

# DATA LIMITATIONS IN THE UDS MAPPER

The screenshot displays the UDS Mapper web application. At the top left is the logo "UDS Mapper". The navigation menu includes "HOME", "ABOUT", "UDS MAPPER", "UPCOMING EVENTS", "TUTORIALS & RESOURCES", and "CONTACT US", with a "Help" button on the right. A search bar at the top left contains the text "Search address or place". The main map area shows a color-coded overlay of the United States, with colors ranging from blue to red. A sidebar on the right is titled "Explore Service Area" and contains the following elements:

- Buttons for map navigation: home, zoom in, zoom out, pan, full screen, and search.
- Section: "Explore Service Area" with a close button.
- Text: "Select a mode to explore your area of interest".
- Radio buttons:  "By Geography",  "By Patient Origin",  "By Distance".
- Text: "Search for a place on the map and manually select ZCTAs for analysis. Use special tools to select many ZCTAs at once."
- Search bar: "Search address, place, ZCTA, or health center name".
- Section: "Selected ZCTAs" with a list of selected areas and a "Go to Selected Area" button.
- Section: "Health Center Program Sites" with checkboxes for "Health Center Administrative Locations" and "Health Center Service Delivery Sites", both of which are checked.
- Section: "Information Card" with a "Select Map Item to View Information Card" dropdown menu.

At the bottom right of the map area, there is a small text attribution: "Esri, HERE, Garmin, FAO, NOAA, USGS, EPA".

# ACRONYMS USED IN THIS LESSON

Acronym	What It Stands For
ACS	American Community Survey
HCP	Health Center Program
MAP for MAT	Mapping Areas of Priority for Medication-Assisted Treatment
UDS	Uniform Data System
ZCTA	ZIP Code Tabulation Area

# PATIENT DATA LIMITATIONS

- Patient data come only from HCP awardees and look-alikes that report data into the UDS
  - In areas that appear underserved, people may receive service from another provider type
- Data suppression
  - Health centers are told not to report ZIP Codes where fewer than 11 of their patients reside
  - Even if a health center reports a ZIP Code with fewer than 11 patients, these patients are excluded from the aggregated ZCTA patient count shown in the UDS Mapper
- Data reported at organization level (not from each site)

# INCOME LEVEL DATA LIMITATIONS (1)

- The UDS does not contain patient income information by ZIP Code
- Therefore, all calculations comparing patient data and low-income population data are only estimates that serve as starting points for analyses
  - The UDS Mapper assumes that 100% of HCP patients are low-income (in 2018 nationally 91.3% of awardee and 91.6% of look-alike patients were low-income)
  - For each ZCTA, the **HCP: Penetration of Low-Income (%)** percentage is estimated by dividing the number of reported UDS patients (numerator) by the low-income population number from the Census Bureau's 5-year ACS (denominator)

# INCOME LEVEL DATA LIMITATIONS (2)

In some scenarios, the low-income penetration rate is overestimated, and may exceed 100%:

- Patients are not low-income (most often in rural areas)
- Patients are migrant or homeless (these populations are not well-counted in the ACS)
- Areas where there are multiple HCP organizations that see the same patients (one health center may offer a service that the other one does not)

# GEOGRAPHY LIMITATIONS

- Patients are reported by ZIP Code, not by address
  - Therefore, the data can only be shown at the ZCTA level; they cannot be shown at any other geography such as county or census tract
- Additionally, ZCTAs cross county and occasionally state lines, therefore the data cannot be precisely aligned with county or state reports
- See this diagram of Census Bureau-created geographies:  
<https://www2.census.gov/geo/pdfs/reference/geodiagram.pdf>
- MAP for MAT indicators data are only available by county

# UDS AND POPULATION DATA LIMITATIONS

- Patient data and population data may be from different years
- The UDS patient data and ACS population data are updated according to different schedules
  - Because patient data are updated in summer and population data are updated in winter, between the summer and winter updates when you compare patient data to population data (i.e., penetration rates) you are comparing datasets from different years

# INSURANCE TYPE LIMITATIONS

- These population data are estimated for ZCTAs
- The data are limited by the population data used to break down the categories
  - The data can only break down into Uninsured; Medicaid or Other Public Insurance; and Medicare or Private Insurance
- Patient by insurance type is assumed to be based on the patient's insurance status at last visit



# ZIP CODE/ZCTA LIMITATIONS

ZIP Code boundaries change or evolve:

- ZIP Codes can be changed at any time by the U.S. Postal Service; ZCTAs are updated less frequently
- Solution: ZIP Code data are updated annually; therefore, every reported ZIP Code in the UDS matches the ZCTA that best fits that location
  - Data are never left out of counts or analyses because a ZIP Code is new or changes

# ESTIMATED DATA LIMITATIONS

Not all data providers publish data at the ZCTA level; therefore, some data are estimated at the ZCTA level:

- Includes Population Indicators data and population by insurance type data
- For these estimates, data at the state, county, or lower level are combined with census block population data and imputed to the ZCTA level
- Remember, these are estimates and should only be used as starting points



# END OF LESSON

Proceed to the next lesson to continue learning how to use the UDS Mapper

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