Technical Assistance Webinar

Identifying Appropriate Data Sources for Community-Level Evaluations Tier 1B Grantees & Evaluators

Abt Associates

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Introductions

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Webinar Overview

- Introductions
- Selecting Outcomes and Covariates: Overview
- Identifying and Using Data Sources to Measure Outcomes and Covariates: Key Considerations
- Administrative Data: Specific Information and Examples
- Summary
- Q and A

Objectives

At the conclusion of this webinar, participants will:

- Understand key considerations for selecting data sources to measure community-level outcomes and covariates;
- Know how administrative data sources commonly used for evaluation are collected, when they are available, and how to access them;
- Be able to assess the appropriateness of different potential data sources for impact evaluations.

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REVIEW OF EVALUATION DATA REQUIREMENTS

Types of Data for Evaluations

- Most quasi-experimental study designs (QED) require two kinds of data:
  1. Outcome
     - Used to assess whether the program was effective
  2. Covariate
     - Used to adjust for differences between treatment and comparison communities
- Outcome and covariate data sources can be different as long as they identify the same communities

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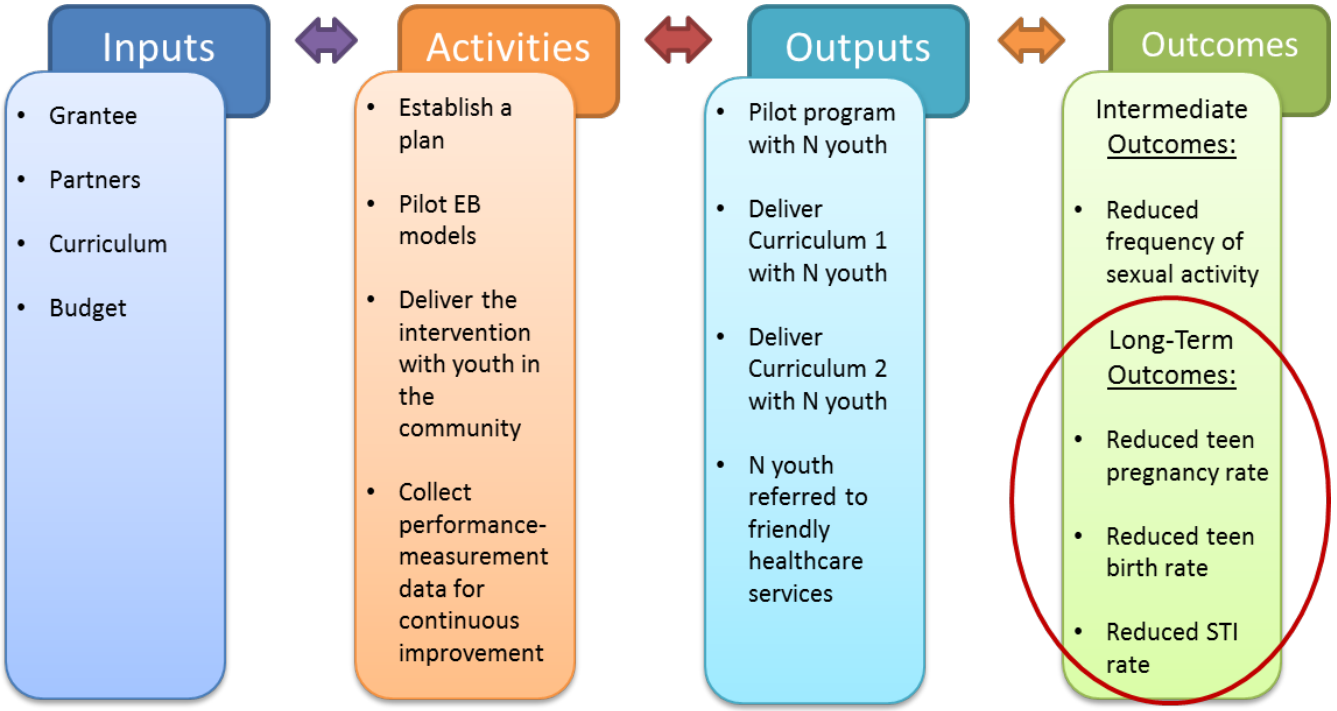
Outcomes From the Logic Model

Evaluation questions and measures should be linked to outcomes in your **logic model**



Potential Outcome Measures

- Example outcomes for your programs:
  - Teen pregnancies or births
  - Health outcomes (e.g., STIs)
  - Sexual risk behaviors (e.g., contraceptive use)
  - Academic outcomes (e.g., grades, attendance)
- Outcomes should be aggregated to the *community level*
  - I.e., the level to which you scale up the program
  - This could mean zip codes, school districts, cities, or counties

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Community-level Covariate Data Are Also Needed

- A QED compares outcomes in the treatment group with outcomes in a “similar” comparison group
- Covariates are community-level attributes that are used to
  - Assess whether the treatment and comparison groups look similar
  - Statistically adjust for any differences, e.g., using propensity score matching

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Covariate Features

- The best covariates are those that are correlated with the outcome of interest.
- Remember: Must convince readers that any difference in the outcome between the treatment and comparison groups at follow-up is due to the intervention and not to other factors.
- Kirby (2007*) identifies some attributes that are antecedents of adolescent sexual behavior.
  - At the community level, these include education, unemployment rate, income level, and crime rate.

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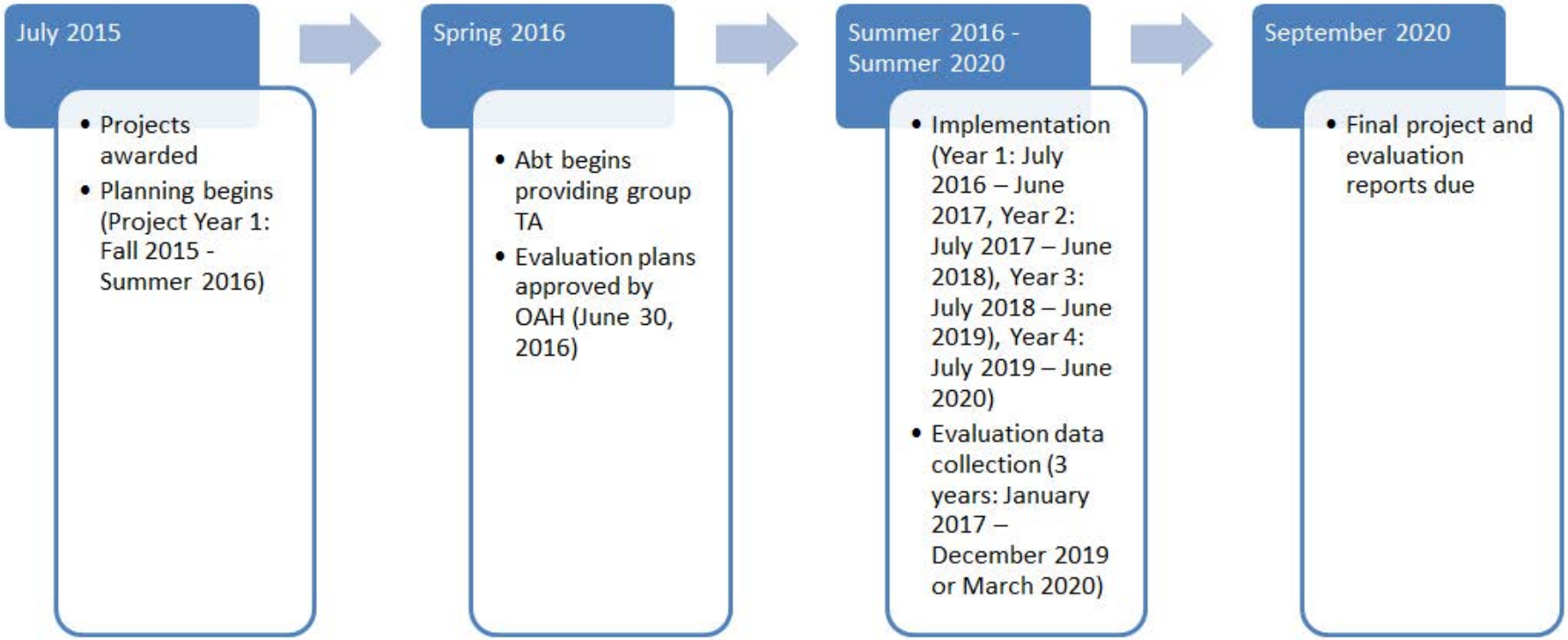
*Emerging Answers: Research Findings on Programs to Reduce Teen Pregnancy, available at https://thenationalcampaign.org/sites/default/files/resource-primary-download/EA2007_full_0.pdf

Project and Evaluation Timeline



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CONSIDERATIONS FOR IDENTIFYING AND USING ADMINISTRATIVE DATA SOURCES

Advantages of Administrative Data

- Administrative data are collected as part of a program agency's routine operations
- Data collection mechanisms include
  - Ongoing surveillance (e.g., count/track live births, demographic characteristics, reportable STDs)
  - Program or service utilization (e.g., program applications, educational records, clinical tests performed)
  - Needs assessment and research activities (e.g., surveys on knowledge or behaviors)
- Key features
  - Already exist!
  - Can be aggregated at the **community level** that is needed for the Tier 1B program evaluations

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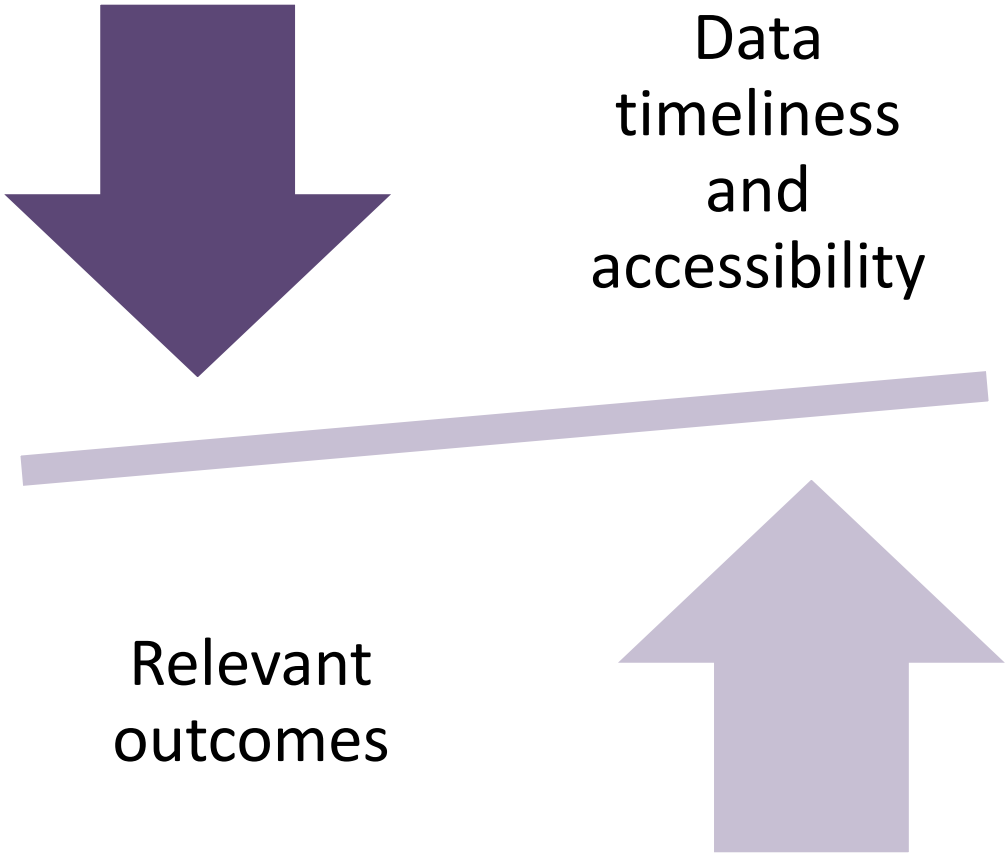
Overall Considerations For Using Administrative Data

- Must strike a balance between



Three Factors for Selecting and Using Administrative Data

- Level and Units
- Timeliness
- Quality

Level and Units of Administrative Data Sources

- Evaluations must measure outcomes and covariates at the community level
- Geographic units used to define Tier 1B program communities
  - Counties
  - ZIP codes
  - Cities
  - School districts
  - Neighborhoods or boroughs
- Same geographic unit must be used in outcome and covariate data for treatment and comparison communities
- Unit of analysis in administrative dataset vs. Logic Model

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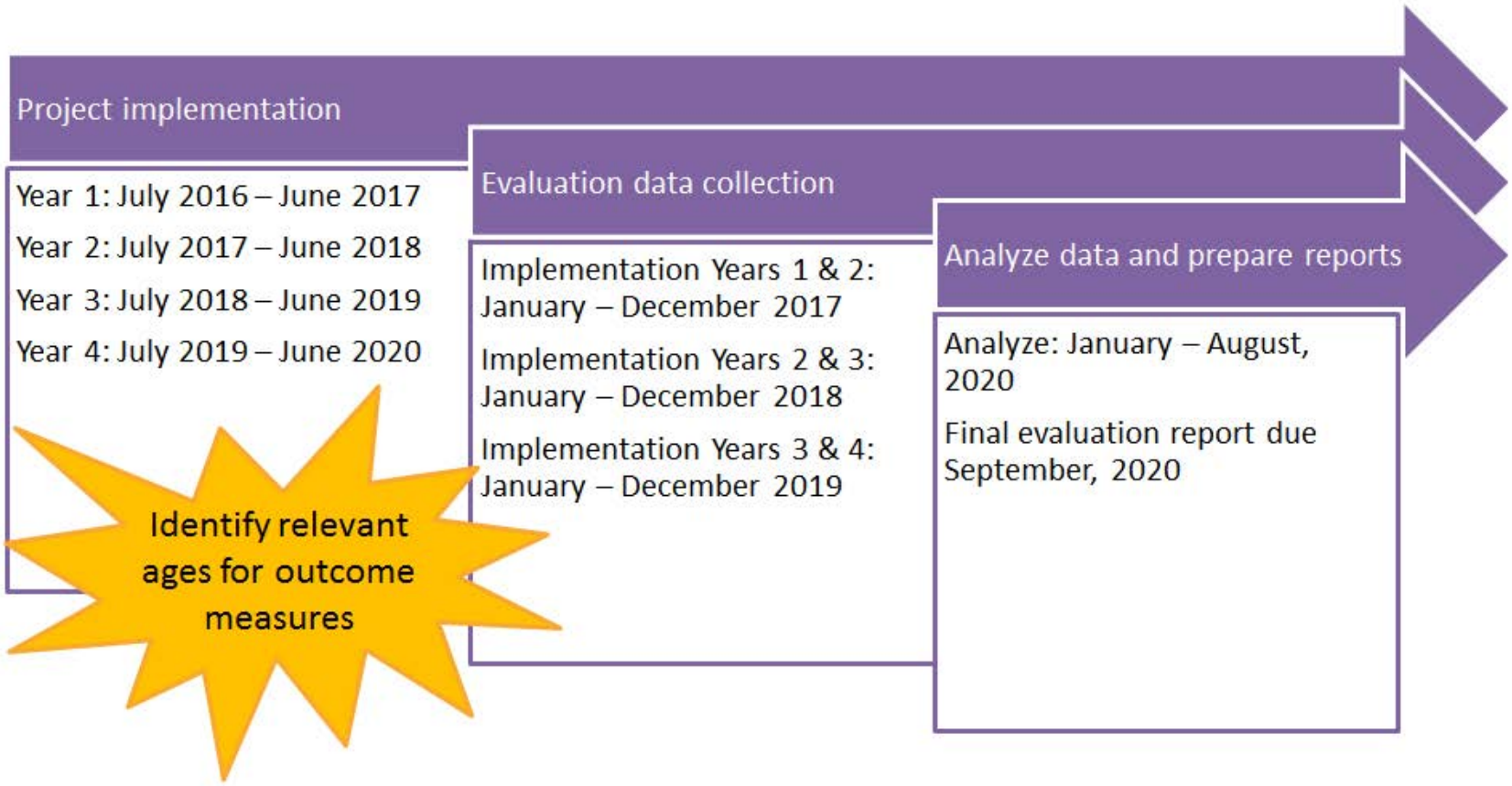
Timeliness Requirements for Administrative Data



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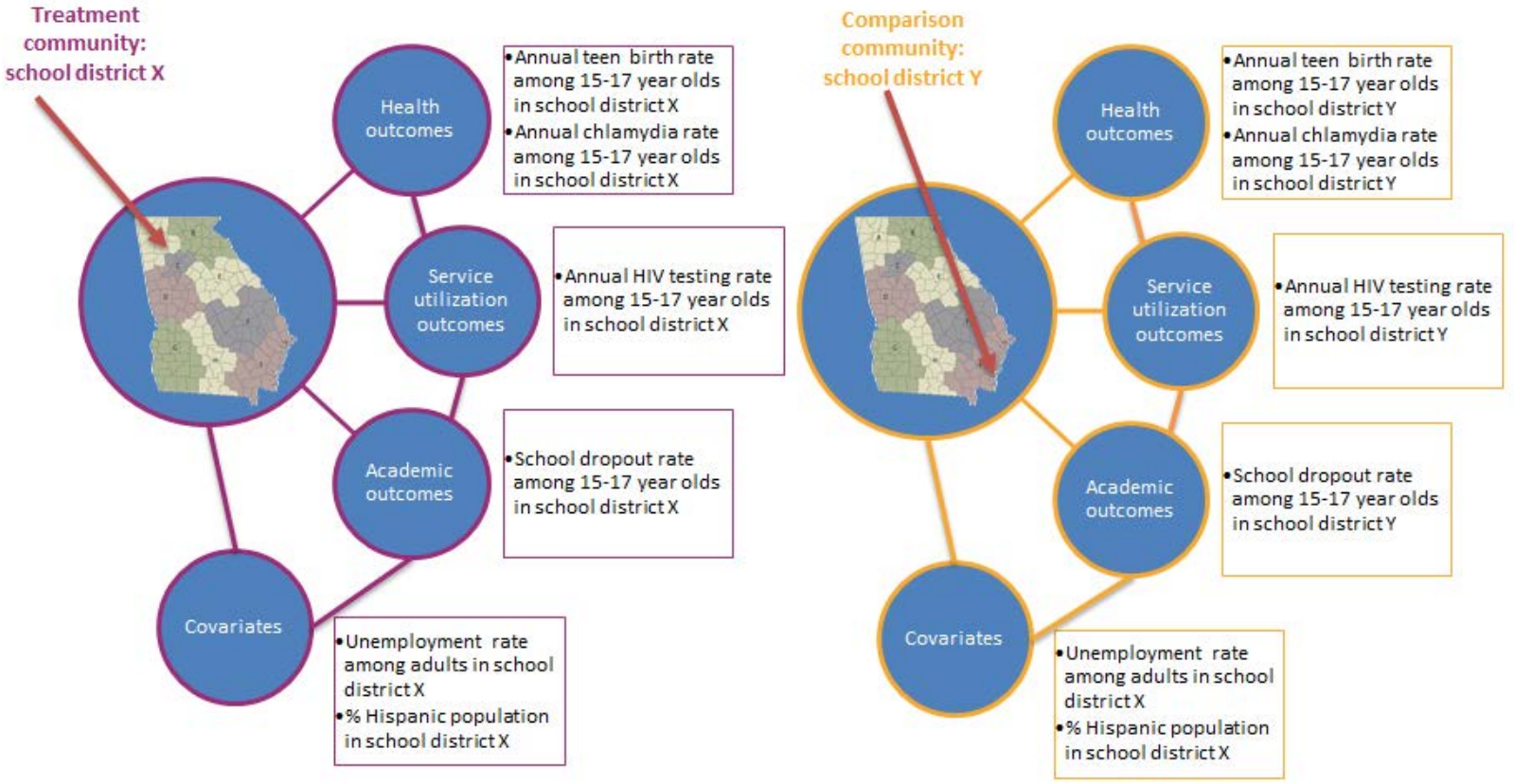
Administrative Data Quality

- Assess data
  - Relevance
  - Interpretability
  - Coherence
  - Accuracy and reliability
  - Credibility
- Quality assessment tools
- Discussions with data providers

Combining Multiple Administrative Data Sources



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EXAMPLES OF KEY ADMINISTRATIVE DATA SOURCES

Community-level **outcome** measures and administrative data sources

Category	Outcome	Example measure	Administrative data source
Health	Births	Community teen birth rate	Vital statistics data
Sexual risk behavior	Sexual activity	% of high school students in the community who were currently sexually active	YRBSS*
Sexual risk behavior	Contraceptive use	% of high school students in the community who were currently sexually active and did not use any method to prevent pregnancy	YRBSS
Knowledge	Knowledge of STIs	% of high school students in the community who were never taught in school about AIDS or HIV infection	YRBSS
Access to health care services	Access to reproductive health care services	Rate of health care service access among teens in the community	local hospital and ambulatory care administrative data

*Youth Risk Behavior Surveillance System

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Other Community-Level Outcomes

- Data *may* be available for other outcomes of interest
  - Teen pregnancy
  - STIs
  - Skills
  - Academic
  - Behaviors
  - Involvement

Community-level **covariate** measures and administrative data sources

Environmental factor	Community-level covariate	Example measure	Administrative data source
Community	Poverty	Poverty rate in the community	American Community Survey (ACS)
Community	Racial/ethnic composition	Proportion non-Hispanic black residents in the community	ACS
Community	Education	High school drop-out rate among people age 25 and older in the community	ACS
Family	Parent's education level	Proportion residents age >25 in the community with college degree or higher	ACS
Family	Proportion single parent households	Proportion single family householder in the community	ACS
Family	Household substance abuse	Percentage of adults in the community that report either binge drinking or heavy drinking	BRFSS*

*Behavioral Risk Factor Surveillance System

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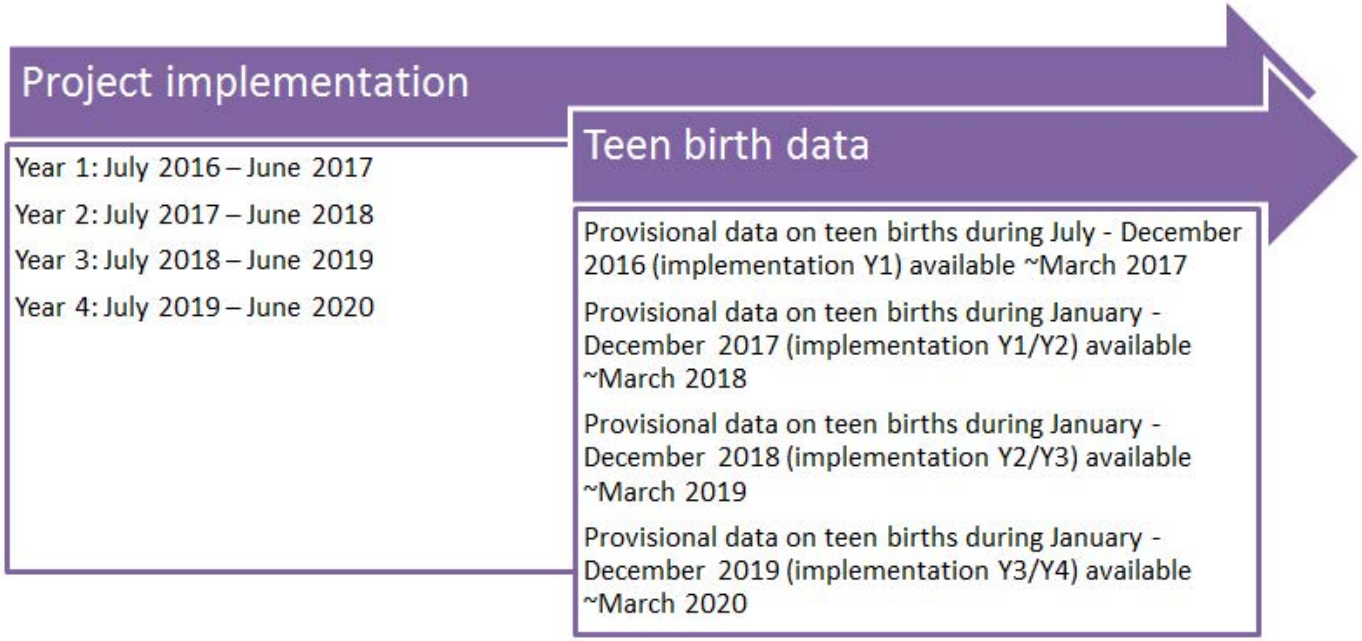
Vital Statistics Data on Teen Births and Pregnancies

- Vital records of live births, fetal deaths, and induced termination of pregnancy are collected by vital statistics registrars in each state and territory
  - Used for legal/administrative and public health statistics
  - Follow established definitions and reporting requirements
  - Physicians and/or hospital personnel file certificates and reports with a local or state registrar
  - State registrars compile and publish data

Availability of Vital Statistics Data on Teen Births

- Final birth data are available 9-12 months (or longer) after the close of the calendar year
  - Provisional data are produced sooner and can be requested for research activities



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Availability of Vital Statistics Data on Teen Pregnancies

- Pregnancy data are more complex and take longer to compile
- Data are typically not available in the timeframe needed for this evaluation
- Grantees can explore options for accessing pregnancy data with health departments and local partners

Accessing Vital Statistics Data on Teen Births

- National websites
  - National Center for Health Statistics
  - Annie E Casey KIDS COUNT state data website
- State vital statistics departments

Teen Birth Rate (Births per 1,000 Females Ages 15-19)
for Year of Birth=All

County of Residence	Year of Birth		
	All	2014	2013
All Selected	19.1	18.3	19.9
ADAMS	25.4	29.9	21.0
ASHLAND	29.1	30.1	28.1
BARRON	24.0	23.8	24.3
BAYFIELD	24.9	19.7	29.8
BROWN	22.3	22.5	22.1
BUFFALO	8.5	7.4	9.6
BURNETT	24.7	25.6	23.7
CALUMET	11.4	10.0	12.9
CHIPPEWA	13.0	12.7	13.3
CLARK	15.9	15.7	16.1
COLUMBIA	16.3	16.6	15.9
CRAWFORD	17.0	18.3	15.7
DANE	11.5	12.6	10.4
DODGE	16.0	14.5	17.5

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Youth Risk Behavior Surveillance System on Teen Sexual Risk Behavior

- Youth Risk Behavior Surveillance System (YRBSS) monitors six types of health-risk behaviors
- Surveys are conducted in selected public middle and high schools every two years by CDC or state or local government agencies
  - Several (21) large urban school districts participate
- Some communities use the YRBS methodology to conduct their own survey

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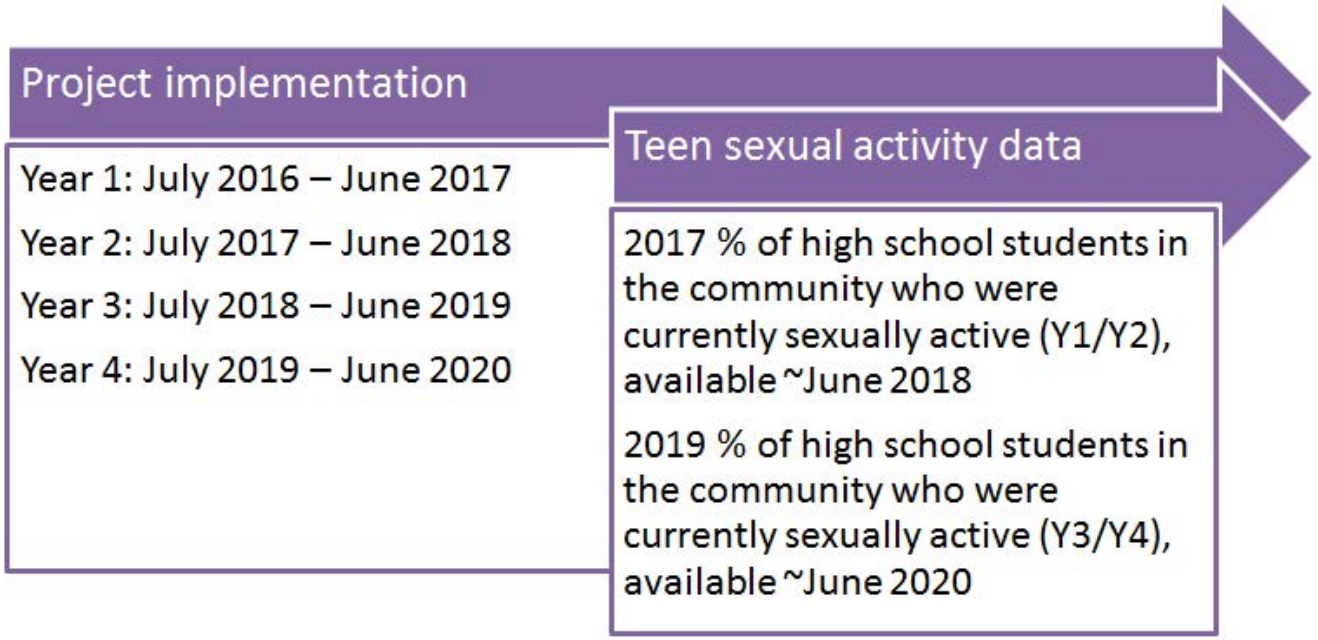
Availability of YRBSS Data on Teen Sexual Risk Behavior

- National, state, and large school district YRBSS data are available the summer after the survey is fielded
  - Response rates vary by location
  - Reliability checks assess data quality



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Considerations for Using YRBSS Data on Teen Sexual Risk Behavior

Advantages

- Survey topics address relevant outcomes
- YRBSS conducted in some grantee locations
- Data can be requested from individual schools
- Pre-intervention data points may be available

Limitations

- State data are not the appropriate geographic level for Tier 1B evaluation
- Individual schools may not be selected to participate each year (2017, 2019)
  - Data may not be available for comparison community
- Unweighted data only represent the students participating in the survey

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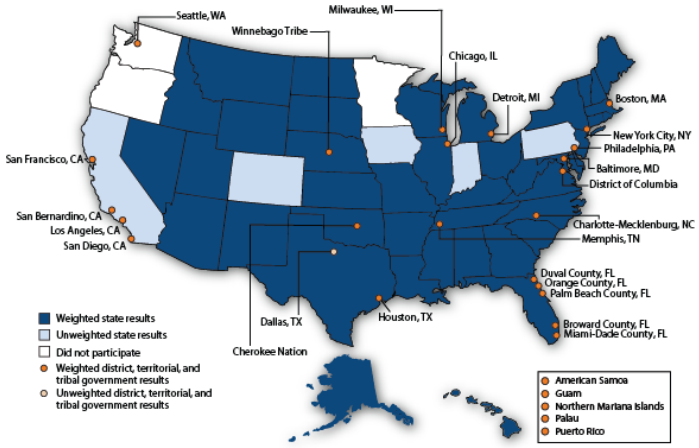
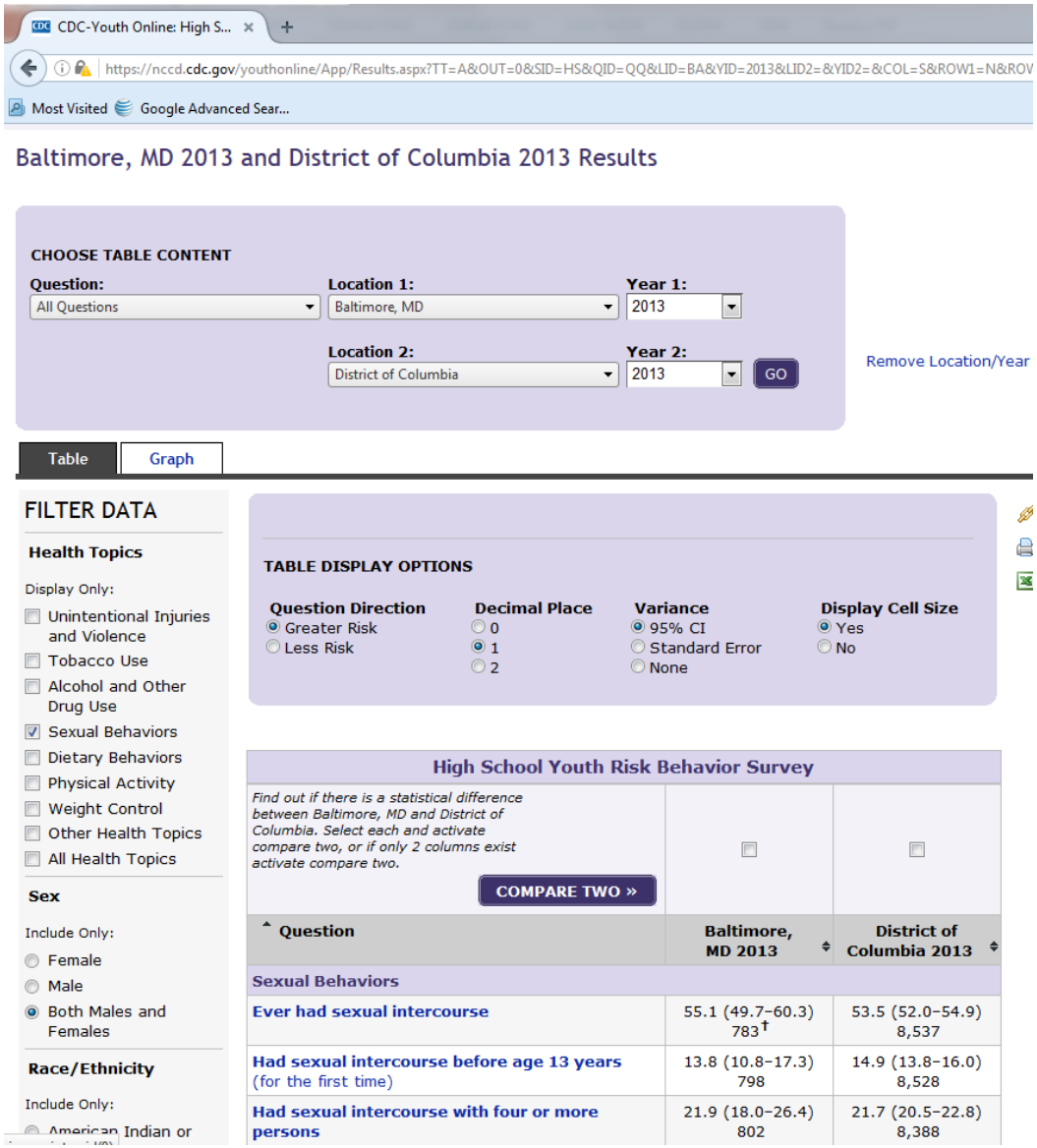
Accessing YRBSS Data on Teen Sexual Risk Behavior

- CDC website
- Local jurisdictions



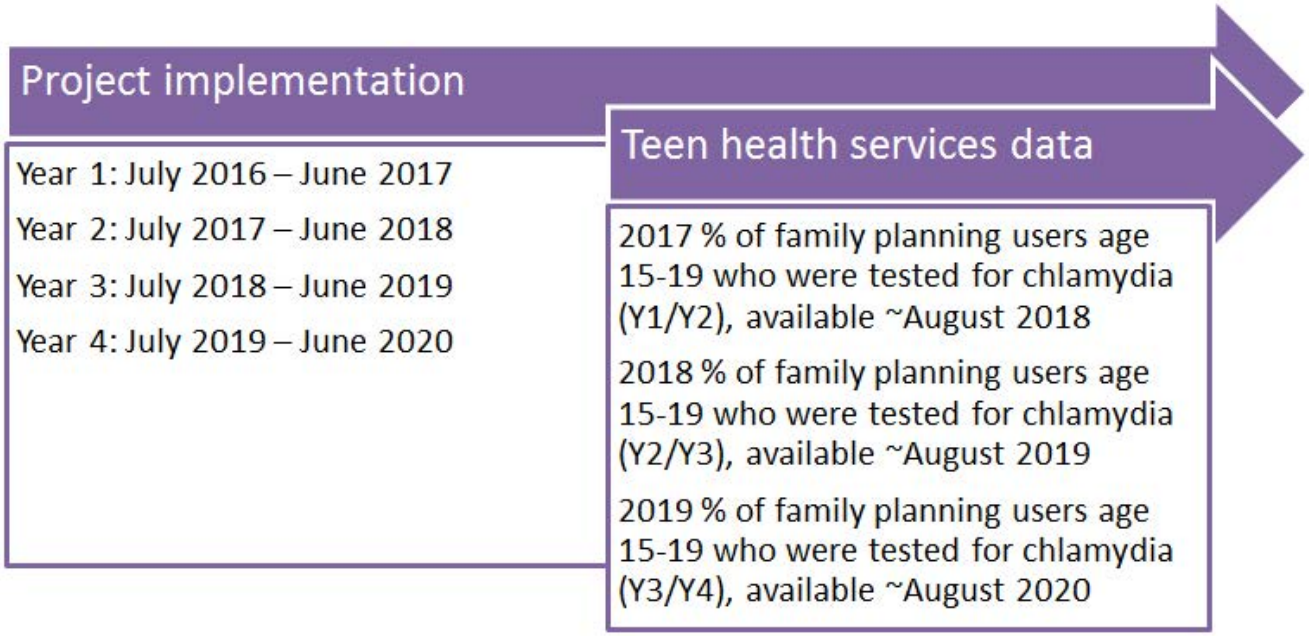


Title X Data on Teen Health Service Utilization

- Title X grantees include state and local health departments, and nonprofit family planning and community health agencies
- Title X services grantees submit annual data via the Family Planning Annual Report (FPAR)
  - Demographic and social characteristics of clients
  - Client use of family planning and preventive health services

Availability of Title X Data on Teen Health Services Utilization

- FPAR data are submitted to OPA by February for the previous year
  - Quality checks at data entry and following submission
- Individual regional offices receive grantee-specific FPAR summary reports



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- Grantees interested in health services utilization data can explore service providers in their community and discuss data access with Abt team
  - Title X
  - Other service providers

Table 11
Unduplicated Number of Family Planning Users Tested for Chlamydia by Age Group and Sex

Age Group (Years)	Female Users (A)	Male Users (B)
1 Under 15		
2 15 to 17		
3 18 to 19		

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Summary Considerations for Selecting Administrative Data on Outcome Measures

- Outcome measures should be:
  - ✓ **Relevant (i.e., linked to logic model)**
  - ✓ **Available for both treatment and comparison communities**
  - ✓ **Aggregated to the community level**
  - ✓ **Timely**
  - ✓ **Reliable**
- After selecting outcome measures, review administrative data sources to determine feasibility of use

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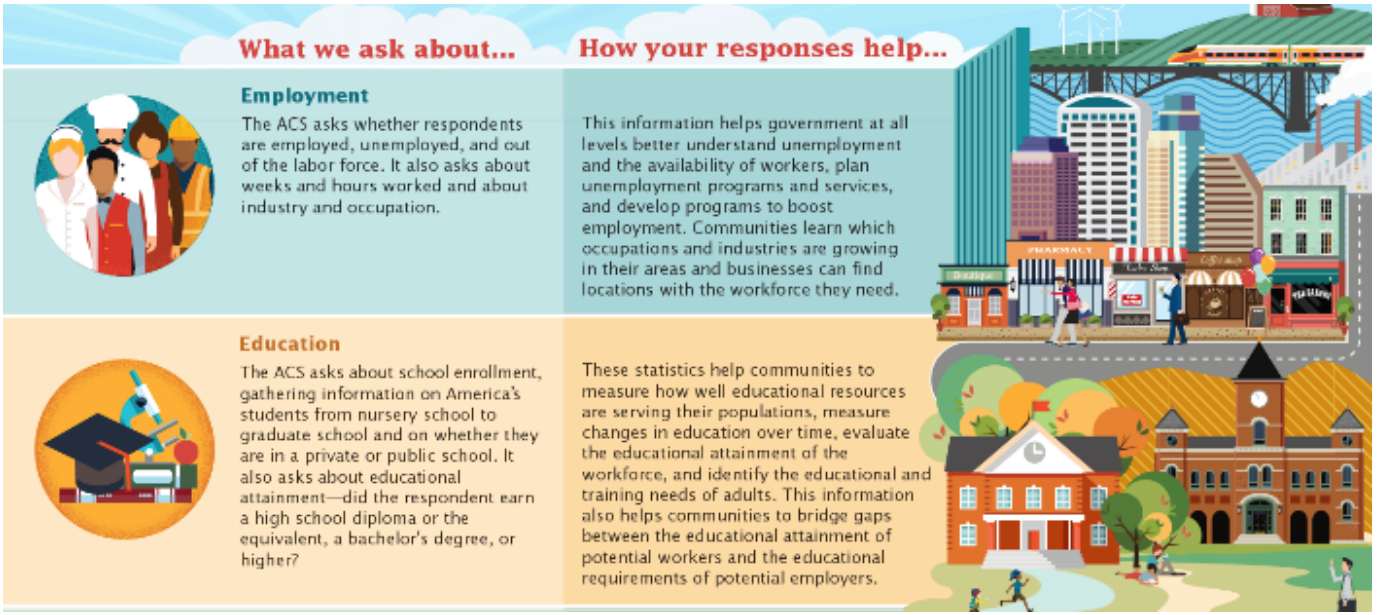
Administrative Data for Covariates

- The comparison group is local and focal
- Comparability is important for both outcome measurement and measures of baseline trends
  - Covariates and outcomes should be measured at the same community level
- Baseline trends in outcomes and covariates are used to match communities

American Community Survey (ACS) Historic Demographic Data

- The ACS is an ongoing survey conducted by the Census
- Survey topics include demographic, education, employment, and income characteristics



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Availability of ACS Historic Demographic Data

- 1-year and 5-year estimates are released annually
  - Available approximately 9 months after the end of the survey calendar year
- Accessing data
  - AmericanFactFinder website
  - School District Demographics System
  - Annie E Casey Foundation KIDS COUNT, County Health Rankings, and the Health Indicators websites
  - Individual state or community agencies and organizations

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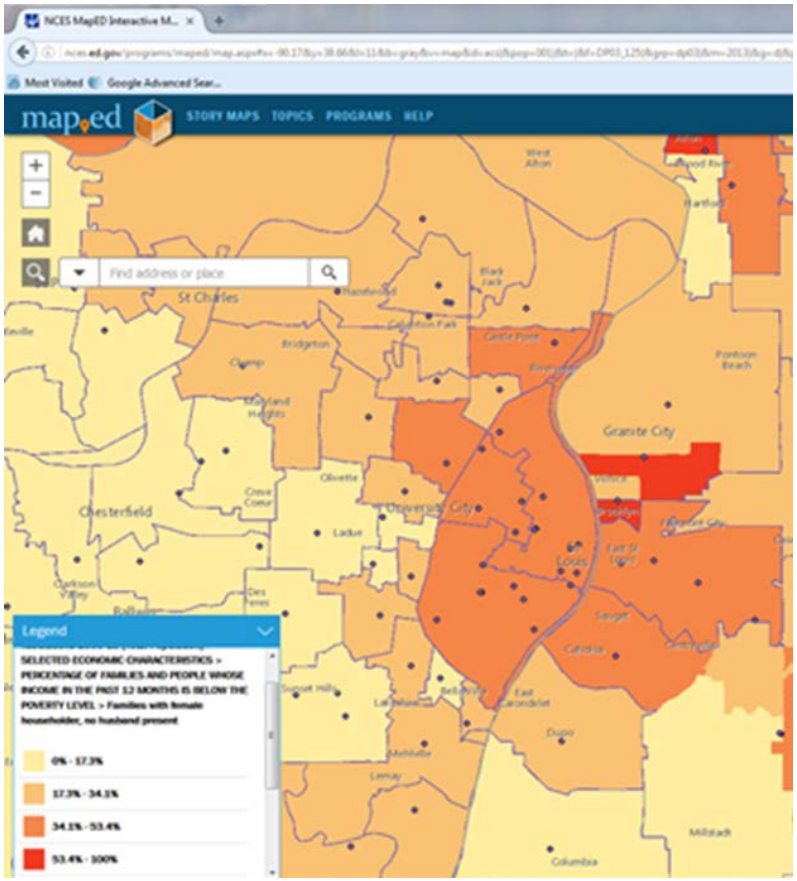
Accessing ACS Historic Demographic Data

School district data on family poverty level



City data on educational attainment

Subject	Hartford city, Connecticut			
	Total		Male	
	Estimate	Margin of Error	Estimate	Ma
Population 18 to 24 years	20,207	+/-1,702	10,297	
Less than high school graduate	22.1%	+/-4.7	29.0%	
High school graduate (includes equivalency)	31.2%	+/-6.5	31.7%	
Some college or associate's degree	41.8%	+/-6.2	37.0%	
Bachelor's degree or higher	5.0%	+/-2.6	2.3%	

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Using Historic Demographic Data to Match Communities

Community-level covariate	Measure	Implementation community (county A)	Candidate comparison community (county B)
Poverty	% families with children under 18 years of age living in poverty	2014: 20.3%	2014: 18.5%
		2013: 20.0%	2013: 18.8%
		2012: 20.0%	2012: 18.7%
Racial/ethnic composition	% black, % Hispanic	2014: 8.3%, 59.3%	2014: 8.9%, 33.9%
		2010: 7.5%, 58.7%	2010: 8.5%, 33.5%
Single parent households	% family households with single householder	2014: 32.4%	2014: 28.1%
		2013: 31.9%	2013: 28.1%
		2012: 31.4%	2012: 28.1%

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Other Administrative Data Sources

- Community-level
  - Needs assessments
  - Partner organization datasets

- National Survey of Family Growth
  - Ongoing survey that includes measures of pregnancy, contraceptive use, and men's and women's health
  - Most recent data are from 2011-2013
  - County-level data are available through the NCHS and Census Research Data Centers

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General Health and Community Data Resources

- *Annie E Casey Kids Count* (http://www.datacenter.kidscount.org/)
- *County Health Rankings* (http://www.countyhealthrankings.org/)
- *Health Indicators Warehouse* (http://www.healthindicators.gov/)
- Individual state or city databases

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SUMMARY

Challenges and Opportunities

- Acceptable data sources are those where…
  - Outcomes and covariates are measured in a reasonable, credible way
  - Data are available on measures of interest for treatment **and** comparison communities
  - Data are timely
- Datasets selected for use will be linked together using the community geographic identifier for use in regression analyses
- Numerous administrative data sources are readily available
  - Historic information as well as outcomes over the course of the intervention
- When selecting administrative data, will need to strike a balance between relevance and timeliness and accessibility
  - Discuss options for accessing data while developing the evaluation plan

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TA RESOURCES

Resources

- Selecting outcomes and covariates
  - The best community-level attributes to use for matching/selection are those that are correlated with the outcome of interest.
  - Kirby 2007: Emerging Answers 2007—Full Report: New Research Findings on Programs to Reduce Teen Pregnancy (https://thenationalcampaign.org/resource/emerging-answers-2007%E2%80%94full-report)
- Identifying and accessing data
  - Repositories
    - *Annie E Casey Kids Count* (http://www.datacenter.kidscount.org/)
    - *County Health Rankings* (http://www.countyhealthrankings.org/)
    - *Health Indicators Warehouse* (http://www.healthindicators.gov/)
  - Vital statistics
    - NCHS (http://www.cdc.gov/nchs/data_access/vitalstats/vitalstats_births.htm)
    - States (see http://www.naphsis.org/)
  - CDC reportable STDs (http://www.cdc.gov/std/stats/by-age/15-24-all-stds/default.htm)
  - YRBSS (http://www.cdc.gov/healthyyouth/data/yrbs/index.htm)
  - ACS (http://factfinder.census.gov, http://nces.ed.gov/surveys/sdds/index.aspx)
  - BRFSS (http://www.cdc.gov/brfss/)
- Evaluating data quality
  - Statistical Uses of Administrative Records Subcommittee Data Quality Working Group tool (http://www.bls.gov/osmr/datatool.pdf)
  - Quality issues in the use of administrative data records (http://www.aisp.upenn.edu/wp-content/uploads/2015/06/Data-Quality-Paper_Final.pdf)

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Questions?

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