

Workgroup D: Effectiveness Research

Leader: Kathleen Carroll

Reporter: Kimberly Hoagwood

Recommendations for training clinical science graduate, internship, and post doctoral students to benefit from and contribute to effectiveness research

Goal: We want our students to embrace translation and to be able to move nimbly among the scientific domains of basic research, intervention development and testing, efficacy, effectiveness, and dissemination-implementation.

1. We recommend that didactic training include educational opportunities to learn about public health models and system issues. This can include videoconferencing with experts. (Note: Public health includes healthcare policy and public health advocacy)
2. We encourage exposure to clinical scientists whose work reflects scientific translations among basic, efficacy, effectiveness or dissemination-implementation research, and who can serve as role models in the translation of effectiveness research to dissemination-implementation as well as translation and integration of basic research with effectiveness. Since not all programs will have such individuals, creating opportunities for long-distance (e.g., virtual) exposure would be valuable.
3. We recommend that experiential opportunities be provided: This should include direct exposure to service settings, populations served within them, and community contexts—the in vivo experience. This may include practicum experiences designed to help students understand the clinical realities of the issues they are tackling.
4. We recommend that training resources be available to help students think about social contexts and cultural issues. This includes helping to expose students to the cultural mindsets relevant to effectiveness research. This can be a way to connect effectiveness research back to intervention development and basic research.
5. We recommend training in measurement systems – measurement-based care--to track outcomes. This can help exemplify how scientific skills are relevant to clinical care. This includes exposure to measurement systems for clinical decision-supports. These measurement systems currently exist and are useful in single case design studies.
6. We recommend the creation of databases based on clients being served in the clinical science programs to use in clinical care. This facilitates studies of mediation/ moderation effects. We recommend creating scientist-practitioner data networks to collaborate with provider data collection systems, when feasible.

7. We encourage training in Mixed Methods (including qualitative), as this is relevant to effectiveness research. This includes learning rigorous qualitative methods which can assist students in learning how to audit their quantitative data
8. We encourage strategic collaboration between faculty and students with community partners, including conducting joint projects.
9. We recommend that clinical science training programs include attention to communication methods for communicating with non-scientists and for engaging in science advocacy.
10. We recommend that students receive experience in how to communicate with community providers. This might include writing a briefing document for stakeholders/policy-makers/administrators.
11. There are several useful statistical methods for conducting effectiveness research (e.g., random regression modeling, propensity score matching, growth curve modeling, HLM, power analysis, survival analysis). These are not typically included in the required statistics sequence for graduate students. We recommend that programs arrange for their students to have opportunities to learn these statistical techniques.
12. We encourage inclusion of training opportunities on research designs relevant to effectiveness research, including comparative effectiveness studies and adaptive designs.
13. We encourage using administrative data from electronic health records (EHR) to improve healthcare quality, evaluate programs related to clinical practice guidelines. We encourage creation of patient registries, when feasible.
14. We encourage programs to use EHR in their own clinical programs.
15. There is a need for better communication networks between graduate, internship, and postdoc programs regarding training opportunities relevant to effectiveness that are available in the training program or which are considered desirable to obtain prior to entering the program.
16. We encourage more internship programs to value effectiveness research skills and experiences. We recommend that more attention be given to increasing internship opportunities for effectiveness research.
17. We recommend developing a resource map to learn about effectiveness research opportunities. This is needed to find internship and especially postdoc opportunities.
18. There is a need for the creation of research networks or programs that exemplify the connection of basic research to efficacy and effectiveness research as well as basic intervention development to dissemination-implementation. Some NIMH-funded research networks existed in the past.

SOME NOTEWORTHY EXEMPLARS OF EFFECTIVENESS RESEARCH TRAINING OPPORTUNITIES

1. MIRECC (Mental Illness Research, Education, and Clinical Centers-VA) (research education and clinical) —2 yr postdoc. This is an example of translational opportunities.
2. CTSA—This network exists in many universities and could be leveraged to promote effectiveness research.
3. Virginia Commonwealth U (Southam-Gerow): Every case is single case study: They use measurement feedback dashboard systems to train progress and practices and show the dashboard to clients and present as training for supervision. This encourages students to think scientifically while doing clinical work