FIRST IN THE WORLD (FITW) PROJECT DIRECTORS MEETING:

UNDERSTANDING CHALLENGES IN CONDUCTING AND MONITORING RANDOM ASSIGNMENT

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Random Assignment in the Context of FITW

- Interventions aimed at increasing college access, persistence, and completion

- Need to determine participant eligibility based on certain criteria, e.g., entering freshman, community college transfers, students in developmental education

- Need to coordinate among multiple partners at multiple levels to define study sample, conduct and monitor random assignment
GOAL: TO SUCCESSFULLY CONDUCT & MONITOR RANDOM ASSIGNMENT

Factors to Consider

- Course scheduling process
- Intervention features
- Participants’ concerns
- Division of responsibility among evaluation team, IHE, and school staff to support RA

Major Activities

- Design RA process
- Create Buy-In
- Identify Eligible Participants
- Conduct RA
- Monitor RA
TIMING OF THE 5 MAJOR ACTIVITIES

• Before Random Assignment
  • Design process for RA that is embedded in existing intake process
  • Create Buy-in
  • Identify Eligible Participants

• During Random Assignment
  • Conducting RA

• After Random Assignment
  • Monitoring and Maintaining RA
CHALLENGES BEFORE RANDOM ASSIGNMENT

• Design RA process
• Create Buy-in
• Identify eligible participants
DESIGN RANDOM ASSIGNMENT PROCESS
KEY CONSIDERATION FOR DESIGNING A RANDOM ASSIGNMENT PROCESS

• Who is the eligible student population and what would they normally do?
  • Is the institution going to maintain the status quo for at least some eligible students? Or do they want to change parts of the process for everyone?
  • How are students identified for the process that we’re considering the control condition, and what does the process look like for them?

• Where are the natural decision points at which you could consider inserting random assignment?
**Key Consideration for Designing a Random Assignment Process**

- All constituents
  - Have a stake in embedding RA into existing processes
  - Should have input into the design of the RA process

- Timing of random assignment
  - Should depend on how services are currently delivered
  - Availability of data for determining eligibility
  - Other factors

- Examples:
  - School enrollment process
  - Course selection process
DECIDING WHEN TO CONDUCT RANDOM ASSIGNMENT

• Summer prior to implementation year
  • Advantage – More time and less pressure than conducting random assignment in the fall of the implementation year/start of semester
  • Disadvantage – May allow students to make decisions at the start of the school year that make it difficult to implement or maintain random assignment (e.g., being able to “shop” for classes or sections)

• Fall of implementation year/ Beginning of semester
  • Advantage – Avoids summer attrition, between-session attrition, and late enrollment problems
  • Disadvantage – Less time and more pressure at the beginning of the school year (semester) to complete random assignment with quick turnaround, so normal school processes can continue
DOCUMENTATION OF PLANNED RANDOM ASSIGNMENT PROCESS

• Create a random assignment guide for the study

• Reflect input from constituents

• Document all planned procedures for random assignment

• Be sure everyone involved in executing the process understands the procedures

• Keep the guide up-to-date as changes are made to the process
CREATING BUY-IN
DIFFERENT CONSTITUENTS HAVE DIFFERENT CONCERNS

• Students
  • Will I be denied services I need/want?

• Faculty
  • How will the study affect the day-to-day interactions with students and running of classes?

• School Administration
  • Will the study interfere with registration/class enrollment process? Will the study interfere with course requirements? Will I hear complaints from students? Faculty? Staff?
STRATEGIES TO INCREASE BUY-IN

• Reach out and communicate with ALL parties affected by the study – students, administrators, faculty, academic advisors.

• Keep in mind that educators (should and do) care more about students than they care about research.
  • Therefore, communicate the importance of the study and the potential benefits for all students *early* and *often*.

• In particular, reassure all involved that the needs of the students eligible for the treatment but assigned to the control group are of special concern.
  • This issue needs to be addressed to obtain the level of support necessary to maintain the integrity of RA.
STRATEGIES TO INCREASE BUY-IN: COMMUNICATE WITH STUDENTS

• Hold information sessions about the study, explaining random assignment
  • Focus on the equity of RA as an admissions lottery when program is oversubscribed
  • If using delayed treatment design, multiple reassurances that control students will receive treatment the following year (although they won’t be part of the study)
STRATEGIES TO INCREASE BUY-IN: COMMUNICATE WITH ALL AFFECTED

- School administrators and faculty

  - Conduct face-to-face training on how random assignment will be done and how it will not interfere with their program’s day-to-day

  - Include all key staff in these trainings who might have responsibility at a decision point associated with random assignment (e.g., registrars if RA is related to scheduling)

  - Promise and deliver quick turnaround in T/C decision
IDENTIFY ELIGIBLE STUDENTS
CLEARLY DEFINE ELIGIBILITY

• Provide a clear definition of eligibility criteria (and, by definition, exclusion criteria)
  • For example, all entering students or only transfer students or only those with a GED?

• Provide written documentation of the criteria to all staff involved in the process for easy reference and support.

• Be sure that everyone involved in identifying eligible students understands criteria
STRATEGIES FOR IDENTIFYING ELIGIBLE STUDENTS

• Set up processes early on with school personnel to obtain administrative data or other data to determine initial eligibility.

• Document the reasons for exclusion and the number of students in each category.

• Allow adequate time for…
  • Review of students identified as eligible to find any mistakes in eligibility status
  • Students to opt-out
    … BEFORE random assignment is conducted!
CONDUCTING RANDOM ASSIGNMENT
CHALLENGES DURING RANDOM ASSIGNMENT

• Tweaking the planned process for random assignment to ensure it works with existing processes.

• Dealing with late identification of eligible students.

• Verifying correct placement of students into randomly assigned condition.

• Documenting random assignment procedures at all points
STRATEGIES FOR DEALING WITH LATE IDENTIFICATION OF ELIGIBLE STUDENTS

• Devise procedures for identifying and conducting RA of eligible students who arrive to the process later than usual
  • For example, develop “instant” RA procedure that can be used at intake so that newly identified students do not have to be excluded from the study

• Develop procedures and timelines for filling vacancies in the treatment group, if needed (e.g. waitlists)
STRATEGIES FOR VERIFYING PLACEMENT OF STUDENTS

• Evaluator and school staff need to develop a dependable and reliable mechanism for obtaining data to confirm that students are receiving the right services.

• Evaluator (not school staff) should verify that students were placed in the correct condition.

• Evaluator and school staff should develop a strategy for fixing mistakes (when students are in the wrong condition).
STRATEGIES FOR DOCUMENTING RANDOM ASSIGNMENT PROCEDURES

• Keep written random assignment guide updated
  • Document all procedures, for all partners
  • Reduces degradation in process due to turnover in evaluator or school staff
  • Especially important for school staff
    • Often have the most influence over protecting the integrity of the original study design

• Tracking random assignment and placement for each student
  • Assigned status
  • Verification of correct placement
CHALLENGES AFTER RANDOM ASSIGNMENT: MONITORING AND MAINTAINING ASSIGNMENT STATUS
CHALLENGES AFTER RANDOM ASSIGNMENT

• Monitoring Random Assignment
  • Tracking of students who stay in the study over time.
  • Monitoring reasons why students drop out of the study.
    • Each student randomized should have a final ‘disposition’ that describes where they ended up at the end of the study.

• Maintaining Random Assignment
  • Avoiding post-random assignment exclusions
STRATEGIES FOR MONITORING RANDOM ASSIGNMENT

• Establish a contact person or site liaison who can be a ‘point person’ for questions/issues with RA

• Set up check-ins every week/month on the random assignment process between evaluators and school staff
  • Are there complaints from students?
  • Is there a need for more assistance, better tools?

• Expect to spend more time on monitoring than you think
  • It is all about establishing relationships across all members of the study team
  • This takes time and effort, but it is well-spent
TOOLS FOR DOCUMENTING STUDENT DISPOSITION

• We will be providing you with a tool for tracking sample numbers throughout the study.
  • Students who stay in the study
  • Students who drop out and why

• Excel spreadsheet – you fill in the numbers, creates the following diagram*
  • Called a CONSORT diagram

* See http://www.consort-statement.org
SAMPLE CONSORT DIAGRAM

Population of Students
N = 1,285

Included
N = 1,078

Treatment
N = 539

- Missing Outcome
  N = 20

Final Analytic Sample
N = 519

Comparison
N = 539

- Missing Outcome
  N = 28

Final Analytic Sample
N = 511

Excluded

- Ineligible: 123
- No consent: 84
STRATEGIES FOR MAINTAINING INTEGRITY OF RANDOM ASSIGNMENT

- Avoid exclusions after random assignment
- Try to keep all randomized units in analysis
  - Do not exclude students based on things that occur after random assignment (e.g., level of participation, applying exclusion criteria after random assignment, changing conditions)
  - Analyze “cross-overs” and “no-shows” in their originally assigned condition
  - Identify ineligible students before random assignment
  - Obtain consent before random assignment
TAKE-AWAY POINTS

• Relationships, relationships, relationships
• Communication – often and early
• Procedures – develop them, and also document them
QUESTIONS?