

Indian Health Service

Qlik® Sense Dashboard Development & Life Cycle

OVERVIEW, UPGRADE AND ADVANCED NEW
FEATURES

SHENG LIU
BI ARCHITECT
8/22/2023





Agenda

- Introduction
- Qlik® Sense Dashboard Overview
- Qlik® Upgrade & Advanced New Features



Introduction

- Division of Data Management and Analytics
- National Patient Information Reporting System (NPIRS)
 - National Data Warehouse
 - Functional Data Marts
 - **Dashboards – Qlik® Sense**
 - Tabular Canned Reports
 - Tabular Ad hoc Reports
- Key Stakeholders
 - Originally supported OPHS, ORAP, and OCPS
 - Extended service to 8 of 12 Program Offices
 - Area and Site Level Support
 - Congress, OMB
 - Partnering Federal Agencies (i.e. CDC, HHS, CMS)



National Patient Information Reporting System (NPIRS)



- The national data repository
- It enables IHS the ability to produce reliable and timely reports in support of statutory, regulatory, and administrative obligations, including user population counts, workload reporting, accreditation, and GPRA performance measures.
- It provides the framework for a Business Intelligence environment that enables data discovery, mining, predictive analysis and trending of key performance indicators in support of patient care and patient care management.

BI/BA Solutions

Business Intelligence

Answers to Questions:

What happened?

Why?

When?

How many?

Includes:

Reporting (KPIs, metrics)

Dashboards

Scorecards

Ad-hoc Queries

Business Analytics

Answers the Questions:

Why did this happen?

Could/would it happen again?

What will happen if we make a change?

What else does the data tell us?

Includes:

Data Mining

Predictive Modeling

Forecasting

Trend Analysis

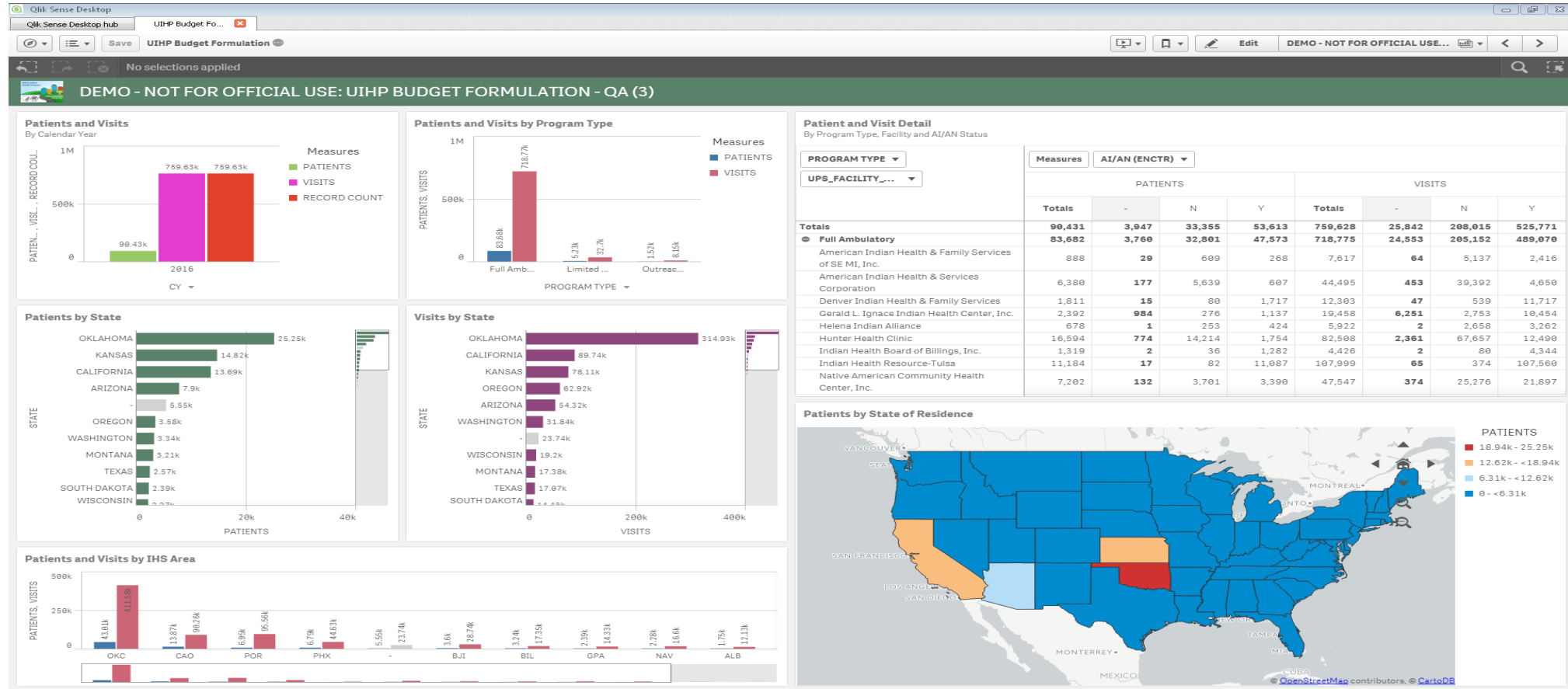
Geospatial Analysis

DASHBOARDS

A dashboard is a reporting solution, delivered by a Business Intelligence tool, that enables the integration and visualization of data to support decision making, trending, analysis and reporting.



DASHBOARDS, con't



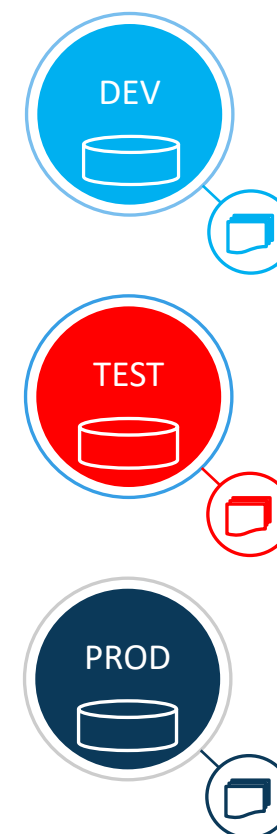


NPIRS Environment Overview

- The NPIRS Enterprise Environments are installed and maintained on DDMA Servers.
 - DEV - Development (Controlled Environment)
 - TEST - Testing/QA (Controlled Environment / QA Public Access via D1 / Section Access)
 - PROD - Production (Controlled Environment / Public Access via D1 / Section Access)
- Each environment contains Qlik® Sense, Qlik® View, Geo-Analytics and Qlik® Nprinting.
- Each environment has an independent data source connection that does not cross environment boundaries.

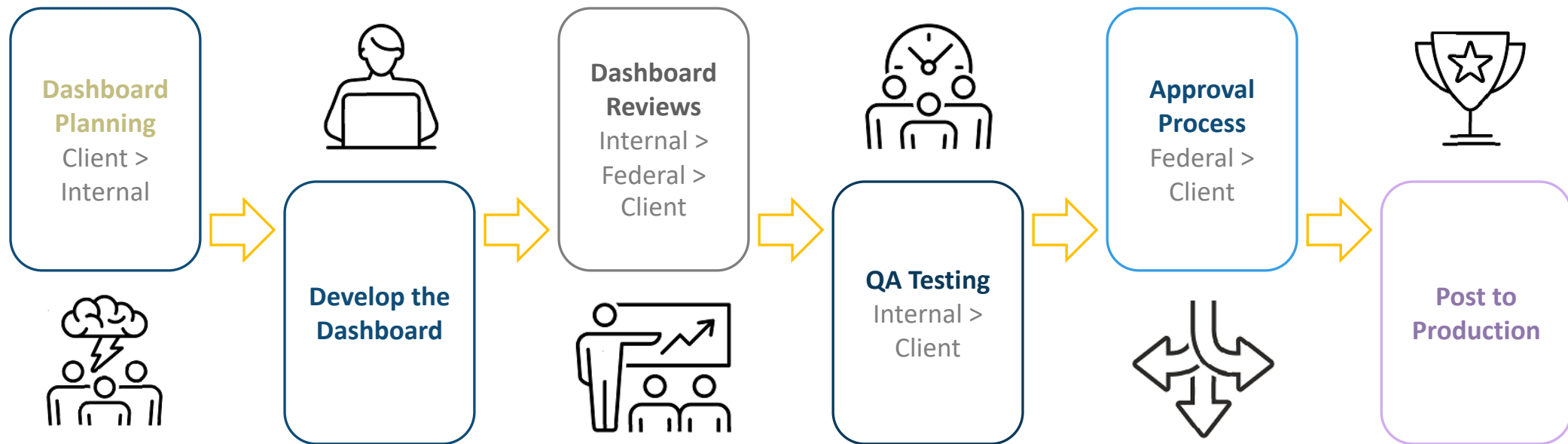


NPIRS Enterprise Environments





Dashboard Planning: Life Cycle Overview





Dashboard Planning: Client Meeting Key Points

DDMA will set up a project kickoff meeting with the client to determine these basics:

- Dashboard Objective
- Data Sources
- Visual Objects and Tables
- Draft the Requirements Documentation





Dashboard Planning: Users

Who is the audience?

DDMA develops and maintains dashboards for a wide variety of clients/stakeholders for IHS that include:

- IHS Users
 - IHS Headquarters, Offices/Divisions, Program & Area Offices
- Tribal/Urban Users
- Internal/External Partners





Dashboard Planning: Security Considerations

➤ Does the dashboard require Secure Access?

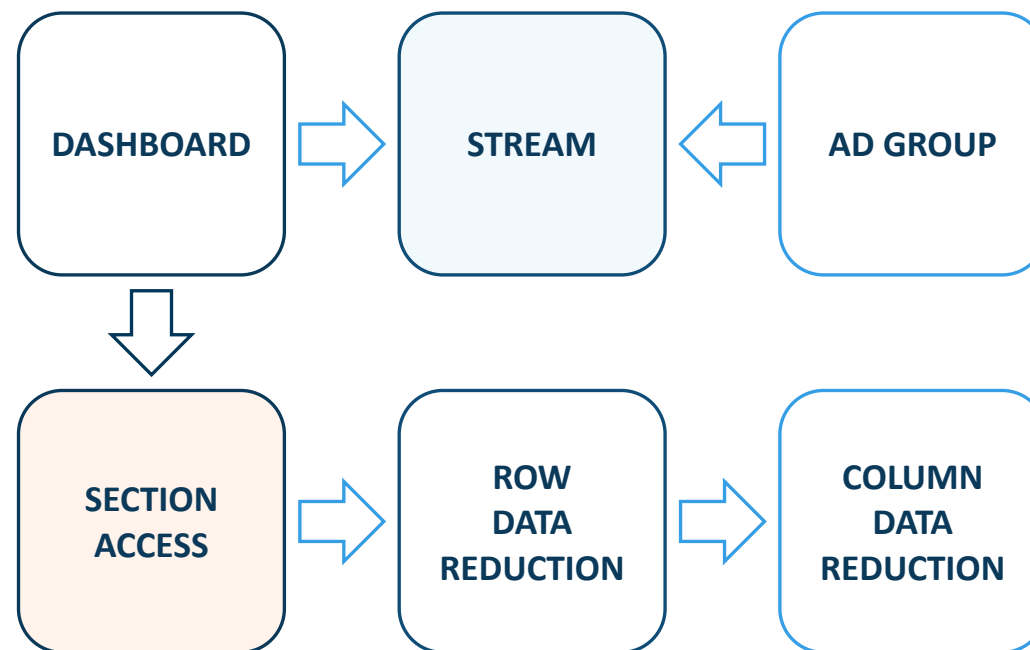
- The default level of security for all dashboards is the AD Group(s) that are connected to the dashboard stream.

➤ Section Access can provide additional levels of security to better protect the dashboard data to users.



Dashboard Planning: AD Group and Stream

- Existing Stream and AD Group(s)
- New Stream and AD Group(s)



** Some abilities may require the developer to work with the Qlik® Sense Administrator.*

Designing the Dashboard

Best Practices and Guidelines

- NPIRS provides a dashboard template and best practice guidelines for developing and designing a dashboard.
- Apps/dashboards developed on DEV are migrated to TEST for QA and later to PROD via the NPIRS migration process guidelines.

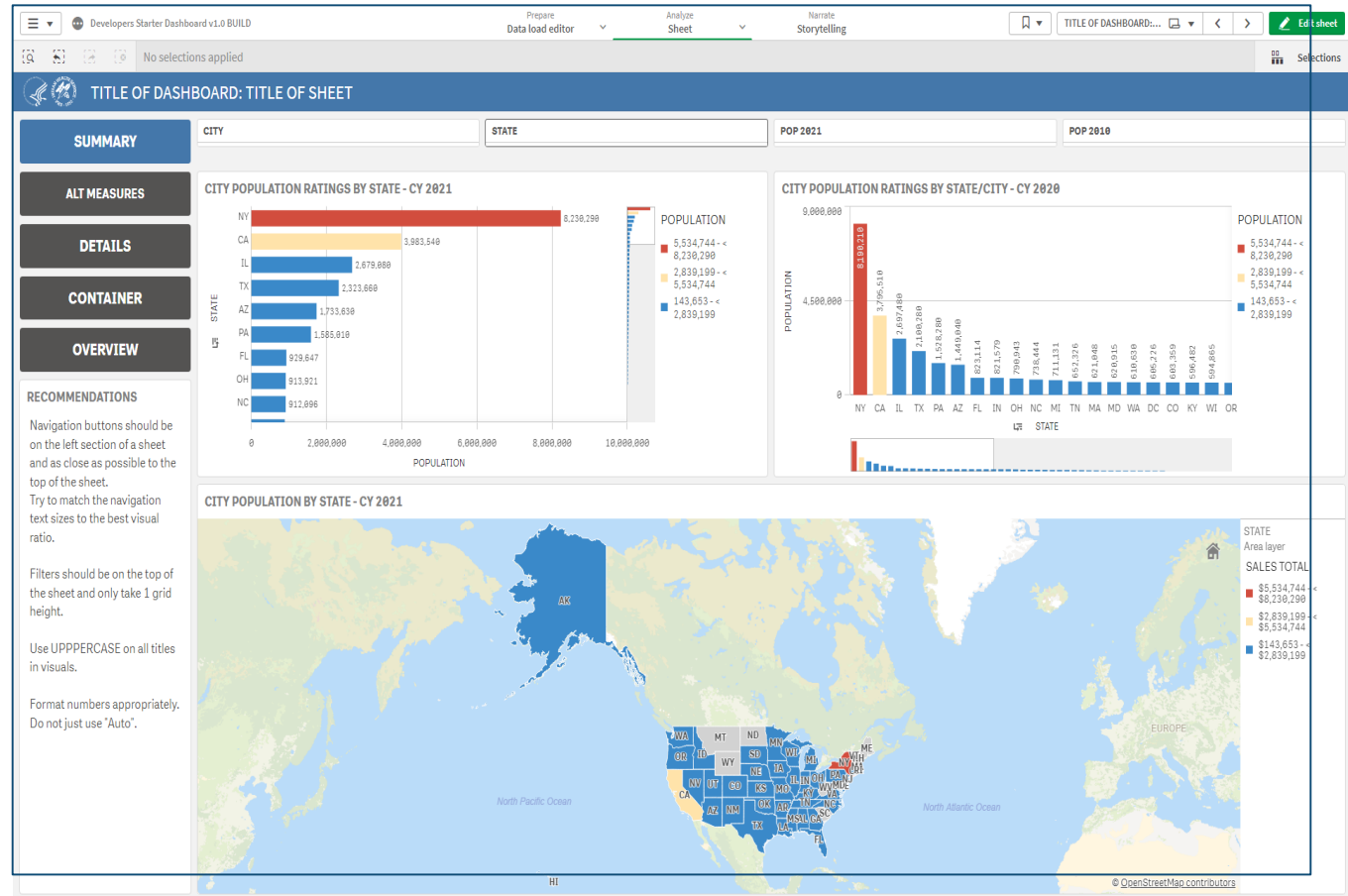


Designing the Dashboard: Developers Template

Developers Dashboard Template

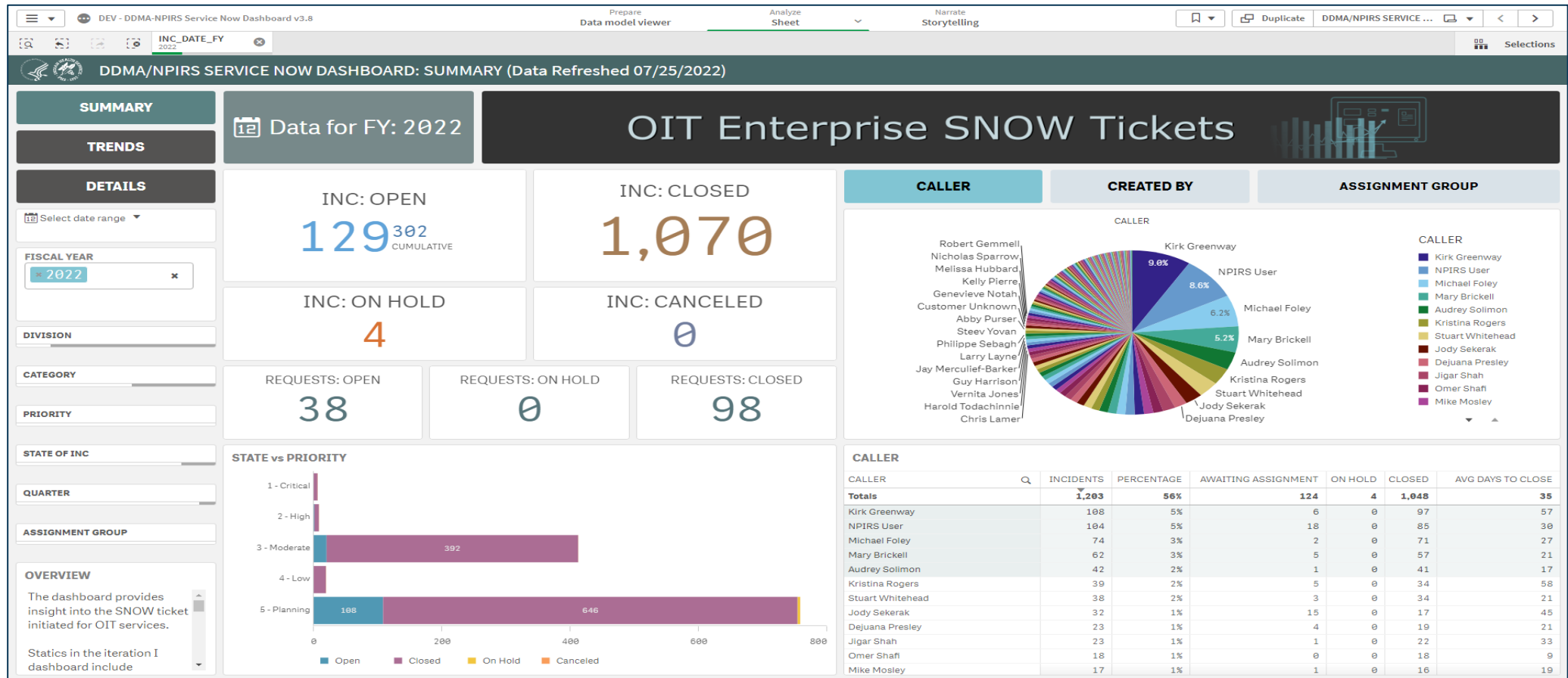
NPIRS has designed a developer's dashboard that can assist the build of a new dashboard with most of the main components already added, including:

- Layout and Navigation
- Disclaimer Sheet
 - Scripting that supports the Disclaimer functionality
- General sample sheets
- Overview sheet





Designing the Dashboard: Summary Sheet



Designing the Dashboard: Navigation & Filters

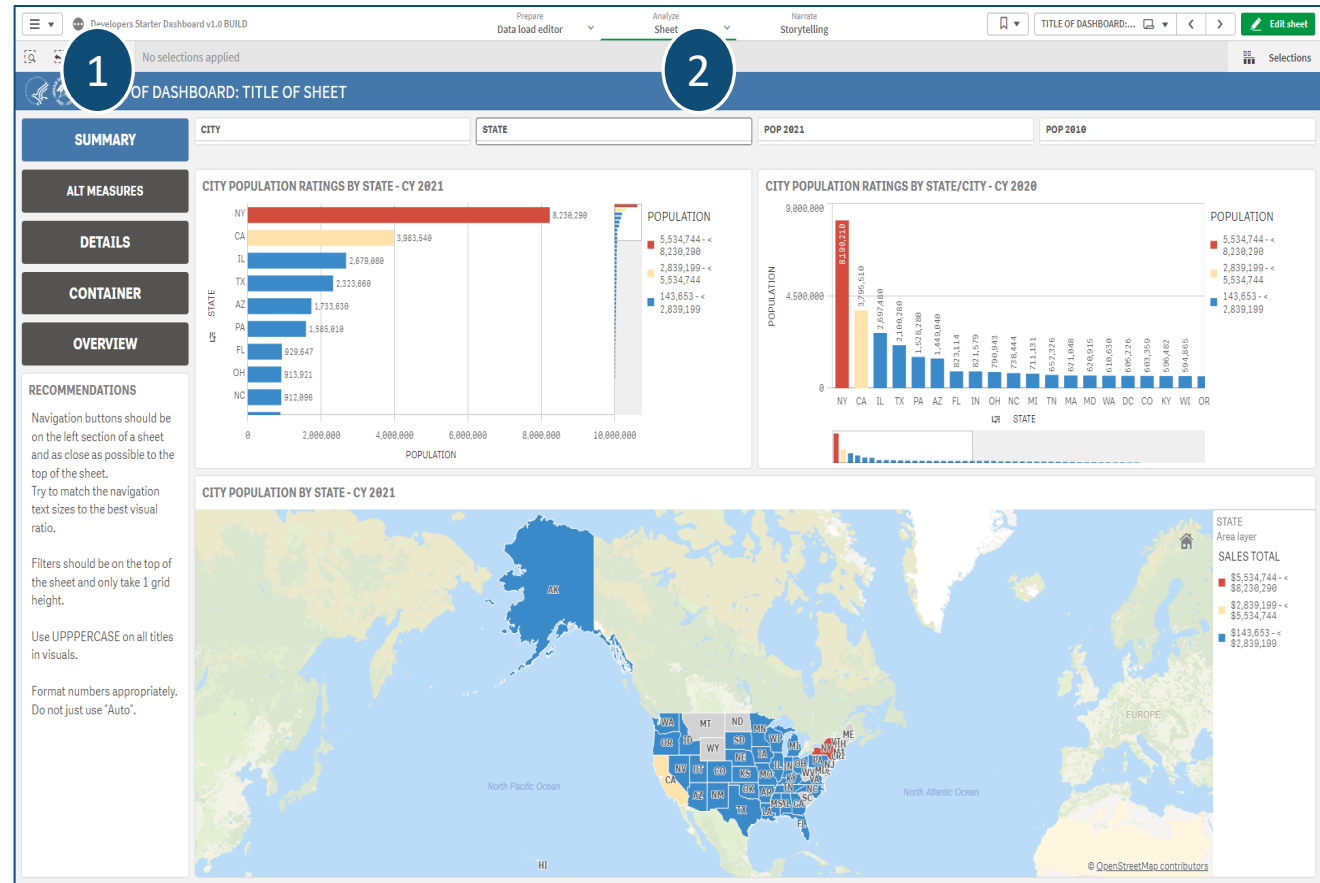
Navigation (1)

The Navigation creates the dashboard flow and visually allows the user to identify the sheets in the dashboard.

Filters (2)

Filters allows ease of use for the users to sort data that best works for their objectives.

Individual filters may be present under the navigation section; however, it is recommended to have a consistent filter bar at the top of all sheets that contain data elements, and to be positioned to the right of the navigation section.





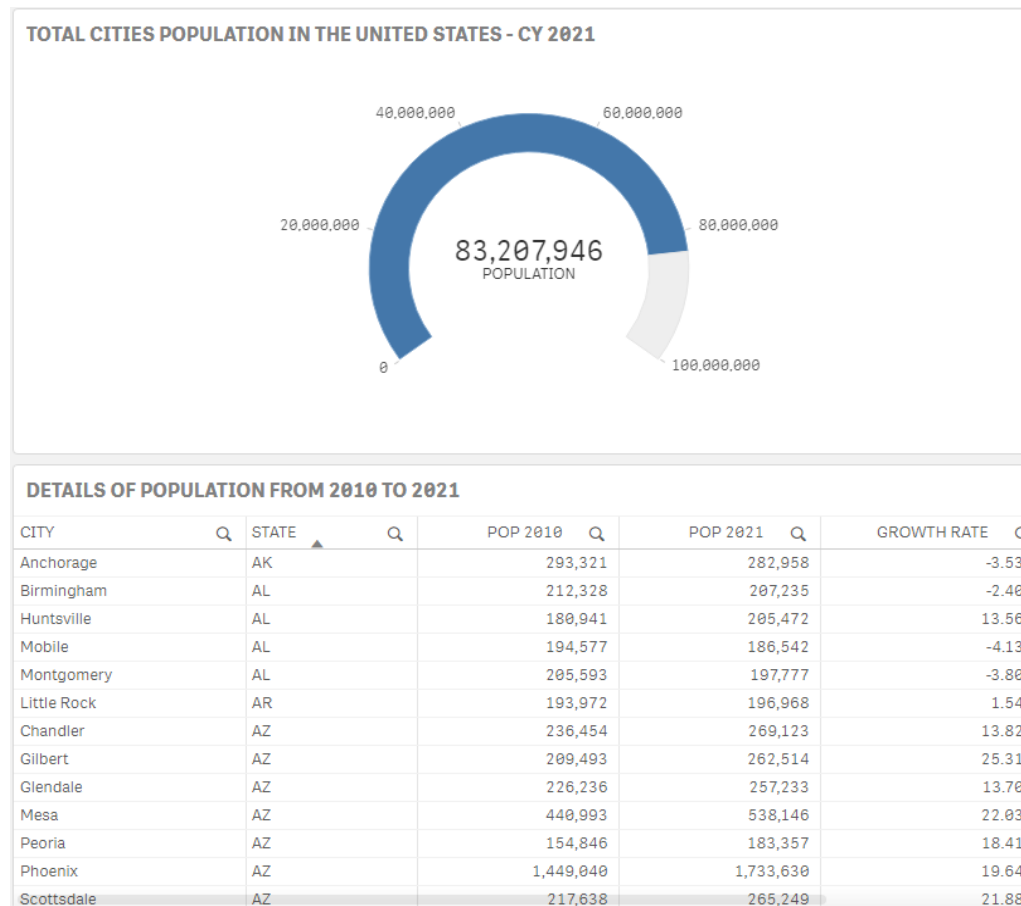
Designing the Dashboard: Titling & Labeling

Title Everything (if possible)

- Titling all objects

Labels that Make Sense

- Data dimension and measure labels should be manually entered and not allowed to default.



Designing the Dashboard: Labeling

Labeling Objects for Clarity

- The label of an object will by default, repeat the dimension name or the measures expression. These can leave confusing content in the chart labeling and filter tracker (top right in dashboard when selections are made).
- Labels should be manually updated to display a proper title of the dimension or measure. This will also ensure when selections are being made, the filter tracker will correctly display properly.

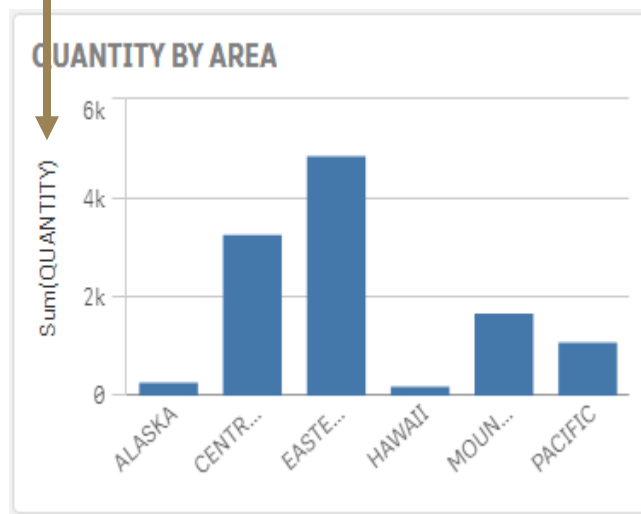
Expression

Sum(QUANTITY) *fx*

Modifier >

Label

Sum(QUANTITY) *fx*



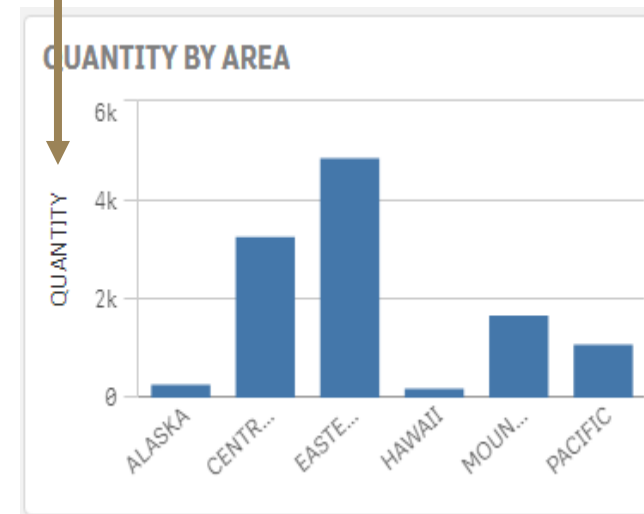
Expression

Sum(QUANTITY) *fx*

Modifier >

Label

QUANTITY *fx*



Designing the Dashboard: Hover Menu

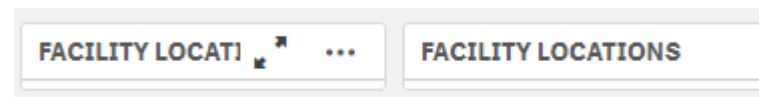
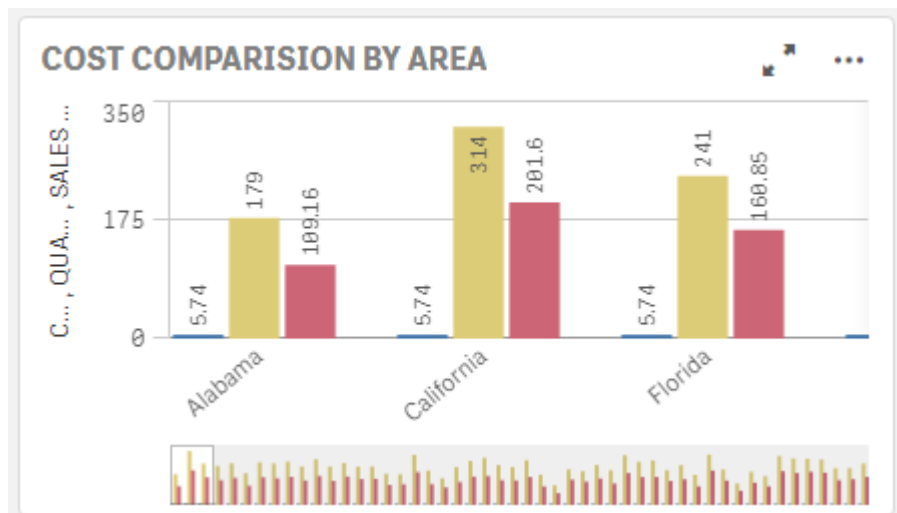
Using and not using the Hover Menu

Qlik® Sense has a “hover menu” that is enabled on all objects by default.

The hover menu is very useful for charts and tables that may be small in the dashboard and need expanding to see the data more clearer.

For other objects such as KPI's, single filter or grouped filter's and buttons, the hover menu can be more hindering to the user and should be disabled for these objects.

The left section in the examples below, shows how the hover menu can get in the way of the objects labeling/titling when the mouse enters the filter and can be easily clicked when trying to select the filter. The right example has the hover menu disabled.



Designing the Dashboard: Overview Sheet

Overview Sheet (optional)

- An overview sheet allows the ability to offer detailed instructions for the users that may assist in understanding how to use the dashboard or the data.
- Overview sheets can contain sheet screenshots, demonstrative graphics and detailed text.
- Work with the client to see if an overview sheet is required.

The screenshot displays a dashboard titled "Developers Starter Dashboard v1.0 FINAL" with tabs for "Prepare Data model viewer", "Analyze Sheet", and "Narrate Storytelling". The main content area is titled "TITLE OF DASHBOARD: TITLE OF SHEET" and features a left-hand navigation menu with options: SUMMARY, ALT MEASURES, DETAILS, CONTAINER, and OVERVIEW (highlighted in blue).

The "OVERVIEW" section contains the following text:

Navigation & Common Filters
All dashboards should have a standard navigation on the left top section of each sheet. Each navigation option should be directed to any main data sheet.
A standard filter bar will also be present on each sheet. Other filters may also be on sheets, but the top filter bar is reserved for common filters.

Below the text are two screenshots of the dashboard interface. The first screenshot shows a navigation menu on the left and a filter bar at the top. Callouts indicate: "USE THE STANDARD FILTER BAR TO FILTER DATA. THIS STAYS ACTIVE ACROSS ALL SHEETS" and "USE THE LEFT NAVIGATION BUTTONS TO NAVIGATE SHEET TO".

The second screenshot shows a table of data with a callout indicating: "1. RIGHT CLICK ANYWHERE ON THE HEADING AREA OF THE TABLE TO OPEN THE DIALOG MENU". Another callout points to a "Download as..." option in the menu: "2. SELECT THE 'DOWNLOAD AS...' OPTION". A third callout points to a "Data" option: "3. SELECT THE 'DATA' OPTION". A final callout points to a download link: "4. WHEN THE DATA DOWNLOAD IS READY, THERE WILL BE A WINDOW DISPLAYED WITH THE LINK".

Below the screenshots, the text reads: **Details Sheet and Exporting Data**
The details sheet holds a base table of all data elements.
This table has the ability to be exported as described in the following image.



Deliverables after Dev.: Landing Page

- Prior to the client review, the development team will initiate the creation of a landing page.
- The landing page allows for a single-entry page for multiple dashboards accessibility using an easily identifiable URL address.
- Landings pages follow web standards but may be different in layout and design.
- Landing page dashboard links are controlled by a NPIRS managed data table to allow seamless dashboard URL changes.

IHS Intranet A-Z Index

IHS Quality Reporting

Indian Health Services has developed an enterprise data analytics framework that ensures mission critical data is transformed into meaningful, insightful and useful information to support the mission of the agency of raising the physical, mental, social, and spiritual health of American Indians and Alaska Native (AI/AN) to the highest level. Quality of care is an agency priority, and IHS is committed to providing a high-performing health care delivery system for AI/AN people with data-driven analytics to advance mission outcomes.

IHS Performance Measure Reporting:

[NAD-Q AREAS vs NATIONAL REPORTS Dashboard](#)

[IQR/OQR QUALITY REPORTING Dashboard](#)

[WAIT TIME / PRIMARY CARE VISIT Dashboard](#)

[WAIT TIME / OP18 & OP22 Dashboard](#)

IHS Intranet A-Z Index

IHS ORAP National Reporting

The Office of Resource Access and Partnerships (ORAP) serves as the lead office for the Business Office and Purchased Referred Care (formerly known as Contract Health Services) within the Indian Health Service (IHS). According to the current functional statement, ORAP is responsible for the following functions:

1. Provides Agency-wide leadership and consultation to the IHS direct operations and Tribal programs on IHS goals, objectives, policies, standards and priorities regarding the **operations and management** of the Business Office Services (BOS) and the Contract Health Services (CHS) programs;
2. Develops and implements **objectives, priorities, standards, measures and methodologies** for the BOS and CHS programs;
3. Manages and provides **leadership, advocacy, consultation and technical support** to Headquarters, IHS Areas and local levels on the full scope of BOS and CHS activities;
4. Represents the IHS at meetings and in discussions regarding **policy, legislation and other national issues**;
5. Provides **oversight and monitors** the BOS and CHS programs regarding compliance requirements, utilization reviews, revenue measures and reports;
6. Formulates and analyzes **BOS and CHS budgets** and prepares information for program budget presentations;
7. Collaborates and coordinates with IHS information technology staff and external organizations on **new technologies, applications and business practices**;
8. Develops resource opportunities and coordinates the BOS and CHS activities with other governmental and nongovernmental programs, **promoting optimum utilization** of all available health resources;
9. Participates in cross-cutting issues and processes including, but not limited to emergency preparedness/security **budget formulation**, self-determination issues, and **resolution of audit findings** as may be needed and appropriate.

→ Enter
ORAP 3RD PARTY REVENUE
Dashboard - UFMS Data

→ Enter
ORAP ALTERNATE RESOURCES
Dashboard

→ Enter
ORAP FOLLOW THE MONEY
Dashboard

→ Enter
ORAP STATUS OF FUNDS
Dashboard

→ Enter
ORAP ENCOUNTERS
Dashboard

→ Enter ORAP RIGHT
OF RECOVERY Dashboard - RPMS
Data



Deliverables after Dev.: Internal Reviews

Internal Review with Contract Management and Peers

When the dashboard development has been completed, it is highly recommended to get feedback from the contract management staff and peers.

This helps identify any possible mistakes made or ambiguous data before presenting to the Federal management for their review.

Internal Review with Federal Management

All dashboards must be approved by the Federal Managers prior to the client review.

The Federal managers may suggest additional improvements for the dashboard.



Deliverables after Dev.: Client Review

Introducing the Client to the New Dashboard

After the dashboard has been approved by Federal Management, it is now time to migrate the dashboard to the TEST Enterprise Environment for client management review, feedback, and approvals.

- A meeting is initiated with the client management staff.
- NPIRS will present the dashboard to demonstrate the understanding of the objectives and the functionality of the dashboard.
- NPIRS listens to the client(s) responses, takes notes for any changes that are requested.
 - If any minor/major requests are made, NPIRS will suggest an expect time frame to complete the work before the next review.
- NPIRS will initiate a follow-up meeting for final review.



Static Reporting: Qlik® Nprinting

START WITH A GOOD REPORT TITLE

Then a Good Opening Sub-Title

The main content section would have information about the main subjects of this report. It may continue to provide more information so the viewer receives a well understanding of all the data elements and what they represent.

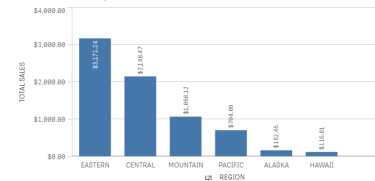
The content section can also include bullet items to:

- Represent the data for effectively.
- Explain the story of the data.
- Offer suggestions or estimates of the data.
- Or any other details that are relevant.

TOTAL SALES
\$7,371.38

Including some text above a visual chart can be helpful to explain the following chart. The text may include details of the chart or maybe just summarized content that explains what the chart represents.

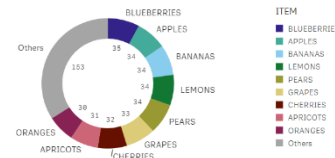
SALES (DRILL DOWN)



Charts & Visuals that Tell the Story

Not to overdo it, but sometimes a few extra charts or a map can tell a more detailed story of the report. All visuals in the report should have a useful relevance for the recipient so that the report is more effective to their needs.

ITEM QUANTITIES



Any data visual or table in the report will respond to reporting filters. What this means is when filters are not set, the report display data in what is referred to as a national level. When filters are set, let's say for a specific region or location, then all the data elements (visuals and detailed table) will only show data for the set filter.



The Details are in the Details

A detailed table of all the raw data can be useful for some recipients that find this type of detailed data display more useful.

REGION	AREA	STORE	ITEM	QUANTITY	COST	SALES TOTAL
ALASKA	Alaska	Albertsons	APRICOTS	33	0.65	\$21.45
ALASKA	Alaska	Albertsons	LEMONS	33	0.49	\$16.17
ALASKA	Alaska	Kroger	BLUEBERRIES	48	0.75	\$36.00
ALASKA	Alaska	Kroger	LEMONS	14	0.88	\$12.32
ALASKA	Alaska	Sprouts	GRAPEFRUITS	20	0.48	\$9.60
ALASKA	Alaska	Whole Foods	GRAPEFRUITS	46	0.57	\$26.22
ALASKA	Alaska	Whole Foods	LEMONS	42	0.56	\$23.52
ALASKA	Alaska	Whole Foods	LIMES	19	0.68	\$12.92
ALASKA	Alaska	Whole Foods	PEARS	5	0.89	\$4.45
CENTRAL	Alabama	Albertsons	CHERRIES	36	0.57	\$20.52
CENTRAL	Alabama	Albertsons	GRAPES	24	0.65	\$15.60
CENTRAL	Alabama	Giant	APPLES	22	0.48	\$10.56
CENTRAL	Alabama	Giant	LIMES	16	0.74	\$11.84
CENTRAL	Alabama	Safeway	MANGOS	4	0.56	\$2.24
CENTRAL	Alabama	Safeway	PEARS	4	0.88	\$3.52
CENTRAL	Alabama	Smiths	APPLES	29	0.68	\$19.72
CENTRAL	Alabama	Smiths	BLUEBERRIES	18	0.69	\$12.42
CENTRAL	Alabama	Smiths	PEARS	26	0.49	\$12.74
CENTRAL	Arkansas	Albertsons	CHERRIES	37	0.49	\$18.13
CENTRAL	Arkansas	Giant	BANANAS	32	0.65	\$20.80
CENTRAL	Arkansas	Kroger	APRICOTS	41	0.74	\$30.34
CENTRAL	Arkansas	Kroger	PEARS	42	0.57	\$23.94
CENTRAL	Arkansas	Safeway	BLUEBERRIES	29	0.69	\$20.01
CENTRAL	Arkansas	Sprouts	PLUMS	25	0.49	\$12.25
CENTRAL	Arkansas	Walmart	CHERRIES	21	0.75	\$15.75
CENTRAL	Arkansas	Walmart	CHERRIES	46	0.89	\$40.94
CENTRAL	Arkansas	Walmart	GRAPEFRUITS	20	0.88	\$17.60
CENTRAL	Illinois	Giant	CHERRIES	23	0.49	\$11.27
CENTRAL	Illinois	Giant	ORANGES	19	0.65	\$12.35

Quality Assurance (QA) Testing

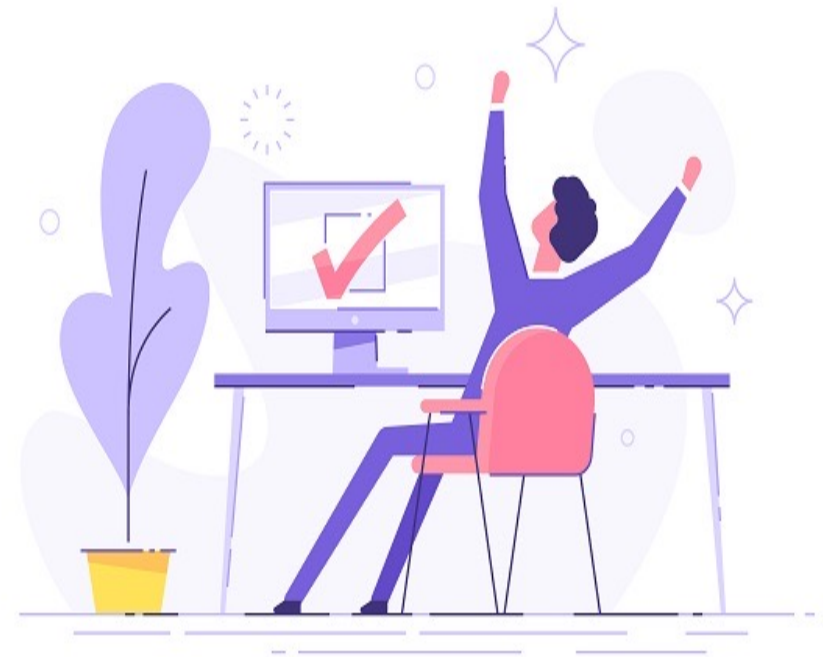
When the dashboard has been approved by the client management staff, then the dashboard is now ready for client QA Testing.





FINAL Stages

- After QA has completed and the client has approved for Production, NPIRS initiates the final stages.
- The Federal Manager will give the final approval to migrate the dashboard and landing page to the Production environment.
- After Production migration, NPIRS will test the dashboard to ensure it is working as expected and testing the landing page links.
- The Federal Manager will be notified the dashboard and landing page is ready for the client.
- The Federal Manager will send an email to the client notifying them their dashboard is published to Production and include the landing page link.





How to access Qlik® Dashboard?

ACCESS PROCESS FOR PROD DASHBOARDS

1. Requestor's Supervisor should submit a SailPoint request for access to a NPIRS PROD Dashboard.
2. The Product Owner will approve the request.
3. NPIRS receives the request.
4. Access is granted by adding the requestor to the PROD Dashboard appropriate AD Group.
5. User(s) are notified of their access

Note: Access to certain dashboards can be granted to the Area or Facility level (also known as Section Access)



SNOW_Sailpoint Request

The screenshot shows a service request portal interface. On the left is a vertical navigation menu with categories and counts: My Team's Access (21), Active Directory Services (8), Applications and Software Services (4), Conferencing and Meeting Reque... (3), Data Center Services (4), Desk Phones, Mobile Service and... (4), Facility Services (6), General IT Services (4), Hardware Services (3), Health IT Services (13), Messaging and Collaboration Ser... (3), National Data Warehouse (4), Network Services (2), and Web Services (7). A large blue arrow points to the 'My Team's Access' category. The main content area is titled 'Popular Items' and contains six request cards: 'RPMS User Access Request' (Request for access to various RPMS systems), 'Shared Drive/Folder Request' (Request to add permissions, remove permissions, transfer, or create network share folders), 'Enterprise VPN Remote Acc...' (Request enterprise VPN account), 'Active Directory Group Req...' (Request for change to any D1 Active Directory Account, Group or Group Manager), 'Software Installation Request' (Request for installation of Enterprise, medical software or non-standard software), and 'PIV Exemption Request' (Request for an employee to be exempt from PIV enforcement). Each card has a 'View Details' link at the bottom.

A supervisor has to submit a SNOW/ Sailpoint request to request access to a NPIRS BI/ Qlik Solution.



SNOW_Sailpoint Request

CHEF Access Request Request access to the CHEF system View Details	Cloud Account Access Requi... Request for access to Cloud Accounts (ex. Azure) View Details	D1 Secure FTP Access for RP... Request for Secure FTP Access for RPMS View Details
Direct Messaging Access Re... Request for access to RPMS Direct View Details	EDR Admin Access Request Request for EDR Admin Access View Details	Enterprise VPN Remote Acc... Request enterprise VPN account View Details
Healthshare (Ensemble) Acc... Request for access to Healthshare (Ensemble) View Details	IT Hardware Request Request IT Hardware for new or existing employees View Details	Multi-Access Enablement Request Access to multiple systems and services in a single Request View Details
NPIRS - System Access Requi... Request access to NPIRS enterprise systems View Details	PHR Admin Access Request Request for administrative access to the PHR system View Details	PIV Exemption Request Request for an employee to be exempt from PIV enforcement View Details





SNOW_Sailpoint Request

NPIRS - System Access Request

Request access to NPIRS enterprise systems

* Requested for <input type="text"/>	* Requested by <input type="text" value="Vanessa Weaver"/>
* Facility <input type="text"/>	Phone Number <input type="text"/>
Current Entitlements <input type="text"/>	
Email Address <input type="text"/>	Title <input type="text"/>
Service Units <input type="text" value="-- None --"/>	
* Access Type <input type="text" value="-- None --"/>	
Employee Role Type <input type="checkbox"/> Health Provider <input type="checkbox"/> Office Worker <input type="checkbox"/> Non-IHS	

Complete the request for access for the user that will need access to the BI/Qlik reporting solution.



SNOW_Sailpoint Request

Request access to NPIRS enterprise systems

Service Units
-- None --

* Access Type
-- None --

Search: |

- NPIRS [NADQ Dashboard]
- NPIRS [NADQ Web Portal]
- NPIRS [National UDS Dashboard]
- NPIRS [NDECI Dashboard]
- NPIRS [OEHE Dashboard]
- NPIRS [Operational Reporting Dashboard]
- NPIRS [Opioid Surveillance Dashboard]
- None --

* Justification

Submit Add attachments

Select the BI Dashboard of interest, if you don't see the dashboard in the list, select 'NPIRS Other' and enter the name of the dashboard in the pop-up field



Qlik® Documents

All subjects discussed in this presentation have detailed documentation and are available here: <https://home.ihs.gov/npirs/qlik/>

STANDARDS DOCUMENTS

- Qlik® Data Overlay - Flow Diagram [PDF]
- NPIRS High Level Overview v1.3 [PDF]
- AD Group Requests in SNOW User Guide [PDF]
- Qlik® Sense App Management Guidelines [PDF]
- Qlik® Sense Apps Dashboards Migration Processes [PDF]
- Qlik® Sense Dashboard Development Guidelines [PDF]
- Qlik® Sense Dashboard Disclaimer Sheet Standards [PDF]
- Qlik® Sense PowerUser Role [PDF]
- Qlik® Sense Tasks Guidelines [PDF]
- Section Access Quick Start Guide [PDF]
- Section Access Request Requirements v1.0 [PDF]



The latest Qlik® Upgrade

- May release of 2022 - > the current release levels of November 2022 in all three environments.



New Features in Qlik[®] Sense[®]

Areas of Improvements:

- Visualization/Visual Analytics Improvements
- Augmented Intelligence/Augmented Analytics
- Connectivity/Connectors
- Administration/Platform Improvements
- Other Improvements



Visualization/ Visual Analytics

Improvements

- Improved reference lines
- Animator control
- Images in custom tooltips
- Image by URL in point layer
- Images in straight table
- Add charts in tooltips
- Copy sheets between apps
- Copy measures between objects
- Visualizations Improvements (Grid Chart/Master measures in expressions/Hidden sheets)
- Improvements to the grid chart
- Video player
- Active chart and dimensions
- New improved combo chart
- Bars on secondary Axis
- Color per measure
- Dark mode Base map
- Accessibility (keyboard navigation in view data mode)
- Layered labels
- All labels visible in line chart
- Sizing and positioning of images
- Edit master items from the property panel
- Define default tab in container object
- Improvements to managing variables
- New actions for button object
- Label coloring with map chart
- Favorites in the hub
- Scatterplot now supports regression lines
- KPI background color and new icons
- Scripting help improvements (set analysis, dollar-sign expansions)



Improved Reference Lines

- Bar Charts
- Line Charts

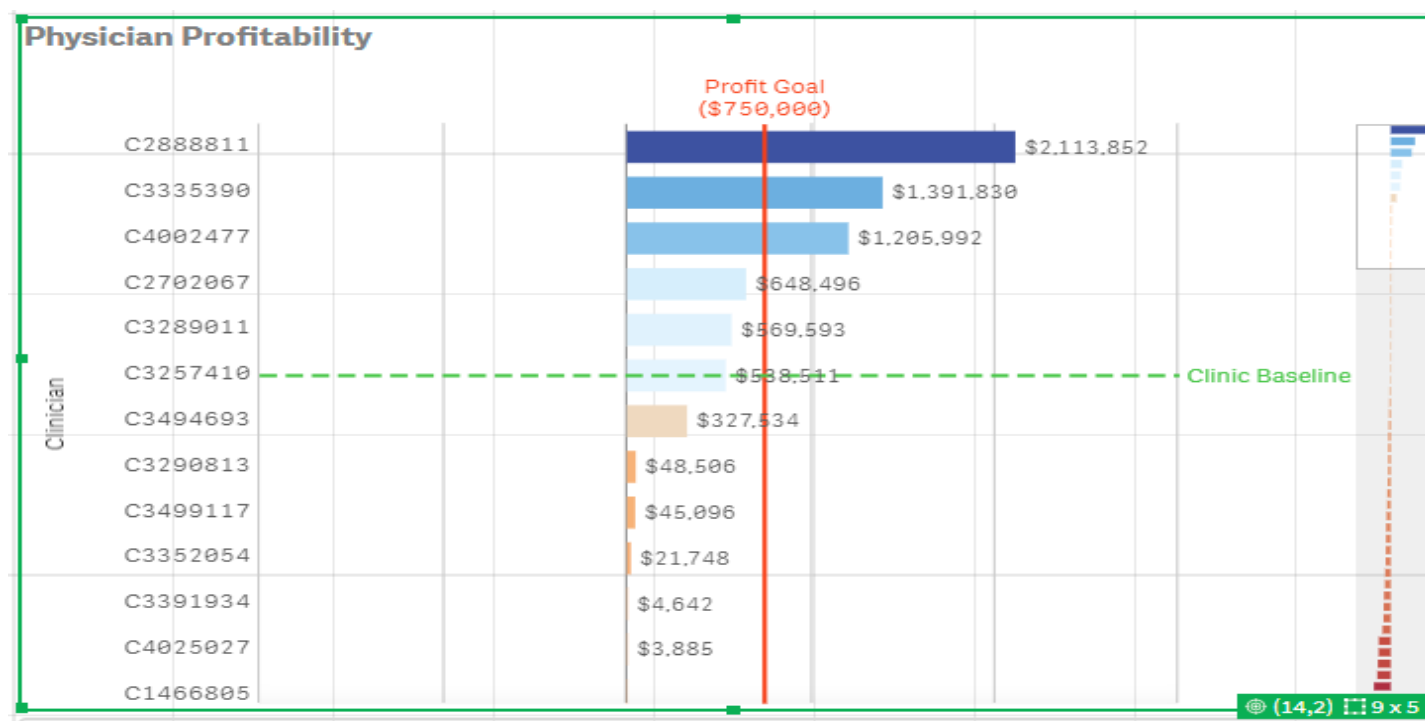
Chart suggestions

Data

Sorting

Add-ons

- ▶ Data handling
- ▶ Reference lines
- ▼ Dimension reference lines





Other Chart Improvements

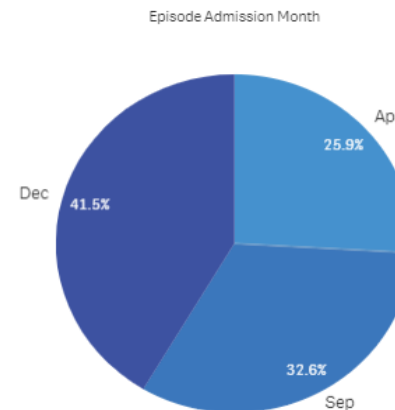
Ability to hide Disclaimers:

The ability to hide disclaimers in charts; a user can now decide whether the disclaimer for additional data points should be visible or not.

Table Mini charts:

Extended functionality in table mini charts, including others, and null.

Physician Profitability



* The data set contains negative or zero values that cannot be shown in this chart.

Region	2005		2006			2007	
	Car Sales	Commercial Vehicle Sales	Car Sales % Total	Car Sales	Commercial Vehicle Sales	Car Sales % Total	Car Sales
	Af	774742	323607	70,54%▲	912939	381675	70,52%▲
Americas	11539399	11773568	49,50%▼	11958950	11372969	51,26%▼	12412759
AOME	15402906	5746268	72,83%▲	16538785	5926733	73,62%▲	17939342
Europe	17492858	2904247	85,76%▲	18342337	2940060	86,19%▲	19291123

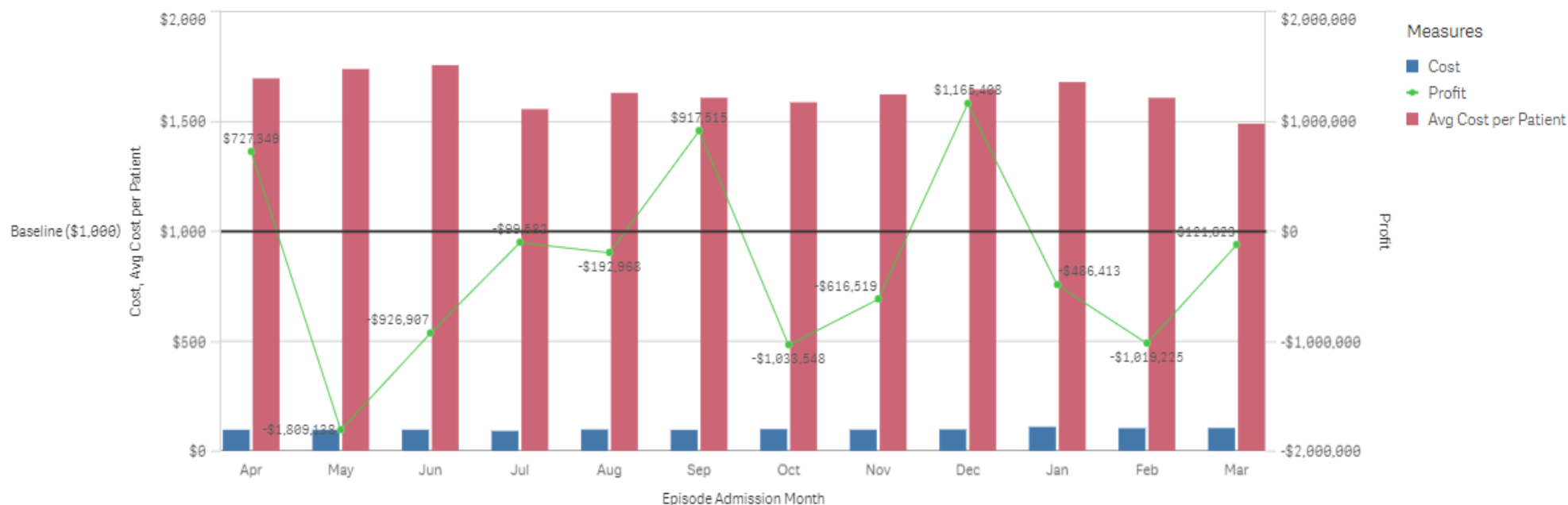


New and Improved Combo Chart

An improved combo chart is now available, with enhanced functionality including support for vertical presentation, reference lines based on measures and dimensions, and line and bar styling.

- Users can now add bars on the secondary axis in a combo chart
- In a combo chart, you can configure each measure to have its own color setting, either a single color or color by expression.

Combo Enhanced Chart - Added Bar

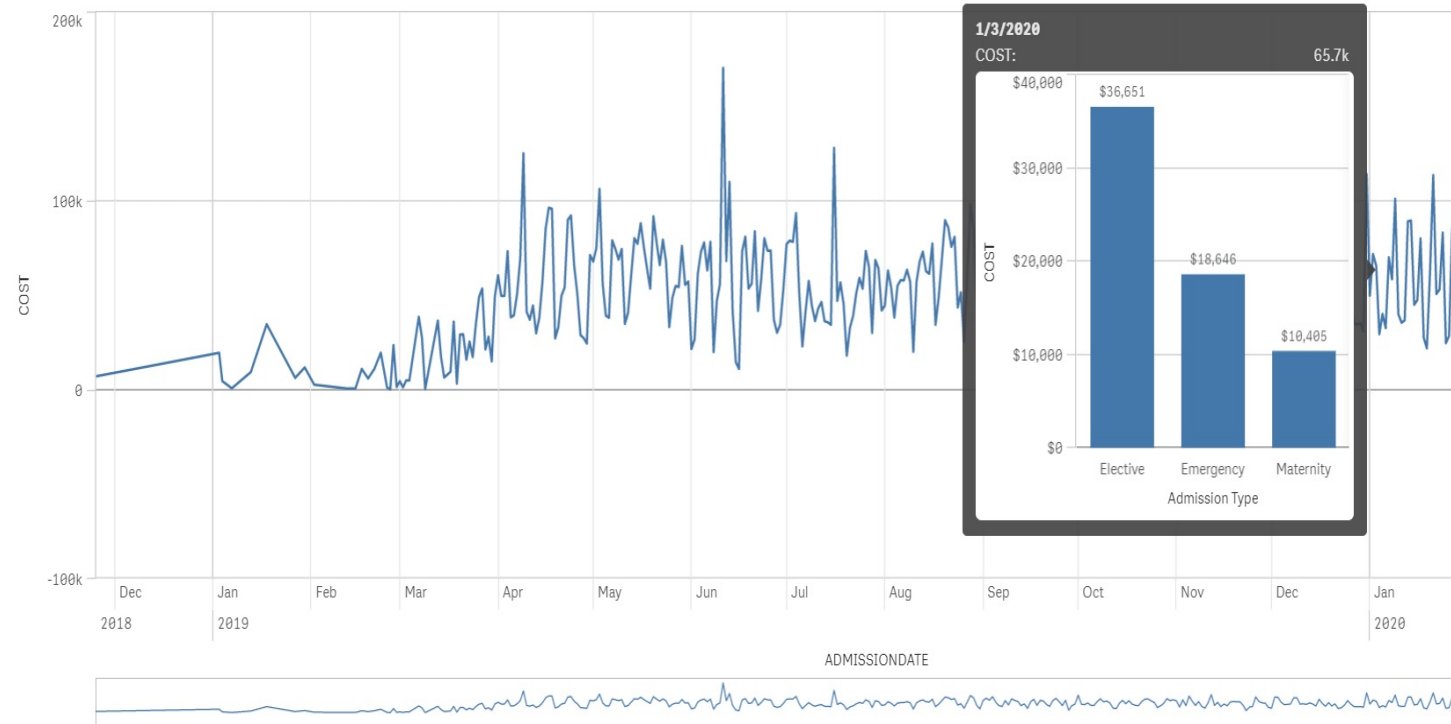




Embedding Charts Inside Tooltip

It is now possible to embed a master visualization inside a tooltip. Users can hover over and see embedded master chart visualization inside a tooltip.

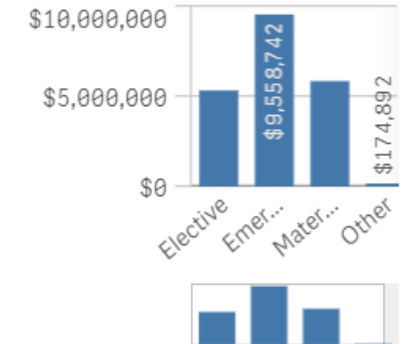
COST BY ADMISSION DATE



Chart

Chart preview

COST BY ADMISSION TYPE



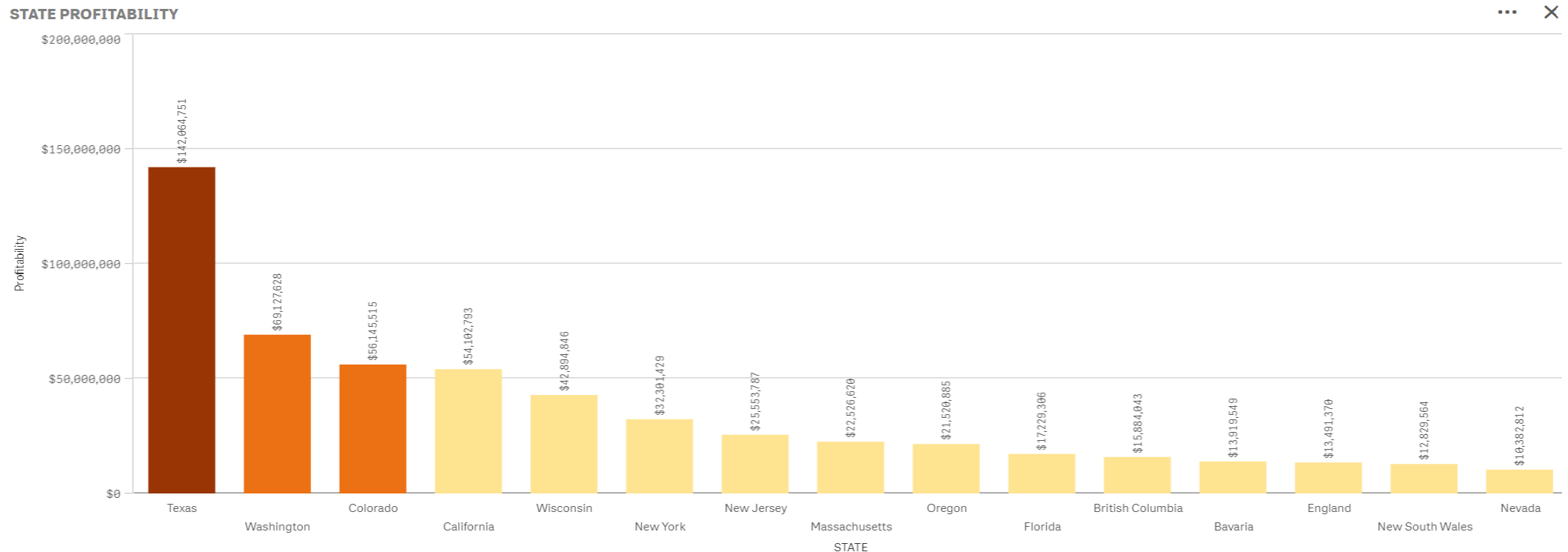
Edit master item

Delete chart



Label Option Improvements

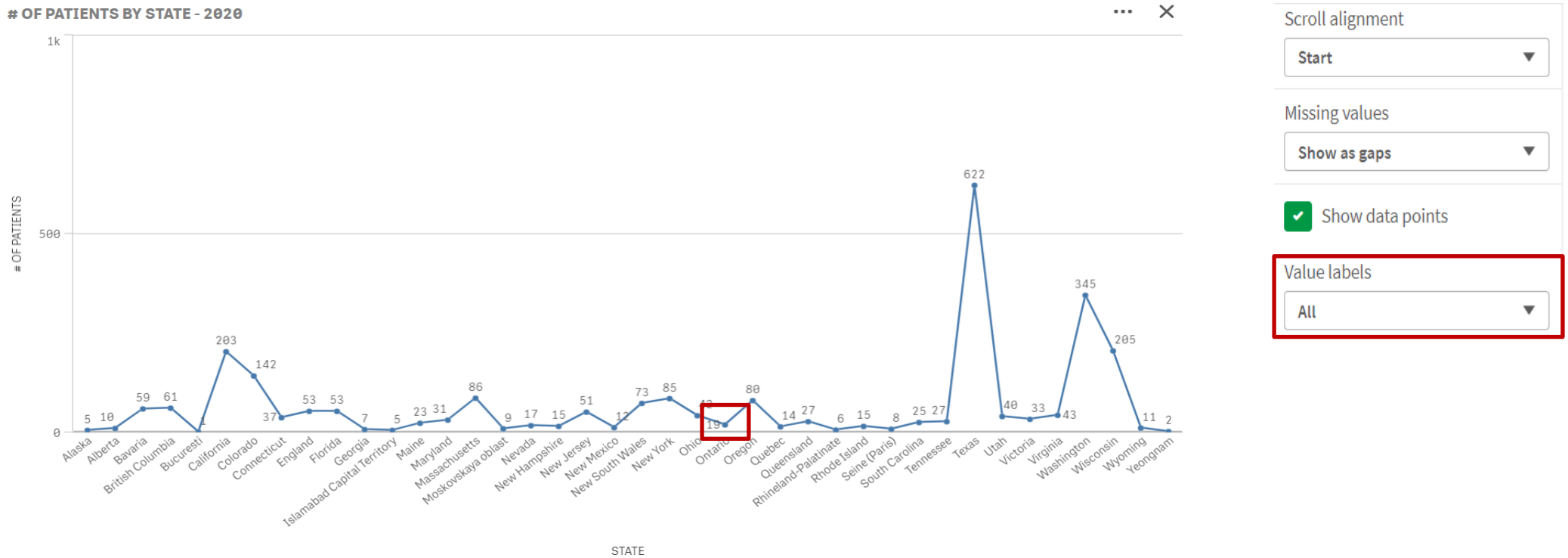
The new “Layered” label orientation provides more control and flexibility in the display of charts. In addition to the existing options (e.g. “Automatic”, “Horizontal” and “Tilted”), labels can now be layered on the X-axis to create more space for the actual chart.





Label Options Improvements, con't

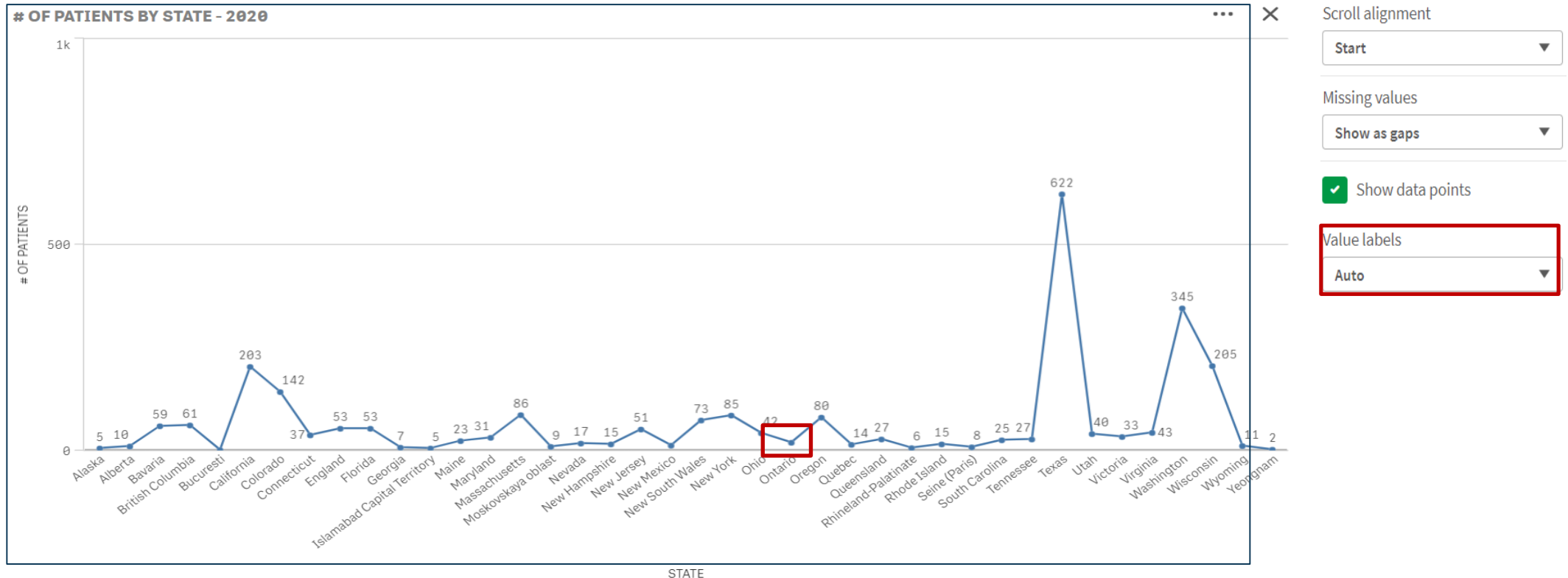
- The labels of the line chart have been extended with the new option "All". This keeps the data labels always visible. The "Auto" option, which automatically adjusts labels to fit the available space, also displays more labels now.





Label Options Improvements, con't

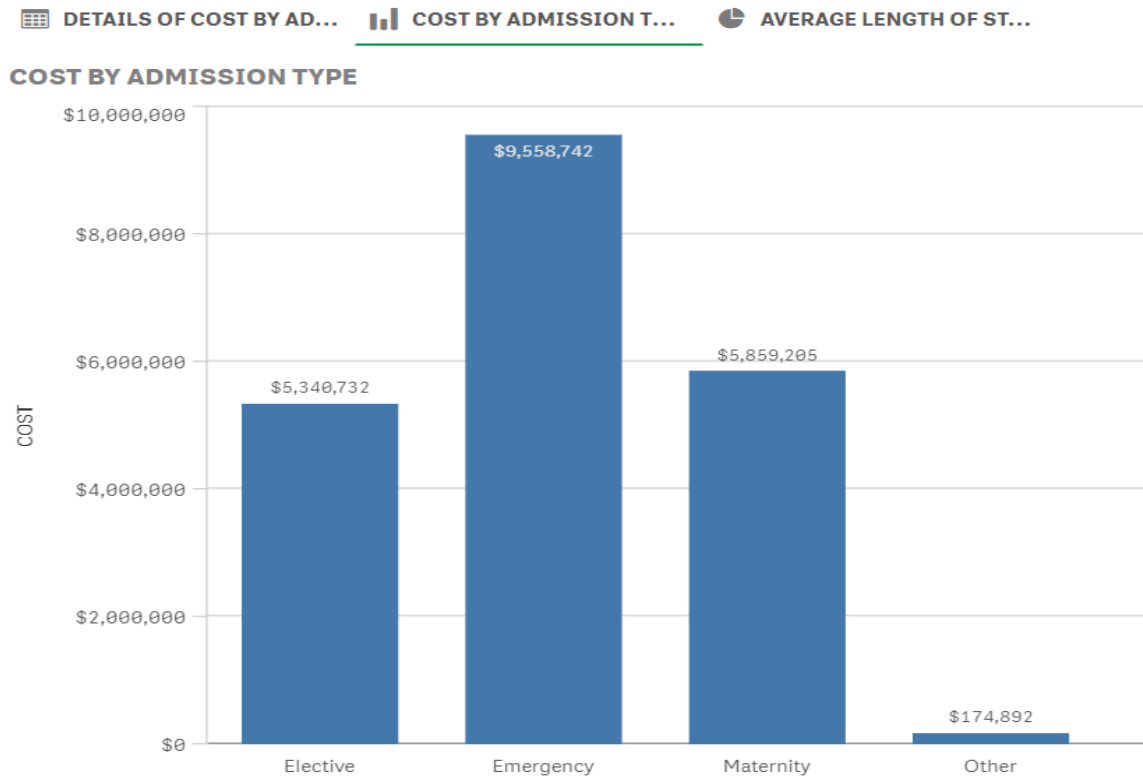
The labels of the line chart have been extended with the new option “All”. This keeps the data labels always visible. The “Auto” option, which automatically adjusts labels to fit the available space, also displays more labels now.





Setting Default tab in a Container

Default tab can now be set while creating or editing a container.



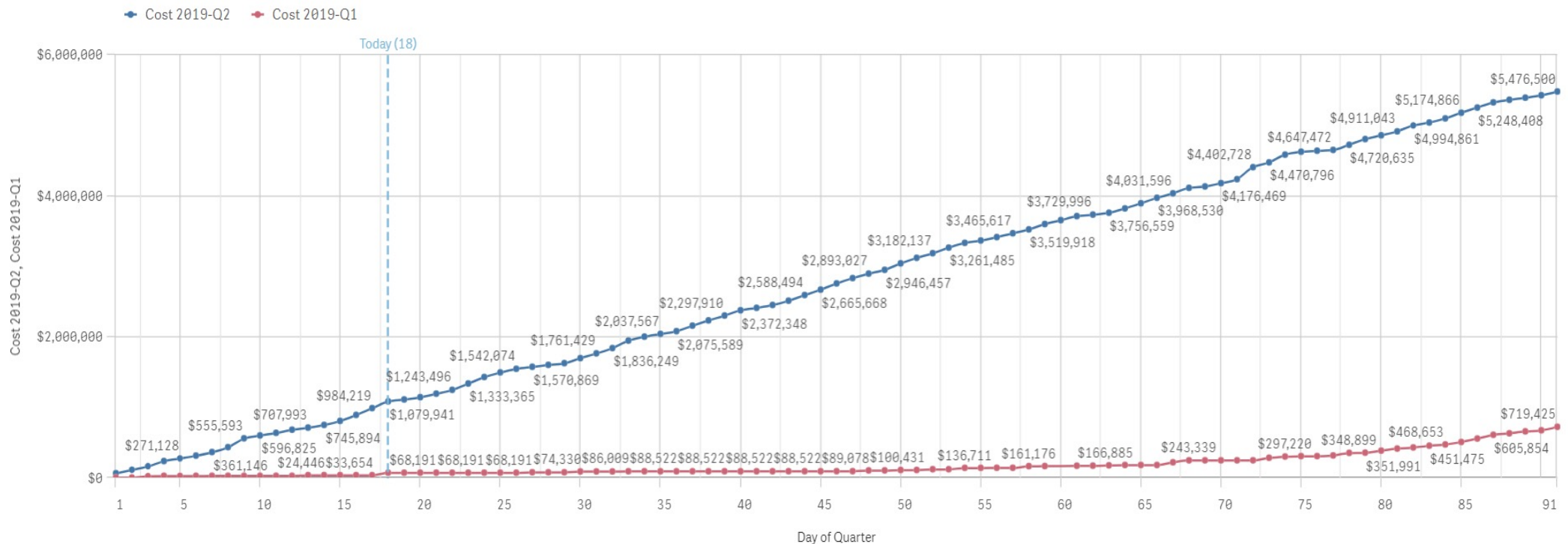
- Content
- Appearance
- General
- Alternate states
- Presentation
- Container
 - Tabs
 - On
 - Menu
 - Auto
 - Navigation arrows
 - Auto
 - Show icons
 - On
 - Default tab
 - COST BY ADMISSION TYPE



Period vs Period Analysis

It is now possible to use the period analysis to compare changes in a measure of the current period versus the previous one. The deviations between the two analysis periods can finally be displayed and analyzed in a line chart.

Cost for 2019-Q2 vs 2019-Q1





On-Demand Customized Printing

- Qlik NPrinting is a reporting platform that allows NPIRS developers to create customized reports versus leveraging the out of the box export capability. Reports can be creating leveraging QlikView and Qlik Sense BI solutions and can be distributed to download or export in a range of standard formats.
- The On-Demand reporting control also adds functionality that generates Qlik NPrinting reports on demand, which is included in the NPIRS dashboard bundle.



On-Demand Customized Printing

The screenshot displays a web dashboard interface. On the left is a sidebar with navigation options: Summary, Charts, Tabular Report, Data Files, Data Sheets, Print (highlighted in yellow), Quarterly, Monthly, Yearly, Expanded Age List, and Selected Stop Code Group (with checkboxes for Primary Care and Non-Primary Care). The main content area shows a table with columns for Area, Service Unit, Facility, Facility Type, Clinic, and Stop Code. Below the table, the 'Total Appt. Count' is 8,455,918. A line chart titled 'National Average Schedule Time' shows data from 2017-Q2 to 2018-Q2. An 'Export' dialog box is open, displaying a PDF file named 'Scheduled Appointment Summary - (PDF) - Jan 13, 2023, 9:32 AM' with a trash icon. At the bottom of the dialog are 'Close', 'Quick Report', and 'New Report' buttons.



On-Demand Customized Printing

- NPIRS user can refer to the url link below to find more information about On-Demand report in Qlik sense:

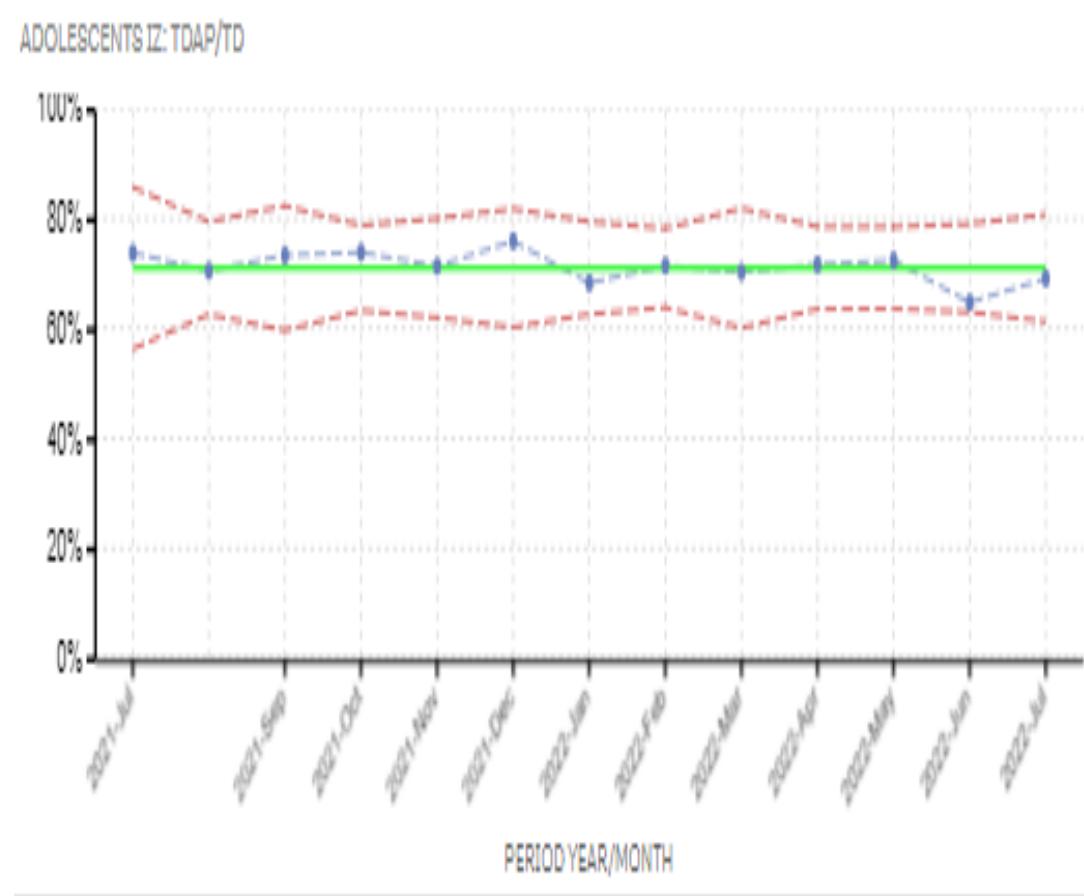
<https://help.qlik.com/en-US/nprinting/May2022/Content/NPrinting/On-Demand/On-Demand-Qlik-Sense.htm>

- Additionally, there is a YouTube video regarding NPrinting On-Demand report below:

<https://youtu.be/nhXsIVMXrAk>

Shewhart's Control Charts

- Shewhart's Control Charts are typically used to distinguish variations due to "special" causes vs. "common" causes.
- The Shewhart's Control Chart has a baseline and upper and lower limits, shown as dashed lines that are symmetric about the baseline.
- The upper (UCL) and lower (LCL) control limits are:
 - $UCL = \text{Accepted value} + k \cdot \text{process standard deviation}$
 - $LCL = \text{Accepted value} - k \cdot \text{process standard deviation}$
- An example of a visualization that leverages a Shewhart's Control Chart is below:





Shewhart's Control Charts

- Shewhart's Control Charts Part 1 -
<https://www.youtube.com/watch?v=9kmbIj5zRtA&list=PLZaSNFPvxOoHT4B26Uayvc6J0Ga1fZ-UC&index=14>
- Shewhart's Control Chart Part 2 –
<https://www.youtube.com/watch?v=lQ3woMr822U&list=PLZaSNFPvxOoHT4B26Uayvc6J0Ga1fZ-UC&index=15>



Contact Information

IHS IT Service Desk via email to ITSUPPORT@IHS.GOV

Vanessa Weaver
DDMA, Division Director
301-633-1716
vanessa.weaver@ihs.gov
(HQ) Indian Health Service
Division of Data Management and Analytics

Sheng Liu
BI Architect
240-551-2415
sheng.liu@ihs.gov
(HQ) Indian Health Service
Division of Data Management and Analytics



Questions??



THANK YOU!