

LIVE WELL SAN DIEGO: HEALTH AND WELLBEING COMMUNITY DATA SYSTEM

Elizabeth Hernandez, PhD, Assistant Director Jackie Baker Werth, Performance Improvement Manager Leslie Upledger Ray, MPH, MPPA, MA, Senior Epidemiologist County of San Diego, Health and Human Services Agency, Public Health Services Administration

October 10, 2019







SAN DIEGO COUNTY



San Diego County is the 2nd most populous county in California and 5th most populous in the United States!

San Diego has:

- About 3.4 million residents.
- Minority majority population.
- Busiest land border crossing in the world 1 of every 13
 people who enters the US come through San Ysidro.
- Largest refugee resettlement site in CA.
- A total area of 4,526 square miles, larger than Rhode Island and Delaware combined.





WHY CREATE A COMMUNITY LEVEL HEALTH AND WELL BEING DATA SYSTEM?



DATA DRIVEN POLICY AND PRACTICE

Increasing demand for more population based data

Increasing demand for integrated health, demographic, economic and behavior data

Limited resources

Opportunity to try something new!



LIVE WELL SAN DIEGO: COMMUNITY HEALTH AND WELL BEING DATA SYSTEM

WINNER OF THE

2019 STATE AND LOCAL DATA INNOVATION

BY MILBANK FUND AND ACADEMY HEALTH!



IMPROVING PROCESSES: COMMUNITY HEALTH AND WELL BEING DATA

Jackie Baker Werth
Performance Improvement Manager
Public Health Services Administration
October 8, 2019

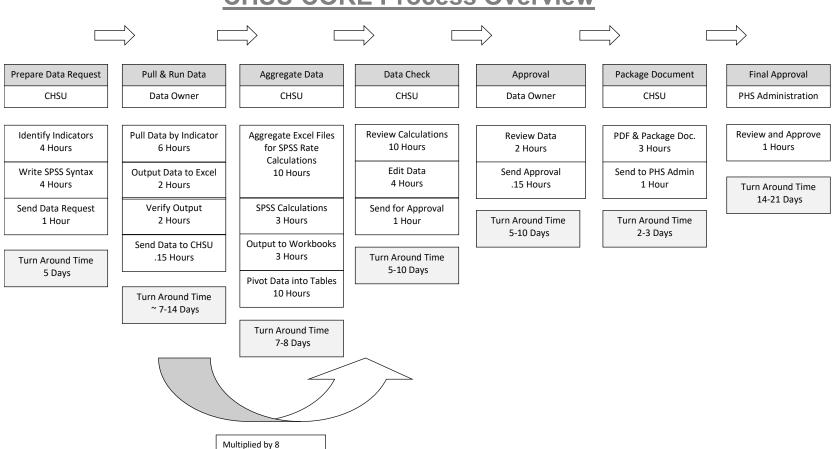


DATA GATHERING PROCESS MAP

Databases/Data Systems



CHSU CORE Process Overview

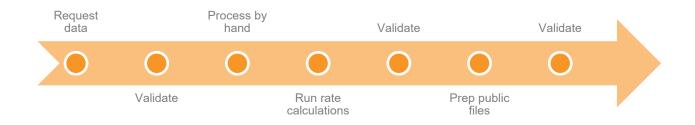


PREVIOUS PROCESS





Process Overview



WHAT WAS THE PROBLEM?

Health Data



Population Reliability Data Multiple physical contacts with Due to geography limitations, Varying definitions of We wait on processing - this increases the population data is at the tract conditions - indicators driven SANDAG data opportunity for errors level, which doesn't match directly by community for rate with the health data collection requests and literature review denominators boundaries - Solution: Automate all data (with - Solution: Standardize indicator - Solution: Request zip exception to specialized databases) definitions to HCUP and other crosswalk to multiple to reduce human interaction in Repeated data authoritative sourcing where geography boundary types. processing and reduce time checks needed. This reduces error in This increases accuracy coding and allows for and expands data outputs reproducibility and the ability to run comparisons to national Problem: An data. Can also expand to inordinate include lenses of Health Equity amount of time Low computer Region and subregional data only **Health Data** processors and RAM but requestors want more extending processing time - Solution: SANDAG Repeated data It takes 6 months with 4 FTEs Data run nearly crosswalk for checks by hand to working on this to produce 2 completely in excel additional verify dozen indicators. Impacts (90%)geographies - Solution: Automate regular work loads check process to - Solution: reduce potential - Solution: Switch Switch human error and automation SHOULD automation to reduce time reduce processing time **SPSS** syntax and staff needed entirely No Direct **Technology** Staffing Access to

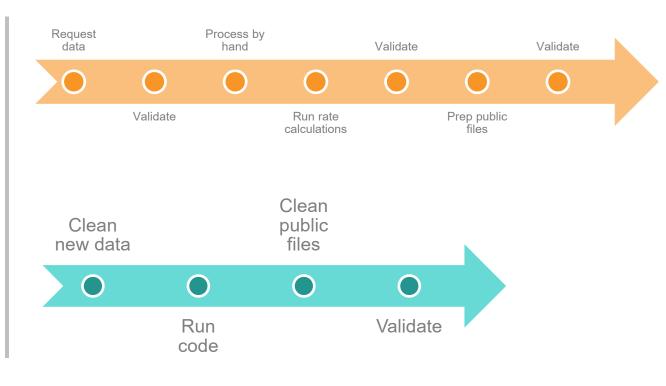
COMPARISON OF PROCESSES



Measures of Success

Process Overview







LIVE WELL SAN DIEGO HEALTH AND WELL BEING COMMUNITY DATA SYSTEM

Leslie Ray, MPH, MPPA, MA Senior Epidemiologist Public Health Services Community Health Statistics October 8, 2019



COMMUNITY HEALTH STATISTICS UNIT



POPULATION HEALTH AND WELL BEING INFORMATION



- Types of information available by County, HHSA Region,
 Geopolitical boundaries and Community levels:
 - Demographic/economic data
 - Death, hospitalization, and emergency department (ED)
 discharge data
 - Inpatient Treatment/Rehab Facilities (Physical and Mental)
 - Health Equity/Health Disparities
 - Social Determinants of Health
 - Behavioral data
 - Mental Health/Substance Use Disorders
 - Alzheimer's Disease and Related Dementias
 - Health, disease and injury topic reports

SDHEALTHSTATISTICS.COM







Health & Human Services Agency

PROGRAMS ALL SERVICES A-Z FACILITIES ADVISORY BOARDS CONTACT US

The Community Health Statistics Unit

The Community Health Statistics Unit (CHSU) provides health statistics that describe health behaviors, diseases and injuries for specific populations, in addition to health trends and comparisons to national targets. CHSU aids in effective decision making and helps to identify opportunities for preventive efforts through the use of data reporting, visualizations, and predictive analytics, CHSU also provides or refers persons to available local, state and national statistics

2016 Demographic Profiles!



The 2016 Demographic Profiles are finally here! These profiles contain economic and demographic data covering San Diego County, the six HHSA Regions and all of the smaller communities.



Start Your Data Journey Here!

I am looking for..



Demographics:

- · Population size Race/Ethnicity
- Languages
- spoken Poverty level
- and more





Critical Pathways



Publications



Maps and Spatial

Disease Atlases

HHSA LIVE WELL





🙆 Popular Services

Home

3-4-50

Demographic and Health Data

Disease Information

Maps and Spatial Data

Reports

Resources



Aging & Independence Services Behavioral Health Services

Children's Services

Disease Information:

- Fact 8heets
- Critical Pathways Presentations
- Data Briefs



Regional Data:

Regional Health Status



Data on Seniors

- Demographics
- Health
- Spending on care



Health Equity

 Publications and related Information





Workshops:

Past workshops and presentations



About Us:

- Contact Information
- Survey



Maps and Spatial

Health Data:

Community

Crashes

Briefs

Alzhelmer's Disease and

Alzhelmer's Disease

Presentations

and related

Information

Project

 Publications Data Tables

3-4-50:

- Disease Atlases
- Community Features Atlases

Profiles- (medical

Development Services and Conservator

Aging & Independence Services

Behavloral Health Services

Public Health Services

Children's Services

Housing & Community

Self-Sufficiency Programs

encounter rates)

Support Divisions Health Briefs Motor Vehicle

Find an office near you More Services

COUNTYNEWSCENTER



Flu Deaths Increase In Still Widespread



licks Test Positive for Tularemia



Disaster CalFresh Assistance Available to Residents Affected by

More Stories



Alzheimer's

Disease

Fun Factolds: Top Baby Names In San Diego County

- Leading names for boy
- and girls
- Historical name lists for the last 20 years



Past Tables and Reports



Recourses:

- County State
- National

Website







County Connections



Contact

(858) 694-3900

Board of Supervisors Department Contacts

Navigation

I Want To...

Visiting San Diego

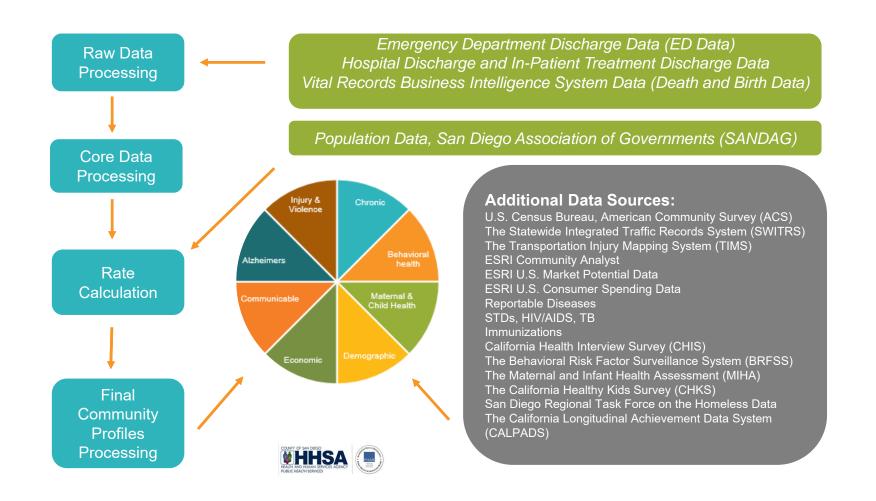




LIVE WELL SAN DIEGO HEALTH AND WELL-BEING COMMUNITY DATA SYSTEM







LIVE WELL SAN DIEGO HEALTH AND WELL-BEING COMMUNITY DATA SYSTEM



KEY AGREEMENTS

- Data standardization by small level geography
- Aggregated data only
- Sequester small numbers
- Disease groupings align with HCUP when possible
- Code in SPSS, Present in Excel
- Goal was to go from original source data to presentation formatted web product without human interaction (error)
- Definitional alignment
 - HCUP for disease groupings when possible
 - CDC Lenses of Health Equity (age, gender, geography, race/ethnicity, SES)
 - ICD10 Z codes for Social Determinants of Health

GEOGRAPHIES



- 6 HHSA Regions
- 41 Sub-Regional Areas
- 18 Cities
- 5 Supervisor Districts



AUTOMATED PROCESSES



PROGRAM OUTPUTS

Uploadable/downloadable spreadsheet workbooks by disease category for primary and any mention diagnosis

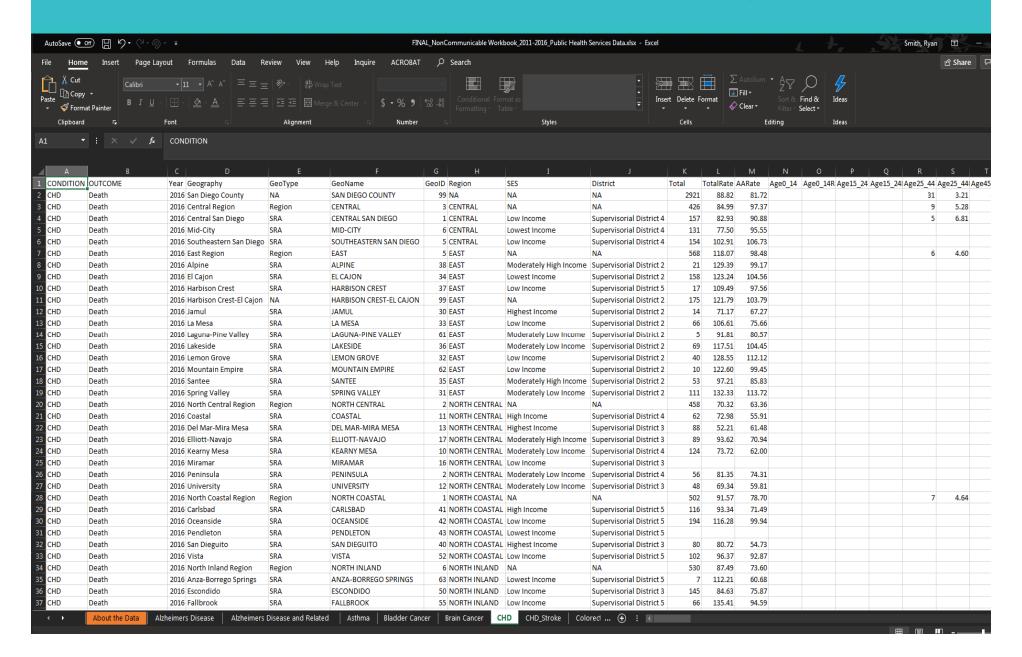
- Organized by diagnosis groups (HCUP)
- Aggregated by geography
- With automated, programmed dashboards

"Add on" programs produce

- 3-4-50 Chronic Disease Deaths
- Leading Causes of Death
- Life Expectancy
- HP2020 monitoring

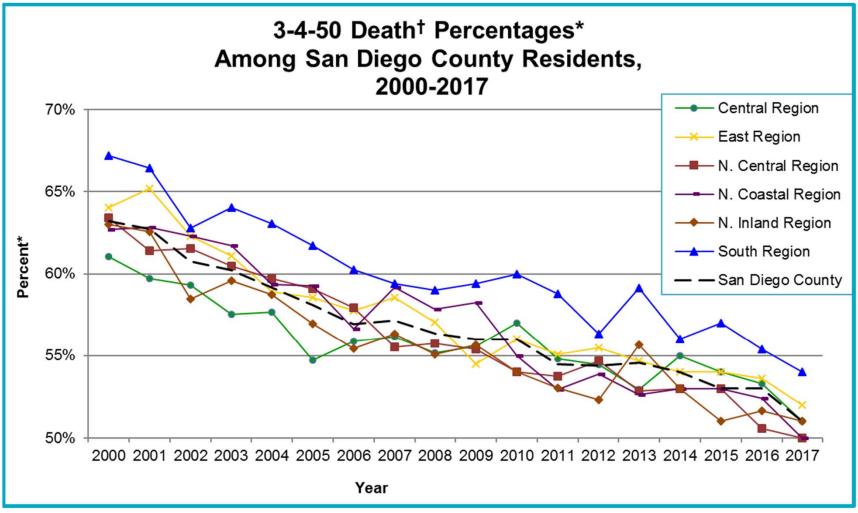
THE DATA TABLES





3-4-50 CHRONIC DISEASE DEATH PERCENTAGES, TREND 2000-2017





^{†3-4-50} deaths include stroke, coronary heart disease (CHD), diabetes, COPD, asthma, and cancer. Beginning with 2017, COPD includes chronic lower respiratory diseases (COPD/chronic lower respiratory diseases).

Source: California Department of Public Health, 2000-2013 Death Statistical Master Files, 2014-2017 California Vital Records Business Intelligence System (VRBIS).

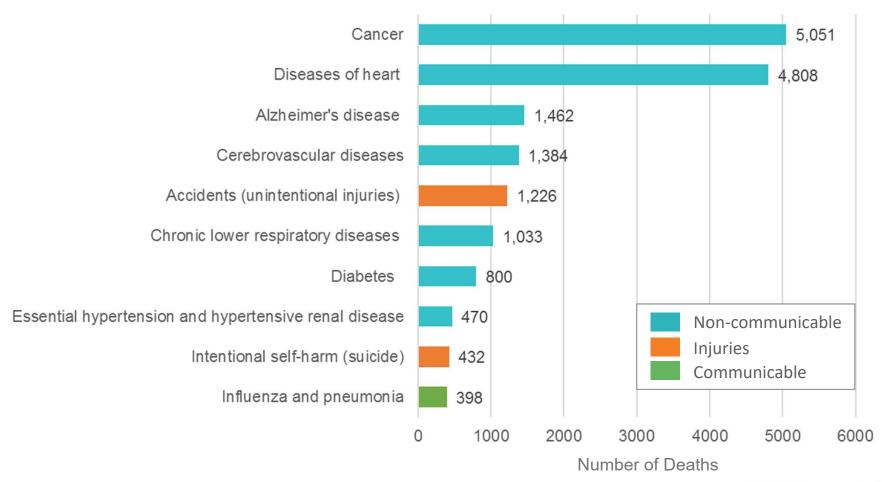
Prepared by: County of San Diego, Health & Human Services Agency, Public Health Services, Community Health Statistics Unit, 2019.

^{*3-4-50} deaths as a percentage of all cause deaths.

LEADING CAUSES OF DEATH, 2017



The Top 10 Leading Causes of Death, San Diego County, 2017







SAN DIEGO COUNTY LIFE EXPECTANCY, DETAILED, 2017





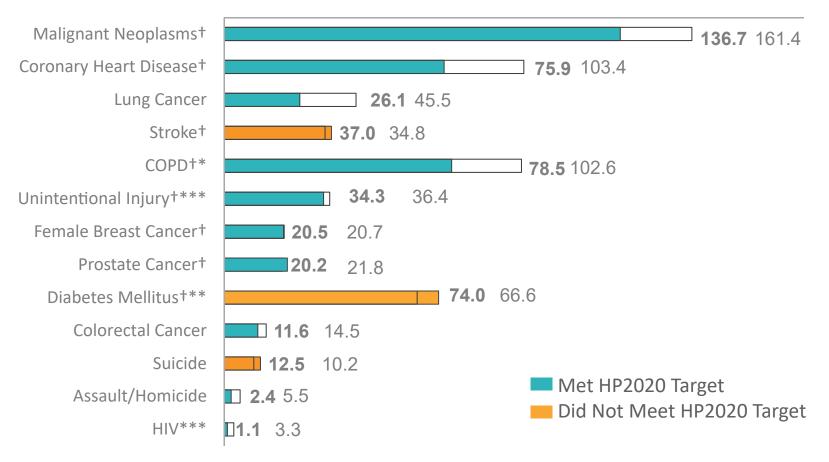
Overall Life Expectancy in San Diego County, 2017: 82.6 years

Race/Ethnicity	Life Expectancy
Asian	86.7 years
Hispanic	85.1 Years
White	81.8 Years
Black	77.3 Years

Note: 2017 Preliminary Life Expectancy Estimates. Subject to Change.

Source: County of San Diego, Health & Human Services Agency, Public Health Services, Community Health Statistics Unit, 2019.

Progress Towards Selected Healthy People 2020 Objectives; 2017 Age-Adjusted Death Rates | SAN DIEGO



All rates are per 100,000 population. Adjusted rates are adjusted to 2000 U.S. Standard Population.

Source: California Department of Public Health, Center for Health Statistics, Office of Health Information and Research, 2014-2017 Vital Records Business Intelligence System; SANDAG January 1 population estimates (released February 2019)

†HP2020 target was revised



^{*}COPD, for adults aged 45 and older, sourced from Centers for Disease Control and Prevention CDC Wonder Database

^{**}Diabetes Multiple Cause of Death

^{***}Source: CDC Wonder Underlying Cause of Death System, 1999-2017.

SO WHAT'S DIFFERENT?



Automated processes

- Decreased processing times means faster turnaround
- Decreased human processing means less opportunity for error introduction
- Automatic/near automatic production of basic website products

Standardization

- Comparability between data sources
- Introduction of comparable well being data sources
- Ability to link aggregated data between health and well being measures

Increased data measures

- The 2017 data includes over 260 diagnostic groups
- Data is now available for death, hospital discharge, emergency department discharge, inpatient treatment, mental health and substance abuse inpatient treatment, physical rehabilitation discharges, skilled nursing discharges.
- Standardized collection of social determinants of health and lenses of health equity
- New geographies!



DATA INDICATOR WORKBOOKS



NON-COMMUNICABLE (CHRONIC) DISEASES



- Asthma, Cancers, Coronary Heart Disease (CHD), Chronic Obstructive Pulmonary Disorder (COPD), Diabetes, Gout, Leukemia, Lupus and Connective Tissue Disorders, Non-Hodgkin's Lymphoma, Osteoarthritis, Osteoporosis, Overall Cancer, Overall Hypertension, Primary Hypertension, Parkinson's Disease, Pulmonary Diseases, Rheumatoid Arthritis, and Stroke.
 - Geography (County, Region, Sub-Regional Communities, Cities, and Supervisor Districts)
 - Socioeconomic Status
 - Gender
 - Race / Ethnicity
 - Age Groups

COMMUNICABLE (INFECTIOUS) DISEASES



CONDITIONS

 AIDS/ HIV, Chlamydia, Gonorrhea, Influenza (Flu), Pneumonia, Primary and Secondary Syphilis, and Tuberculosis (TB)

Cases and Rates presented by:

- Geography (County, Region, Sub-Regional Communities, Cities, and Supervisor Districts)
- Socioeconomic Status
- Gender
- Race / Ethnicity
- Age Groups

INJURY-RELATED CONDITIONS



- Drowning, Firearms-Related Injuries, Poisonings, Intentional Injuries including: Assault, Homicide, Self-Inflicted and Suicide; Unintentional Injuries including: Disorders of the Teeth and Jaw, Falls, Hip Fractures, Injuries-Not Self-Inflicted, Motor Vehicle Injuries to Pedestrian, Overall Motor Vehicle Injuries, and Pedestrian Injuries-Not Motor Vehicle-Related.
- Cases and Rates presented by:
 - Geography (County, Region, Sub-Regional Communities, Cities, and Supervisor Districts)
 - Socioeconomic Status
 - Gender
 - Race / Ethnicity
 - Age Groups

MATERNAL AND CHILD HEALTH CONDITIONS



- Congenital Anomalies, Infant Mortality, Live Births, Live Births to Girls 15-17, Live Births with Early Prenatal Care, Low Weight Births, Maternal Complications, Preterm Births, Sudden Infant Death Syndrome (SIDS), and Very Low Birth Weight Births
- Cases and Rates presented by:
 - Geography (County, Region, Sub-Regional Communities, Cities, and Supervisor Districts)
 - Socioeconomic Status
 - Number of Mothers, Gender of Newborn
 - Race / Ethnicity of Mother, Race / Ethnicity of Newborns
 - Age Groups of Mother

BEHAVIORAL HEALTH-RELATED CONDITIONS



- Disorders related to Alcohol use, Substance use, including breakouts for Amphetamine/ Stimulant, Benzodiazepines/ Sedatives, Cannabis, and Opioid use (primary diagnosis and any mention); Attention-Deficit Conduct and Disruptive Behavior (ADD), Anxiety, Childhood, Developmental, Impulse Control, Mood, Personality disorders, Schizophrenia/ Other Psychotic Disorders, and Self-Inflicted Injuries and Suicide.
- Cases and Rates presented by:
 - Geography (County, Region, Sub-Regional Communities, Cities, and Supervisor Districts)
 - Socioeconomic Status
 - Gender
 - Race / Ethnicity
 - Age Group

ALZHEIMER'S DISEASE AND OTHER DEMENTIAS



CONDITIONS

 Data on Alzheimer's Disease and Related Dementias in San Diego County residents as well as separate Dementia, Alzheimer's Disease, and Parkinson's Disease breakouts.

Cases and Rates presented by:

- Geography (County, Region, Sub-Regional Communities, Cities, and Supervisor Districts)
- Socioeconomic Status
- Gender
- Race / Ethnicity
- Age Groups

SOCIAL DETERMINANTS OF HEALTH (2017 DATA UPDATE)





- Data on homelessness, physical safety, environmental factors, exposures, alcohol or drug use and/or abuse in family, isolation, transportation challenges, employment, etc. as recorded in healthcare record and linked to diagnosis grouping. In 2017, the majority of SDOH diagnoses are recorded with behavioral health diagnoses groups but is expanding..
- Cases and Rates presented by:
 - Geography (County, Region, Sub-Regional Communities, Cities, and Supervisor Districts)
 - Socioeconomic Status
 - Gender
 - Race / Ethnicity
 - Age Groups

ANY MENTION DIAGNOSIS (2017 DATA UPDATE)



- While most workbook data are based on primary diagnosis grouping, however some diseases such as high blood pressure or diabetes are more often reported as secondary diagnoses. In order to develop more complete understanding of the burden of these diseases on the population, "any mention" data will be available in workbooks as well primary diagnosis.
- Cases and Rates presented by:
 - Geography (County, Region, Sub-Regional Communities, Cities, and Supervisor Districts)
 - Socioeconomic Status
 - Gender
 - Race / Ethnicity
 - Age Groups



DASHBOARDS FOR DATA VISUALIZATION



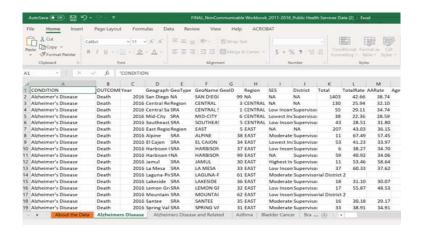
PREVIOUS DATA FORMATS

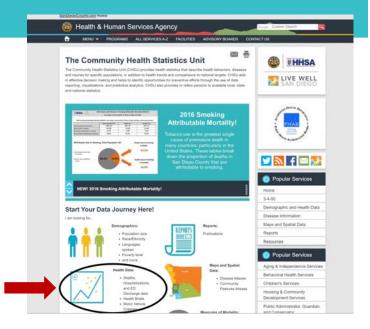


Under the Community Health Statistics website, we have previously uploaded data under "Health Data"

Link to website:

https://www.sandiegocounty.gov/hhsa/programs/phs/community_health_statistics/





This section contains multiple workbooks of data that are separated by health conditions within San Diego County.

Each data point is a line-item with over 200 columns.

This is useful for those who are familiar with creating Excel Pivot Table, but what about the general public?

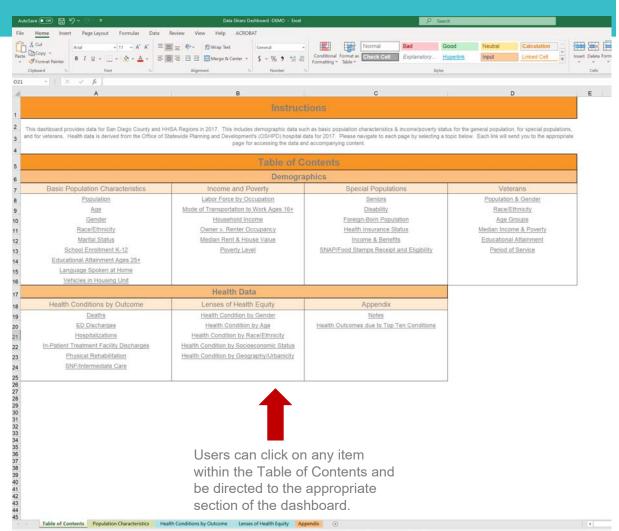
EXCEL DASHBOARDS



In order to provide a tool which contains all of the data within these workbooks in one space, an Excel dashboard was created.

The image on the right displays a screen image of the Excel dashboard's "Table of Contents" and "Instructions" tab.

 Each topic under the Table of Contents is hyperlinked to the appropriate section of the dashboard.

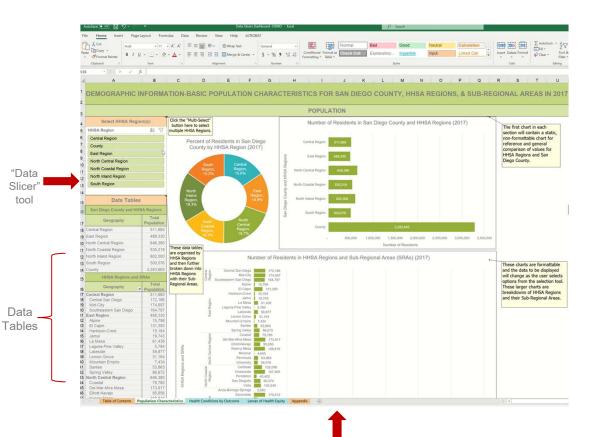


DASHBOARD COMPONENTS



Each section of the Dashboard contains specific information pertaining to a topic.

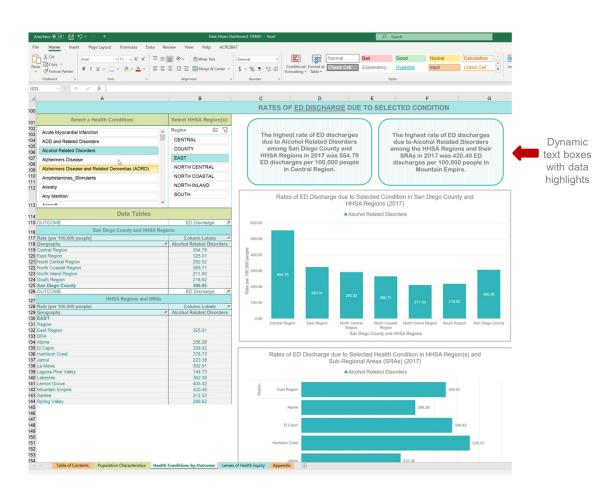
- In this screen image, data for Population numbers are displayed along with corresponding charts and tables.
- The data values in both charts and tables will automatically populate based on the selection that the user makes in the "Data Slicer" tool
- These components allow for visualization of the data that we publish online.
 - This is helpful for users with little experience with Excel.



Data Charts

DASHBOARD COMPONENTS





Additional features include dynamic text boxes that highlight either "highest rates" of a health condition, "lowest rates", and formulas can also be formatted to measure the averages of a data value.

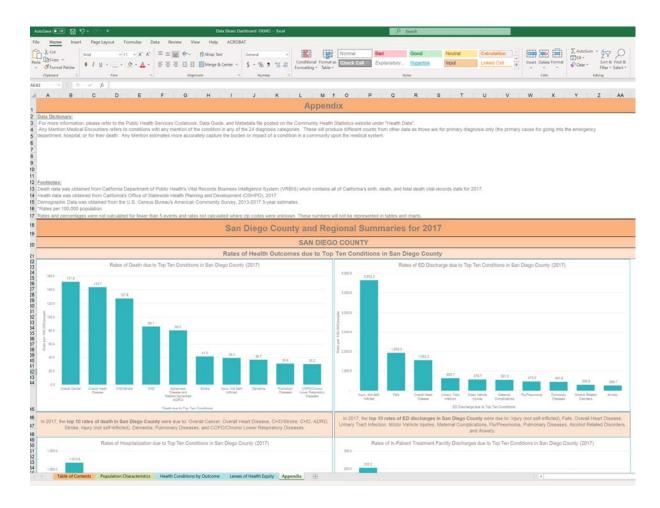
Excel allows for great flexibility in formatting custom colors and fonts.

 The template here is in "Live Well San Diego" colors

DASHBOARD COMPONENTS



An appendix or index can be added as an additional feature so that users can get more information regarding the data as well as retrieve static summary charts for reference.



WHERE DO WE GO FROM HERE?



FUTURE PLANS

Integrated demographics workbook and dashboard

Further development of Social Determinants of Health

Integrating SNF and rehab facility data in meaningful ways

- Opioids
- ADRD

Expansion of dashboard to include multi-year trending

Economic analysis component

Incorporate automated map atlas functionality



YOU CAN DO THIS TOO!

This code can be used by any county in California with minor modifications and by substituting local population data.

You need SPSS to run the system and Excel to post workbooks.



QUESTIONS?



For more information, including data, resources and reports, from Public Health Services:

www.SDHealthStatistics.com