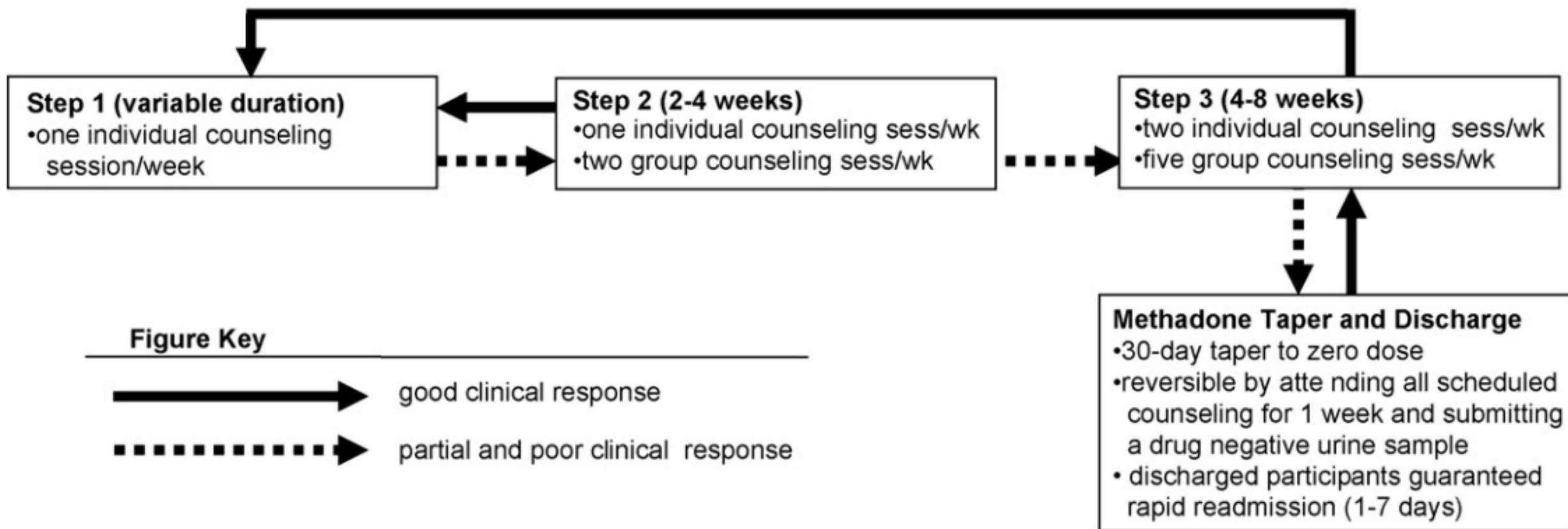


Getting SMART about Developing Individually-Tailored, Adaptive Health Interventions

Addiction Health Services Research - Monday, October 3, 1PM-5PM
 Instructors: Daniel Almirall, PhD & Susan A. Murphy, PhD (University of Michigan)

Module	Module Description
INTRODUCTION 1:00-1:10PM (10 min)	Course Outline, Structure, and Introductions <i>Exercises:</i> Identify working groups of 2-3 investigators by scientific interests/discipline.
MODULE 1 1:10-1:40PM (30 min)	What are Adaptive Treatment Strategies? <ul style="list-style-type: none"> • What are adaptive treatment strategies (ATS)? Give examples of ATSs. • Discuss why ATSs are needed and how they inform clinical practice. • Compare simple ATSs versus more deeply tailored ATSs.
Q&A 1:40-2:00PM (20 min)	Question, Answer, Discussion & Practice Exercise <i>Exercise:</i> Write down 2-3 simple ATSs to address a condition in your research.
MODULE 2 2:00-2:40PM (40 min)	What are Sequential Multiple Assignment Randomized Trials (SMARTs)? <ul style="list-style-type: none"> • What are SMARTs? Why do we need SMARTs? • Compare SMARTs to using a multiple-RCT approach for building ATSs. • Discuss SMART design principles. What are typical primary and secondary aims? • Address misconception that SMARTs necessarily require large sample sizes.
Q&A 2:40-3:10PM (30 min)	Question, Answer, Discussion & Practice Exercise <i>Exercise:</i> Using the 2-3 simple ATSs written above, (a) construct a draft SMART design and (b) identify your primary scientific aim.
BREAK 3:10-3:30PM (20 min)	Break for water, snacks, and restrooms.
MODULE 3 3:30-3:55PM (25 min)	Primary Data Analytic Methods using Data Arising from a SMART <ul style="list-style-type: none"> • Discuss common primary research questions in a SMART. • Present SAS code and worked examples using simulated/fake data.
Q&A 3:55-4:10PM (15 min)	Question, Answer, Discussion & Practice Exercise <i>Exercise:</i> Write down a primary research question of interest to you. What data analysis approach would you use to address this primary question?
MODULE 4 4:10-4:35PM (25 min)	Secondary Data Analytic Methods using Data Arising from a SMART <ul style="list-style-type: none"> • Discuss common secondary research questions in a SMART. • Present SAS code and worked examples using simulated/fake data.
Q&A 4:35-4:50PM (15 min)	Question, Answer, Discussion & Practice Exercise <i>Exercise:</i> Write down a secondary research question of interest to you. What data analysis approach would you use to address this question?
WRAP-UP 4:50-5:00PM (10 min)	Wrap-up early to address final questions & to share contact information, etc.

Motivated Stepped Care (MSC)



ADAPTIVE INTERVENTION



Baseline Risk Assessment

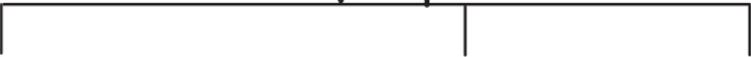
High Risk

Low Risk

BI-WEEKLY COURT HEARINGS

AS-NEEDED COURT HEARINGS

Monthly Progress Assessments



NON-COMPLIANT

- ≥ 2 missed counseling sessions and/or
- ≥ 2 unexcused failures to provide a urine specimen

NON-RESPONSIVE

- ≥ 2 drug-positive urines

RESPONSIVE & COMPLIANT



If Was As-Needed:
BI-WEEKLY COURT HEARINGS

If Was Bi-Weekly:
JEOPARDY CONTRACT

INTENSIVE CLINICAL CASE MANAGEMENT

CONTINUE AS PREVIOUSLY ASSIGNED

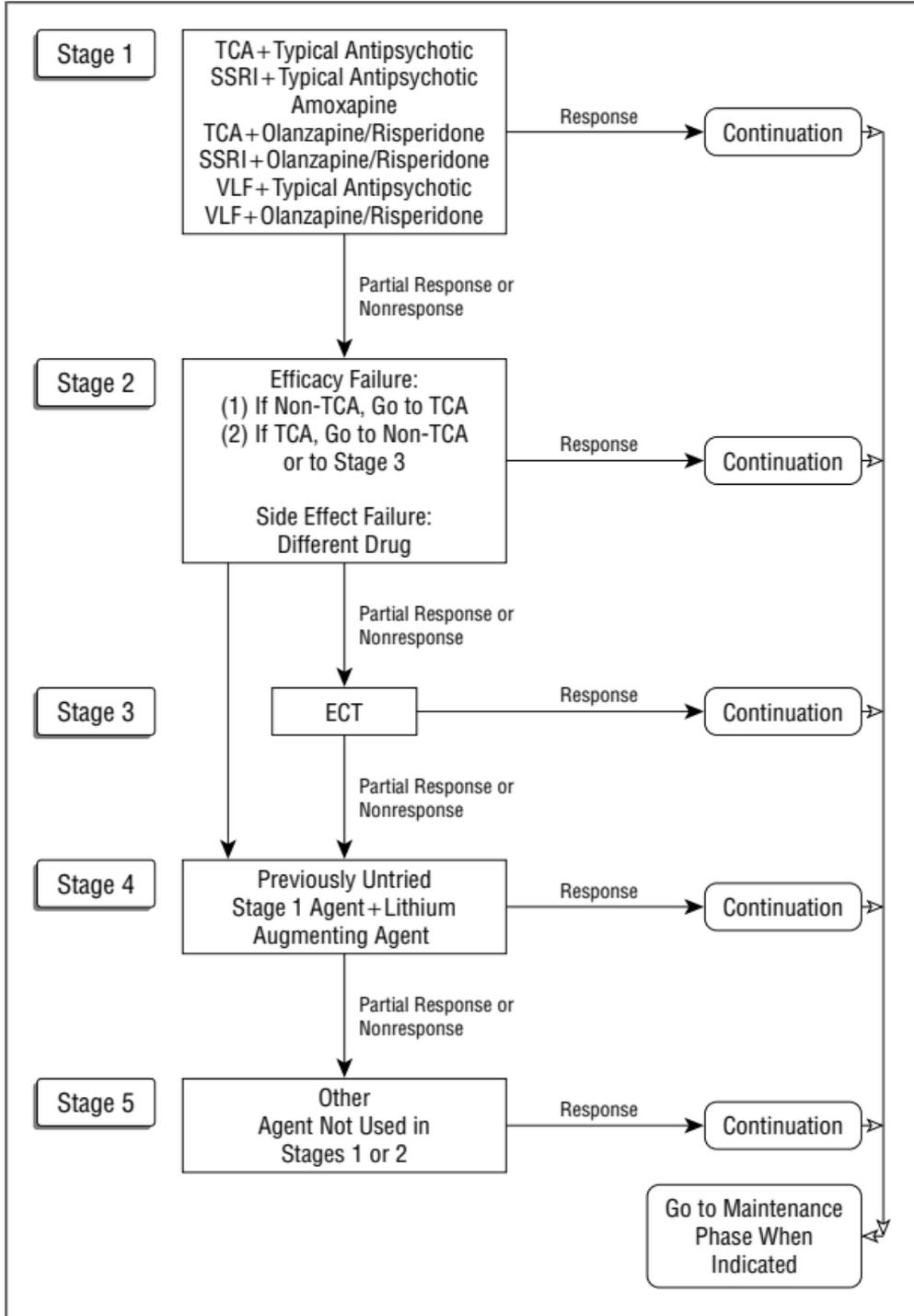


Figure 2. Strategies for the treatment of psychotic major depressive disorder. ECT indicates electroconvulsive therapy; SSRI, selective serotonin reuptake inhibitor; TCA, tricyclic antidepressant; VLF, venlafaxine. This figure is published with permission from the Texas Department of Mental Health and Mental Retardation and is part of a state-funded project.

ADHD in Children SMART Design

Principal Investigator: W. Pelham

