ANALYSIS REPORTING TEMPLATE

OAH is asking all grantees with independent evaluations (Tier 1 C/D and Tier 2 grantees *not* participating in the federal evaluations) to provide an impact analysis plan. This analysis plan is a key component of the end of grant reporting requirements. At the end of the five-year grant period, OAH will require all Tier 1 C/D and Tier 2 grantees not participating in the federal evaluations to write a brief report on the findings from the impact study. The content of these reports will be organized around a template that OAH will provide in the future. The template for the end of grant report will be designed so that the reports will be brief and the findings will be reported similarly and will be accessible and easily interpreted by non-researchers – those making policy and programming decisions. The report will also provide all of the information needed for the HHS Pregnancy Prevention Evidence Review team to assess the quality of the evidence.

This impact analysis plan template is structured around tests of program effectiveness on behavioral outcomes relevant to the Evidence Review. In addition, the analysis plan will include descriptions of the intervention, the comparison condition, and the study design, and will also provide details on how the primary and secondary research questions will be answered. Once the analysis plan is finalized, most of it can be re-used in the end of grant report. This means that a well constructed, well written analysis plan will go a long way towards your end of grant reporting requirement, as well as other publications such as journal articles.

As is detailed in the following plan, OAH has made very specific decisions regarding key aspects of the analysis plan (and the eventual end of grant report). For example, OAH has requested that the plans differentiate between primary and secondary research questions, that multiple comparison adjustments be applied appropriately, and that findings be reported as differences in means or proportions at a single point in time (for example, six months post-intervention). All of these decisions pertain to this analysis plan and the end of grant report only; grantees and their evaluators may choose to analyze impacts on behavioral outcomes in different ways (for example, to use growth curve models) and/or to address different research questions for other publications, such as journal articles. At the end of the plan, you will see that OAH is asking you to list all of additional research questions you will address. Please address each item in the analysis plan template; if an item is not relevant to your design, explain why.

1. Research questions that address program effectiveness on behavioral outcomes
   1. **Primary research question(s):** Each primary research question should focus on the effect of the program on at least one behavioral outcome measure relevant to the HHS Evidence Review using the full analytic sample (unless the study has adequate power to test impacts for particular subgroup – e.g., sexually inexperienced at baseline) at a specific time point. The outcome(s) and the time point(s) should be clearly connected to the program’s logic model for the theory of change. For example:

“What is the impact of [treatment] relative to [counterfactual] on sexual activity and one year after the end of the treatment?”

“What is the impact of [treatment] relative to [counterfactual] on risky sexual behavior one year after the end of the intervention?”

* 1. **Secondary research question(s):** These research questions can focus on three possible impact questions:
     1. Impacts for subgroups
     2. Impacts on the primary outcomes at different time points (such as immediately at the end of the treatment and/or 6-months later)
     3. Impacts on other behavioral outcomes relevant to the evidence review which may not be considered a primary, intended outcome of the intervention.

1. Description of the intervention and counterfactual condition
   1. **Intervention condition:** Describe the *intended* experiences of those in the intervention condition. In particular, describe the following.
      1. **Intended program components**: Group sessions, individual services, etc.
      2. **Intended program dosage:** What is the total *intended* program dosage? How is that dosage acquired? How many sessions of what length, how frequent are they, and over what period? (e.g., “This is a 6 month program, with sessions occurring 3x/week for 30 minutes per session”).
      3. **Intended program content:** What is the intended program content and materials?
      4. **Intended program delivery:** Where is the program intended to be delivered? By whom? What are the intended characteristics of the program providers? What training and technical assistance is intended to be offered?
   2. **Counterfactual condition:** Describe the intended experiences of those in the counterfactual condition. If an alternative program is being provided to the control/comparison group (e.g., there is not a “no treatment/business as usual” counterfactual condition), describe:
      1. **Intended program components:** Group sessions, individual services, etc.
      2. **Intended program dosage:** What is the total *intended* program dosage; how many sessions of what length, how frequent are they, and over what period?
      3. **Intended program content:** What is the intended program content and materials?
      4. **Intended program delivery:** Where is the program intended to be delivered? By whom? What are the intended characteristics of the program providers? What training and technical assistance is intended to be offered?
2. Study design
   1. **Sample formation:** Describe the ways in which the members of the target population become members of the impact study sample (used to answer the impact study research questions above). *Note: do not include a description of youth that were never intended to be part of the evaluation sample; for example, youth involved in program pilots.* Include information on:
      1. **Eligibility criteria for target population:** What characteristics are necessary for sample inclusion (e.g., age, gender, pregnant, geography, school enrollment, class enrollment, etc.)?
      2. **Purposeful Sampling:** Describe any additional criteria for selecting the sample beyond the eligibility criteria (e.g., willingness to participate in the study for schools, not requiring ESL or other academic support for individuals).

*Note: this information has previously been described in the top box of the CONSORT diagram required for annual progress reports.*

* 1. **If a quasi-experimental design: Research group formation**
     1. Describe the criteria used to determine whether individuals (or groups of individuals) would be assigned to the treatment or the comparison group, and the process used for constructing the treatment and comparison groups. When did this assignment procedure occur, relative to the timing of consent and baseline data collection?
  2. **If a random assignment design: Random assignment process**
     1. What is the unit of randomization (e.g., schools, classrooms, individuals, etc.)?
     2. Who conducts random assignment, when, and under what circumstances?
        1. Is randomization conducted by evaluation staff or by program staff?
        2. When does random assignment occur with respect to the timing of consent and baseline data collection? For clustered randomized controlled trials (CRCTs), who was told of the outcomes of random assignment and for what purposes?
        3. Is randomization conducted all at once (meaning a large number of units is randomly assigned at a single point in time) or on a “rolling” basis (meaning, small numbers of units are randomly assigned at different points in time)? Describe the details of this process.
     3. Describe any stratification/blocking that is used to cluster units into groups before random assignment, or any variables used to match treatment units prior to assignment.
        1. Describe how single units that could not be paired/blocked with others are assigned to condition.
     4. If applicable, describe any sub-sampling that occurred after random) assignment, the reason for the sub-sampling, the criteria used for sub-sampling, and how the sub-sampling was operationalized.
     5. Report the intended probability of assignment to the treatment group and whether that probability varies systematically (for example, across blocks/strata).
  3. **Consent process:** Describe, in detail, the consent process for both the treatment and control groups. Include in your descriptions similarities and differences with respect to timing, process, and materials used (like the consent forms, incentives, etc.).
  4. **Data collection:** Describe the sources of data to be used in the analyses. Describe the number of timing of each data collection point (e.g., baseline and the follow-up time periods used for primary and secondary research questions). Describe the modes and methods of collecting data at each data collection point (baseline and all follow-ups). Include a thorough description of the process and the timing for data collection, by study condition. Clearly articulate similarities and differences across the two study conditions.
  5. **Outcome measures:** Describe the outcome measures used to answer the primary (and secondary, if applicable), research questions, including the source. If the measures will be constructed measures of sexual risk behavior, include a description of what survey items will be used to create each construct.
     1. Complete Table 1, describing all measures that will be used to answer the primary research questions assessing the impact of the program. Include the time periods that will be used to assess impacts for primary and secondary research questions.
     2. Complete Table 1a for all measures that will be used to answer secondary research questions.

1. Analysis
   1. **Data cleaning:** Describe the ways in which data will be cleaned and prepared for analysis.
   2. **Assessment of baseline equivalence:** What measures will be used to examine the equivalence of the groups at baseline? What methods will be used to test the significance of the difference between the groups? *At a minimum, include the demographic and behavioral measures assessed in your annual reporting to OAH, as well as baseline measures of each outcome.*
   3. **Analytic approach for primary research questions:**Describe how the benchmark analysis will be conducted to answer the primary research questions, under an intent-to-treat (ITT) framework.
      1. **Analytic sample:** Describe how the analytic sample will be defined. Describe how analysis will pool data across multiple sites or cohorts (if applicable).
      2. **Model specification:** Provide the model that will be used to estimate program impacts for each primary and secondary research question (logistic regression, etc.).
         1. What statistical software package will be used?
         2. Define the criteria that will be used to assess the statistical significance of study findings (for purpose of HHS Evidence Review, findings are considered statistically significant based on p < .05, two-tailed test).
         3. How will model adjust for clustering (if applicable)?
      3. **Covariates:** List all potential covariates that will be included in the analysis in Table 2 and justify your reason for their inclusion. If covariates have not yet been determined, describe a plan for determining what covariates will be included. Aside from the baseline version of the outcome of interest, will there be any covariates that will differ across the models used to answer the primary research questions? When appropriate, describe how blocking/stratification variables will be incorporated as covariates.
      4. **Missing data approach:** How will the analysis handle missing outcome data? How will the analysis handle data missing on any of the covariates indicated above?
      5. **Sample weights:** Will sample weights be used?If so, what weights will be used? Why? How will they be constructed?
      6. **Adjustments for multiple comparisons (if applicable):** Describe the approach that will be used to adjust for the multiple hypotheses tests if more than one primary research question will be addressed. Or justify why a multiple comparison adjustment will not be used in the case where multiple hypothesis tests will be conducted.
      7. **Sensitivity analyses:** Describe any analyses that will be conducted to test the robustness of the results or the appropriateness of the analytic model for the observed data.
   4. **Analytic approach for secondary research questions:** Describe the analytic approach that will be used to address all secondary research questions. Please cover 4.b.i – 4.b.viii above.
2. Plans for presentation of results
   1. **Provide empty table shells of how findings will be presented to demonstrate the following key components of the analysis*. We will provide detailed descriptions of how to complete these tables for final reporting in later communication. For the purposes of completing the analysis plan template, it is not necessary to fill in Tables 3-7 with any results.***
      1. **Sample flow:** The table shell must provide counts of sample members who contribute both a baseline and a follow-up survey, as well as tests of significance of the differences in various response rates. *See Table 3.*
      2. **Non-response analysis:**
         1. **Characteristics by response status:** This table shell must provide baseline characteristics of youth according to whether or not they completed a follow-up survey. *See Table 4.*
         2. **Characteristics of the baseline sample:** This table shell must provide descriptive statistics of the initial sample members who completed a baseline assessment on demographics and baseline measures of the outcomes of interest. *See Table 5.*
      3. **Baseline equivalence of analytic sample:** This table shell must contain descriptive statistics of the analytic sample (i.e., the sample members who were observed at the focal follow-up assessment period who may or may not have completed a baseline assessment) at baseline on demographics and baseline measures of the outcomes of interest. *See Table 6.*
      4. **Program impacts:** This table shell must contain descriptions of follow-up means and program impacts, including information on statistical significance of the difference. *See Table 7.*
3. Additional planned analyses

Identify all additional research questions that you plan to address using data from this evaluation. These questions may include impacts on non-behavioral outcomes (such as knowledge and/or attitudes) and exploratory (non-experimental) analyses on mediator variables, dosage/participation, and the relationship between implementation and impacts. In addition, this section can include alternate specifications used to test impacts of the intervention across time points, such as growth-curve analyses.

Appendix Table Shells:

Table 1. Behavioral outcomes used for primary impact analyses research questions

| Outcome name | Description of the outcome, including how it is operationalized (e.g., “The outcome is a yes/no response taken directly from the survey” or “the risk outcome is calculated as the average of the five risk indicator variables”). | Source of the measure (e.g., performance measure) | Timing of measure (e.g., 6 months after program ends) |
| --- | --- | --- | --- |
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Table 1a. Behavioral outcomes used for secondary impact analyses research questions

| Outcome name | Description of the outcome, including how it is operationalized (e.g., “The outcome is a yes/no response taken directly from the survey” or “the risk outcome is calculated as the average of the five risk indicator variables”). | Source of the measure (e.g., performance measure) | Timing of measure (e.g., 6 months after program ends) |
| --- | --- | --- | --- |
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Table 2. Covariates included in impact analyses

| Covariate | Description of the covariate and how it will be used as a covariate in the analysis. |
| --- | --- |
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Table 3. Cluster and youth response rates, by treatment status

|  | Period of time for the given event | All students | Treatment | Control | T/C difference | *p‑*value |
| --- | --- | --- | --- | --- | --- | --- |
| **Number of Clusters (if applicable)** | | | | | | |
| (c1) In study at random assignment |  |  |  |  | NA | NA |
| (c2) Still in study at follow-up |  |  |  |  | NA | NA |
| **Cluster retention rate [(c2)/(c1)]** | NA |  |  |  | NA | NA |
| **Number of Youth** | | | | | | |
| (1) In study sites at random assignmenta |  |  |  |  | NA | NA |
| (2) who consented |  |  |  |  | NA | NA |
| (3) Still in study at follow up |  |  |  |  | NA | NA |
| (4) who consented |  |  |  |  | NA | NA |
| (5) Completed a baseline survey |  |  |  |  | NA | NA |
| (6) Completed a follow-up survey |  |  |  |  | NA | NA |
| (7) Completed both baseline and follow-up surveys |  |  |  |  | NA | NA |
| **Response Rates Among Youth** | | | | | | |
| **Baseline Survey** |  |  |  |  |  |  |
| In study sites at random assignment [(5)/(1)] | NA |  |  |  |  |  |
| who consented [(5)/(2)] | NA |  |  |  |  |  |
| who completed a follow-up survey [(7)/(6)] | NA |  |  |  |  |  |
| **Follow-Up Survey** | NA |  |  |  |  |  |
| In study sites at random assignment [(6)/(1)] | NA |  |  |  |  |  |
| who consented [(6)/(2)] | NA |  |  |  |  |  |
| Still in study at follow up [(6)/(3)] | NA |  |  |  |  |  |
| who consented [(6)/(4)] | NA |  |  |  |  |  |

a In cluster RCTs where cluster level attrition occurred, this number (and subsequent numbers in this section of the table) should reflect the number of students in non-attriting clusters.

Table 4. Baseline characteristics of youth, by response status

|  | All youth who completed a baseline survey | | | |
| --- | --- | --- | --- | --- |
|  | Not missing outcome data | | Missing outcome data | |
| Characteristic | Mean (or proportion) | Standard deviation | Mean (or proportion) | Standard deviation |
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Note: Table 4 contains information for all students who completed a baseline survey.

Table 5: Pre-treatment sample sizes and characteristics for the BASELINE sample

|  | Treatment group | | | Control group | | | Baseline differences | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Baseline measures | Unit of analysis (Table 3,  Row 5) | Mean (or proportion) | Standard deviation (if applicable) | Unit of analysis (Table 3,  Row 5) | Mean (or proportion) | Standard deviation (if applicable) | Mean difference | ICC (If applicable | *p*-value of difference |
| Measure 1 |  |  |  |  |  |  |  |  |  |
| Measure 2 |  |  |  |  |  |  |  |  |  |
| Measure 3 |  |  |  |  |  |  |  |  |  |

Note: Table 5 contains information for the BASELINE sample at BASELINE.

Table 6: Pre-treatment sample sizes and characteristics for the Analytic sample

|  | Treatment group | | | Control group | | | Baseline differences | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Baseline measures | Unit of analysis (Table 3,  Row 6 or 7) | Mean (or proportion) | Standard deviation (if applicable) | Unit of analysis (Table 3,  Row 6 or 7) | Mean (or proportion) | Standard deviation (if applicable) | Mean difference | ICC (If applicable | *p*-value of difference |
| Measure 1 |  |  |  |  |  |  |  |  |  |
| Measure 2 |  |  |  |  |  |  |  |  |  |
| Measure 3 |  |  |  |  |  |  |  |  |  |

Note: Table 6 contains information for the Analytic sample at BASELINE.

Table 7: Post-treatment outcomes and effects for the Analytic sample

|  | Treatment group | | Control group | | Estimated effects | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Outcome measures | Mean (or proportion) | Standard deviation (if applicable) | Mean (or proportion) | Standard deviation (if applicable) | Mean difference | ICC (if applicable) | *p*-value of difference |
| Measure 1 |  |  |  |  |  |  |  |
| Measure 2 |  |  |  |  |  |  |  |
| Measure 3 |  |  |  |  |  |  |  |

Note: Table 7 contains information for the Analytic sample at Posttest.