

Hep B Mortality Report

A Novel Approach for Hawai‘i



The question is...

**What can you do without
surveillance data?**

Table 2.1. Numbers and rates (per 100,000) of reported cases of acute hepatitis B virus infection, by state or jurisdiction, United States, 2016–2020

State or Jurisdiction	2016 No.	2016 Rate	2017 No.	2017 Rate	2018 No.	2018 Rate	2019 No.	2019 Rate	2020 No.	2020 Rate
Alabama	59	1.2	82	1.7	48	1.0	75	1.5	61	1.2
Alaska	6	0.8	9	1.2	7	0.9	6	0.8	4	0.5
Arizona	14	0.2	26	0.4	23	0.3	28	0.4	18	0.2
Arkansas	49	1.6	46	1.5	47	1.6	39	1.3	36	1.2
California	115	0.3	126	0.3	105	0.3	111	0.3	53	0.1
Colorado	28	0.5	32	0.6	21	0.4	17	0.3	13	0.2
Connecticut	7	0.2	10	0.3	10	0.3	3	0.1	—	—
Delaware	3	0.3	9	0.9	7	0.7	12	1.2	7	0.7
District of Columbia	U	U	U	U	U	U	U	U	U	U
Florida	558	2.7	588	2.8	617	2.9	595	2.8	456	2.1
Georgia	100	1.0	106	1.0	179	1.7	114	1.1	104	1.0
Hawaii	—	—	—	—	3	0.2	1	0.1	—	—



Existing Opportunities

Local Context



Existing Opportunities

Local Context



HI Health Matters

Laulima Claims

US Cancer Stats²

CDC Wonder³



The question is...

How did we use CDC

Wonder data?



CLICK HERE

<https://wonder.cdc.gov/mcd.html>

National Center for Health Statistics Mortality Data on CDC WONDER

All Ages Deaths by Multiple Cause of Death

Provisional Multiple Cause of Death Data

- **2018 - Last Month:** by Single race categories (6 groups, 15 groups, or 31 groups), age groups (single year age cohorts, 5-year age groups, 10-year age groups, or infant age groups), sex, ethnicity, state, county for residence and death's occurrence, underlying cause of death and multiple cause of death (specified in ICD-10 codes, 113 selected causes, 130 selected cause for infants, injury causes, drug / alcohol induced causes), urbanization, year and month of death, week of death, weekday of death, place of death, and autopsy status.
[Data Request](#) [More information](#)

Current Final Multiple Cause of Death Data

- **2018 - 2021:** by Single race categories (6 groups, 15 groups, or 31 groups), age groups (single year age cohorts, 5-year age groups, 10-year age groups, or infant age groups), sex, ethnicity, state, county, underlying cause of death and multiple cause of death (specified in ICD-10 codes, 113 selected causes, 130 selected cause for infants, injury causes, drug / alcohol induced causes), urbanization, year and month of death, weekday of death, place of death, and autopsy status.
[Data Request](#) [More information](#)
- **1999 - 2020:** By Bridged race categories (4 groups), age groups (single year age cohorts, 5-year age groups, 10-year age groups, or infant age groups), sex, ethnicity, state, county, underlying cause of death and multiple cause of death (specified in ICD-10 codes, 113 selected causes, 130 selected cause for infants, injury causes, drug / alcohol induced causes), urbanization, year and month of death, weekday of death, place of death, and autopsy status.
[Data Request](#) [More information](#)

Archive Final Multiple Cause of Death Data

- **2005 - 2006:** By Bridged race categories (4 groups), age groups (10-year age groups, or infant age groups), sex, ethnicity, state, county, underlying cause of death and multiple cause of death (specified in ICD-10 codes, 113 selected causes, 130 selected cause for infants), urbanization and year.
[Data Request](#) [More information](#)
- **1999 - 2004:** By race (3 groups), age groups (10-year age groups, or infant age groups), sex, state, county, underlying cause of death and multiple cause of death (specified in ICD-10 codes, 113 selected causes, 130 selected causes for infants), urbanization and year.
[Data Request](#) [More information](#)

The Multiple Cause of Death data available on CDC WONDER are county-level national mortality and population data. Data are based on death certificates for U.S. residents. Each death certificate contains a single underlying cause of death, up to twenty additional multiple causes, and demographic data. The number of deaths, crude death rates and age-adjusted death rates can be obtained by place of residence (United States national, state, and county), age group, race, Hispanic ethnicity, gender, year and month of death, weekday of death, place of death, autopsy status, and underlying and multiple cause of death (4-digit ICD-10 codes, 113 selected causes of death, 130 selected causes of death for infants, injury causes, or drug / alcohol induced causes of death). Two archive datasets offer subsets of these data. For more information, refer to [Multiple Cause of Death data description](#).



About Multiple Cause of Death, 1999-2020

Request Form Results Map Chart About

[Multiple Cause of Death Data](#) [Dataset Documentation](#) [Other Data Access](#) [Data Use Restrictions](#) [How to Use WONDER](#)

Note: Any use of these data implies consent to abide by the terms of the data use restrictions.

The Multiple Cause of Death database contains mortality and population counts for all U.S. counties. Data are based on death certificates for U.S. residents. Each death certificate contains a single underlying cause of death, up to twenty additional multiple causes, and demographic data. The number of deaths, crude death rates, age-adjusted death rates and 95% confidence intervals for death rates can be obtained by cause of death (4 digit ICD-10 codes, 113 selected causes of death, 130 selected causes of infant death, drug and alcohol related causes of death, injury intent and injury mechanism categories), place of residence (national, region, division, state, and county), age (single-year-of age, 5-year age groups, 10-year age groups and infant age groups), race (American Indian or Alaskan Native, Asian/Pacific Islander, Black or African American, White), Hispanic ethnicity, gender and year. Data are also available by urbanization categories for county of residence, place of death, month and week day of death, and whether an autopsy was performed.

Data Use Restrictions:

The Public Health Service Act (42 U.S.C. 242m(d)) provides that the data collected by the National Center for Health Statistics (NCHS) may be used only for the purpose for which they were obtained; any effort to determine the identity of any reported cases, or to use the information for any purpose other than for health statistical reporting and analysis, is against the law. Therefore users will:

- Use these data for health statistical reporting and analysis only.
- For sub-national geography, do not present or publish death counts of 9 or fewer or death rates based on counts of nine or fewer (in figures, graphs, maps, tables, etc.).
- Make no attempt to learn the identity of any person or establishment included in these data.
- Make no disclosure or other use of the identity of any person or establishment discovered inadvertently and advise the NCHS Confidentiality Officer of any such discovery.

Confidentiality Officer
National Center for Health Statistics
3311 Toledo Road
Hyattsville, MD 20782
Telephone 888-642-4159
Email: nchsconfidentiality@cdc.gov

Sanctions for Violating Rules:

Researchers who violate the terms of the data use restrictions will lose access to WONDER and their sponsors and institutions will be notified. Researchers who are suspected of violating the rules may be prevented from using WONDER until an investigation can be completed. Deliberately making a false statement in any matter within the jurisdiction of any department or agency of the Federal government violates 18 USC 1001 and is punishable by a fine of up to \$10,000 or up to 5 years in prison, or both.

By clicking the "I Agree" button I signify that I will abide by the terms of data use stated above and understand the sanctions and legal penalties for violation of these terms of use.

I Agree

Click [Dataset Documentation](#) for complete information about this dataset.



Multiple Cause of Death, 1999-2020 Request Deaths occurring through 2020

Request Form **Results** [Map](#) [Chart](#) [About](#)

[Multiple Cause of Death Data](#) **[Dataset Documentation](#)** [Other Data Access](#) [Data Use Restrictions](#) [How to Use WONDER](#)

Make all desired selections and then click any **Send** button one time to send your request.

1. Organize table layout: [Help](#)

Group Results By
And By
And By
And By
And By

Notes:
• Group Results By "15 Leading Causes" to see the top 15 rankable causes selected from the corresponding 113 or 130 Cause List. [More information.](#)

Measures (Default measures always checked and included. Check box to include any others.)
 Deaths **Population** **Crude Rate**
For crude rates: **95% Confidence Interval** **Standard Error**
 Age Adjusted Rate **95% Confidence Interval** **Standard Error**
 Percent of Total Deaths

Title

Additional Rate Options *Click '+' for non-standard age adjusted rates and other options.* [Help](#)

2. Select location: [Help](#)

Click a button to choose locations by **State**, **Census Region** or **HHS Region**.
[States](#) [Census Regions](#) [HHS Regions](#)

Browse or **search** to find items in the States Finder Tool, then **highlight** the items to use for this request.
(The *Currently selected* box displays all current request items.)

[Finder Tool Help](#) [Advanced Finder Options](#)

Browse **Search** [Details](#)

States

All (The United States)
+ 01 (Alabama)
+ 02 (Alaska)

Currently selected:

All (The United States)

Multiple Cause of Death Data Request

Output: You can produce [tables](#), [maps](#), [charts](#), and [data extracts](#). Obtain [death counts](#), [crude death rates](#), [age-adjusted rates](#), [95% confidence intervals](#) and [standard errors](#) for rates, and percentage of total. Select specific disease and demographic criteria to produce cross-tabulated mortality measures. Data are organized into three levels of geographic detail: national, state (including multi-state regions and divisions) and county. The population estimates used as the denominator for rate calculations are also shown.

Variables: You can limit and [index](#) your data by any and all of these variables:

1. [Location](#): HHs Regions, Census Regions and Census Divisions, State, County
2. [Age Groups](#): 10 year age groups, 5 year age groups, single-year age groups and infant age groups
3. [Race](#): American Indian or Alaskan Native, Asian / Pacific Islander, Black or African American, White (archive data for years 1999-2004: Black or African American, White, Other Race)
4. [Hispanic Origin](#): Hispanic or Latino, Not Hispanic or Latino, Not stated (Hispanic Origin not available in archive data 1999-2004)
5. [Gender \(Sex\)](#): Female, Male
6. [Year of death](#): 1999-2020 (Year limited in archive data: 1999-2004, or 2005-2006)
7. [Month of death](#): January through December (Month not available in archive data)
8. [Weekday of death](#): Sunday through Saturday, Unknown (Weekday not available in archive data)
9. [Autopsy performed](#): No, Yes, Unknown (Autopsy not available in archive data)
10. [Place of Death](#): Medical Facility - Inpatient, Medical Facility - Outpatient or ER, Medical Facility - Dead on Arrival, Medical Facility - Status unknown (years 1999-2002 only), Decedent's home, Hospice Facility (years 2003 and later only), Nursing home/long term care, Other, Place of death unknown (Place of Death not available in archive data)
11. [Cause of Death](#): underlying and multiple causes of death - ICD-10 codes, 113 Selected Causes, 130 Selected Causes (for infants), Drug/Alcohol Induced Causes (not available in archive data), Injury Intent and Mechanism groups (not available in archive data)
12. [Urbanization](#): classifies population density and other factors at the county level - pick between the 2006 or the 2013 NCHS Urban-Rural Classification Scheme for Counties

How? The Request screen has sections to guide you through the making a data request as step-by-step process. However, to get your first taste of how the system works, you might want to simply press any Send button, and execute the default data request. The data results for your query appear on the Table screen. After you get your data results, try the [Chart](#) and [Map](#) screens. Or [export](#) your data to a file (tab-delimited line listing) for download to your computer.

For more information, see the following:

[Quick Start Guide](#)

[Step 1](#), Organize table layout

[Step 2](#), Select location

[Step 3](#), Select demographics

[Step 4](#), Select year and month

[Step 5](#), Select weekday, autopsy and place of death

[Step 6](#), Select underlying cause of death

[Step 7](#), Select multiple cause of death

[Step 8](#), Other options

'By-Variables' Select variables that serve as keys (indexes) for organizing your data. See [How do I organize my data?](#) for more information.

Note: To map your data, you must select at least one geographical location as a "By-Variable" for grouping your data, such as State or County.

Help: Click on any button labeled "Help", located to the right hand side of the screen at the top of each section. Each control's label, such as the "Location" label next to the Location entry box, is linked to the on-line help for that item.

Send: Sends your data request to be processed on the CDC WONDER databases. The Send buttons are located on the bottom of the Request page, and also in the upper right corner of each section, for easy access.

CLICK HERE for the "Quick Start Guide"

<https://wonder.cdc.gov/wonder/help/mcd.html#>

Identify ICD-10 Codes

Using CDC Wonder

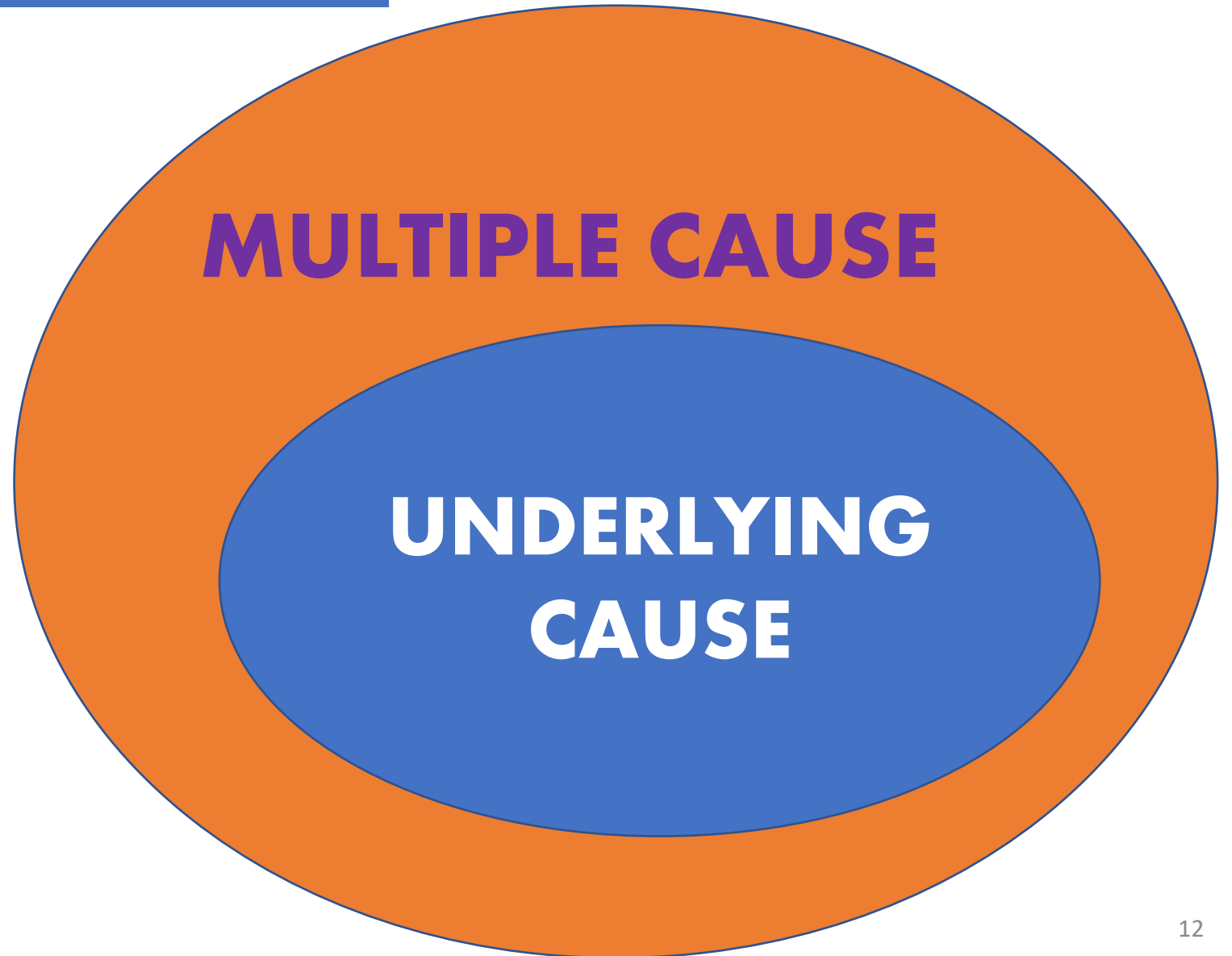


Hep B: B16, B17.0, B18.0, B18.1



Causes of Death

Attention!



Age Adjust Rates

Using CDC Wonder



Adjust to age distribution of
2000 US standard population

Express per 100,000 population



Confidentiality & Suppression Rules

Using CDC Wonder



Suppress if <10 deaths in year

Report “unreliable rate” if <20 deaths in year



Combine Years for Hep B in Hawaii

Using CDC Wonder

4

Calculate 3-yr moving average rates
(due to small #/yr)

Run separate queries for each 3 yrs
--**19 queries** to generate trend data for
2000-2020



Highlight of Findings

2000-2020 in Hawai‘i

Figure 1. Age-adjusted rates of hep B associated death (per 100K), Hawai‘i vs U.S.

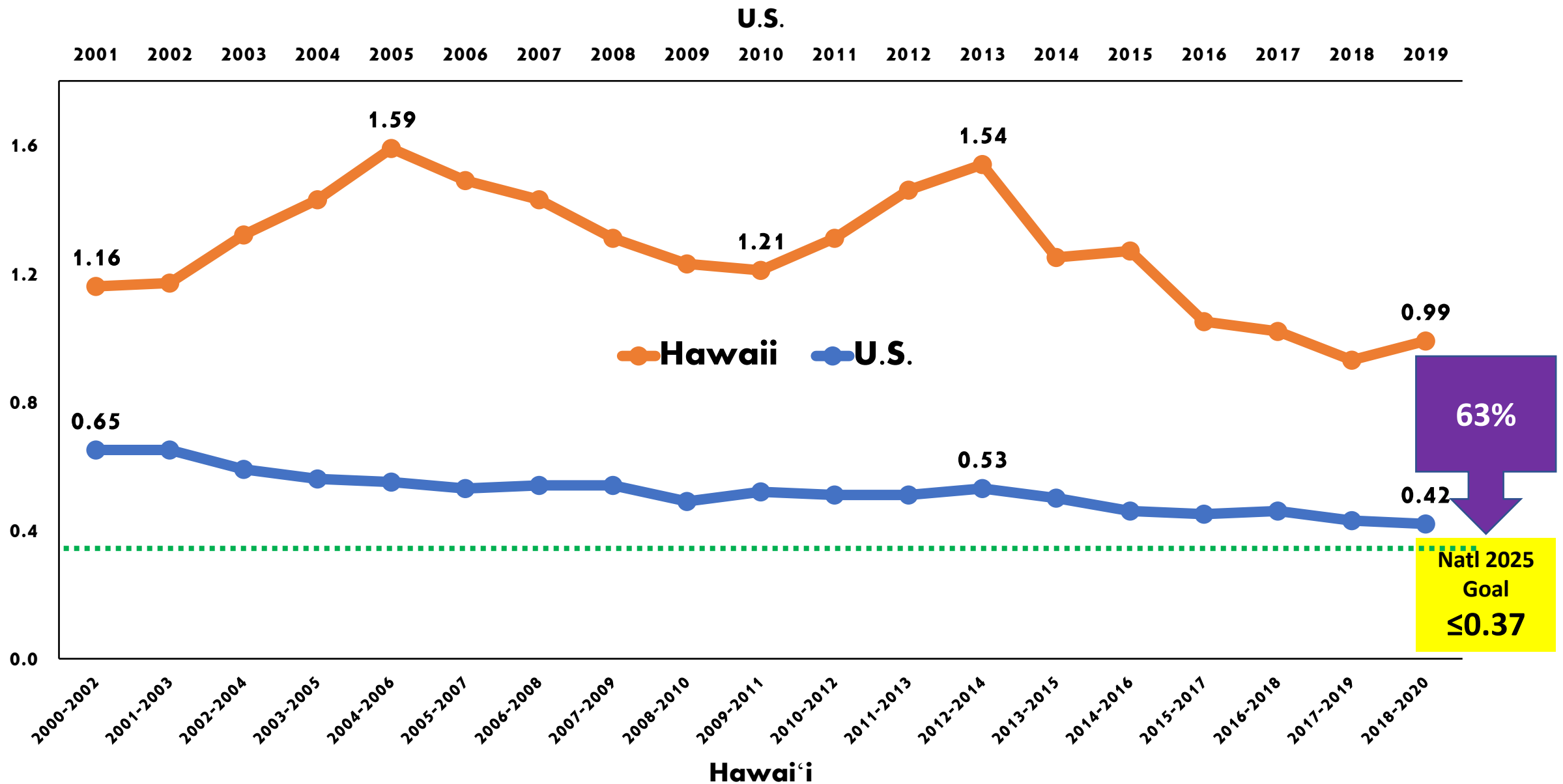


Figure 2. Percentage of Asian or Pacific Islander (API) Residents among general population vs hepatitis-B associated death, 2000-2020, Hawaii

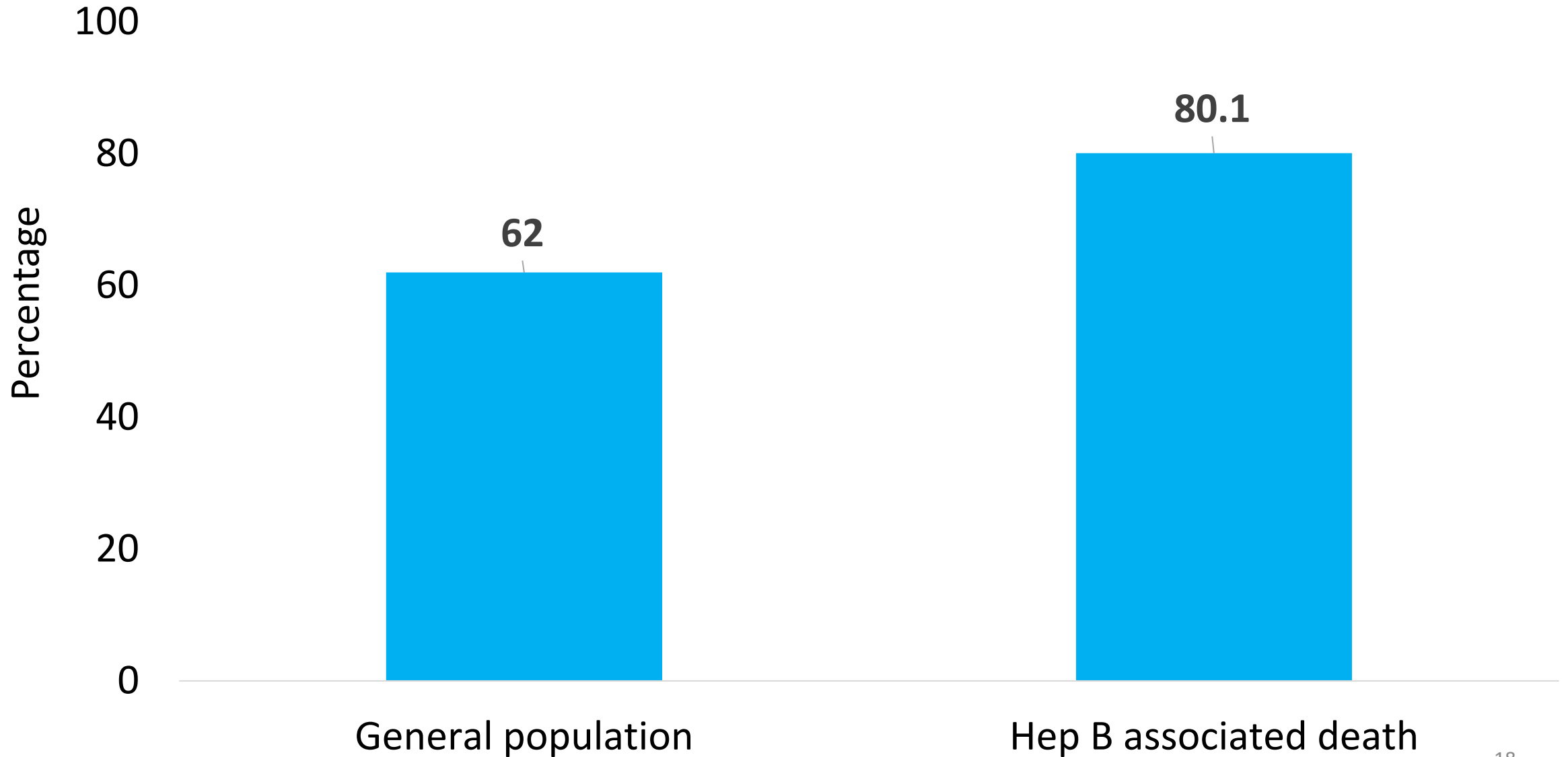
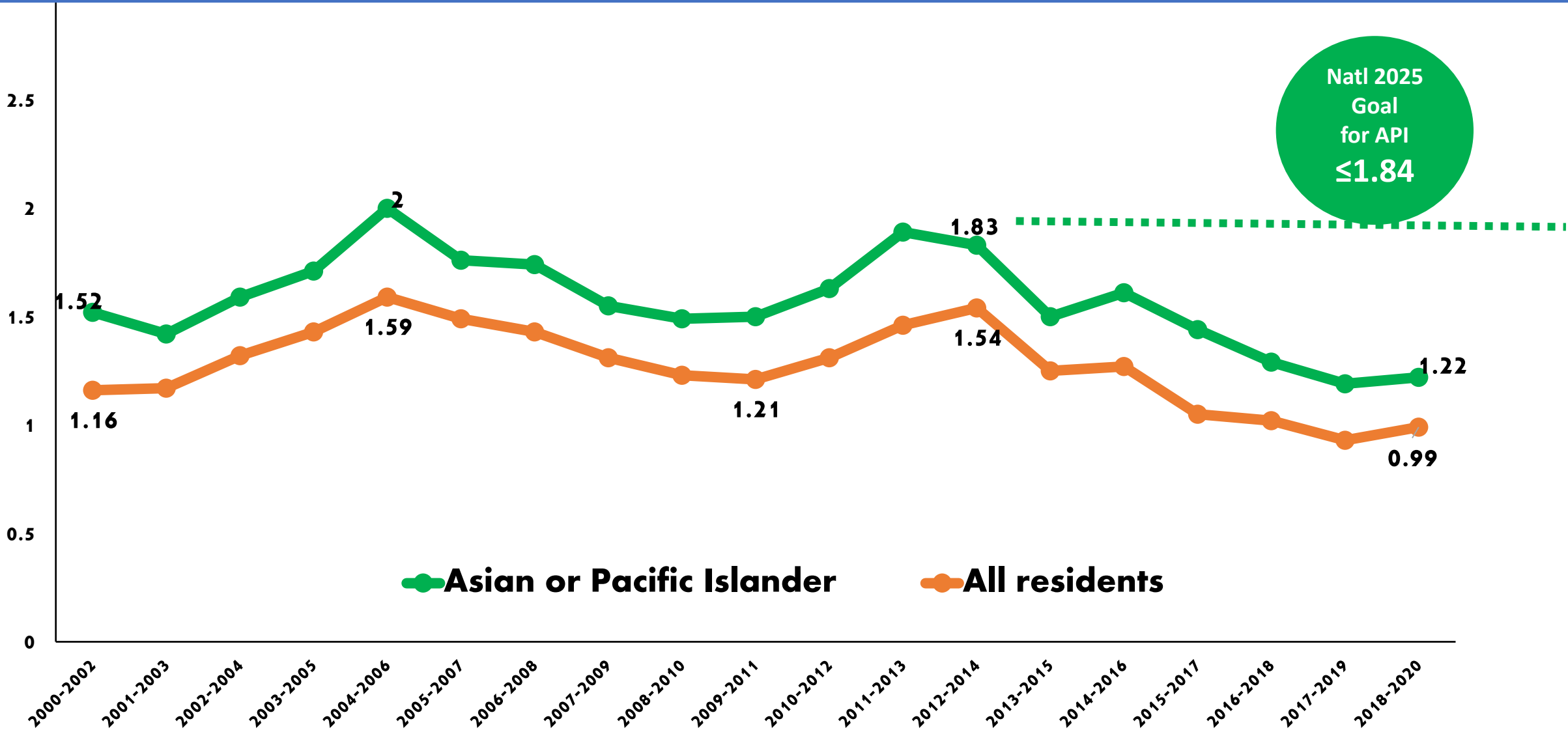


Figure 3. Three-year moving average rates of hep B associated death (per 100K), statewide vs API populations

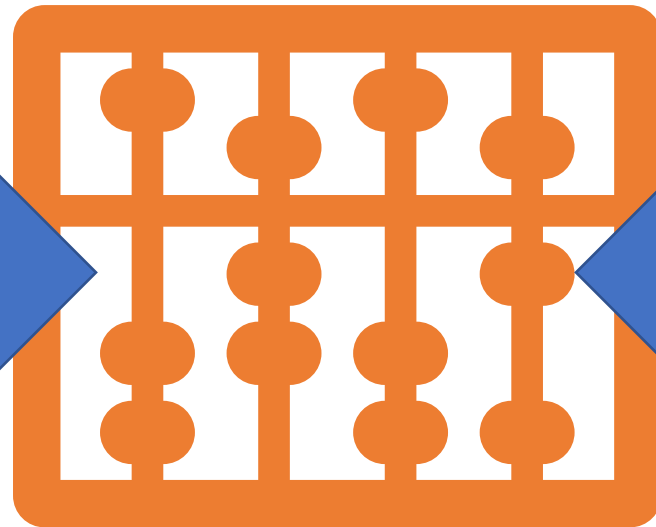


Limitations

Insufficient Data

Limitations

**No
individual
level**
(consider
confounders)

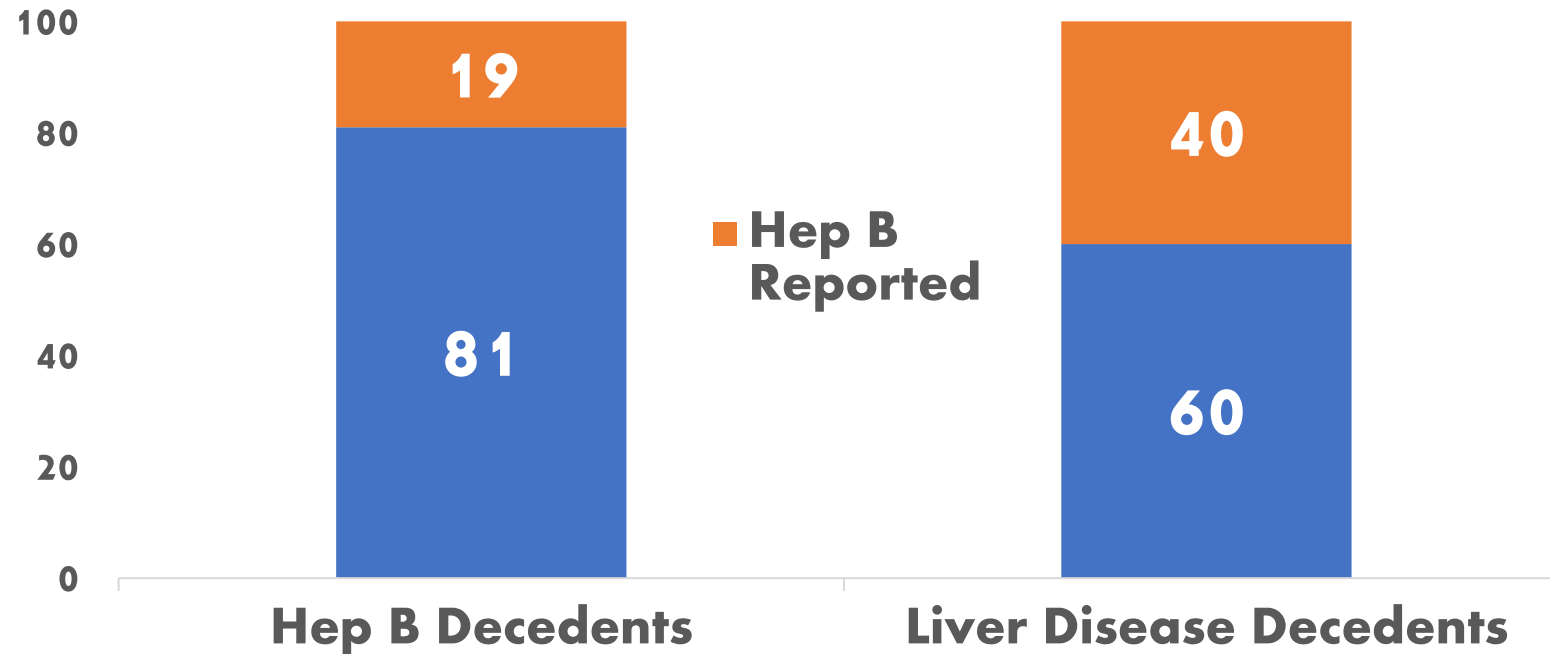


**Cannot
separate
API**
(except dataset
2018-2021)

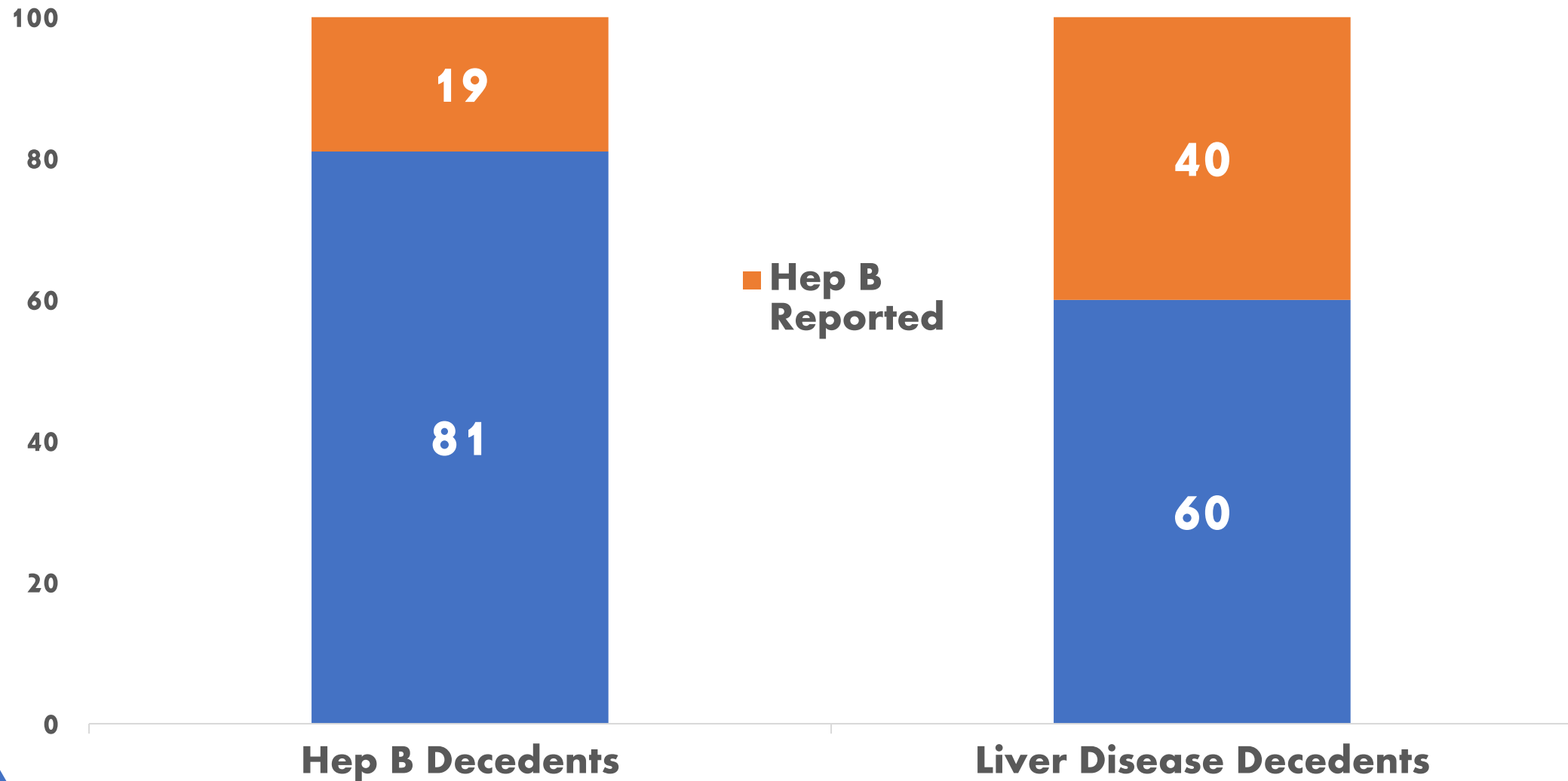


Underreporting⁴

Limitations



Hepatitis B Reported as Cause of Death (%)⁴



Data to Action

Action

Dissemination

HepFree



Action

Dissemination



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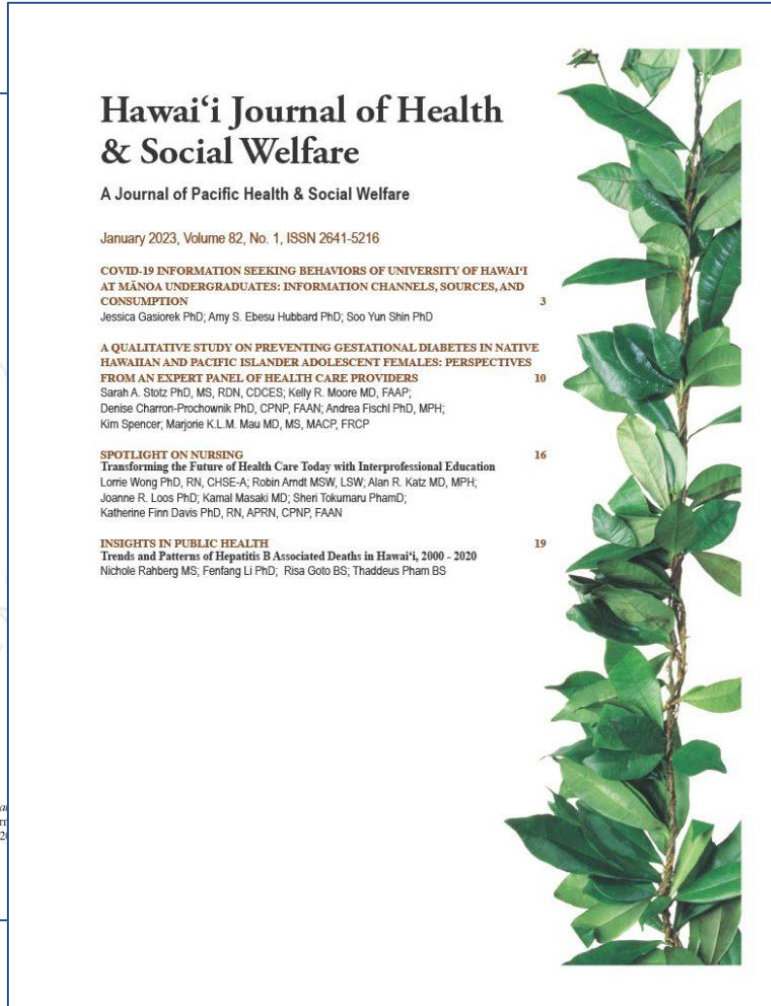
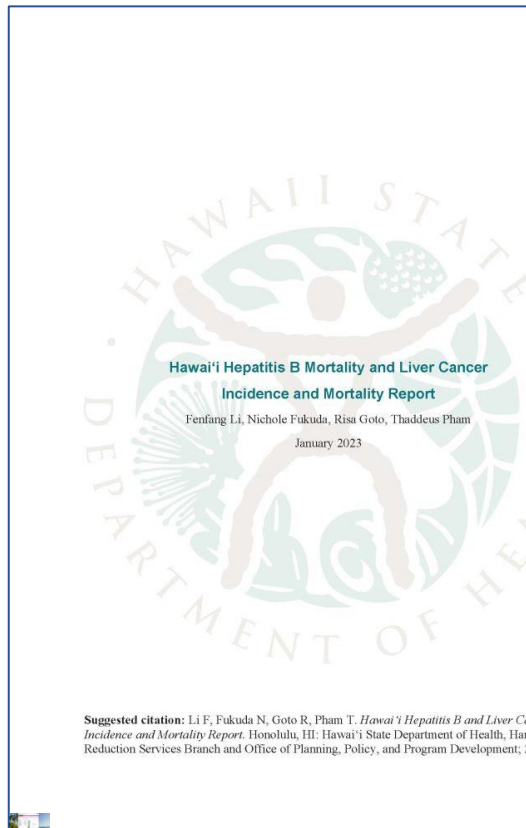
Access

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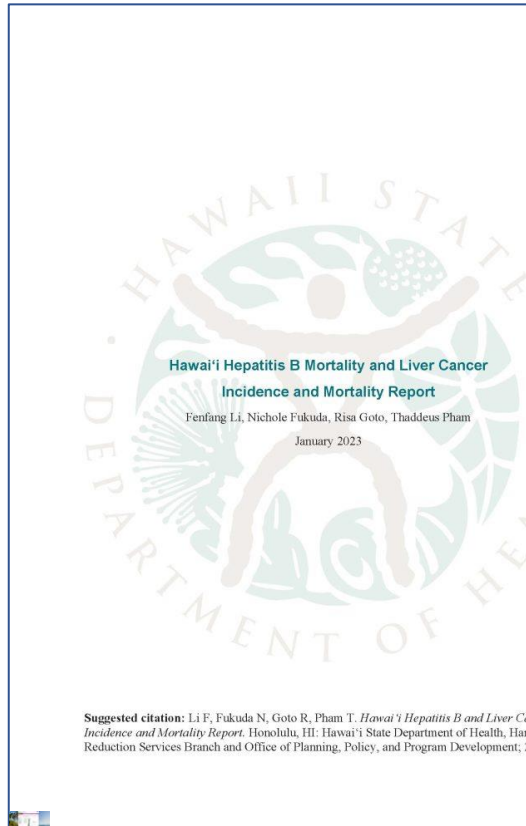
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Suggested citation: Li F, Fukuda N, Goto R, Pham T. *Hawaii Hepatitis B and Liver Cancer Incidence and Mortality Report*. Honolulu, HI: Hawaii's State Department of Health, Harm Reduction Services Branch and Office of Planning, Policy, and Program Development; 2023.

Hawai'i Journal of Health & Social Welfare

A Journal of Pacific Health & Social Welfare

January 2023, Volume 82, No. 1, ISSN 2641-5216

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Trends and Patterns of Hepatitis B Associated Deaths in Hawai'i, 2000 - 2020

Nichole Rahberg MS, Fenfang Li PhD, Risa Goto BS, Thaddeus Pham BS



MORTALITY IN HAWAII: HEPATITIS B AND LIVER CANCER IN THE PAST 20 YEARS



In February 2023, the Hawai'i Department of Health released *Hawai'i Hepatitis B Mortality and Liver Cancer*, the first such report ever developed in the state. Below are the main report findings that demonstrate the importance of hepatitis elimination, in alignment with Hep Free 2030.

HIGHER RATES

of Hepatitis B Deaths (2000-2020)

3 TIMES HIGHER
IN HAWAII

In 2019, Hep B mortality rate for Hawai'i was **1.17 deaths per 100,000**, compared to 0.42 per 100,000 for the United States.

MALE RESIDENTS
IN HAWAII

Hep B mortality rates for male residents in Hawaii were **up to 1.7 times state average** from 2000 to 2020.

API RESIDENTS IN
HAWAII

Hep B mortality rates for Asian and Pacific Islander (API) residents were **up to 1.4 times state average** from 2000 to 2020.



Higher rates of **liver cancer mortality** were also found when comparing Hawai'i to the United States.

In Hawaii, higher rates were found among male and/or API residents as well.

The full report contains more detailed information including tables and graphs as well as recommendations for improving data capacity to eliminate hepatitis B and related liver cancer in Hawaii. To read the full report, go to <https://health.hawaii.gov/harmreduction/new-hep-b-mortality-article/> or www.hepfreehawaii.org.



Access

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Hawai'i State Department of Health
Harm Reduction Services Branch
Ka 'Oihana Olakino

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- Happy Honolulu Pride 2021!
- CDC Releases Updated STI Treatment Guidelines for 2021
- DOH Releases Medical Advisory on New Gonorrhea Treatment Guidelines

New Hep B Mortality Report!

Posted on Jan 31, 2023 in [Featured](#) [Resource](#) [Update](#)

MORTALITY IN HAWAII'

Hepatitis B and Liver Cancer in the Past 20 Years

In February 2023, the Hawai'i Department of Health released

Higher Rates of Hepatitis B Deaths in Hawai'i (2000-2020)

3 Times Higher

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Male Residents



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Third Edition! SGM Directory
JOB OPPORTUNITY Driver (89-day hire)
Happy Honolulu People
CDC Releases Updated Treatment Guidelines
DOH Releases Medical Guidelines for New Gonorrhea Treatment

STATE OF HAWAII
DEPARTMENT OF HEALTH
JOSH GREEN, M.D.
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KENNETH S. FINK, MD, MGA, MPH
DIRECTOR
KA LUNA HO'ŌKELE

FOR IMMEDIATE RELEASE
February 15, 2023 23-009

DOH report finds high rates of hepatitis B and liver cancer mortality
Asian and/or Pacific Islander residents especially affected

HONOLULU – The Hawai'i Department of Health (DOH) recently released a report that found higher rates of hepatitis B virus infection and liver cancer mortality in Hawai'i, compared to the United States. The *Hawai'i Hepatitis B Mortality and Liver Cancer* report analyzed mortality data from 2000 to 2020 in order to guide local efforts to improve liver health and reduce preventable deaths.

This novel report was the first comprehensive analysis of hepatitis B and liver cancer death data for Hawai'i. The most important findings from the report include:

- **Hawai'i has one of the highest hepatitis B death rates nationwide.** In 2019, the rate for Hawai'i (1.17 per 100,000) was almost three times the national rate (0.42 per 100,000).
- **Hepatitis B death rates were higher among Asian and Pacific Islander (API) residents in Hawai'i.** Rates for API residents were 1.2 to 1.4 times the rate of the state average.
- **Liver cancer death rates in Hawai'i were consistently higher than the national average,** with Hawai'i rates 1.1 to 1.8 times national rates. This overall trend was driven by higher rates among male and API residents, compared to the rest of the state.

Based on the analysis, the report makes recommendations to reduce the burden of hepatitis B and liver cancer mortality, including additional research and reporting, improved data collection

DOH Home



Awareness

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DOH Report Finds High Rates Of Hepatitis B And Liver Cancer Mortality In Hawai'i

February 20, 2023 at 5:20 am



Tuesday, April 18, 2023 Today's Paper 78.656°

Hawaii News

Report: High rates of hepatitis B, liver cancer mortality

By Wyatt Haupt Jr. The Garden Island | Monday, February 20, 2023, 12:05 a.m.

Share this story

Local News

Hepatitis B deaths in Hawai'i surpass national average, report says

Hawaii Public Radio | By Zoe Dym
Published February 21, 2023 at 12:13 PM HST

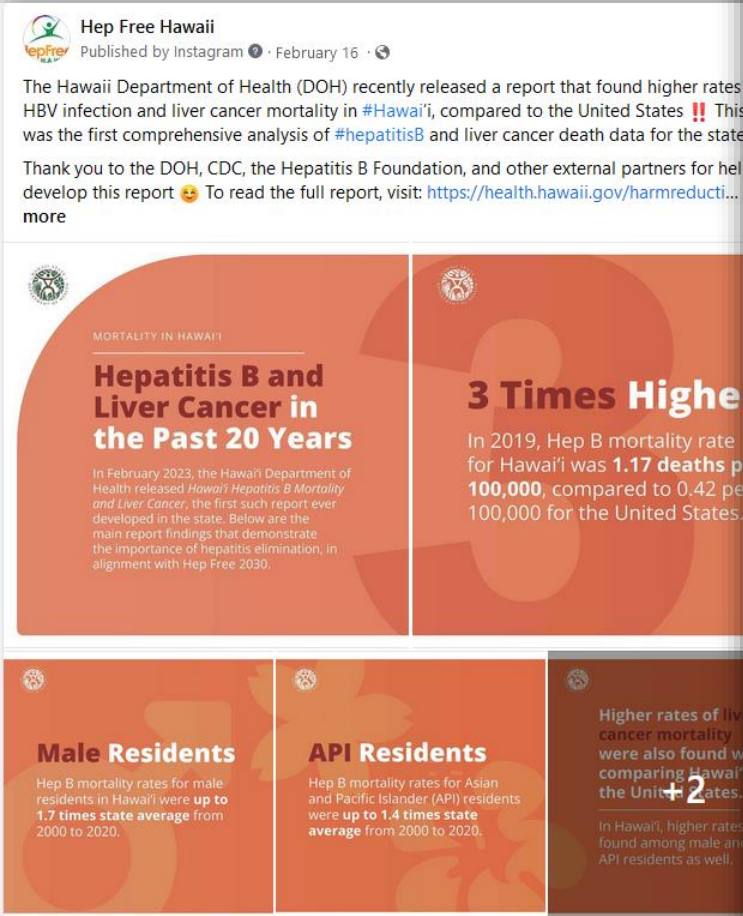
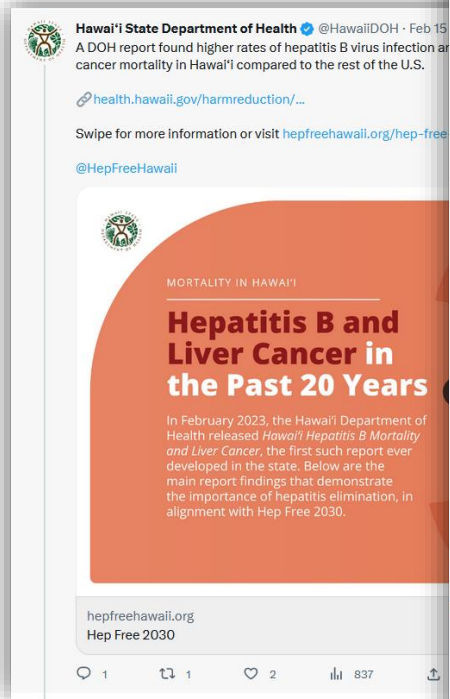


▶ LISTEN • 0:55



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Hep Free Hawaii
@HepFreeHawaii

...

Hep Free Hawaii, and the Department of Health will be presenting on the most released, Hepatitis B Mortality Report for Hawaii! Register to attend the presentation TODAY from 9am-10am (HST) !! Click the link in our bio to register and attend 🍷

[#takeTHAThepatitis #HepFree2030](#)



MORTALITY IN HAWAII:

HEPATITIS B AND LIVER CANCER IN THE PAST 20 YEARS

In February 2023, the Hawaii Department of Health released *Hawaii's Hepatitis B Mortality and Liver Cancer*, the first such report ever developed in the state. Below are the main report findings that demonstrate the importance of hepatitis elimination, in alignment with Hep Free 2030. See the back for a referral letter to get tested for hepatitis B.

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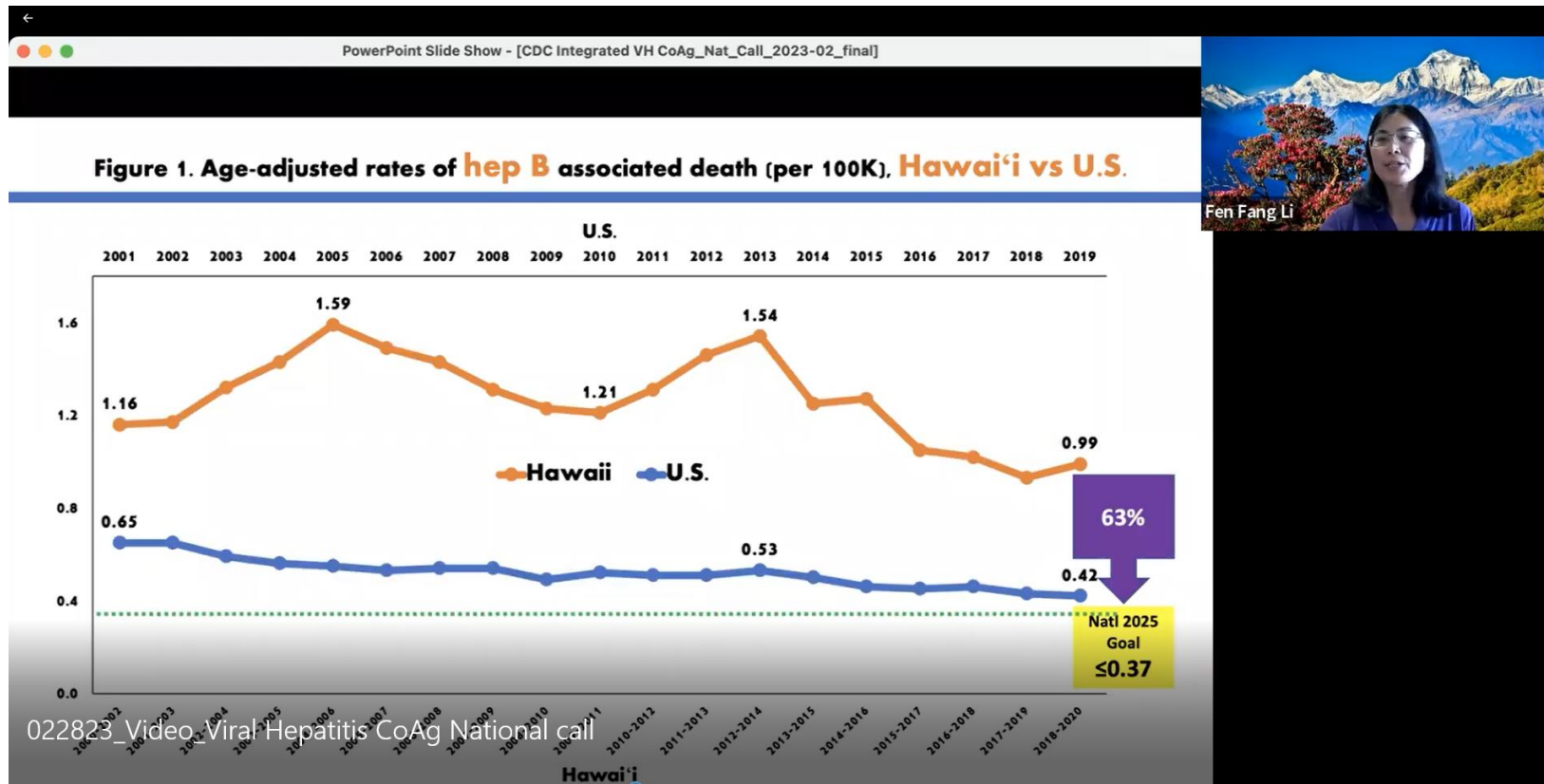
In Hawaii, higher rates were found among male and/or API residents as well.

4:31 AM · Feb 28, 2023 · 466 Views



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Fen Fang Li

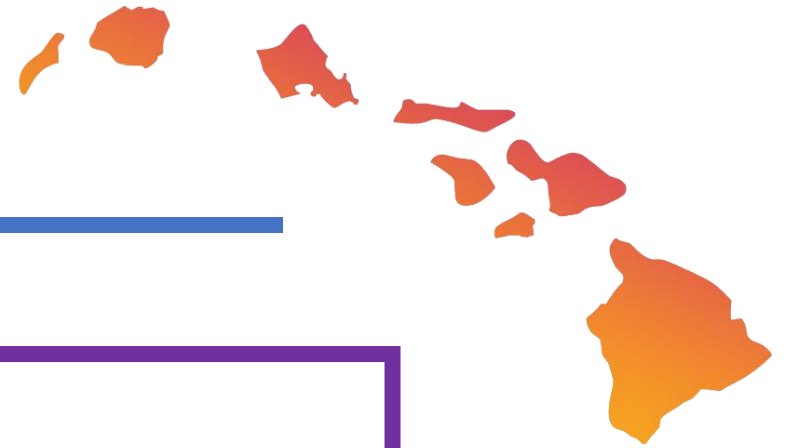


<https://centersfordiseasecontrol.sharefile.com/share/view/s2a0d856f8a754e8fac21c3b1196aec1e>

The question is...

**What can you do with
non-surveillance data?**

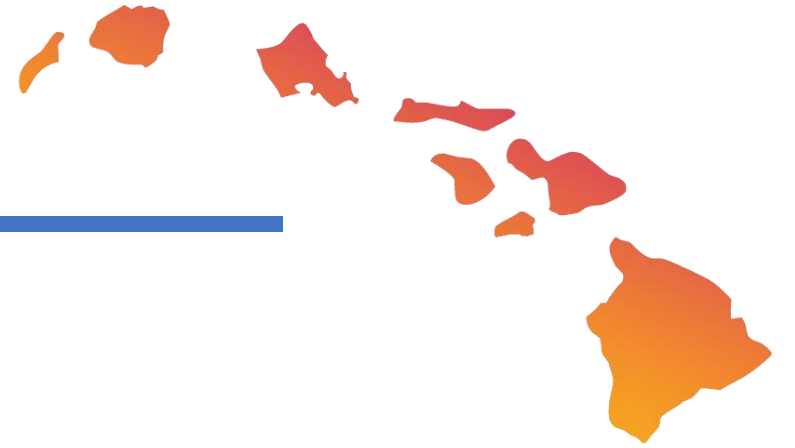
Download Report



<https://health.hawaii.gov/harmreducation/new-hep-b-mortality-article/>



Contact Us



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Risa Goto - rgoto1@g.ucla.edu

Thaddeus Pham - thaddeus.pham@doh.hawaii.gov

References

1. CDC. Numbers and rates of reported cases of acute hepatitis B virus infection, by state or jurisdiction — United States, 2016-2020. <https://www.cdc.gov/hepatitis/statistics/2020surveillance/hepatitis-b/table-2.1.htm>
2. CDC and National Cancer Institutes' United States Cancer Statistics Data Visualizations Tool 1999-2019 - <https://gis.cdc.gov/Cancer/USCS/#/AtAGlance/>
3. CDC WONDER Multiple Cause of Death 1999–2020 online database - <http://wonder.cdc.gov/mcd-icd10.html>
4. Bixler, Danae, Yuna Zhong, Kathleen N. Ly, Anne C Moorman, Philip R. Spradling, Eyasu H. Teshale, Lorelee B. Rupp, et al. “Mortality Among Patients with Chronic Hepatitis B Infection: The Chronic Hepatitis Cohort Study (CHeCS).” *Clinical Infectious Diseases* 68, no. 6 (March 2019): 956-963. doi:10.1093/cid/ciy598.