



PROCESS FOR COLLECTING DATA AND GENERATING REPORTS

Diversity Action Plan (DAP) Annual Meeting
(Formerly Minority Action Plan (MAP))

Tempe, AZ
October, 2010



Overview

- IRB Process and Implications for Data Collection
- Developing Evaluation Content
- Developing Evaluation Instruments





IRB Process

- Why consider IRB?
- TRADITIONALLY DO NOT NEED
 - Each MAP program is educational and as such does NOT need IRB review
 - Until this last year, this has been the case ...

IRB Process

- DO NEED IF DOING "RESEARCH"
 - EVERY IRB DEFINES "research" DIFFERENTLY !!!!!
 - At Washington University
 - Defined as "research" if , among others ...
 - i. SHARING data with a 3rd party who was not "actively engaged" in your study
 - ii. Have plans to PUBLISH the data



Yes

IRB Process

- WU IRB DOES consider this “research” AND *requires*
 - Approval from your end before you can send your data to us
 - May take form of ...
 - YOUR IRB approval
 - YOUR Institutional representative (FERPA) approval
 - Has not worked very well in 2 cases
 - SIGNED CONSENT FORM FROM EACH TRAINEE
 - WU has set of WU IRB approved Informed Consent forms

IRB Process:

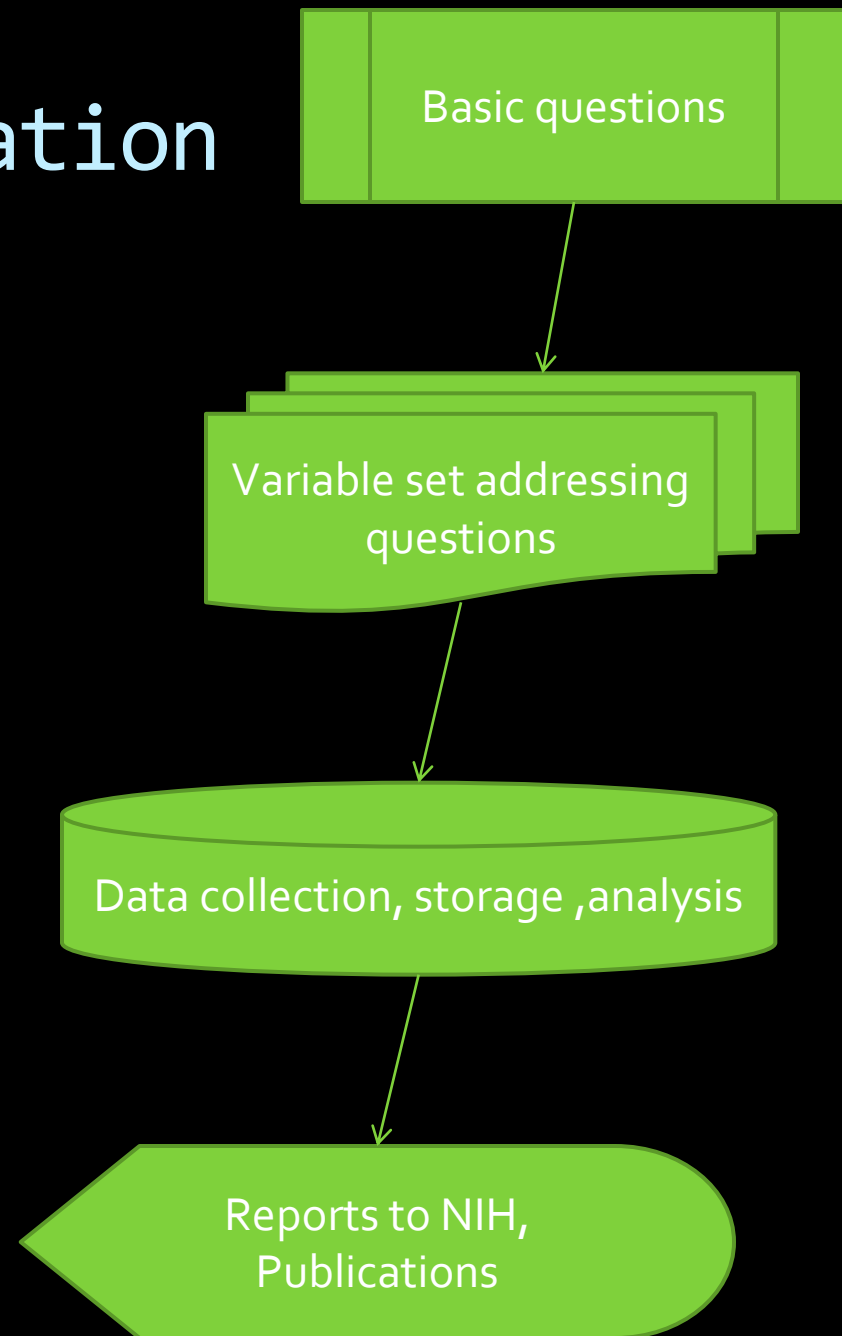
Implications for Data Capture?

- DACC cannot receive your data until one or more of the **approval conditions*** are fully satisfied
- Two data capture systems set up
 - REDCap:
 - For those with full approval
 - Data sent directly to DACC through web-based entry system
 - EXCEL:
 - For those without approval
 - Data entered, but retained by MAP each program (NOT sent to DACC) until full approval is obtained

*IRB or institutional representative approval or signed informed consents

Developing Evaluation Content

- Develop set of basic questions that need to be addressed
- Design variable set that addresses the questions
- Design the data capture system and collect data
- Report






Developing Evaluation Content

1. Did student make successful transition from one career level to the next?
2. Did student remain in a STEM field or field requiring knowledge of STEM discipline?
3. Did student remain in research?
4. What tangible outcomes did training have?
5. Participation in other MAP or non-MAP training programs?
6. What was student's institution prior to MAP?
7. Where originally learn about MAP?



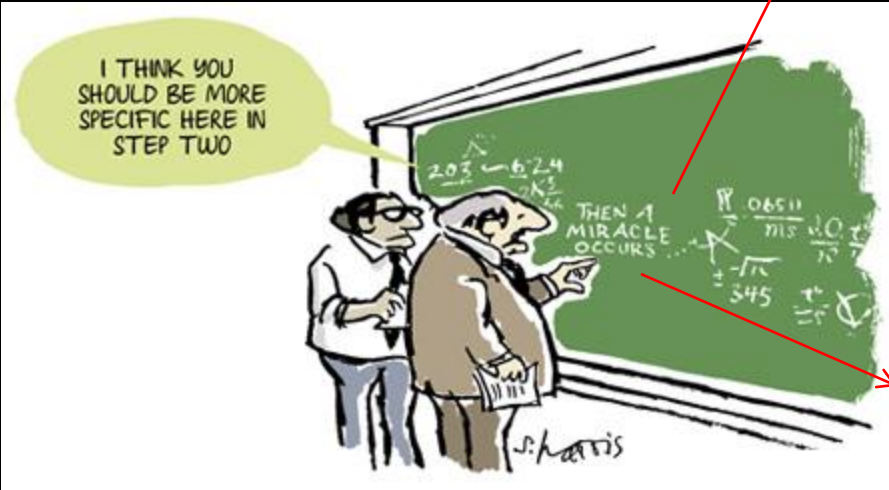
Developing Evaluation Content

1. Did we train leaders?
 2. What elements of training impacted success?
 3. What are predictors of success?
 4. What/who influenced student's career?
 5. How did duration of training impact success?
- 

Developing Evaluation Instrument(s)

- From my perspective, this is what happened

$$\begin{aligned}
 & \int f(x) dx = \int \left(\sum_{j=1}^n a_j u_j(x) \right) dx = \sum_{j=1}^n a_j \int u_j(x) dx \\
 & \Delta F = F(x_0 + \Delta x_0) - F(x_0) \quad I_1 = \int \frac{1}{x^2} dx \\
 & \lim_{n \rightarrow \infty} \frac{(\sqrt[3]{n+2})^3 - (\sqrt[3]{n})^3}{(\sqrt[3]{n+2})^2 + (\sqrt[3]{n+2}) + (\sqrt[3]{n})^2} = \lim_{n \rightarrow \infty} (\sqrt[3]{n+2} - \sqrt[3]{n}) \\
 & \left(1 + \frac{1}{n}\right)^{n+1} < \left(1 + \frac{1}{n}\right)^n \quad a = \psi\left(\frac{1}{q}\right) = [\psi\left(\frac{1}{q}\right)]^q \\
 & z^{n-2} + a^2 z^{n-2} + \dots + a^{n-1} \quad I_1 = \int \frac{1}{x^2} dx \quad z^n - a^n = (z-a)(z^{n-1} + \dots + a^{n-1}) \\
 & = a_0 + a_1 z + \dots + a_n z^n = \sum_{k=0}^n a_k z^k \quad (a_k \neq 0) \quad P_n(z) = a_0 + a_1 z + \dots + a_n z^n \\
 & \ln(x+h) - \ln a^x = \ln \left(\frac{x+h}{x} \right) = \ln \left(1 + \frac{h}{x} \right) \quad a = \psi\left(\frac{1}{q}\right) \quad (\log_a x)' = \lim_{h \rightarrow 0} \frac{\log_a(x+h) - \log_a x}{h} \\
 & \lim_{h \rightarrow 0} \log_a \left(\frac{x+h}{x} \right)^{1/h} = \lim_{h \rightarrow 0} \log_a \frac{1}{x} \left(1 + \frac{h}{x} \right)^{1/h} = \lim_{h \rightarrow 0} \frac{1}{x} \log_a \left(1 + \frac{h}{x} \right)^{1/h} \\
 & P_n(z) = \sum_{k=0}^n a_k z^k = 0 \quad I = \int \frac{1}{x} dx = \ln|x| + C
 \end{aligned}$$



- But, from Karen Clark Laseter's perspective, there was a little more to it ...

Developing Evaluation Instrument

- Reports presented today are based on the SHORT excel format
 - Most MAP programs did not have IRB approval
 - Could not send data to DACC
- Excel format
 - Allows MAP programs to enter data in a template
 - Produce “reports” based on these templates

Developing Evaluation Instrument

- Reports presented today are based on the SHORT excel format
 - Entered only data that are currently on hand
 - DID NOT ask for new data collection at this time
 - ** expect some missing data
 - Basic Feedback Expected
 - Get feel for how extensive is each data base?
 - Informative & standardized reports from each program

Developing Evaluation Instrument -- REDCap

- More extensive baseline AND annual follow-up data will be collected in future using REDCap
 - More efficient data capture using web-based data entry system: Internal QC checks, skip logic, etc
 - More detailed information collected, e.g.
 - Background and Follow-up: parents contact, permanent address, future plans, other training programs, details about positions, awards, publications, etc)
- More thorough review next year ...

Developing the Evaluation Instruments

- **Background**
 - Program Description
 - Total Enrollment
- **Follow-Up**
 - Sample Description
 - Educational Levels
 - Remained in STEM field
 - Remained in research-related field
 - Scientific achievements
- **Experiences**
 - Challenges during follow-up data collection
 - Creative ways to do follow-up data collection
 - General Comments



LIFE