Introduction:

All incoming doctoral students need to have a common frame of reference for the first year of study, and are expected to be familiar with the following foundational materials before starting the program in August (for those admitted for fall semester), or by early January (for those admitted for spring semester).

This document provides guidance for developing this common frame of reference in the form of basic understanding of statistics, and a detailed outline for developing a program plan.

Statistics:

Incoming doctoral students to HPEB should be familiar with basic statistical concepts and methods equivalent to that covered in a first course in statistics. The topics typically covered in such a course are:

- What is statistics
- Describing data
- Probability and probability distributions
- Inferences about a population mean and differences in means
- Categorical data (e.g., binomial distribution, contingency tables)
- Linear regression and correlation, and inferences related to these
- One-way analysis of variance, including multiple comparisons
- Introduction to multiple regression

There are many statistics texts that provide an introduction or review of this material. One that we recommend is Lyman Ott and Michael Longnecker, "An Introduction to Statistical Methods and Data Analysis", which is now in its sixth edition; any earlier edition would be fine.
Program Plan:

Review resources:

Theory

Health Behavior Theory Monograph ("Theory at a Glance"):


Program Planning


Re-Aim program planning model:
http://www.re-aim.org/

Evaluation and Research Methods


Shadish, WR, Cook TD & Campbell DT. (2002). Experimental and Quasi-experimental Designs for Generalized Causal Inference. Houghton Mifflin Company, 2002. (This is a required textbook for HPEB 818 which doctoral students take during their first year in the program.)

Other

University of Chicago Staff (2010). The Chicago Manual of Style, 16th Ed. University of Chicago Press. http://www.chicagomanualofstyle.org/home.html (This is a required textbook for HPEB 704 which doctoral students take during their first year in the program.)
**Program Plan Outline:**
For each section of the program plan outline, there is a description (in a lavender box), references for further reading (in purple box) and the accompanying brief outline (in a green box). General comments are in a pink box.

<table>
<thead>
<tr>
<th>Background to Health Promotion Program Planning and Evaluation Planning</th>
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<tbody>
<tr>
<td><strong>Review:</strong> Issel, chapters 1 (history and context) and 3 (planning approaches, models, and steps)</td>
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**Detailed Commentary for Each Section of Program & Evaluation Plan Outline**

(1) **Introduction: Health Condition, Population, and Planning Context**

The **Introduction** should provide a brief overview of the issue, population affected, planning context, and relationship between planners and stakeholders.

**NOTE:** Write this section last; it is a summary from the body of the proposal.

**Brief outline of section 1: Introduction: Health Condition, Population, and Planning Context**

- a. Introduction: overview of health condition and population affected
- b. Organization and setting/context of planning group
- c. Planners’ relationship with stakeholders and/or priority population
The **Health Problem Focus and Justification** section should present a convincing rationale for the study, including the public health significance of the health condition in the identified population, quality of life issues for the population, strategies for engaging stakeholders including the identified population, and health objective. The following questions should be addressed and backed up with supportive data from local, state, national, or other sources (see Green & Kreuter “*Key Questions*”, pp. 99-100):

- What is the health problem?
- Why should this issue receive priority for funding? Describe public health importance of the problem/issue for the identified group (i.e., morbidity, premature mortality, and/or disability) and feasibility of preventing the problem and/or reducing risk factors.
- Who is affected by this problem? Present the demographics and other statistics that describe a specific population affected by this problem. Focus on a specific group in an identifiable context (versus “adult males in SC with heart disease”).
- In what ways is this issue important to those directly affected by it? How does this problem affect the lives of those who have it?
- What approaches will you use to engage the potential target population to identify strengths and capacity and to understand the relevance of this issue from their perspectives? (See pp. 51-60).
- What additional stakeholders have (or will you) involve in the planning process? (See Table 2-1 on p. 51, key questions for “Stakeholders” and “Potential Key Collaborators”.)
- What methods will you use to engage stakeholders in the program? What potential roles will they play (See pp. 51-60).
- In what setting(s) will the program take place?
- What are the primary health goal, specific health objective, and health objective indicator? (See Green & Kreuter “*Developing Health Objectives*, p 100).

**Review**: Green & Kreuter Chapters 2 (social assessment) and 3 (health assessment) pp. 78-102; Issel, Chapters 4 (community health assessment), 5 (defining the health problem), and 7 (objectives and indicators)

**Brief outline of section 2: Health Problem Focus and Justification**

a. Quality of Life Issues/Establishing Need
b. Overview of Health Problem
c. Description of Primary Target Population /Setting
d. Key Stakeholders and Relationship with Program Planners
e. Health Goal and Health Objective
   - Primary indicator for evaluation of health objective
(3) Behavioral and Environmental Assessment and Program Focus

The Behavioral and Environmental Assessment and Program Focus should present a compelling case for the selected focus of the program. Health problems have multiple causes or multiple risk factors, so it is often necessary to prioritize behaviors or environmental conditions that one will target in the program. In this section you should make a case for the behavioral OR environmental focus that you selected based on literature and documentation. Document that the focus is important (related to the health problem), prevalent in this population, and feasible to change in this population and setting. Conclude with a behavioral OR environmental objective. Questions to address include:

- What behaviors cause or contribute to the health problem in the target group and setting that you have chosen?
- What environmental conditions cause or contribute to the health problem in the target group and setting that you have chosen?
- What other (e.g., biological and non-changeable) risk factors cause or contribute to the health problem? What behaviors contribute to these risk factors?

See Greene & Kreuter, Table 3-10 on p. 121). Do not include "educational" factors or those things that influence behavior.

- What is the primary behavioral OR environmental change focus? What is the justification for focus (i.e., on this behavior over other risk behaviors; on this environmental factor versus others)?
- What is a realistic target for change given the program time frame and resources?
- What is the behavioral OR environmental objective and primary indicator? (See Green & Kreuter page 129)

Brief outline of section 3: Behavioral and Environmental Assessment and Program Focus

- a. Overview of Behavioral and Environmental Risk Factors
- b. Justification of Selected Behavioral OR Environmental Focus* in Population and Setting
- c. Behavioral OR Environmental Objective
  - Primary indicator for behavioral or environmental objective
- d. Contextual Influences

*An environmental change program focuses on change in the greater policy, regulation, legislation, and/or physical environments and requires advocacy, media, and/or social change approaches. Environmental change programs are guided by conceptual models that consider key leverage points (primary influences) and strategies to facilitate change; however, these may not fall strictly into the PER categories.
(4) Ecological & Educational Influences on Behavior (OR Environment)

The **Ecological & Educational Influences on Behavior (OR Environment)** section should identify primary influences on the behavior OR environment in the selected target population and, based on theory and evidence, justify the specific focuses of the program. Influences on behavior (or environment) should reflect multiple levels of a social ecological model and organized into levels of influence such as predisposing, enabling, and reinforcing factors (**See Green & Kreuter Table 4-2 on p. 174**). These factors to reflect appropriate theory concepts (aka constructs). This section also includes a conceptual model that illustrates how influences, behavior and outcomes are related and concludes with ecological and educational objectives for each of these influences (a minimum of three objectives; **see Green & Kreuter Tables 4-3 and 4-4 on pp. 178-179 for examples**). Questions to address include:

- What are important multi-level influences on the health behavior (OR environment) in this population and setting (**see Figure 4-1**)?
- What evidence supports focusing on specific influences (e.g., logic, experience, data, and theory)?
- What is a realistic target for change given the program time frame and resources?
- What are the ecological and educational objectives and accompanying indicators?
- How can the multi-level influences (e.g., PER factors) and theoretical constructs be integrated into a conceptual model?

**See Green & Kreuter:** Predisposing factors, which provide motivation for engaging in the behavior, include attitudes, beliefs, values, knowledge, and perceptions (perceived self-efficacy) (pp. 154-163). Enabling factors, which facilitate the expression of behavior, include availability, access, and affordability of health resources such as clinics, schools, worksite programs, etc.; ecological factors such as availability, access, and affordability; and new skills (such as ability to read food labels) (pp. 163-167). Reinforcing factors, which provide incentive to continue (or not continue) a behavior and includes primarily social acceptance or support for a behavior from peers, family members, etc. (pp. 167-170).

**Review:** Green & Kreuter, Chapter 4 (educational and ecological assessment); Bartholomew et al, Chapters 2 (using evidence, theory and new research), 3 (behavior-oriented theories) and 4 (environment-oriented theories); Issel Chapter 7 (objectives and indicators); [other theory resources]

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**Brief outline of section 4: Ecological & Educational Influences on Behavior (OR Environment)**

- a. Multi-level Influences on Behavior: Predisposing, Enabling and Reinforcing (PER) Factors*
- b. Justification of Selected Factors in Population and Setting
- c. Ecological/Educational Objectives
  - Primary indicators for ecological/educational objectives
- d. Conceptual Model Integrating Multi-level Influences with Theory
(5) Intervention Alignment and Strategies to Address Influences on Behavior

The Intervention Alignment and Strategies to Address Influences on Behavior OR Environment section should move beyond the abstract and describe how the program will be delivered to a specific population in a specific setting. This includes describing program components and selecting strategies guided by the conceptual model (based on theory and evidence) that will help accomplish the ecological and educational objectives. This section also includes a description of how you plan to monitor implementation of your program (process evaluation) including how many participants are reached, delivery of program components, and fidelity of program components.

Questions to answer include:

- What is the best way to “package” the program for this setting? What are the program components?
- What specific theory- and evidence-based strategies based on conceptual model will be used to accomplish the educational and organizational objectives with documentation? (see page 205 in Greene & Kreuter)
- How will you work with change agents and/or program stakeholders to carry out the program, including providing training and/or other capacity development activities?
- What is the program delivery plan including plan for recruiting and retaining participants and stakeholders into the program?
- What is the plan for monitoring program implementation?

Review: Green & Kreuter, Chapter 5 (program design) (pp. 190-215); Issel Chapters 8 & 9 (implementing and monitoring programs); Bartholomew et al, Chapters 7 (methods and strategies) and 8 (program components and materials; Shaddish et al Chapter 10 (implementation challenges)

Brief outline of section 5: Intervention Alignment and Strategies to Address Influences on Behavior (OR Environment)

a. Program Delivery
b. Program Components and Description
c. Theory and Evidence-Based Strategies to Address Multi-level Influences on Behavior
d. Implementation Monitoring Plan (process evaluation)
e. Time Line of Program Activities
(6) Administrative and Policy Assessments

The **Administrative and Policy Assessment** section should provide an overview of the resources needed to carry out the program, a realistic time frame for all project activities, and an assessment of potential barriers to implementation including program fit with the setting in which the program is being carried out and organizational capacity of implementing organization and develop a realistic plan for addressing capacity issues. Specific questions to address include:

- What resources are needed to carry out the plan you have developed including personnel, budget, and time (pp. 215-223)?
- What are potential barriers to implementation for this program, population and setting, and how you will address these in advance (See Table 5-3 on p. 224 and pp. 223-227)? Strive to be realistic.
- How does the program fit with mission, operations and daily routine of the setting in which the program will take place?
- Does the organization have the capacity to carry out the program? (See pp. 227-234). If not, how do you plan to address these barriers and/or what adjustments will you make?

**Review:** Green & Kreuter, Chapter 5 (administrative and policy design)(pp. 216-234); Issel Chapter 8 (implementing programs)

**Brief outline of section 6: Administrative and Policy Assessments**

a. Overview of Existing and Needed Resources Needed to Implement Plans (staff, materials, funds)
b. Probable Barriers to Implementation
c. Plan for Addressing Barriers
(7) Evaluation Plan for Health, Behavioral, and Ecological/ Educational [OR Environmental] Objectives

The Evaluation Plan section should provide a detailed plan for evaluating each objective (aim or question) (health, behavior OR environment, and ecological/ educational) and a plan for sharing the results. The impact/outcome evaluation plan should include a description of the evaluation design, threats to internal validity, and description of external validity; data sources, primary measures, and data collection procedures for each objective; and statistical analysis to be used to address each evaluation objective. Specific questions to answer include:

- How will you select the sample? How you will recruit organizational and/or individual participants into the study, as applicable (sample description and sampling procedures).
- What evaluation design will be used including a description of and justification for conditions (number and types of groups), assignment of participants to conditions (e.g., how participants get into groups), and time frame for data collection?
- What measures will be used to assess key variables identified in health, behavioral, and ecological/ educational objectives? These are the indicators from the objectives in the program plan.
- What are the key variables (dependent) and how will each be derived from the measures? What is the independent variable?
- What is the plan for data collection and data management?
- What statistical analysis you will use to evaluate each objective?
- What are the strengths and limitations of the study design? Describe the external validity of your study.

Review: Green & Kreuter Chapter 3 pp 139-141; Issel Chapters 11-14; Shaddish et al Chapters 4-6 & 8

NOTE: The evaluation plan should address each objective (aim or question) identified in the proposal (health outcome, behavior OR environment and influences on behavior)

Brief outline of section 7: Evaluation Plan for Health, Behavioral, and Ecological/ Educational objectives

a. Sample Description and Sampling Procedures
b. Evaluation Design
c. Variables and Summary of Indicators
d. Plan for Data Collection and Data Management
e. Data Analysis to Address Each Objective
f. Design Strengths and Limitations
   - primary threats to internal validity; describe external validity
(8) Communication Plan

The communication plan should describe how results will be used within the project and shared with stakeholders, and how results will be disseminated and shared beyond the project. This section should refer to stakeholders identified earlier in the proposal.

Brief outline of section 8: Communication Plan

a. Plan for Sharing Information about the project and evaluation results within project and with stakeholders
b. Plan for Sharing Information about the project and evaluation beyond the project

(9) Summary

The Summary should provide a recap of all key program elements.

Brief outline of section 9: Summary

a. Health need; setting, context and priority population
b. Behavioral or environmental, educational/ ecological focus including conceptual approach
c. Program components, primary strategies and delivery approach
d. Involving change agents and stakeholders
e. Evaluation and communication plan