Last Name [50: PatLName]
- Patient First Name [55: PatFName]
- OR Time (minutes)
- Admit Date to Discharge (days)
- LOS - Surgery to Discharge (days)
- Admit Date [305: AdmitDt]
- Date of Surgery [310: SurgDt]
- Hospital Discharge Date [7006: DischDt]
- Hospital Name [205: HospName]
- Surgeon [1955: Surgeon]
- Risk Model Population (Procl)
- OR Entry Date And Time [2245: OREntryDT]
- OR Exit Date And Time [2250: ORExitDT]

Filters

- STS Adult Cardiac Surgery v4.20 is Yes

Totals

- Mean: Admit Date to Discharge (days)
- Mean: LOS - Surgery to Discharge (days)
- Median: Admit Date to Discharge (days)
- Median: LOS - Surgery to Discharge (days)

Time Frame

Date of Surgery [310: SurgDt]

Grouping

- Surgeon [1955: Surgeon]

Import template Export template

Graphs

Graph Type

- none
- Bar
- Stacked Bar
- Multiple Graph Bar
- Pie Chart
- Scatter Plot

Graph Bars

- Mean: Admit Date to Discharge (days)
- Mean: LOS - Surgery to Discharge (days)
- Median: Admit Date to Discharge (days)
- Median: LOS - Surgery to Discharge (days)

Bar Labels

Surgeon [1955: Surgeon]

+ Add

Save Template

Report Template Name

STS 4.20 - LOS

Save Template

Run Report

Output Format

Same Window

Run report

Once you run the report, you can see the Bar Graph is listed by surgeon, and the mean and median of LOS.



If you wanted to look at the groupings by the hospital name, then surgeon, you can go back to the **Grouping** header and add those specifications.

Edit Report

Report Type | Report Fields | Filters | Time Frame | **Grouping** | Totals | Finish

Report summary grouping
Select the report fields that should define the report summary groups. The report totals will be calculated for each unique value represented in all the selected groups.

Click here to add a Top Level Group

Ungrouped Report Fields

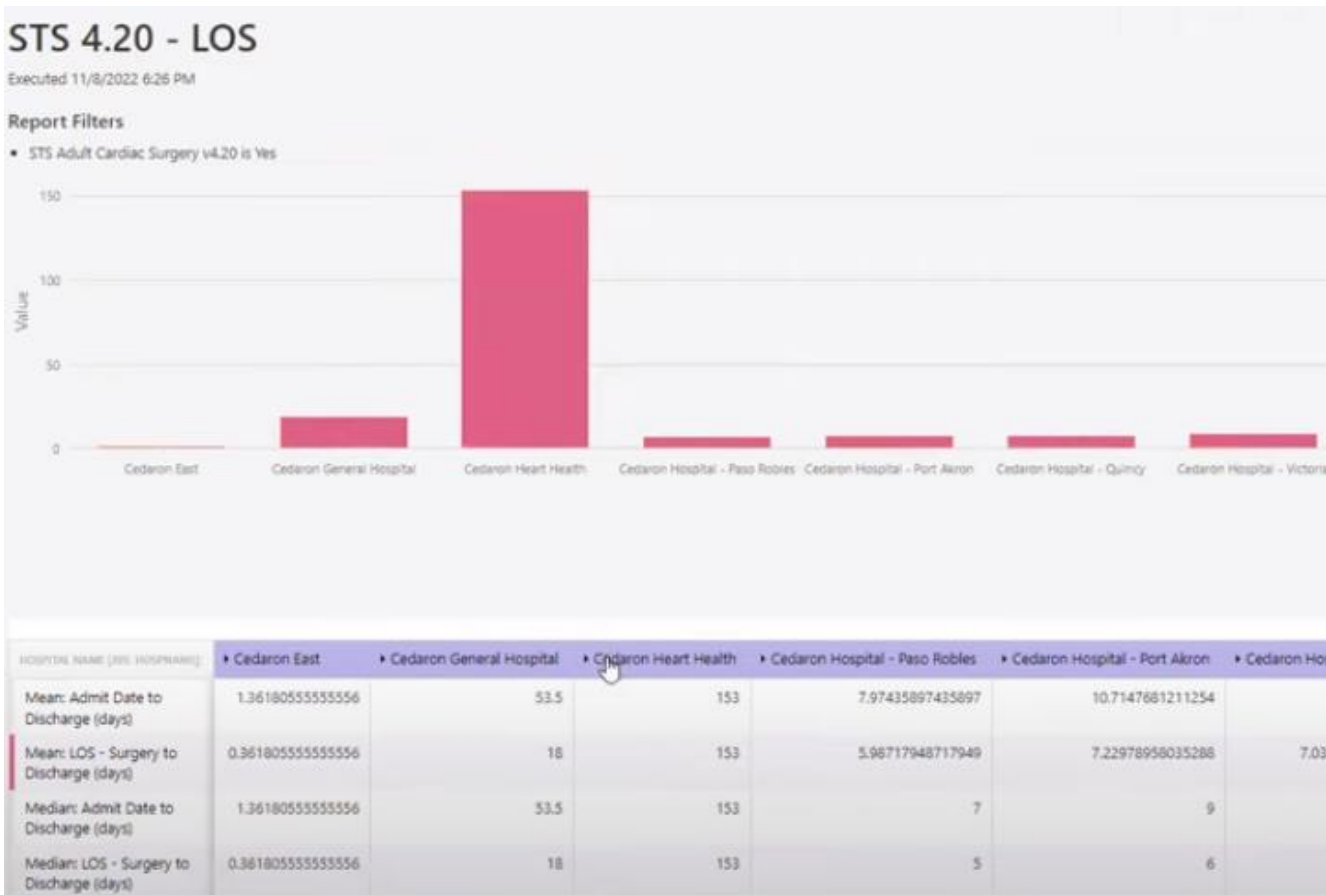
- Patient Last Name [50: PatLName]
- Patient First Name [55: PatFName]
- OR Time (minutes)
- Admit Date to Discharge (days)
- LOS - Surgery to Discharge (days)
- Admit Date [305: AdmitDt]
- Date of Surgery [310: SurgDt]
- Hospital Discharge Date [7006: DischDt]
- Risk Model Population (Procd)
- OR Entry Date And Time [2245: OREntryDT]
- OR Exit Date And Time [2250: ORExitDT]

Selected Groups

- Hospital Name [205: HospName]
- Surgeon [1955: Surgeon]

Next

The screenshot below is what this grouping looks like on the report.



You can also add a benchmark line under the "Finish" header if you would like your report to have one.

Report Summary

Type: Pivot Summary

Report Fields

- Patient Last Name [50: PatLName]
- Patient First Name [55: PatFName]
- OR Time (minutes)
- Admit Date to Discharge (days)
- LOS - Surgery to Discharge (days)
- Admit Date [305: AdmitDt]
- Date of Surgery [310: SurgDt]
- Hospital Discharge Date [7006: DischDt]
- Hospital Name [205: HospName]
- Surgeon [1955: Surgeon]
- Risk Model Population (Procid)
- OR Entry Date And Time [2245: OREntryDT]
- OR Exit Date And Time [2250: ORExitDT]

Filters

- STS Adult Cardiac Surgery v4.20 is Yes

Totals

- Mean: Admit Date to Discharge (days)
- Mean: LOS - Surgery to Discharge (days)
- Median: Admit Date to Discharge (days)
- Median: LOS - Surgery to Discharge (days)

Time Frame

Date of Surgery [310: SurgDt]

Grouping

- Hospital Name [205: HospName]
- Surgeon [1955: Surgeon]

Graphs

Graph Type

- none
- Bar
- Stacked Bar
- Multiple Graph Bar
- Pie Chart
- Scatter Plot

Graph Bars

- Mean: Admit Date to Discharge (days)
- Mean: LOS - Surgery to Discharge (days)
- Median: Admit Date to Discharge (days)
- Median: LOS - Surgery to Discharge (days)

Bar Labels

Hospital Name [205: HospName]

Benchmark Lines

- Benchmark Name: 50th
- Benchmark Value: 8.5

Save Template

Report Template Name: STS 4.20 - LOS

Run Report

Output Format: Same Window

Benchmark - is simply the point or value for reference - to compare numbers with.

For example, at a hospital, Length-of-Stay for surgery might be between 3 days to 7 days. However, for the national average, the LOS (Length of Stay) - is 3.7 days.

Adding a Benchmark value of 3.7 - to a report - adds a horizontal line to the bar-graph - depicting what is the benchmark value you are comparing it to.

Reports can have multiple Benchmark values.

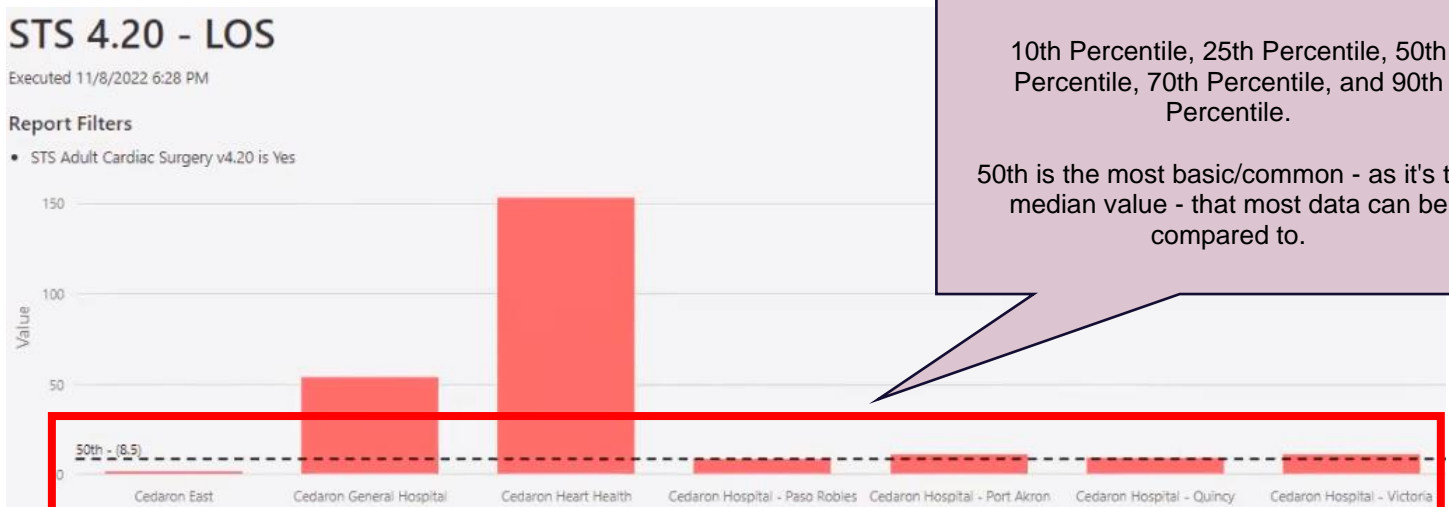
50th - is simply the median (50th percentile).

In case of many NCDR Reports, there are 5 different benchmark values:

10th Percentile, 25th Percentile, 50th Percentile, 70th Percentile, and 90th Percentile.

50th is the most basic/common - as it's the median value - that most data can be compared to.

You can now see the benchmark line on the report.



Repeated Questions

Some reports can have the same information because of multiple answers in CardiacCare. The example below shows what a report looks like for patients with multiple lesions. The report shows the same patient multiple times. This is not an error. (See more details on the **Cento Office Hours – Advanced Concepts recording-Time Stamp 26:19**).

Drag a column header here to group by that column

| Last Name [2000: LastName] | First Name [2010: FirstName] | Procedure Start Date and Time [7000: ProcedureStartDateTime] | PCI Operator | Lesion Counter [8000: LesionCounter] | Stenosis Immediately Prior to Treatment [8004: StenosisPriorTreat] |
|----------------------------|------------------------------|--|-------------------------------|--------------------------------------|--|
| ANDERSON | CHRISTOPHER | 1/9/2019 1:52 PM | | | |
| ANDREWS | HERMAN | 2/11/2019 9:43 AM | | | |
| ANTHONY | ETHAN | 2/21/2019 2:41 PM | | | |
| ANTHONY | MARCELINO | 4/27/2018 11:40 AM | JORGE JONES (1891183855) | 1.00 | 100.00 |
| ARMSTRONG | GLEN | 2/6/2019 12:29 PM | | | |
| ARNOLD | TIM | 2/12/2019 11:33 AM | | | |
| ASHLEY | CLAUDIO | 3/25/2018 4:58 PM | CHRISTOPHER WOOD (2002129280) | 1.00 | 100.00 |
| ASHLEY | CLAUDIO | 3/25/2018 4:58 PM | CHRISTOPHER WOOD (2002129280) | 2.00 | 100.00 |
| ASHLEY | CLAUDIO | 3/30/2018 8:26 AM | CHRISTOPHER WOOD (2002129280) | 1.00 | 80.00 |
| ASHLEY | CLAUDIO | 8/16/2018 9:37 AM | GERALD BELL (1325398969) | 1.00 | 100.00 |
| ATKINS | EDMOND | 1/15/2019 4:00 PM | | | |
| ATKINSON | ISAAH | 1/24/2019 4:28 PM | WILLIAM FOWLER (1416246462) | 1.00 | 100.00 |
| ATKINSON | TRACEY | 6/6/2018 2:55 PM | JORGE JONES (1891183855) | 1.00 | 100.00 |
| ATKINSON | TRACEY | 6/6/2018 2:55 PM | JORGE JONES (1891183855) | 2.00 | 90.00 |
| AUSTIN | RAMON | 1/8/2019 3:34 PM | | | |
| AVERY | DELMER | 9/20/2018 10:52 AM | CHRISTOPHER WOOD (2002129280) | 1.00 | 90.00 |
| AVILA | ELISE | 1/30/2019 10:24 AM | | | |
| AYALA | STEPHAN | 2/16/2019 4:21 PM | GERALD BELL (1325398969) | 1.00 | 70.00 |
| AYALA | STEPHAN | 2/16/2019 4:21 PM | GERALD BELL (1325398969) | 2.00 | 95.00 |
| AYALA | STEPHAN | 2/18/2019 4:13 PM | CHRISTOPHER WOOD (2002129280) | 1.00 | 85.00 |
| AYALA | STEPHAN | 2/18/2019 4:13 PM | CHRISTOPHER WOOD (2002129280) | 2.00 | 85.00 |
| AYERS | MAVIS | 2/5/2019 10:38 AM | | | |
| BAILEY | MILDRED | 3/5/2019 3:44 PM | GERALD BELL (1325398969) | 1.00 | 85.00 |
| BAILEY | MILDRED | 3/5/2019 3:44 PM | GERALD BELL (1325398969) | 2.00 | 70.00 |
| BAILEY | MILDRED | 3/5/2019 3:44 PM | GERALD BELL (1325398969) | 3.00 | 70.00 |
| BAIRD | SIMONE | 12/1/2018 7:50 AM | GERALD BELL (1325398969) | 1.00 | 100.00 |
| BAIRD | SIMONE | 12/1/2018 7:50 AM | GERALD BELL (1325398969) | 2.00 | 90.00 |
| BAIRD | SIMONE | 12/1/2018 7:50 AM | GERALD BELL (1325398969) | 3.00 | 80.00 |

Beginners Using Cento

For beginners just getting started with Ad-hoc reporting using Cento, a good technique to use is to take advantage of the flash reports and manipulate them by adding/deleting fields until you get the information exactly how you want it. Also, try building a simple report by adding fields and filters to get familiar with the headers and how they work. (See more details on the **Cento Office Hours – Advanced Concepts recording-Time Stamp 47:05**).