Simultaneous Practice and Research:
A Model for Conducting Research in Private Practice

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My idea of heaven is: I am sitting in my office conducting a therapy session with a patient and, *as I do that*, I am collecting data that simultaneously aid my treatment of that patient and contribute to research that advances knowledge. In this chapter I describe a model for conducting research in a private practice setting that I call *simultaneous practice and research,* because many elements of the research and practice happen simultaneously. The model is founded on a very tight integration of the practitioner's clinical work and the research s/he conducts. I describe the elements of the model, beginning with a description of the idiographic case formulation approach to clinical practice that is the foundation of the model, and ending with an account of the ways the research and clinical work feed and support each other.

The simultaneous-practice-and-research model I describe here, in which the research enterprise is founded on data collected for clinical purposes, is certainly not the only way to conduct research in a private practice setting, as some of the other chapters in this volume show (Castonguay & Youn, Osborne, and Juoma). I made up the simultaneous model as I went along, over the course of many years, and I adopted it because it addresses many of the impediments to conducting research in a clinical practice setting. The model's conceptual clarity and elegance also strengthen its appeal. The model underpins most of my own research contributions, and has made it possible for me to have a research career in a private practice setting. I describe it here with the hope that it might be helpful to others.

The Simultaneous Practice and Research Model

The simultaneous-practice-and-research model requires a high degree of overlap of the practitioner's clinical skills and research interests. The practitioner must be interested in research questions that can be addressed using the types of data collected in his/her clinical practice or, stated the other way around, must have the clinical skills needed to provide the type of treatment and/or the types of symptoms and problems that the practitioner wants to study. The model won't

support the practitioner who, for example, has an outpatient practice treating childhood anxiety disorders and a research interest in psychotic disorders.

In addition to the overlap of clinical and research interests, in order to implement the model described here, the practitioner must have: A case formulation-driven approach to clinical work, research skills and training, library access, collaborators and helpers, statistical assistance and software, a treatment agreement in which the patient provides informed consent for research, access to an institutional review board or some other review mechanism to address ethical issues, collegial support, and solutions to the problems of time and money. I describe each of these elements here.

A case formulation-driven approach to clinical work

An essential element of the simultaneous practice and research model for doing research in clinical practice is a case formulation-driven approach to clinical work. In a case formulation-driven approach to psychotherapy, the clinician collects data from each patient, in order to develop an idiographic formulation or case conceptualization. The formulation is a hypothesis about the mechanisms that cause and maintain the symptoms and problems of the unique individual who is in the clinician's office at that moment. The clinician uses the formulation to develop interventions and guide clinical decision-making, collecting data as the treatment proceeds to evaluate whether the treatment is effective in helping the patient achieve his or her treatment goals and whether the formulation hypothesis that guides the treatment appears to be correct (Persons, 2008). In this approach to psychotherapy, the clinician is using the same hypothesis-testing and data collection mode of working that scientists use, treating each case as an N = 1 experiment (Sackett, Richardson, Rosenberg, & Haynes, 1997). The therapist also draws on a wide range of types of scientific evidence, including evidence from randomized controlled trials of treatments, basic science findings, studies of the process of change in psychotherapy, and evidence collected from the patient himself. Thus, the case formulation approach to psychotherapy relies on both the *products* and the *methods* of science.

The case formulation-driven approach to clinical work promotes scientific thinking and curiosity, facilitates the use of evidence from multiple sources, and requires extensive data collection. All of these support the research enterprise. I discuss each of these in turn, giving particular emphasis to the data collection piece.

Curiosity and scientific thinking. The case formulation-driven approach promotes curiosity and scientific thinking because the clinician is constantly asking questions and testing hypotheses about what is going on in the clinical work (rather than turning to the next page in the empirically-supported treatment (EST) protocol). Shiloff (2015) describes the way training students to use ESTs teaches them to use some of the *products* of the clinical science enterprise, but does not train them in the *methods* of clinical science, does not train them to think or operate like clinical scientists. A case formulation approach to psychotherapy, in contrast, calls for constant hypothesis-testing.

Reliance on multiple types of evidence. To develop a case formulation and carry out a treatment based on it, the therapist draws on multiple sources of evidence from the scientific literature, including evidence-based formulations of disorders and symptoms, basic science findings, and on evidence from the patient at hand, such as information about typical events that trigger symptoms for this patient. The therapist also relies on evidence-based assessment tools.

The therapist draws on the basic science and psychotherapy literatures, including, for example, findings about the maladaptive effects of suppression (e.g., (Rosenthal, Cheavens, Lejuez, & Lynch, 2005), about the role of imagery in depression (Holmes, Blackwell, Heyes, Renner, & Raes, 2016), about the role of memory enhancement strategies in improving psychotherapy outcome (Harvey et al., 2014), and evidence that the trajectory of change in psychotherapy is generally non-linear, with early rapid improvement followed typically followed by a slower rate of change (Lutz, Martinovich, & Howard, 1999). The therapist is often developing a formulation based on transdiagnostic mechanisms such as perfectionism, intolerance of uncertainty, anxiety sensitivity, and similar, and drawing on the basic science findings about these phenomena as she does so. The focus on transdiagnostic mechanisms aligns with current thinking in the research community (Sanislow, Pine, Quinn, Kozak, & Garvey, 2010), and thus enhances the potential for the clinician to make a contribution to research.

Extensive data collection. The case formulation-driven approach requires extensive data collection that provides a strong support for both the clinical work and for research. To develop a formulation and get the progress monitoring started right away, the clinician collects a lot of data *at intake*. To test hypotheses (formulations) and monitor the patient's progress in treatment, the practitioner collects data *at every session* (and indeed, at every moment (e.g., monitoring the patient's nonverbal and verbal responses to the therapist's behavior and interventions)). I discuss each of these in turn.

Assessment at intake. When I meet with a new patient at intake, I ask them to complete and bring to the session a large packet of questionnaires asking about their symptoms, treatment history, and family and social history. These tools aid with the initial tasks of developing a problem list, obtaining diagnosis and formulation hypotheses, and setting treatment goals.

Patients complete an Intake Questionnaire that provides extensive information about current symptoms and treatment and family history, and a Diagnostic Screening Tool, a self-report measure that my colleagues and I developed that includes screening questions (e.g., questions about substance use) that help the clinician identify areas where additional diagnostic assessment is needed. These measures are available at: xxx. Patients also complete the *Depression Anxiety Stress Scales* (DASS; (S. H. Lovibond & P. F. Lovibond, 1995), a self-report measure with three subscales assessing symptoms of depression anxiety (panic and physiological arousal, and stress. Patients complete the *Patient Health Questionnaire-9* (PHQ-9; Kroenke, Spitzer & Williams, 2001), a 10-item self-report measure designed for screening, diagnosing, and/or monitoring depressive symptoms over a two-week period. The measure is available copyright-free at http://www.phqscreeners.com. The also complete the *Perseverative Thinking Questionnaire* (PTQ; (Ehring et al., 2011), a 15-item self-report scale that assesses content-neutral repetitive negative thinking, including rumination and worry. The PTQ is reproduced in the appendix of Ehring et al. (2011), which is available online at http://www.sciencedirect.com/science/article/pii/S000579161000114X. Clicking the link within the text that reads "under a creative commons license" on that webpage will give you access to the PTQ through the creative commons. I collect information about perseverative thinking using the PTQ at intake because I have learned in my experience, and there are data indicating that patients who have a lot of perseverative thinking do not respond well to standard CT (Watkins, 2016) so I collect this measure to help me identify when perseverative thinking is a treatment target, and also because I hope to be able to do a piece of research to test the hypothesis that patients who score high on this measure are less likely to respond to treatment unless the clinician explicitly targets it in treatment. Patients also complete the *Obsessive Beliefs Questionnaire-44* (OBQ-44); (Obsessive Compulsive Cognitions Working Group, 2005), a 44-item self-report scale that assesses beliefs about over-responsibility and perceived threat of

harm, assessing perfectionism and intolerance of uncertainty, and assessing over-importance of thoughts and of controlling thoughts, that are common in patients with OCD and other anxiety disorders. The OBQ-44 is copyright-free, available at xxx. There is evidence that patients high on perfectionism have worse outcome of treatment of depression, so collecting these data will allow for a future test of that hypothesis. Patients also complete the *Difficulties in Emotion Regulation Scale* (DERS; Gratz & Roemer, 2004), and the *Medical Outcomes Study Social Support Survey* (Sherbourne & Stewart, 1991), a 19-item self-report measure of perceived social support in several domains, including emotional/informational support, tangible support, affectionate support, and positive social interaction. Finally, they complete the *Work and Social Adjustment Scale*, a self-report measure of functional impairment due to a problem (e.g., depression) identified by the patient (Mundt, Marks, Shear, & Greist, 2002). The scale consists of five questions that ask the patient to rate the degree of impairment caused by their problem in five domains of life: work, home management, social/leisure activities, private leisure activities, and close relationships. The measure can be obtained from the author, Isaac Marks, for use in research free of charge.

Progress monitoring. Collecting data to monitor progress is an essential element of the case formulation approach. In an ideal world, the practitioner collects data to monitor both the *outcome* (symptoms, functioning, patient progress toward idiographic goals) and *process* of treatment (including changes in the transdiagnostic mechanisms described in the case formulation, the quality of the patient-therapist relationship, homework compliance, patient learning, and patient satisfaction with treatment).

To monitor outcome, I try to assess outcome with at least one standardized measure to monitor symptoms for every patient at every session. The most common measures I use are the Depression Anxiety Stress Scales, the Yale-Brown Obsessive-Compulsive Scale, the Perseverative Thinking Questionnaire the PHQ-9, and the GAD-7. The PHQ-9 is useful because it includes an item that measures functioning, which is under-studied and yet of great importance to patients and clinicians. The study of changes in functioning due to psychotherapy is an area where the practitioner can make a research contribution. The weakness of the PHQ-9 for progress monitoring purposes is that it assesses symptoms over a 2-week period; a measure that assessed symptoms over the one week that is typical between therapy sessions would be more useful for monitoring progress.

I use the DASS for most patients because it assesses symptoms that are problematic for the majority of my patients, and I have found it to be sensitive to change during treatment. Although there are some data in the literature documenting the sensitivity to change of the DASS (Ronk, Korman, Hooke, & Page, 2013), my colleague Lance Rappaport pointed out that this issue has not much been studied, and so he and I are considering undertaking a study of the DASS's sensitivity to change. As Osborne (this volume) points out and the study by Ronk et al. 2013 illustrates, studies of the properties of assessment tools are an area where the practitioner can make a research contribution.

Despite my best efforts, I can only find a standardized measure for only about 75% of my patients. There are inevitably some patients who do not report easily-assessed distress and I am unable to identify a standardized measure to track outcome. In some of these cases, I track progress via a self-monitoring log, sometimes a shared google form on which the patient tracks number of minutes spent worrying daily, for example.

To assess process, I am using two assessment measures. One is a standard progress note that I developed with the help of two colleagues, Polina Eidelman, and Janie Hong. We used google form to develop a progress note that assesses key aspects of psychotherapy process that we need to track for clinical purposes and that we believe are related to outcome and can allow for a research study. The data are stored in a secure site in the cloud that is encrypted and HIPAA compliant, and can be exported from the google form into an excel document that can easily be converted to or used in statistical packages. Amy Sanchez, a clinical science graduate student at UC-Berkeley, is leading a study of the role of patient skill learning and practice in symptom change during therapy that we hope to conduct in our clinical practice setting, collecting data using the standard progress note that we use for clinical purposes.

The second process measure that I use routinely is the Session Assignment and Feedback Form (SAFF), a measure developed by Janie Hong, Polina Eidelman, Victoria Lemle Beckner, and Daniela Owen, local psychotherapists and clinician-researchers, to track homework assignments and compliance, patient learning in the session, the quality of the alliance, and several other aspects of process (Persons, Hong, Lemle Beckner, Owen, & Eidelman, 2012). It is available at xxxx. One of our very talented research assistants, Alexandra Jensen, has studied SAFF data that all these collaborators collected in routine clinical practice, and found that when the patient's homework assignments are closely related to the material the patient reported was helpful in the session, homework compliance was greater (Jensen et al., 2017)

When tracking outcome and process, I strive to select measures that are sensitive to change, allow me to efficiently keep tabs on important phenomena (e.g., suicidality), are not copyright-protected, help the patient and therapist know if the patient is making progress toward his/her treatment goals, give information about whether the mechanisms that the therapist proposes are underpinning and maintaining the symptoms are in fact changing in treatment, can be used in a software or online format, and give the therapist some feedback about the relationship and other aspects of process. Another key criterion is that the measure is used in the research literature, in order to strengthen the research contribution that our clinical data can make.

Although I am striving to shift from paper-and-pencil to online data collection mechanisms, I am only at the beginning of that process. So for many measures, I am still using paper and pencil. I store measures in a box in waiting room and I ask the patient to come five minutes early for the session, grab and measure and clipboard and complete the measure in the waiting room and bring it to me. Then I score the measure at the beginning of the session, plot the score, review the plot with the patient, and use the data to inform the agenda session. A large change in the patient's score since the previous session is always worth an agenda item as the more we can understand the factors that push the patient's scores up and down, the more we understand the mechanisms driving symptoms and driving improvement in symptoms, and the more effective we can be in treatment.

Research skills and training

To conduct research, the clinician must have skills in formulating a good research question, designing a study to test the question, collecting data in a systematic way, handling and storing and analyzing data, presenting the paper at a conference, writing the paper, and submitting the paper for publication and navigating the revision process. Good research training is needed; this generally means a Ph.D. in clinical psychology or a similar field.

The most important research skill is the skill of choosing a good question. To choose a good question, pay attention to your observations and insights, and take them seriously. Don't assume that Tim Beck knows everything there is to know about cognitive therapy or that Marsha Linehan knows everything there is to know about borderline personality disorder. Notice the questions that concern you in your clinical work, that take up your time and energy, that aid or impede your ability to help your patients. Focus on those.

Many clinicians are super-talented and have fabulous ideas. The field needs them to publish their ideas and clinical experiences and successes. Notice that we have do not yet have ESTs for many disorders and problems that talented clinicians treat every day, including autism spectrum disorders in adults, most personality disorders, dissociative disorders, alexithymia, cyclothymia, anorexia nervosa in adults, and misophonia, among others. Related, the response rates even for the disorders where we have the best treatments are roughly 50% to 60% (Westen & Morrison, 2001). Clinicians who are working every day with these patients, and learning about and having some success with them, can make an important contribution to the field. If the clinician has a treatment success with any of these types of cases, s/he who has collected extensive data of the sort described here will be in the position to publish a single case study or case series that can make a useful contribution to literature.

Questions about the process of change in psychotherapy are of central interest to the clinician and they are also of central interest to the field (Persons, 2007). An example is the study I conducted with David Burns (Persons & Burns, 1985) when I was an intern, titled "Mechanisms of action of cognitive therapy: The relative contributions of technical and interpersonal interventions." This study consisted of data collected during the course of completing Thought Records from 17 patients whose therapy session entailed completing a Thought Record during the session. We also asked the patient to complete a 10-item scale assessing the quality of the alliance. My husband (Jeffrey M. Perloff, a co-author on several of my other papers -- but not this one!), an econometrician, conducted the data analysis for us, and we showed that, as predicted by Beck's cognitive model, change in intensity of emotions during the therapy session was a function of the change in degree of belief in the patient's automatic thoughts during the session and the strength of the patient-therapist relationship; both factors made independent contributions to emotion change during the session. This paper is an example of a study that cost nothing to conduct and that addressed questions about the mechanism of action of cognitive therapy that remain important to this day.

My experience has been that if you study a good question, journal editors and reviewers will be interested in publishing your work even if the study has flaws as a result of the fact that the data were collected in a clinical setting. An example is a single case study I published with Amori Mikami, showing that when the initial treatment of the patient's hypochondriasis failed, the process of collecting additional assessment data and using the data to develop a new formulation of the case led to an improved treatment plan that led to a successful outcome (Persons & Mikami, 2002). In that study, I measured symptoms of hypochondriasis by simply asking the patient at the beginning of each session to report how many bouts of hypochondriasis he had had during the preceding week!

It is important to acknowledge that the method I advocate here of doing research by studying data that are collected during the routine clinical enterprise does not always match up well with the dictum to identify a good question. That is because the simultaneous practice and

research method leads to the collection of a lot of data without a good question having been formulated. So that leads to time spent asking: What research questions can I answer with the data I have collected? This is not a very elegant or efficient way to do research. That said, creativity, or in my case, creative collaborators, can save the day. My collaborator Cannon Thomas very creatively identified two questions in the literature that could be addressed with the dataset available to us that consisted of weekly Beck Depression Inventory scores collected during the course of routine treatment for mood and anxiety disorders. In one study, Thomas conducted data simulations and used other methods to test the hypothesis that sudden gains (large reductions in BDI score from one session to the next) were not necessarily evidence of a qualitative change in the change process, as the primary account of sudden gains proposed, but could simply be a very large instance of gradual change (Thomas & Persons, 2010). In a second study, we used the same dataset and also studied datasets we obtained from investigators who collected the data in randomized controlled trials, to show that depressed patients who remain severely symptomatic at week 4 of cognitive therapy for depression are very unlikely to remit from their depression at the end of their treatment (Persons & Thomas, 2016).

Library access

To make a research contribution, the simultaneous practice and research must stay up to date with the current state of the field. Library access is essential. Often clinical psychologist practitioners can get a clinical faculty appointment at a local university that will give them library access. However, there are other options for solving this problem. If you yourself do not have access to a university library, you may be able to get it by working with collaborators or even research assistants who have access. LeJeune and Luoma (2015) point out that public libraries can often provide access to journals or databases. Google Scholar can be surprisingly helpful. Another option is that if you know the author's name you can go to his/her university webpage or send a request via e-mail for the article. Research that is federally funded is available online at the pubmed website, located at: http://www.ncbi.nlm.nih.gov/pmc/about/public-access-info/. Go to the website and enter the author name or topic into the search window at the upper right). Another resource is ResearchGate, which offers investigators access to members' work via a self-archiving mechanism. An online library resource is Deepdyve (go to https://www.deepdyve.com/). For about $40/month, it provides full online access to all their journals, and this appears to include a large number in clinical psychology and CBT.

In addition to getting access to the literature, the clinician faces the daunting challenge of keeping up with the literature. I find it useful to get journal alerts, so that I get an e-mail that tells me about the newest papers that are appearing in the journals of greatest interest to me. I often ask my research assistants to download papers that come to me via the alerts that are useful to my clinical and research work, and then enter them into the tool I use to manage references, which is easily searchable. That way I have a chance of finding an article that is now filed in my articles folder on my desktop by the last name of the author and can easily get lost or forgotten there. If I find an article that is immediately relevant to a project I'm working on, I dump the pdf of the article in the folder (a google drive folder or a dropbox or box.net folder) for that project.

Collaborators and helpers

It is difficult to impossible for a single person to have all of the skills and resources I list here as needed to carry out research in a clinical practice settings. Even clinicians who have excellent research training often need help in one or more of these areas, often in the area (my

own weak link) of statistics and data analysis, where skills go out of date quickly and abilities get rusty. Even management of the database that results when the simultaneous practice and research collects data from his or her patients in a routine way, is a challenging task, and the clinician will want help with it. In addition, research often involves many hours of detailed work entering data, cleaning data, preparing tables and Powerpoint slides, doing literature searches, organizing references, formatting tables, and more. Assistance with these tasks is invaluable to all researchers, especially the busy clinician.

The clinical psychologist researcher who is located near a college or university can reach out to recruit collaborators and volunteer research assistants there. Psychology students who aspire to a degree in clinical psychology often want research assistant work to help them sort out their career goals and interests and to accrue valued experience (and a letter of recommendation) to support their applications to graduate school in clinical psychology. The students will be eager to help and provide useful assistance, and have an invaluable learning experience, so that is a win-win for all. I purposely located my office within easy access to UC-Berkeley, and I find I do not have any difficulty recruiting talented undergraduates or post-undergraduates who are willing to volunteer their time one day a week as research assistants (RAs) in exchange for training in research and research experience. And when I was able to contribute to the design of a new space, I arranged a larger-than usual common area that would hold a table for the RAs and a nearby storage closet for materials. Before I had this space, I had to organize my clinical schedule so as to not have patients during the time my RAs were on site; occasionally when the schedule broke down, the RAs were relegated to doing their work in the coffee shop down the street!

<u>Statistical assistance and software</u>

Occasionally, especially when using a single case research design, a simple plot or report of summary statistics, is sufficient to present the results of a study. More commonly, a more formal data analysis is required. Excel can conduct several basic calculations and statistical analyses. Most practitioners likely have Microsoft Office and may not need anything beyond what Excel can offer. Free or inexpensive data analytic software, such as R, are also an option.

The clinician who has a university affiliation can sometimes obtain otherwise-costly data analytic software such as SPSS and SAS through the university. Collaborators, and students who can assist, are another valuable resource to solve this problem. The Clinical Research Methods and Statistics Special Interest Group at the ABCT is a useful resource. Its members are skilled methodologists and statisticians who can be tapped to provide consultation and collaboration.

<u>A treatment agreement in which the patient provides informed consent for research</u>

The clinician who wishes to use data obtained from the patient during the treatment process for research purposes must obtain the patient's written permission to do so. I seek my patient's written permission using this material in the Treatment Agreement that each patient signs, and I ask the patient to initial this paragraph if she gives permission.

RESEARCH, TRAINING, WRITING: *Dr. Persons conducts research and training, and she writes for professional and lay audiences. Your initials here give Dr. Persons permission to use information about you and your treatment in any of these ways, provided that she takes reasonable efforts to protect your identity. If you do not initial, Dr. Persons understands that she*

does not have your permission to use de-identified information about you in research, training, or writing. Declining to give permission will not affect your treatment with Dr. Persons in any way.

My experience is that the large majority of patients will give permission for use of data from their treatment in research. I do view the clinical care as primary, and thus the request for research permission is optional and the care provided does not depend on the patient giving permission for data to be used in research.

I am working to establish a data repository for my clinical data, and so I have established an additional consent mechanism for the data repository. For details about that, see my Treatment Agreement, which is available at www.xxxx.

Access to a review mechanism to address ethical issues

The therapist who is collecting data from his/her patients for both clinical and research purposes has a dual relationship with the patient. The clinician has both a treatment provider-patient and a researcher-research participant relationship with the same patient. APA ethical principle 3.05 (cite the 2002 code) states: "(a) A psychologist refrains from entering into a multiple relationship if the multiple relationship could reasonably be expected to impair the psychologist's objectivity, competence, or effectiveness in performing his or her functions as a psychologist, or otherwise risks exploitation or harm to the person with whom the professional relationship exists. Multiple relationships that would not reasonably be expected to cause impairment or risk exploitation or harm are not unethical." Other applicable codes include the privacy and confidentiality codes of the APA Ethics code. Of course clinicians from other disciplines may have other ethics codes for their professional discipline.

To address these ethical issues, and to protect him or herself and the clinician's practice (her livelihood!) in the event of a disgruntled subject/patient, the practitioner will want to obtain some sort of review of his/her research project.

If the data that are collected do not differ from those collected for clinical purposes, the review may not be needed until the project moves to the stage where the practitioner begins to pull the data together to make a contribution to science, that is, to generalizable knowledge. Pulling the data together for evaluation purposes, to evaluate the quality of one's work, is not research. But when the practitioner writes up the data for publication or presentation at a conference, for contribution to generalizable knowledge, s/he is conducting research and will want to obtain some sort of ethical review from an outsider.

The practitioner can follow any of several strategies to obtain a review of his/her research. One is consultation with another professional, as we have all been trained to do when handling other ethical issues that arise in practice. This consultation might be an informal one from a colleague with whom we trade consultation, so no money might be exchanged. Or it might be a more formal, hands-off consultation so to speak, for which the practitioner pays the consultant, who is not a friend or close colleague, for his/her time. To guide the review, you might ask the reviewers to review the research using the principles outlined in the Belmont Report (posted at https://www.hhs.gov/ohrp/regulations-and-policy/belmont-report/index.htmlxx), a short document that outlines principles underpinning ethical research that was published in 1979 by the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research. I once hired a local colleague who was both a psychologist

and an attorney and who held multiple posts in our local professional community, including serving as chair of the IRB at one of the local professional schools, to review my project.

The practitioner can also elect to obtain a formal review of his/her study from an institutional review board (IRB). An IRB review is only legally required for studies that are supported by federal funding. However, if the practitioner has access to an IRB, perhaps through a university adjunct appointment or via collaborators, an IRB review is a good idea. Another option is to work with a free-standing IRB in the community that will review your projects in exchange for a fee. The fees can be sizeable, up to several thousand dollars for an initial review, and additional fees to review revisions. A final option, one that involves a major investment of time and energy, is to establish your own cooperative institutional review board (IRB) following the model described by Travis Osborne in this volume.

When conducting research in your clinical setting, it is a good idea to consult with your malpractice insurance company to be sure that they will cover your research work in the case of any adverse events. It is also a good idea to identify whether your state has regulations governing research that you must attend to (California does not).

To assure that you are aware of federal standards guiding research and are using them, you and the members of your research team can complete online training in the conduct of research. A useful resource for providing that training is the Collaborative Institutional Training Initiative (CITI), which was established in 2000 with the mission *"To promote the public's trust in the research enterprise by providing high quality, peer reviewed, web based, research education materials to enhance the integrity and professionalism of investigators and staff conducting research."* The CITI online training program in human subject research can be accessed at: https://www.citiprogram.org/. It offers access to independent learners who aren't affiliated with a subscriber organization. The cost to take a course in Social Behavioral Human Subjects Research appears to be $100 and the clinician can get CEU credits for completing the training.

A strategy for minimizing the need for IRB review is to create a data repository. The data repository is a de-identified database of clinical data, and no IRB review is required for research conducted using de-identified data. The data are de-identified in that they do not include any information that would uniquely identify each patient, such as date of birth, name, etc. And the simultaneous practice and research must not be able to identify patients in the database simply because of his/her familiarity with the patients. A de-identified database has no master identifying list or key to link the data to a patient name or identity. However, even though IRB review is not needed for research conducted using the data repository data, the clinician will want to obtain the patient's written consent for his/her data to be entered into the repository, and may want to get an IRB or some sort of review of the policies and procedures, consent document, and ongoing activity of the data repository mechanism itself. Regulations to be attended to when developing all these things (consent, procedures, oversight) include: the federal Office of Human Research Protection (OHRP), HIPAA, and state medical record regulations, and your state's IRB, if there is one (California does not have one).

Collegial support

Collegial support is essential to a successful research career. It is easy, as a clinician, to feel like a fish out of water when thinking about research and interacting with the practitioners

you work with every day who live in the clinical world. To develop an identity as a researcher, it is essential to join and participate in communities of fellow-researchers. The Association of Behavioral and Cognitive Therapies (ABCT) has been my primary community, and since I joined the ABCT as a postdoctoral fellow more than 30 years ago, I have made it a point to submit to and present at and attend every annual conference of the ABCT. Other groups that have been important to my development as a simultaneous practice and research are the Anxiety and Depression Association of America (ADAA), the Society for Psychotherapy Research (SPR), the Society for a Science of Clinical Psychology, Division 12 (Society of Clinical Psychology) of the American Psychological Association, and the Society for a Science of Clinical Psychology (SSCP). The practitioner will want to identify professional organizations that focus on his/her area of interest and can support the research work.

Participating in a professional community of colleagues can add invaluable interpersonal and other reinforcers. Learning at a conference or from a colleague that someone has read your work and used what s/he learned to guide his or her own work is a huge positive reinforce, in an environment where reinforcers of this sort are few and far between. And it is the stray conversations at conferences, the e-mail dialogue in the process of putting together a symposium, which yield tiny diamond-like bits of reinforcement that will carry the simultaneous practice and research through many long lonely hours when you are doing the hard slogging work required to compile or clean the dataset or your data analysis is failing to produce the desired results.

Participating in a professional community of researchers can also magnify the contribution you can make. If you sit in your office and write your papers and get them published in journals, you can make a certain contribution, but if you go to conferences, present your work, interact with others who are doing similar work and exchange ideas, your influence and learning and thus your contribution can be greater.

In fact, participation in the community of scientists is not only a help to the practitioner, but really a requirement for the practitioner who wants to contribute to science. Clinical work is usually very private. Science is public. No matter how smart the clinician's ideas are, unless he or she publishes them and sends them out into the world, she is not able to make a contribution to knowledge.

Local support is also important. Collegial relationships with other local practitioners who do research, and with students and faculty at local universities, and with the undergraduate research assistants, can also provide a solid foundation for the clinician's research activities. I hold a monthly research meeting with all of my (usually one or two, sometimes three) research assistants to build a local sense of community and support.

Solutions to the problems of time and money

Research requires time and therefore money. The biggest cost of the research is the investigator's time. The main cost of research is the foregone income—that is, money not collected from clients because the practitioner spent the time on research activities, including collecting data, meeting with assistants and collaborators, and going out of town to a conference to present the research. And there can be other expenses as well, for statistical software or consultation, for equipment, books, conference registration fees and travel expenses.

Of course, one solution to the time and money problem is to seek grant funding and that certainly can be done. My own experience is that obtaining grant funding is a large amount of work, and I'd rather put the work into the research itself. So one of the main reasons I set up or established the highly overlapping clinical and research model of working that I present here is to try to fold the research as much as possible into the clinical operation, so that the research can be self-funded rather than supported by grant funding.

In the simultaneous-practice-and-research model, the high degree of overlap of the clinical and research tasks addresses several of the issues that arise with time and money. In that model, the research relies on data collected during the clinical enterprise addresses this problem in part. The time required to establish and implement a mechanism for data collection is time that the simultaneous practice and research is already expending to support his/her clinical practice. Similarly, much of the time required to keep up with the literature, necessary for doing research, is also necessary for a high quality evidence-based practice. And the time required and the fees expended to attend conferences serve joint clinical and research purposes in that the practitioner attends conferences to learn about the latest findings in the field, both basic science and clinical applications, and to present his/her research and clinical offerings. Books that the researcher wants to read are also useful clinically. And, at least in my community in the San Francisco Bay Area, the clinician who is attending to the literature and providing high quality evidence-based care can establish a fee for service practice (rather than participating on insurance panels that often impose paperwork burdens) and to set a high fee that allows him/her to reduce his/her caseload to allow time for research and to pay for costs of the research.

The main solution to the problems of time and money is intrinsic motivation. The clinical researcher puts in the time (unpaid) to do the research because s/he enjoys doing it. He enjoys learning and working hard, enjoys making a contribution. My typical week includes about 10 hours for patient visits and 5 hours for consultation to clinicians, some time spent returning calls, handling clinical record-keeping, and managing my practice. The rest of the time I spend on my my projects, including one or two committees I serve on -- and my research and writing projects. I generally work from 8 or 9 in the morning until 6 p.m. Monday through Friday and I like to spend the hours of 9:30 to 10 a.m. til 3 or 4 p.m. on Saturday in my office.

As the work hours I just described indicated, the simultaneous-practice-and-research model only works for the individual who is intrinsically motivated to do the work. Many hours are unpaid. The tight integration of research and clinical work increases the intrinsic reward, as the clinician is tackling research questions that are also intriguing clinically. However, the intrinsic reward of contributing to knowledge is also an essential piece of the puzzle.

<u>Synergy of the elements of the simultaneous practice and research model</u>

I've described a mode of clinical work and practice that tightly links the clinical work to research. However, the sequential description above of the list of elements of the integrated approach does not quite capture the synergy that results from using these same core elements as the foundation of practice and science, and I'll try to say a bit here to capture that magic that glues everything together. It's the clean, coherent, elegant seamlessness of the whole thing that makes it work. Because the researcher studies the same phenomena that s/he treats clinically, the reading and library work you do to improve your patient care aids your research, and the library work you do to advance my research improves your patient care. The overlap of clinical and research interests means that the conference talks you attend (and give) to improve your research

also improve your patient care, and the conference talks and clinical training and consultation you do to improve your patient care also contribute to your research. The overlap of research and practice helps you select good research questions, because the questions that the clinician wants to answer in order to help her patients are frequently questions that the scientific literature also wants to answer. The tight link between research and clinical practice gives the practitioner multiple vantage points of viewing research questions, as the practitioner sees the same question from the vantage point of the research literature and interactions with and data collected from patients in the office.

Another benefit of the tight links is the excitement of producing a piece of research that has both clinical and research implications. This type of project is super-exciting to me! An example is the study I described earlier in which Cannon Thomas and I showed that remission from depression can be very strongly predicted by examining the patient's BDI score at week 4 of treatment. This study tells clinicians that it is important to consider making a change to the treatment plan of the depressed patients who remains severely depressed at week 4 of treatment, as this patient is highly unlikely to remit. And the study also has implications for treatment developers, encouraging them to stop writing fixed treatment protocols that are 16 to 18 or 20 sessions in length, and instead to write flexible protocols that encourage therapists to make changes in the treatment plan when the patient continues to be severely ill after several weeks of treatment.

Doing clinical work and research simultaneously, using the tightly integrated model for clinical work and research that I describe here, can make the difficult task of conducting research in a clinical setting a manageable and rewarding part of the clinician's daily practice experience, while simultaneously improving the quality of the practitioner's clinical work.

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