

## APPENDIX G

### THE PRACTICE-RESEARCH INTEGRATION PROJECT (PRIP)

#### A STUDENT MANUAL

##### A. DESCRIPTION

The Practice-Research Integration Project (PRIP) is required of all doctoral clinical students and constitutes the Comprehensive Examination for the doctoral degree. No student may apply for internship unless this project is completed and the paper approved by the doctoral committee by May 15 before the internship year. The PRIP is described below, and involves an empirically-grounded clinical case study of a patient treated by the student (in the UT Psychological Clinic or other acceptable context as determined by clinical faculty). The paper detailing this clinical research reflects the student's real-world integration of relevant practice and research knowledge about the chosen topic. The empirically-grounded case study is used to illustrate the student's ability to integrate science and clinical practice.

The basic requirements include:

1. The paper reviews relevant research in an integrative manner.
2. The empirically-grounded case study itself must continuously track some aspect(s) of clinical relevance across the course of clinic contact (e.g., outcome, process, or both).
3. The number of observations must impart to the study an ability to detect (statistically) whether or not the obtained change (or association) can be easily explained by random fluctuation within or between phases.
4. Explanation of how the empirical findings relate to the descriptive material of the case and the treatment.
5. Show understanding of the Tennessee Model.

##### B. PRIP FORMAT: CRITERIA FOR PSYCHOTHERAPY OUTCOME AND PROCESS STUDIES

For the purpose of the PRIP, students are required to integrate science and practice as per the Tennessee model. Toward the objective of examining patient change on an empirical basis, the PRIP must focus on psychotherapy outcome and/or process variables that are data driven, and not merely qualitative (or narrative) in structure or format. If the decision is made to focus on psychotherapy process, you will examine the process of change in psychotherapy as it unfolds over time. It is entirely acceptable for you to have a PRIP focused solely or partly on process. In this case of course, you must obtain frequent observations throughout therapy. This happens naturally in the clinic, but can be arranged in other settings.

With the necessity that data are collected, there is flexibility in terms of the timing of data collection. For example, therapy outcome or process variables may be assessed daily, weekly, at pre- and post-treatment (and perhaps subsequent follow-up intervals). There also is flexibility in methods used to analyze your psychotherapy outcome and/or process data. For example, there are at least three general approaches to analyzing whether change in treatment is notable or clinically meaningful. These approaches deliver yields that are to a degree conceptually distinct, but there is nothing exclusive about their utilization. For example, a PRIP using a patient and associated time-series data can test across all three approaches outlined below: null hypothesis, measure/norms, and meaningfulness. Although incorporation of at least one of these approaches is recommended, it is feasible to propose another sound data-driven approach. Importantly, with consultation from their mentor, students are encouraged to examine the references cited below in developing the research design for their PRIP.

1. Testing the null hypothesis. As with any true experiment, here we ask: “How likely is it that the observed improvement would occur under random conditions (i.e., controlling for ups and downs of *this* patient’s symptoms occurring across time)? This is the design of the clinic time-series project, and datastreams such as those generated in the clinic are needed for this approach (such data sets generated through other clinical contexts and other patient samples also are acceptable). See the following founding articles with associated software (Borckardt et al., 2008). There you will also find descriptions of other ways to test the null hypothesis with autocorrelated data (e.g., ARIMA):

Borckardt, J. J., Nash, M. R., Murphy, M. D., Moore, M., Shaw, D., & O’Neil, P. (2008). Clinical practice as natural laboratory for psychotherapy research - A guide to case-based time-series analysis. *American Psychologist*, 63, 77-95.

Jones, E. E., Ghannam, J., Nigg, J. T., & Dyer, J. P. (1993). A paradigm for single-case research: The time series study of a long-term psychotherapy for depression. *Journal of Consulting and Clinical Psychology*, 61, 381–394.

2. Testing against the criterion measure’s reliability and norms. Here we ask a twofold question: a) “Is the patient’s magnitude of change on the criterion measure (pre to post) sufficiently unlikely to occur among people who just take the same measure twice (essentially the measure’s standard error of measurement)? b) If so, is the patient’s post-treatment symptom status more like that of non-patients than it is like that of untreated patients with the disorder?” Note that it is critical that the criterion measure’s norms and psychometric properties be known for both disordered and normal subjects such that a Reliable Change Index (RCI) can be determined. For this approach see the following founding articles:

Jacobson, N. S., & Truax, P. A. (1991). Clinical significance: A statistical approach to defining meaningful change in psychotherapy research. *Journal of Consulting and Clinical Psychology*, 59, 12-19.

Jacobson, N. S., Roberts, L. J., Berns, S. B., & McGlinchey, J. B. (1999). Methods for defining and determining the clinical significance of treatment effects: Description, application, and alternative. *Journal of Consulting and Clinical Psychology*, 67, 300–307.

3. Testing Meaningfulness. Here we ask: “Non-random improvement and norms aside, what evidence is there that the treatment made a *meaningful* difference in the patient’s life?” As one example, arbitrary metrics may be used to assess the meaningfulness of change (Kazdin, 2006). It also is feasible to use the percentage of non-overlapping data (PND) approach as is often used in single-subject behavioral research methodology (Scruggs, T. E., & Mastropieri, 1998). For these approaches to meaningfulness see the following articles:

Kazdin, A. E. (2006). Arbitrary metrics: Implications for identifying evidence-based treatments. *American Psychologist*, 61, 42-49. (20).

Scruggs, T. E., & Mastropieri, M. A. (1998). Summarizing single subject research. *Behavior Modification*, 22, 221-242.

#### **REQUIREMENTS FOR PSYCHOTHERAPY PRIP:**

Based on these guidelines, the following criteria must be met in completing your PRIP:

- a. The PRIP must be based on the Tennessee Model and involve skillful integration of science and practice.
- b. The PRIP must involve a design and data analysis that enables the student to test the findings against the null hypothesis (approach 1 above) or against the criterion measure's reliability/norms (approach 2 above).
- c. Regardless of whether psychotherapy outcome and/or process is examined, every effort must be made to examine the clinical meaningfulness of data as described (approach 3 above).

*Note.* At present it is highly recommended that your PRIP meet these requirements. Beginning June 1, 2012, it is mandatory that these requirements are satisfied.

With these requirements as the foundation of your PRIP, there is some degree of flexibility in how you structure your final document. That stated, many students have found it highly useful to use the structure adhered to in the journal *Clinical Case Studies*. This structure is as follows:

- FOCUS AND RATIONALE FOR THE EMPIRICALLY-GROUNDED CASE STUDY
- REVIEW OF RELEVANT CLINICAL AND RESEARCH LITERATURE
- PATIENT DESCRIPTIVE MATERIAL
  - PRESENTING COMPLAINTS
  - HISTORY
  - PSYCHOLOGICAL TESTING IF ANY
- CASE FORMULATION
- TREATMENT PLAN
- CLINICAL RESEARCH QUESTION(S)
- RESEARCH DESIGN (LIKE A METHOD SECTION)
- COURSE OF TREATMENT
- EMPIRICAL FINDINGS WITH ANALYSIS
- FOLLOW-UP IF ANY (WITH ANALYSIS IF POSSIBLE)
- DISCUSSION OF DESCRIPTIVE AND EMPIRICAL FINDINGS
- REFERENCES

### **C. THE DOMAIN OF QUESTIONS THE STUDENT CAN ADDRESS**

All non-emergency patients seeking treatment in the Clinic are participating in a clinical care protocol which provides the fundamental data required for an empirically grounded case study (although as indicated earlier it is acceptable to use patients treated in another context providing adherence to PRIP requirements). This Generic Clinical Care Protocol is described below, and involves tracking a patient's progress on three or four measures across baseline and treatment phases. The student is strongly encouraged to choose for his/her empirically-grounded case study a patient of special interest. Further,

the student is encouraged to customize or otherwise embellish the generic protocol/analysis (described below in section D) to optimally suit his/her clinical research agenda.

Many of the sample clinical research questions listed below can be addressed via the generic clinical care protocol, with no special input by the student beyond choosing the 2 or 3 symptoms to be tracked daily during treatment. However, for some questions the student might customize the protocol further. Here are some sample questions that could be addressed in the empirically grounded case-study. Those with (\*) require a little extra customizing by the student/mentor on the front end. The remainder can be handled by the generic protocol already in place as long as the student helps identify the symptoms to be tracked.

Psychotherapy outcome questions:

- Is my patient better off than he/she was before therapy began (phase effect)?
- If he/she improved, at what point did the improvement begin?
- Which aspects of his/her functioning improved; and which did not improve?
- Did the improvement last after termination?\*
- If my patient improved on symptom scales, was the improvement on the symptom scales reflected on pre-treatment/post-treatment research measures?

Psychotherapy process questions:

- What was the pattern of change?
- Were there things I did that made matters worse?\*
- Did he/she get worse before he/she got better?
- What symptoms improved first?
- When my patient's anxiety lessened did it lead to mood improvement, or visa versa?
- Did a richer therapeutic alliance lead to clinical improvement?\*
- Did clinical improvement lead to a richer therapeutic alliance?\*
- What was the pace of improvement?
- When I started to interpret transference, did he/she get better?\*
- When he/she began to expose himself/herself to the feared stimulus did he/she get better?\*
- What happened to the therapeutic alliance when I interpreted?\*
- What happened to the therapeutic alliance when I supported?\*
- Were more sessions better or was most of the improvement early on?
- If I added or deleted an aspect of the treatment, how did he/she respond?\*

The above list of questions is definitely NOT exhaustive. Indeed the limits of what can be addressed in the empirically-grounded case study as defined by the student's ingenuity, his/her understanding of the generic care protocol itself, and a sound appreciation of case-study design possibilities. Be as creative as you like.

#### **D. THE GENERIC CLINICAL CARE PROTOCOL: CLINIC TIME SERIES PROJECT (SEE FIGURE 1)**

**The fundamentals.** As highlighted earlier, there is flexibility in terms of the research design of the PRIP. As an example of a possible research design, the clinic time series project uses the design illustrated in Figure 1. Remember that it is not mandatory that you use this design, but it is one excellent option to meet your PRIP requirements. This generic protocol is primarily (though not entirely) an outcome design with a pre-treatment baseline phase and a treatment phase. Hence, it is an A-B design. During both phases patients are tracked daily on three or four symptom scales. These are very simple Likert-type scales which the patient fills out daily before treatment formally begins, as well as during treatment. The questions are determined at intake or IMMEDIATELY thereafter (within 48 hours). One question addresses general distress. It is the same for all patients. The other two or three questions are tailored to the patient's symptom picture. So it behooves you to know exactly what type of patient you are looking for, to be tracking intakes, and ideally to do the intake on a particularly interesting patient. After treatment ends, eventually all patients are contacted for follow-up evaluation, but this is of

course 6-12 months after termination. Therefore, students should not count on there being any follow-up data for their PRIP, unless they make special arrangements with the patient (which is fully possible). The point here is that should you decide to utilize this design, what will be tracked for you is three or four symptoms across baseline and treatment. You can count on that. In addition, the patient will be administered the OQ-45 at baseline (usually at intake) and once a month during treatment.

**Satisfy baseline requirement.** The generic care protocol requires a sufficient number of baseline datapoints to allow statistical analysis of phase effects. That means that before therapy is begun formally, there must be at least two weeks (preferably three weeks) of pre-treatment baseline datapoints (14 to 21 days). That is why the symptom questions must be identified so quickly and distributed to patients for daily tracking. This means that the therapy cannot begin until those datapoints are obtained (at least 14 of them). Hence, there is room for a little post-intake assessment. This will be monitored carefully by the project director, but when you have chosen a patient for your empirically-grounded case study, you must move very fast, and be exceedingly careful to make sure that the baseline requirement has been met before therapy begins. In reality, this is rarely a problem. But it requires attention. Do not start therapy before an adequate baseline is established.

**The data and the analysis.** The Doctoral Committee handles almost all the logistics and the analysis of the data. The Doctoral Committee will help you analyze the data using statistical software tailored to the requirements of ideographic serially dependent datastreams. You can use this work to complete the requirements for your paper. Writing your paper is of course up to you. As per APA guidelines (and common decency) if you decide to publish the case in a journal, and if that publication report contains components of the generic project, you will need to cite as co-authors the people who shared the creative process and the work load (e.g., the Doctoral Committee member who worked closest with you, perhaps your supervisor, and maybe your mentor). In the case of the clinic time series project, reports of accumulated data derived from the generic design will eventually be published by those serving as principal investigators on the project (currently Dr. Mike Nash). In terms of your PRIP case analysis, you have every right to publish your study, and generally as first author should you show such initiative. Of course the message here is to communicate, be open, and share well, and discuss potential authorship issues a priori.

**The importance of being creative.** Though the generic clinical care protocol is an A-B design, there is nothing to prevent you and your mentor from choosing other time-series designs (e.g., A-B-A, A-B-A-B), multiple baseline designs, or other acceptable research methods which could be add-ons to the generic project or completely independent of the generic project. So, be as creative as you like.

## E. EXAMPLES

The empirically-grounded case study that constitutes the Practice-Research Integration Project (PRIP) has been in place since 2003. We highly encourage you to interact with your mentor and more advanced students for models of how to complete a PRIP. Several PRIP projects also have been published (e.g., Armento & Hopko, 2009; Carvalho & Hopko, 2009). You also will be receiving training on this topic in the first-year Research Design seminar, and again in the second year Psychotherapy II seminar. You will be receiving three papers which ought to give you an idea of the concept and importance of this type of approach, as well as what passes for a good empirically-based case study. These papers are:

Borckardt, J. J., & Nash (2002). How practitioners (and others) can make scientifically viable contributions to clinical outcome research using the single-case time-series design. *International Journal of Clinical and Experimental Hypnosis*, 50, 114-148.

Borckardt, J. J. (2002). Case study examining efficacy of a multi-modal psychotherapeutic intervention for hypertension, *International Journal of Clinical and Experimental Hypnosis*, 50, 189-201.

Borckardt, J. J., Nash, M. R., Murphy, M. D., Moore, M., Shaw, D., & O'Neil, P. (2008).

Clinical practice as natural laboratory for psychotherapy research - A guide to case-based time-series analysis. *American Psychologist*, 63, 77-95.

## F. TIMING OF THE PRACTICE-RESEARCH INTEGRATION PROJECT (SEE FIGURE 2)

Completing the Practice-Research Integration Project is a two-step process (see Figure 2). The first step is roughly tethered to completion of the pre-doctoral dissertation project, and is a requirement for completion of the Psychotherapy II course. The second step is tethered to completion of the requirements for admission to the doctoral degree program.

### **Step 1: Crafting a plan by the end of the second year: A course requirement for Psychotherapy II**

No later than the end of Year 2 and in consultation with his/her research mentor, the student crafts a scholarly written document (the plan) describing a topic and design suitable for the Practice-Research Integration Project. The document consists of the following sections of the Outline for the Empirically-Grounded Case Study:

- focus and rationale for the study
- Review of relevant clinical and research literature study
- Clinical research questions
- Research Design

An advisor-approved document and proposal will be a requirement for completion of the Psychotherapy II course-671 (Spring Semester year 2). Whether the student has his/her Proposal approved before, during, or at the end of the Psychotherapy II course, once it is approved by the advisor the student can move ahead with implementation.

### **Step 2: Completion of the study and submission of PRIP paper**

Once the patient is selected by the student and advisor, any Psychology Clinic supervisor may oversee the case. The supervisor, student, and the mentor are encouraged to meet together once a semester to discuss the case. Some effort will be made to maximize the chance that the entire case is overseen by the same supervisor. The Practice-Research Integration Project (PRIP) paper is submitted by the student to his/her doctoral committee no later than October 1 of Year 4. When the doctoral committee has approved the PRIP paper, the student has then formally passed the Comprehensive Examination. Without approval of the PRIP by May 15, the student may not apply for internship that year.

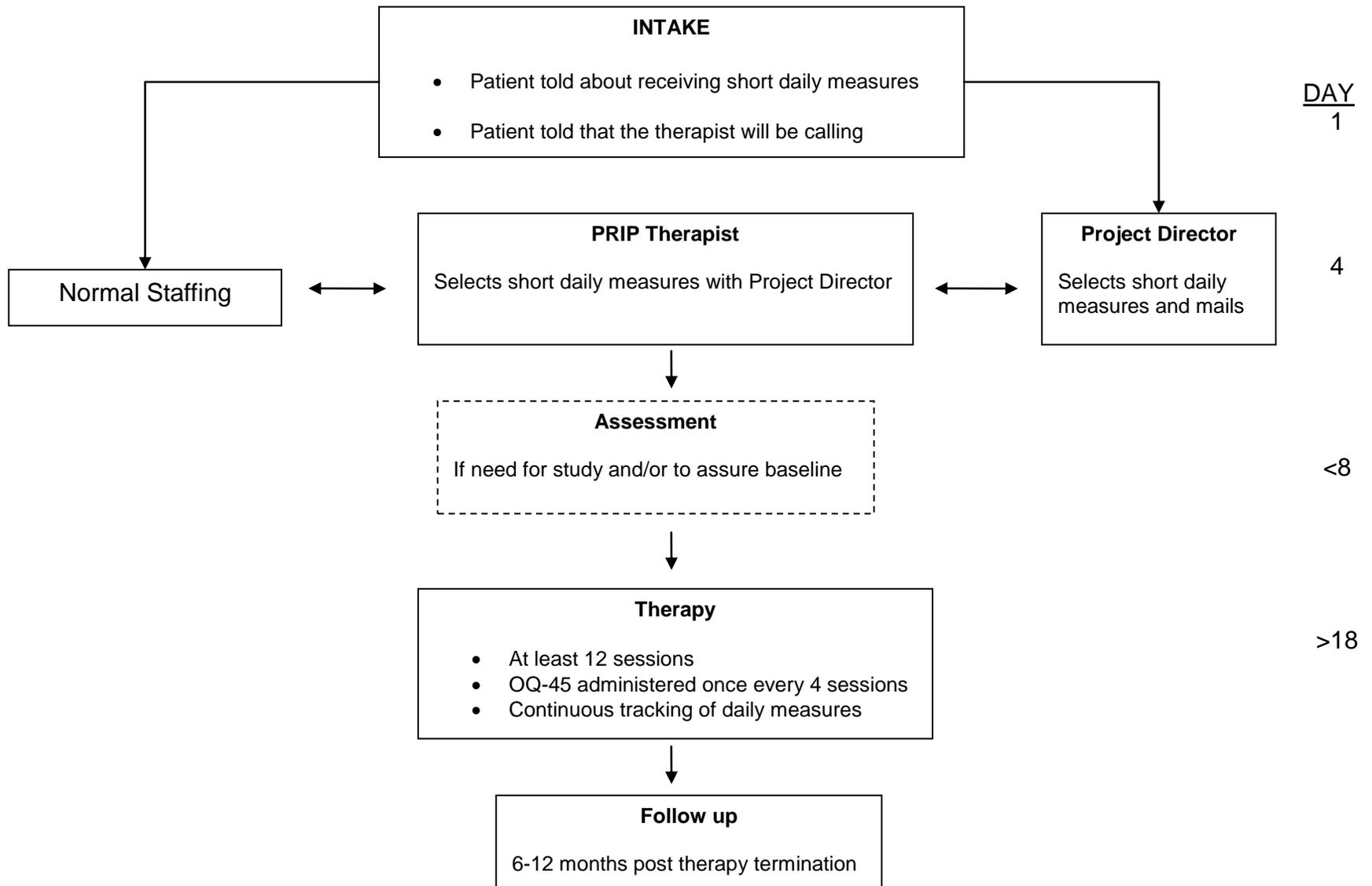
## G. EXPECTED STUDENT PROGRESS ON PRIP

1<sup>st</sup> year: Exposure to single-subject research topic in Research design seminar.

2<sup>nd</sup> year: A completed and Advisor-approved Proposal for PRIP is part of the course requirement for Psychotherapy II-671 (Taken Spring of Year 2). The proposal must be approved by the advisor before it is submitted for the course requirement. Once approved, the student may begin implementation of the project. If problems occur with unplanned termination or failure of compliance by the patient, a new patient must be identified. Revision to the PRIP proposal can be made by the advisor and student.

3<sup>rd</sup> year: Completion of course work, formation of the doctoral committee, and implementation of the PRIP design. **Submission of the PRIP paper to the doctoral committee by October 1. Approval by May 15 is necessary if the student wishes to apply for internship.**

**FIGURE 1.**  
**The Generic Clinical Research Protocol**



**Figure 2.**  
**Chronology for Progress on the**  
**Practice-Research Integration Project (PRIP)**

**FIRST YEAR**

- 1<sup>st</sup> semester: discussion of PRIP in Psych 570
- 2<sup>nd</sup> semester: discussion of Ideographic and Time Series Designs in Psych 580



**SECOND YEAR**

- Placement in UT Psychological Clinic
- 1<sup>st</sup> semester: discussion in Psych 670
- 2<sup>nd</sup> semester: **May 1**: Deadline for submission of mentor-approved PRIP plan as course requirement for Psych 671
- Implementation of plan can begin upon approval



**THIRD YEAR**

- Further implementation of PRIP
- Formation of Doctoral Committee
- Writing of PRIP if possible



**FOURTH YEAR**

- Implementation of PRIP plan and writing of PRIP paper
- **October 1**: Deadline for submission of PRIP paper to the student's doctoral committee
- **October 15**: Deadline for doctoral committee approval of PRIP paper. No internship application if not approved by October 15

