

Missing sexual orientation and gender identity data in the Behavioral Risk Factor Surveillance System: Sources, Magnitude, Correlates, Implications

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THANK YOU BRFS!!

BRFSS is an innovative leader in collecting SOGI data.

BRFSS is by far the largest source of population-based sexual orientation data, and the **ONLY** source of population-based gender identity data.

BRFSS is the **ONLY** source of SOGI data available at the *state* level.

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Kang J, Kim K.
West J Nurs Res. 2019 Mar 27:193945919836448. doi: 10.1177/0193945919836448. [Epub ahead of print]
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8. [Perceived Stigma in Health Care Settings and the Physical and Mental Health of People of Color in the United States.](#)

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Veliz P, Matthews AK, Arslanian-Engoren C, Evans-Polce RJ, Lee JGL, Boyd CJ, Hughes T, McCabe VV, McCabe SE.
Cancer Epidemiol. 2019 Mar 22;60:51-54. doi: 10.1016/j.canep.2019.03.009. [Epub ahead of print]
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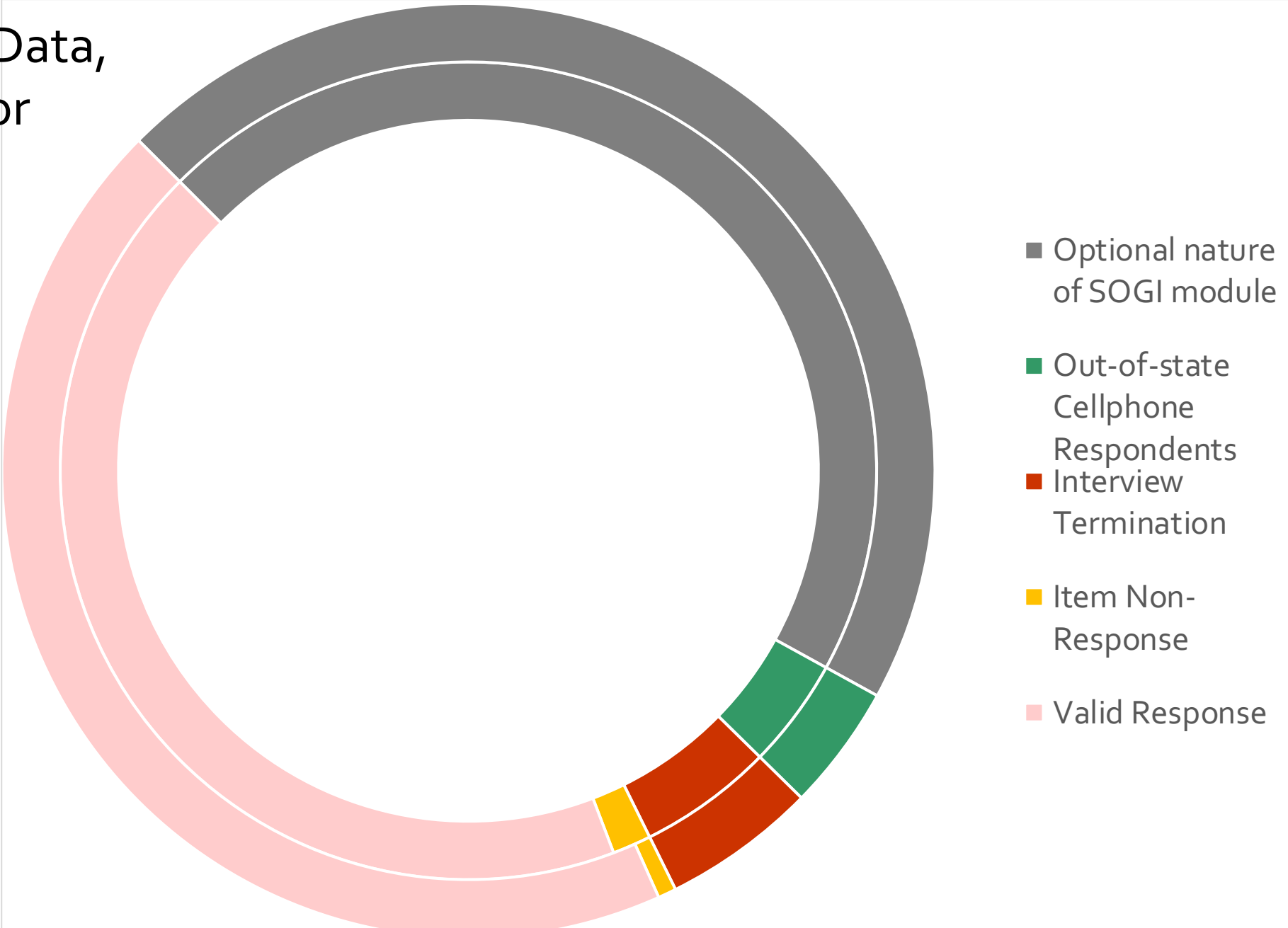
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Learning Objectives

- 1) *Sexual orientation and gender identity (SOGI) data are missing **more often** than researchers realize.*
- 2) *This missing data problem is **more complicated** than researchers realize, and our usual missing data techniques don't work (well), **even at the state level.***
- 3) *The only practical solution is to include the SOGI module in the **core demographics** section, on a **national basis.***

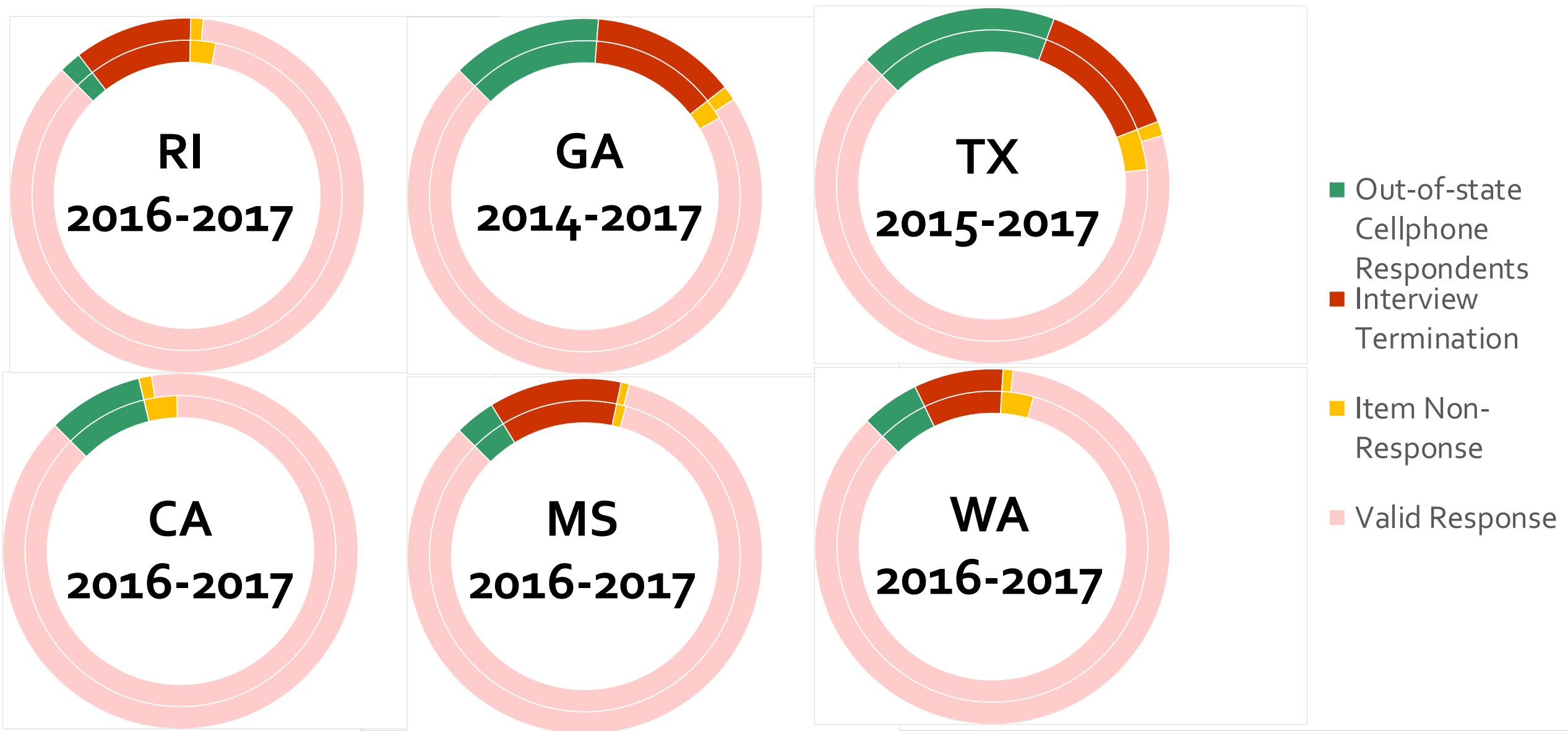
Sources of Missing BRFSS SOGI Data

Sources of Missing Sexual Orientation and Gender Identity Data, Behavioral Risk Factor Surveillance System, 2014-2017

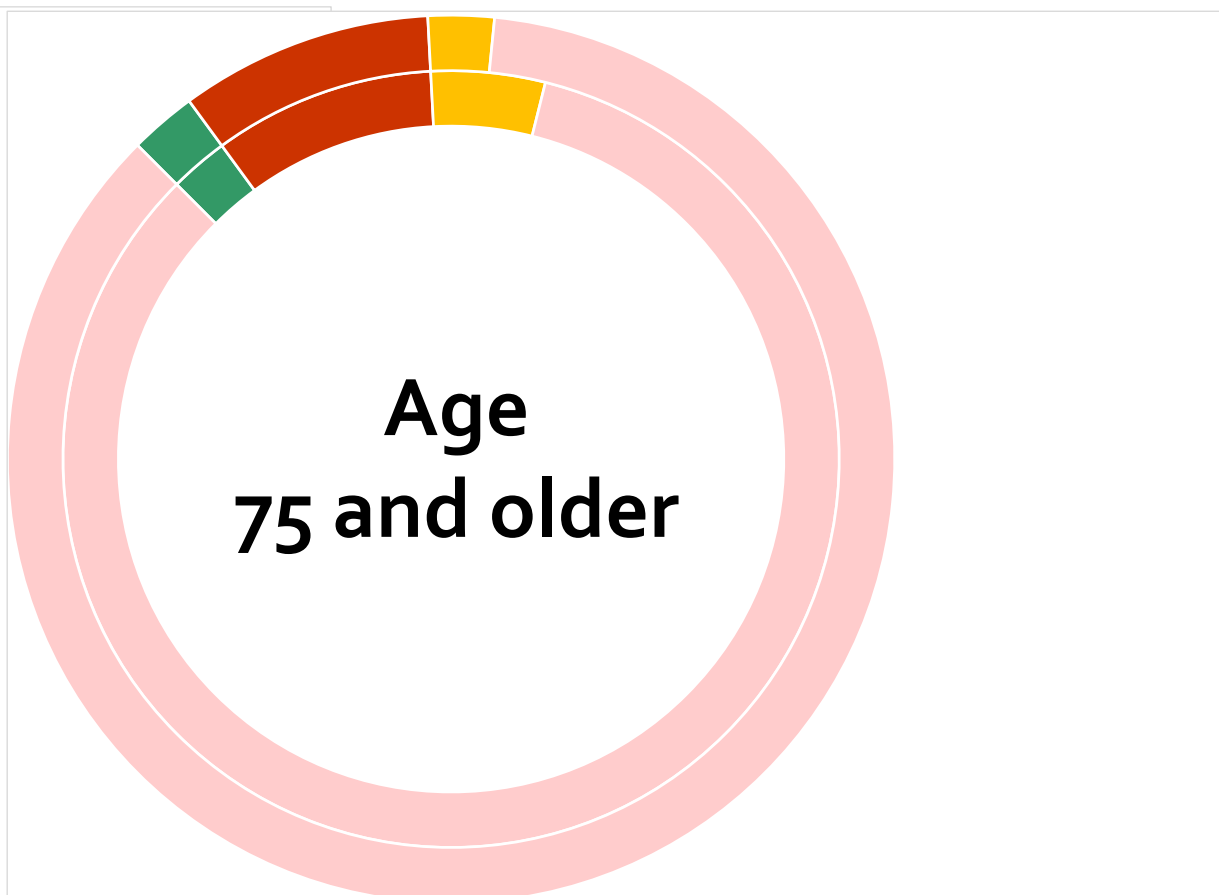
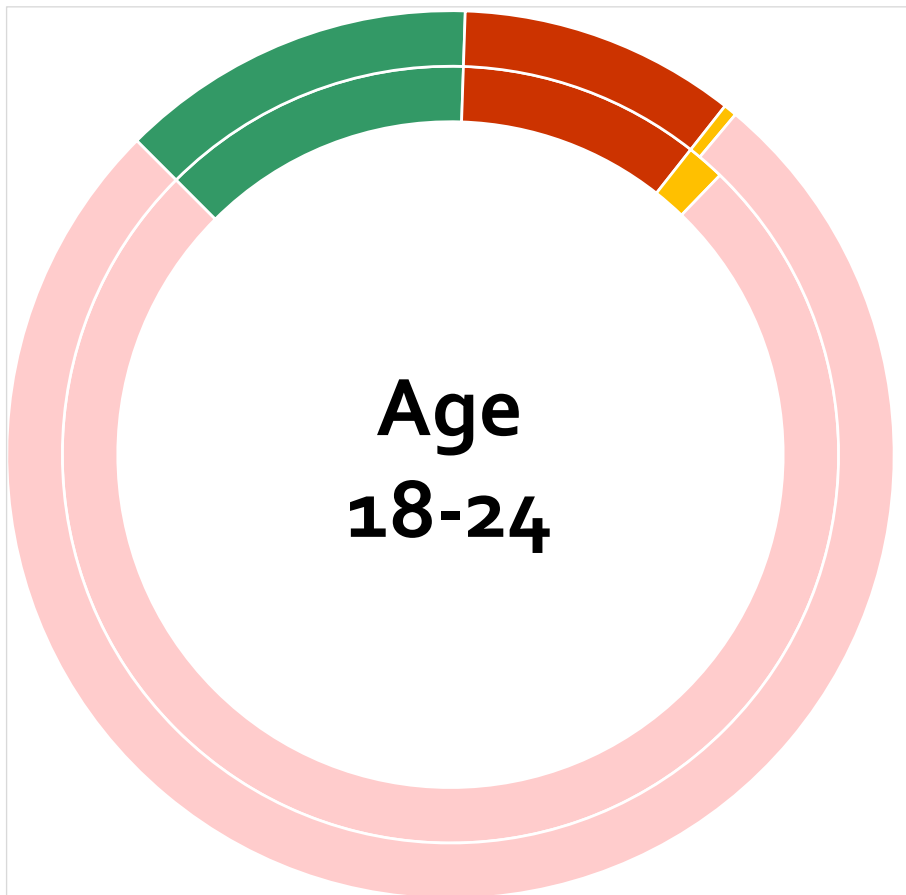


Sources of Missing Sexual Orientation and Gender Identity Data

Selected States, Behavioral Risk Factor Surveillance System, 2014-2017

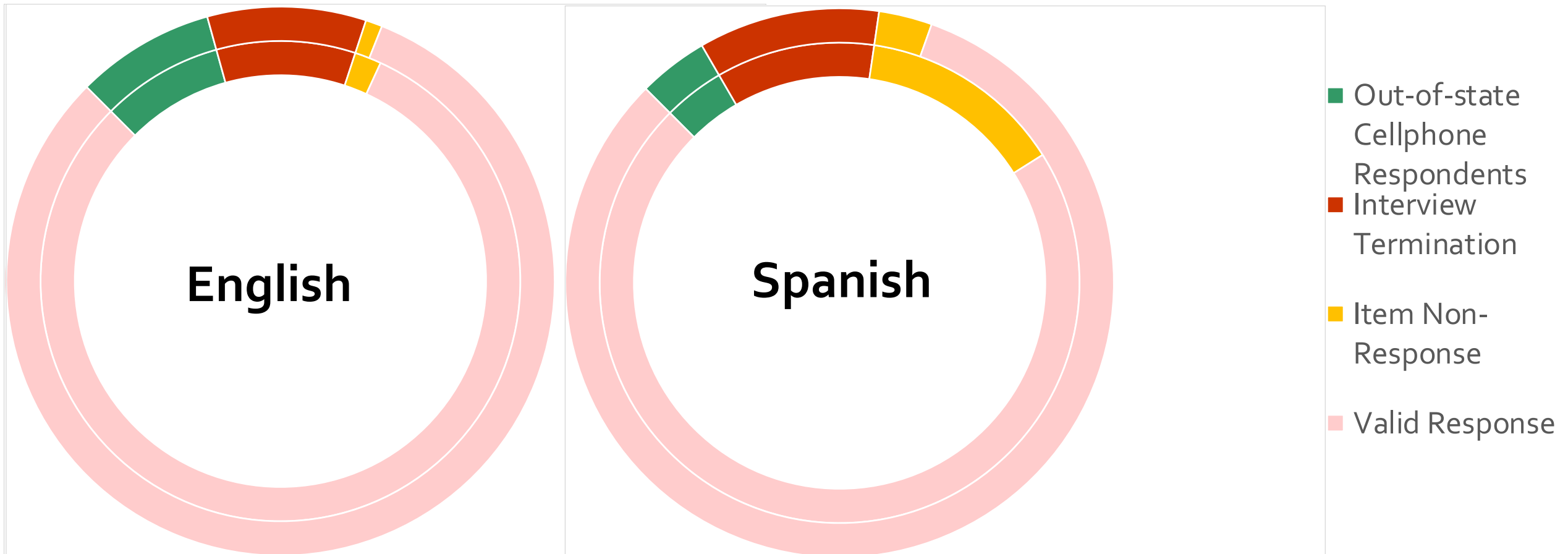


Source of Missing Data by Age Group

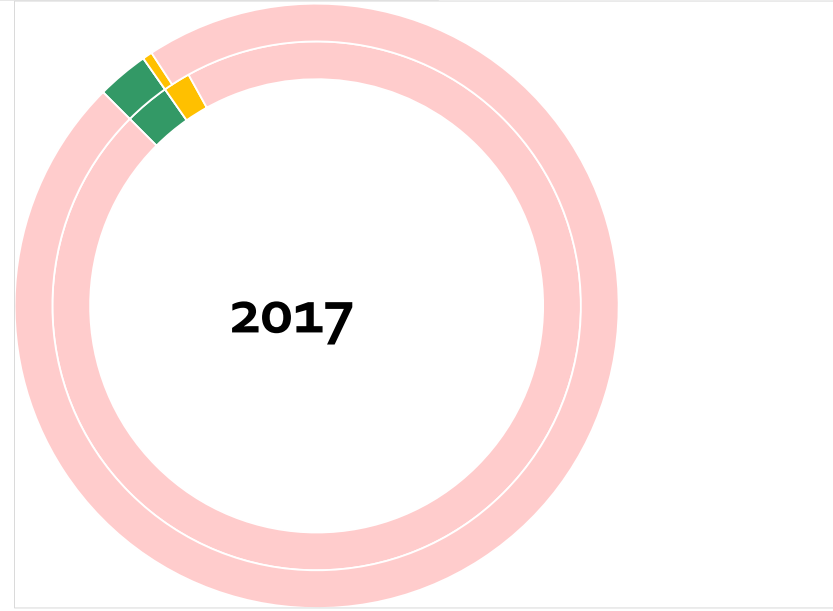
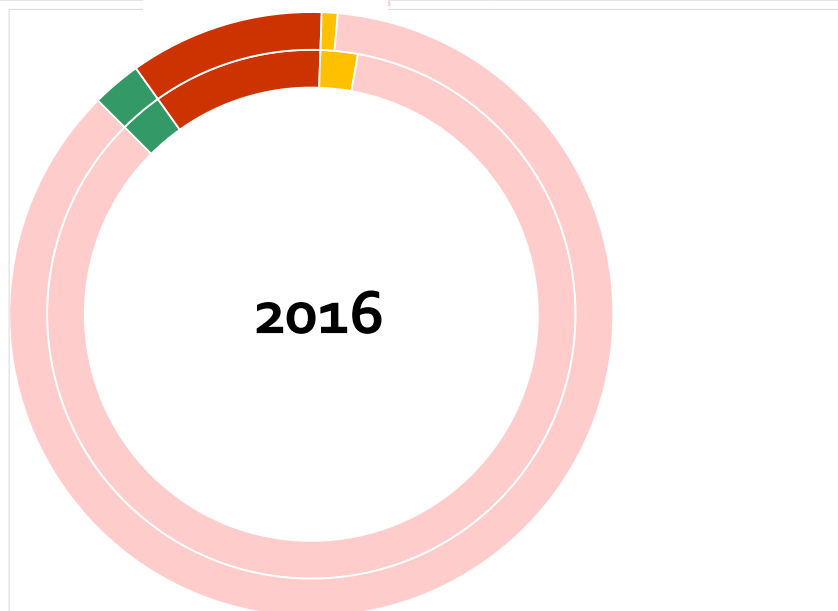
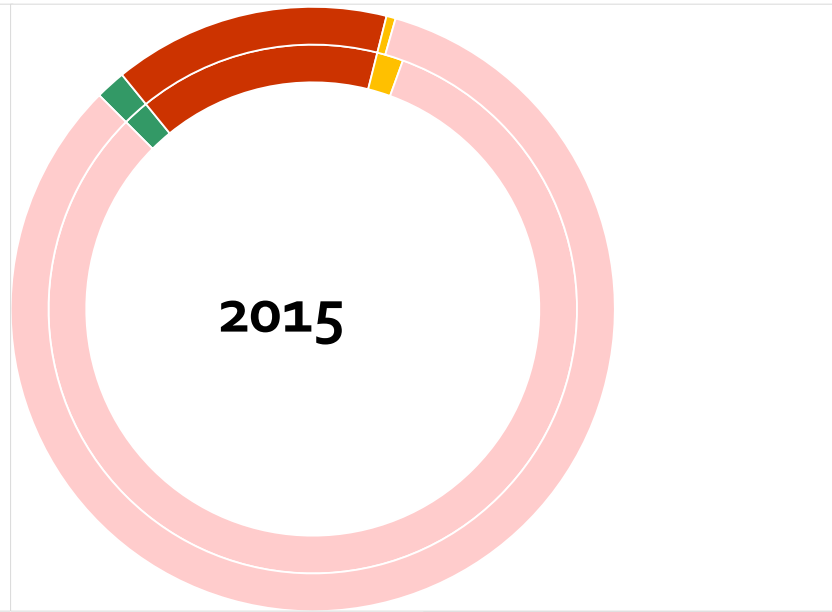
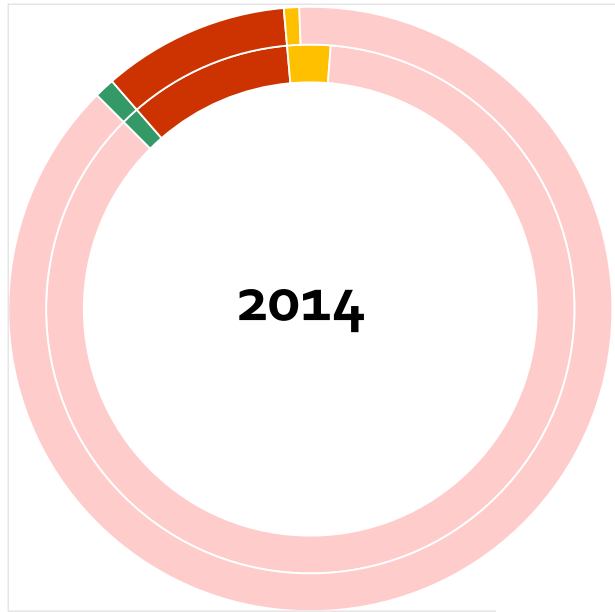


- Out-of-state Cellphone Respondents
- Interview Termination
- Item Non-Response
- Valid Response

Source of Missing Data by Language of Interview

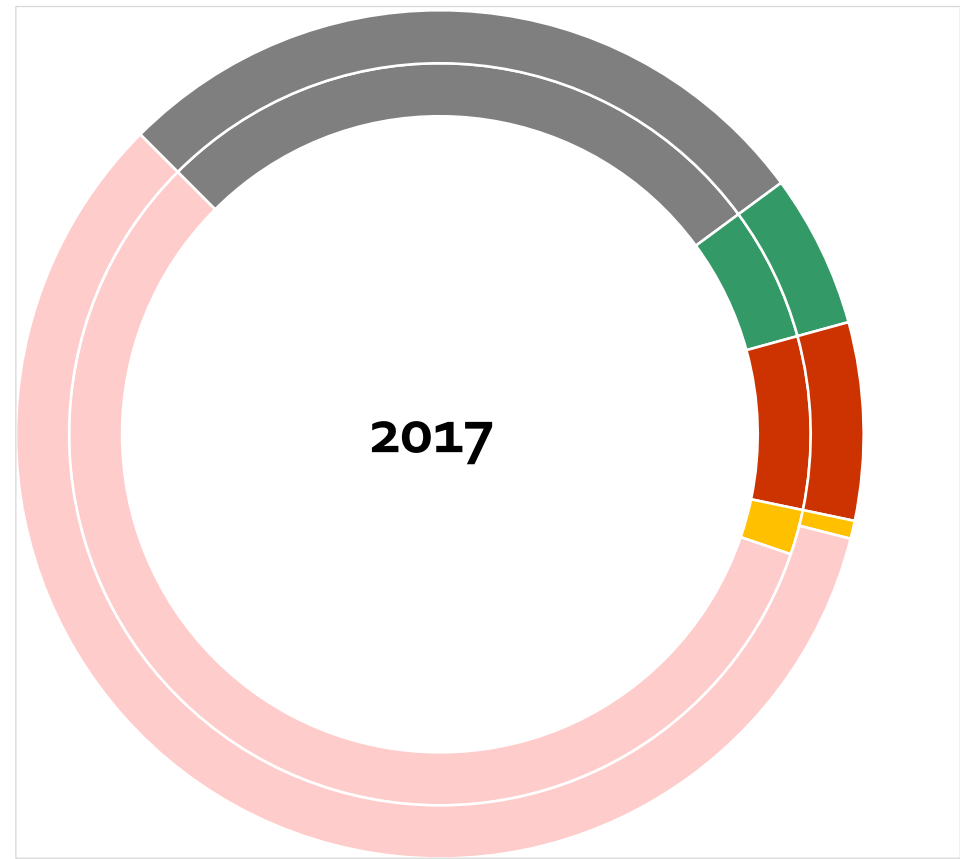


Source of Missing Data by Year, Hawaii



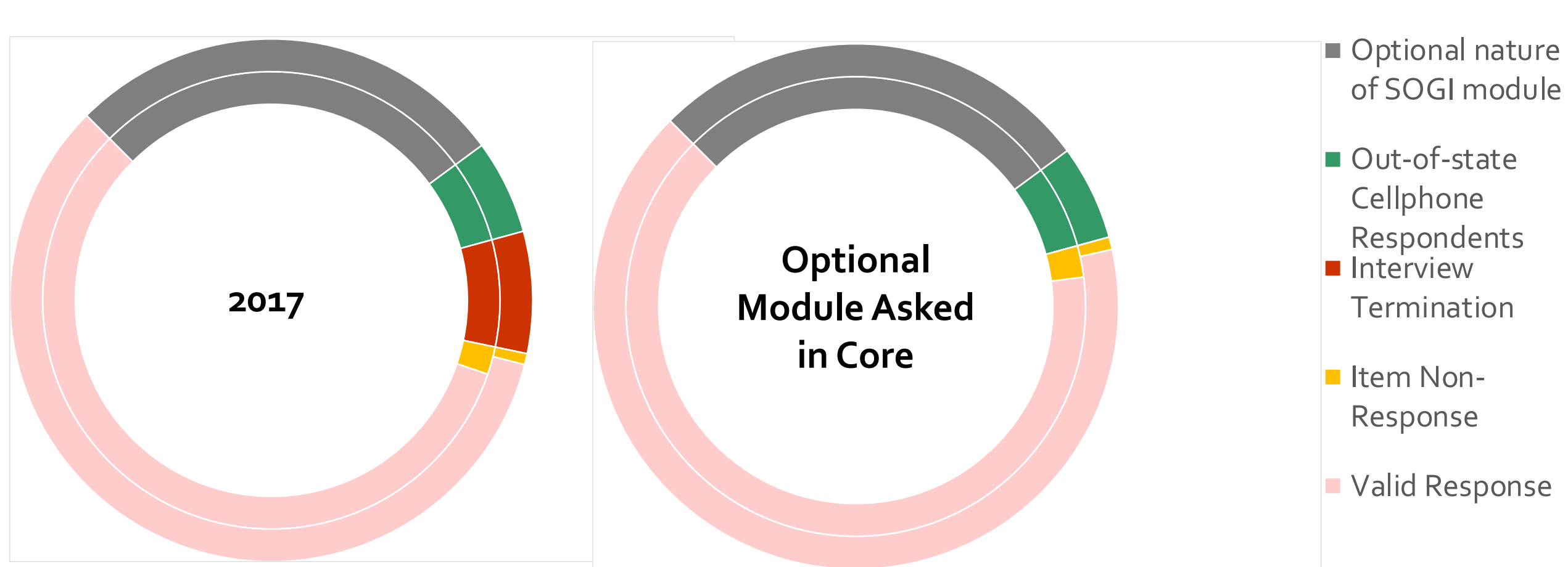
- Out-of-state Cellphone Respondents
- Interview Termination
- Item Non-Response
- Valid Response

2017 and Hypothetical Alternative: SOGI Adopted in National Core

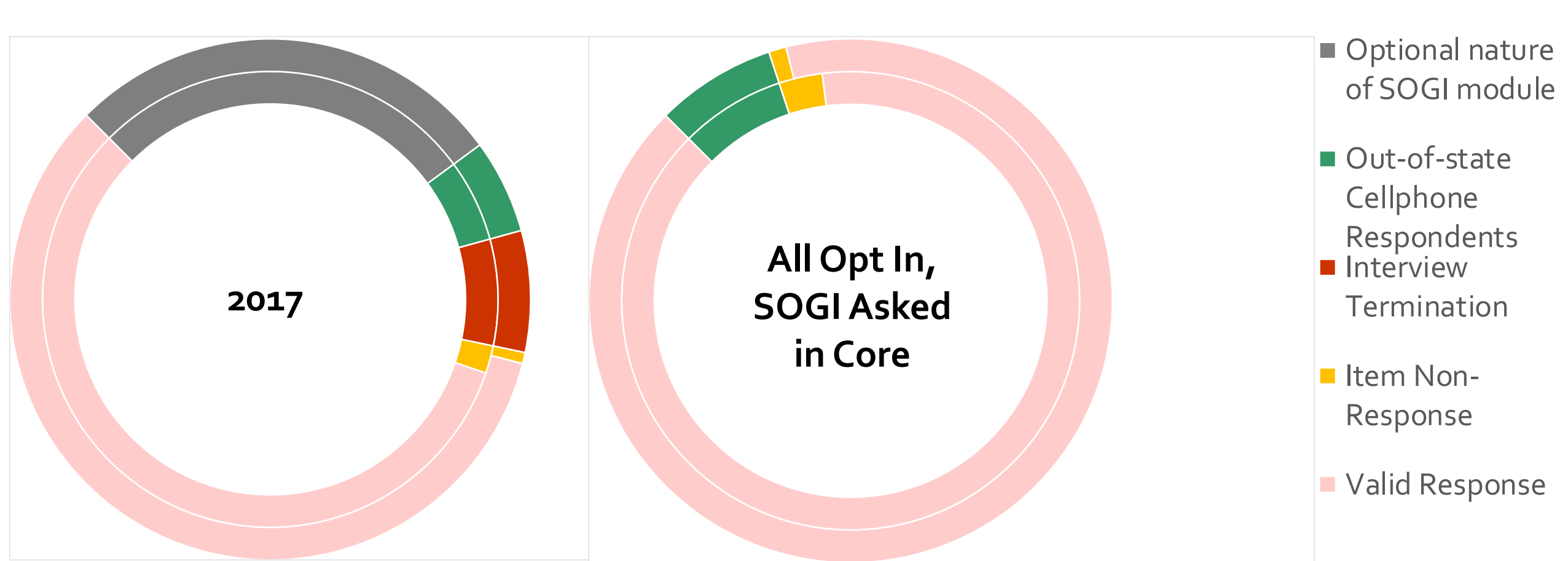


- Optional nature of SOGI module
- Out-of-state Cellphone Respondents
- Interview Termination
- Item Non-Response
- Valid Response

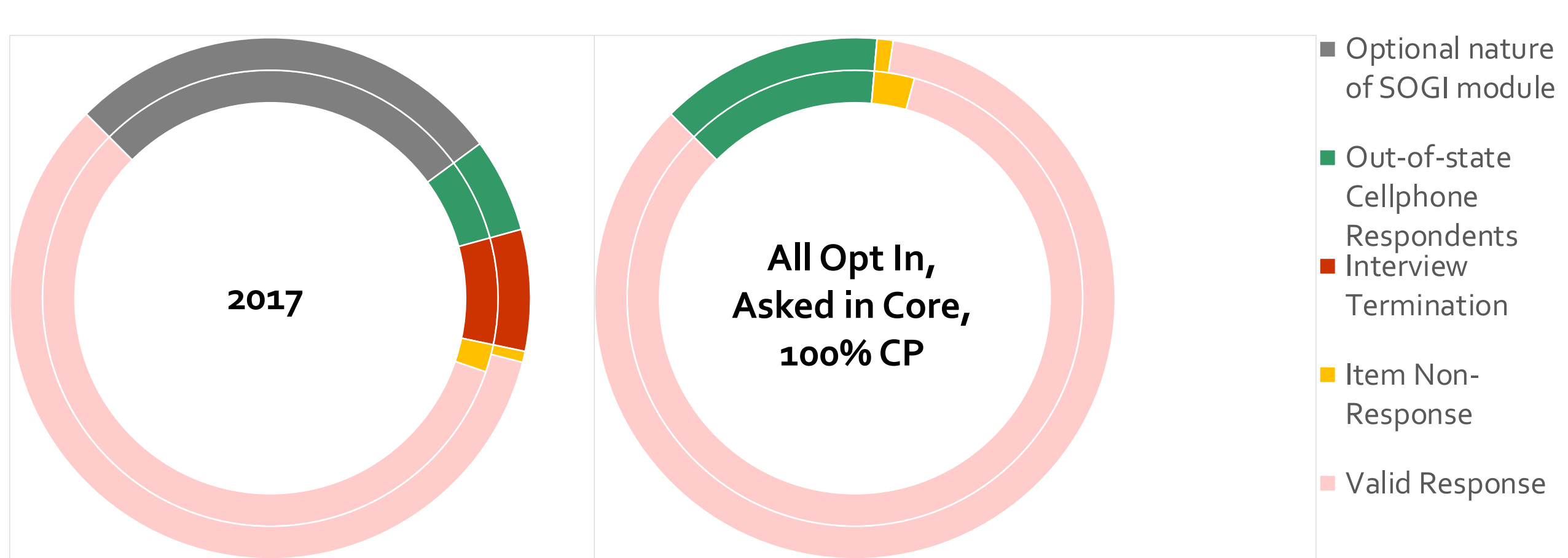
2017 and Hypothetical Alternative: Some states opt in, all insert SOGI in core



2017 and Hypothetical Alternative: All States opt in, move SOGI to core



2017 and Hypothetical Alternative: All States opt in, move SOGI to core, 100% CP



THANK YOU BRFSS!!

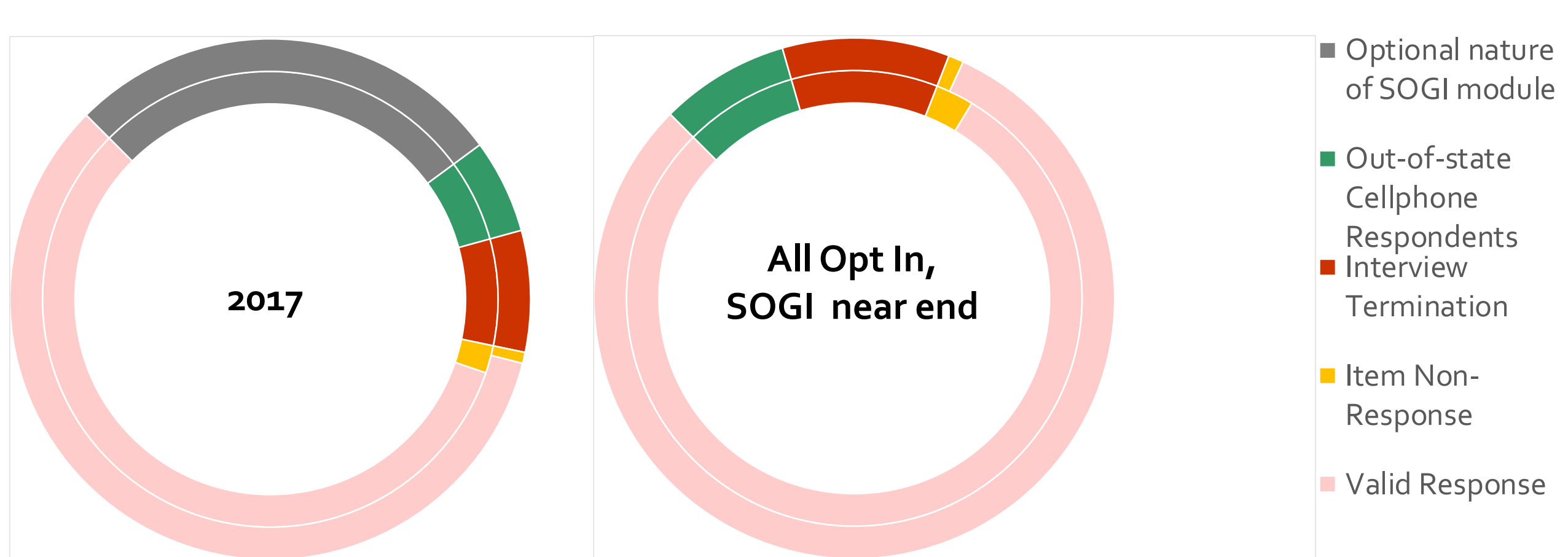
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Adding SOGI to the nation-wide core will produce the best state-level data.

2017 and Hypothetical Alternative: All States opt in, SOGI module near end



Potential Impact of Alternate Strategies

- 1) Incorporating SOGI into the national core removes almost all missingness, and what is left (item non-response) can be handled with standard statistical techniques.
- 2) Keeping SOGI as an *optional* module, but incorporating it into the core demographics at the state level *only* reduces missingness due to interview termination, still leaves us with no “national” estimates, and leaves states with no data for out-of-state cellphones, making even estimates within a state electing to implement SOGI with potentially biased estimates.
- 3) Push to web for out-of-state cellphone respondents has the *potential* to reduce missingness due to out-of-state cellphones, but takes us back to a high level of missingness due to interview termination.