The Goldilocks Effect

What happens when consumers and clinicians are free to decide how much and what kind of treatment is "just about right"?

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Additional material related to this presentation can be viewed at www.clinical-informatics.com

Goldilocks Effect

- Effects that are due to freedom of choice on the parts of clinicians and patients with regard to method, intensity and duration of treatment
- Observed in data collected in naturalistic setting using patient self report questionnaires
- Controlled studies on treatment outcomes are designed to eliminate these effects in order to investigate a particular treatment at a particular intensity and duration.

Why Goldilocks?

- In the story of Goldilocks and the Three Bears, Goldilocks keep trying different things (chairs, porridge and bed) until the found the one that was “just about right” for her.
- In mental health treatment as practiced in the real world, clinicians and patients are constantly making ongoing choices about about the method, intensity and duration treatment.

Hypothesized Mechanisms

- Patients seek treatment when level of distress is high.
- Utilization of services (intensity & duration) is a function of the patient's level of distress and rate of improvement.
- Clinician/patient dyad make decisions in an ongoing, dynamic manner with regard to treatment methods, intensity and duration.

Testable Predictions

- Little or no % of variance in outcomes due to intensity or duration of care…. or
- Patients with high intensity/duration of treatment will show less improvement than patients with low intensity/duration.
- Little or no % of variance in outcomes due to treatment method.
- Significant % of variance due to the clinician, .i.e. skill.

Evidence for Goldilocks

Two managed care companies have collected outcome data in naturalistic settings.

1. Human Affairs International CIS Project: 1996-1998
2. PacifiCare Behavioral Health ALERT Project: 1999 - present

Outcome Measures

- Human Affairs International (HAI)

  Outcome Questionnaire-45 (OQ-45)

  Youth Outcome Questionnaire (YOQ)

- PacifiCare Behavioral Health (PBH)

  Life Status Questionnaire (LSQ, OQ-30)

  Youth Life Status Questionnaire (YLSQ, YOQ-30)

- Questionnaires administered at sessions 1, 3, 5 and every fifth session thereafter.

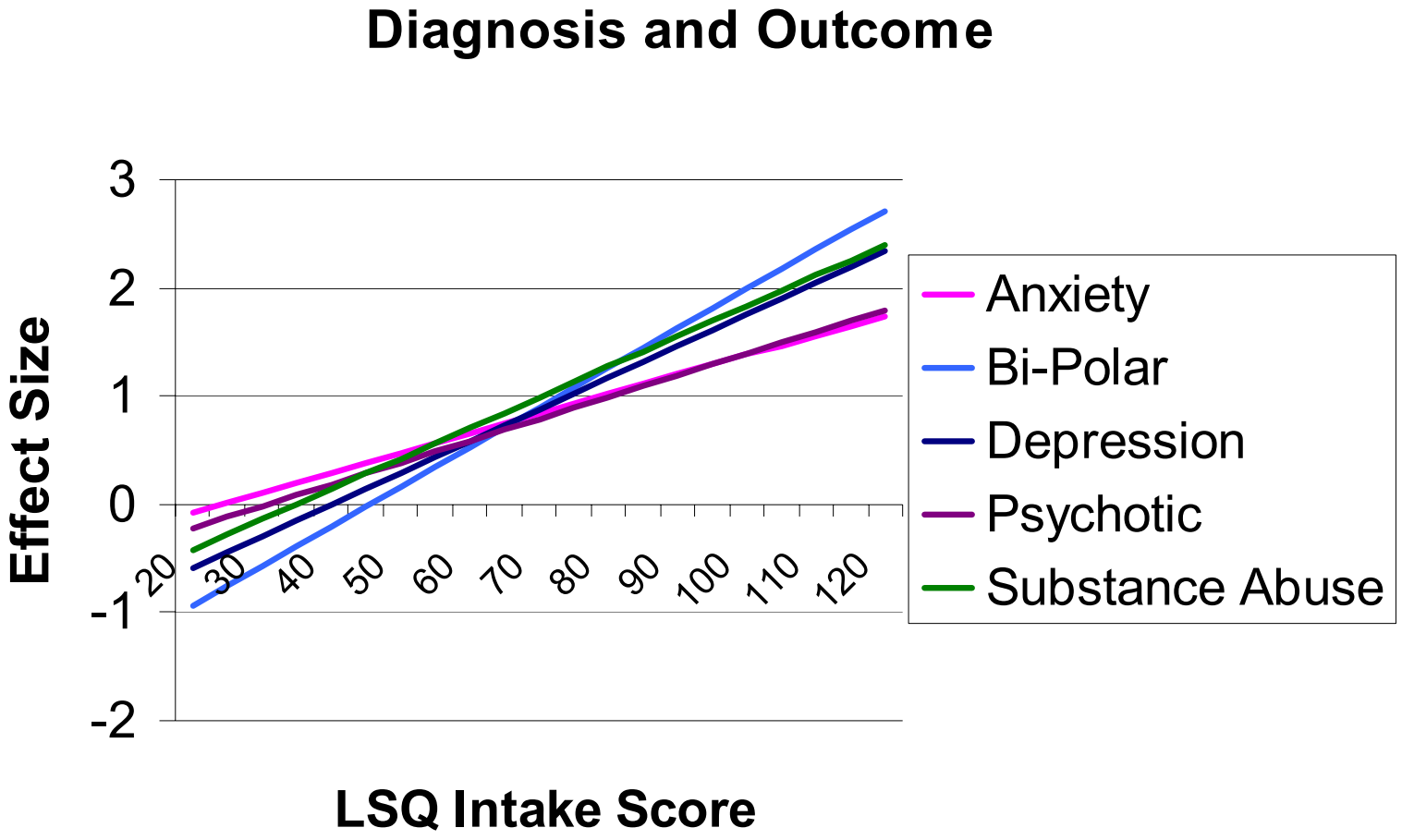
Where's the variance?

- Case mix (diagnosis, test score at intake, SES, age, sex, etc.)
- Duration (time in treatment or total number of sessions)
- Intensity (frequency of sessions, medication dose)
- Method (type of psychotherapy or medication)
- Clinician skill (expertise, judgment, ability to engage patient in treatment, warmth)

Case mix

- Case mix variables are those variables present at the beginning of the treatment episode that are predictive of the outcome
- Intake score (severity), diagnosis, age, sex, SES.
- Less than 19% of variance in change scores explained by case mix, with the intake score accounting for 18%. (n>22,000 adults; PBH data).

Example: Case mix adjustment



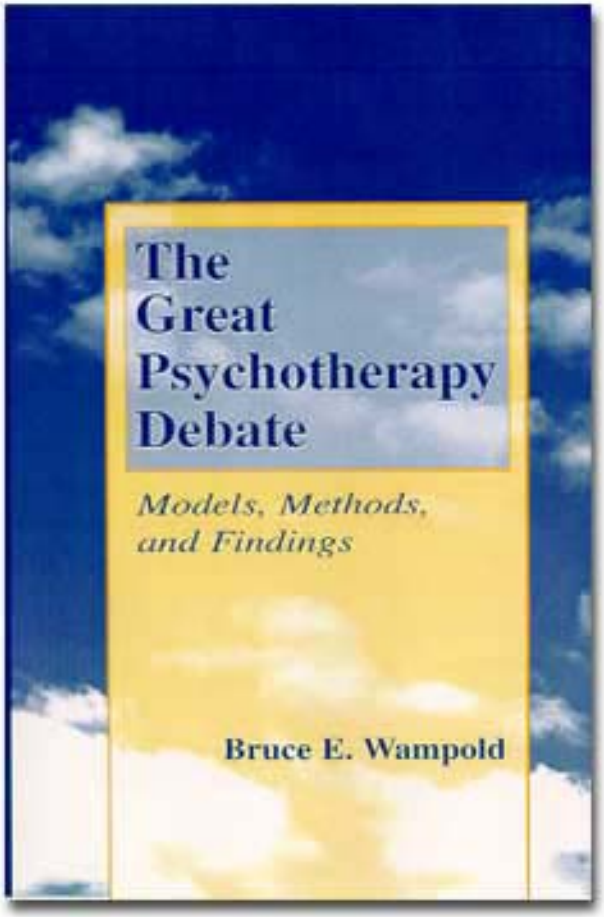
Data source: PacifiCare Behavioral Health ALERT project

Psychotherapy method

- Decades of controlled studies of psychotherapy research fail to demonstrate one method superior to another
- Accounts for 0% of variance in HAI data

  n=6202 adults; 14 “schools” of psychotherapy; medication(s) by class

Recommended reading

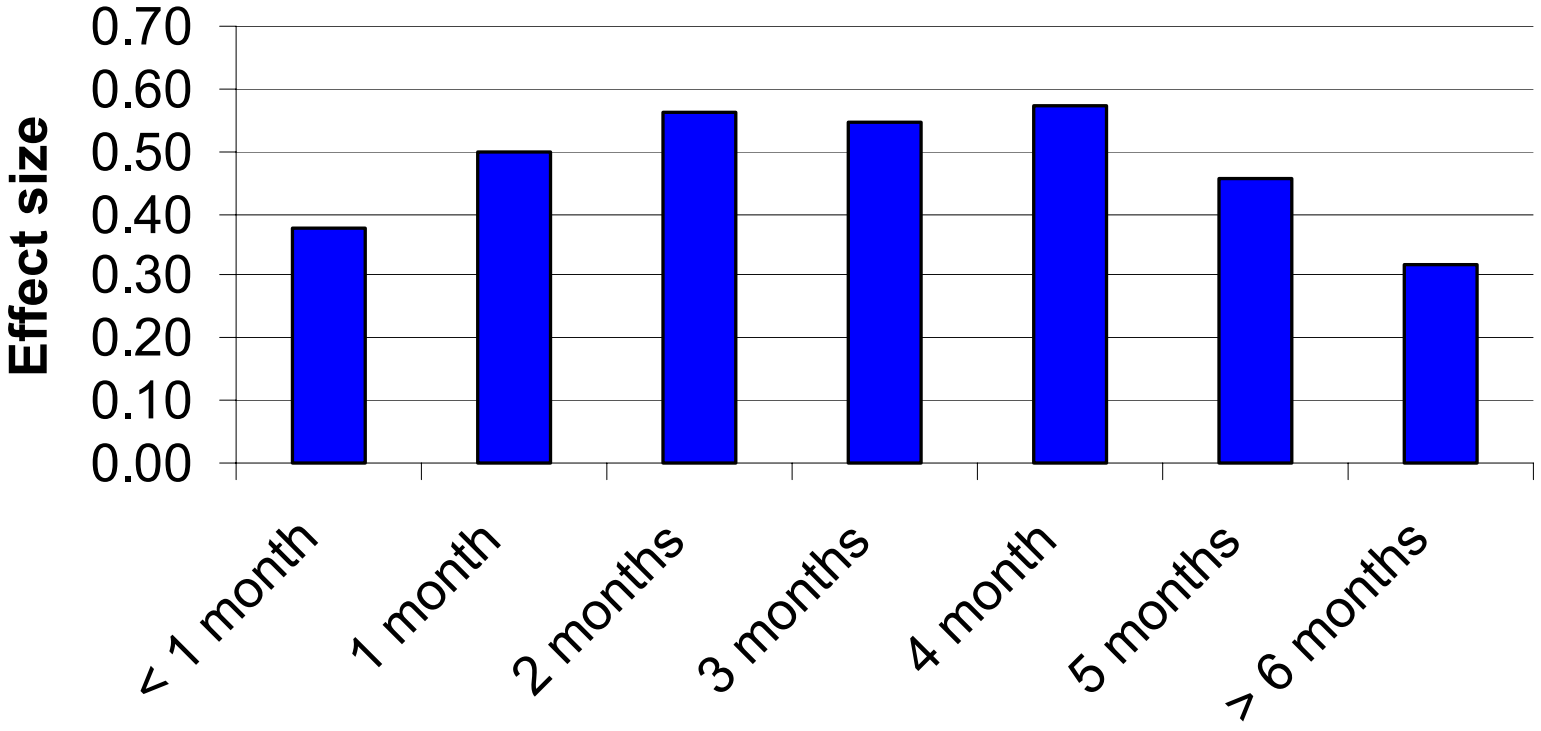


Rigorous review and analysis of controlled studies on psychotherapy outcome.
Proposes the "contextual" model as alternative to the "medical" model to explain lack of variance due to treatment methods.
Conclusion: much more variance rests with the clinician than the treatments.

Duration

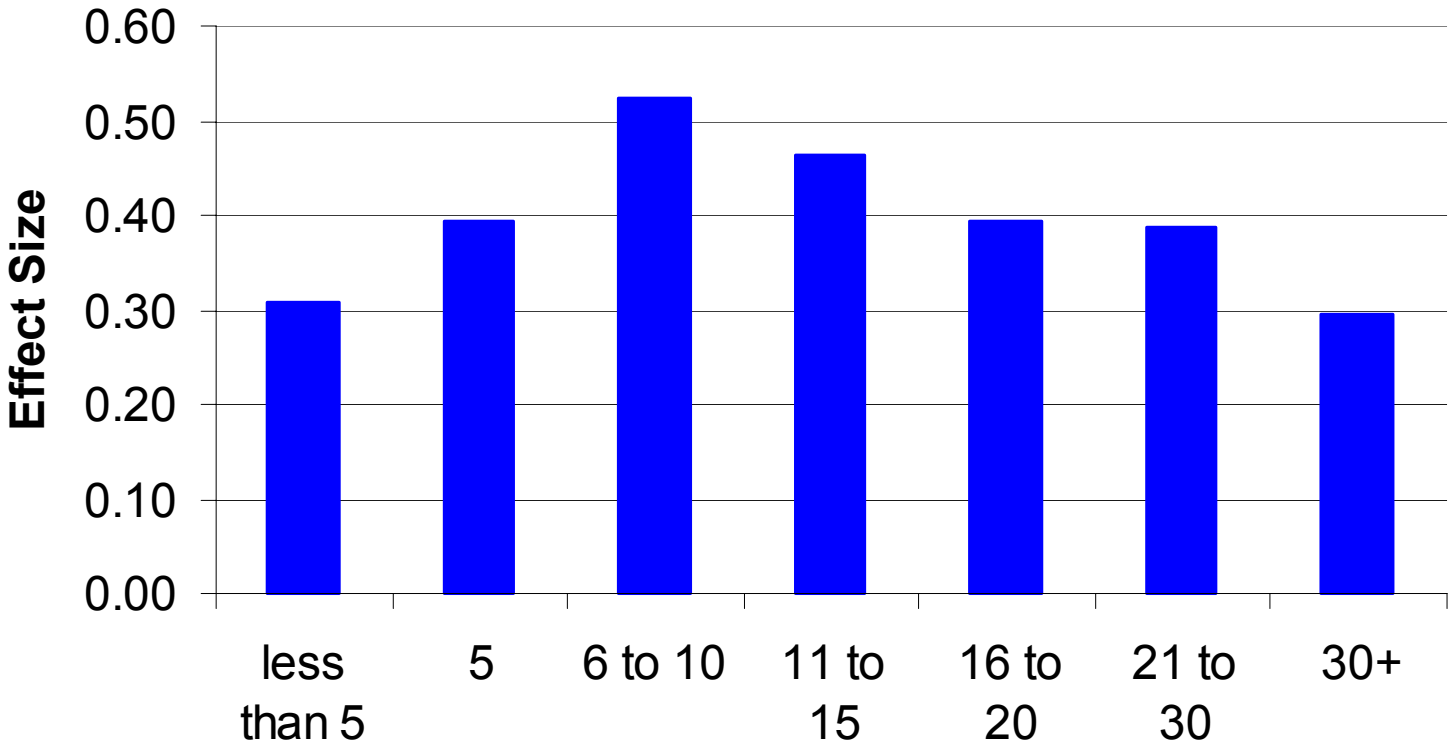
- Total time (days, weeks) of the treatment episode
- Total sessions in the treatment episode
- Negligible % of variance explained by either time or sessions in treatment (PBH data, n>16,000 adults)

Duration – time



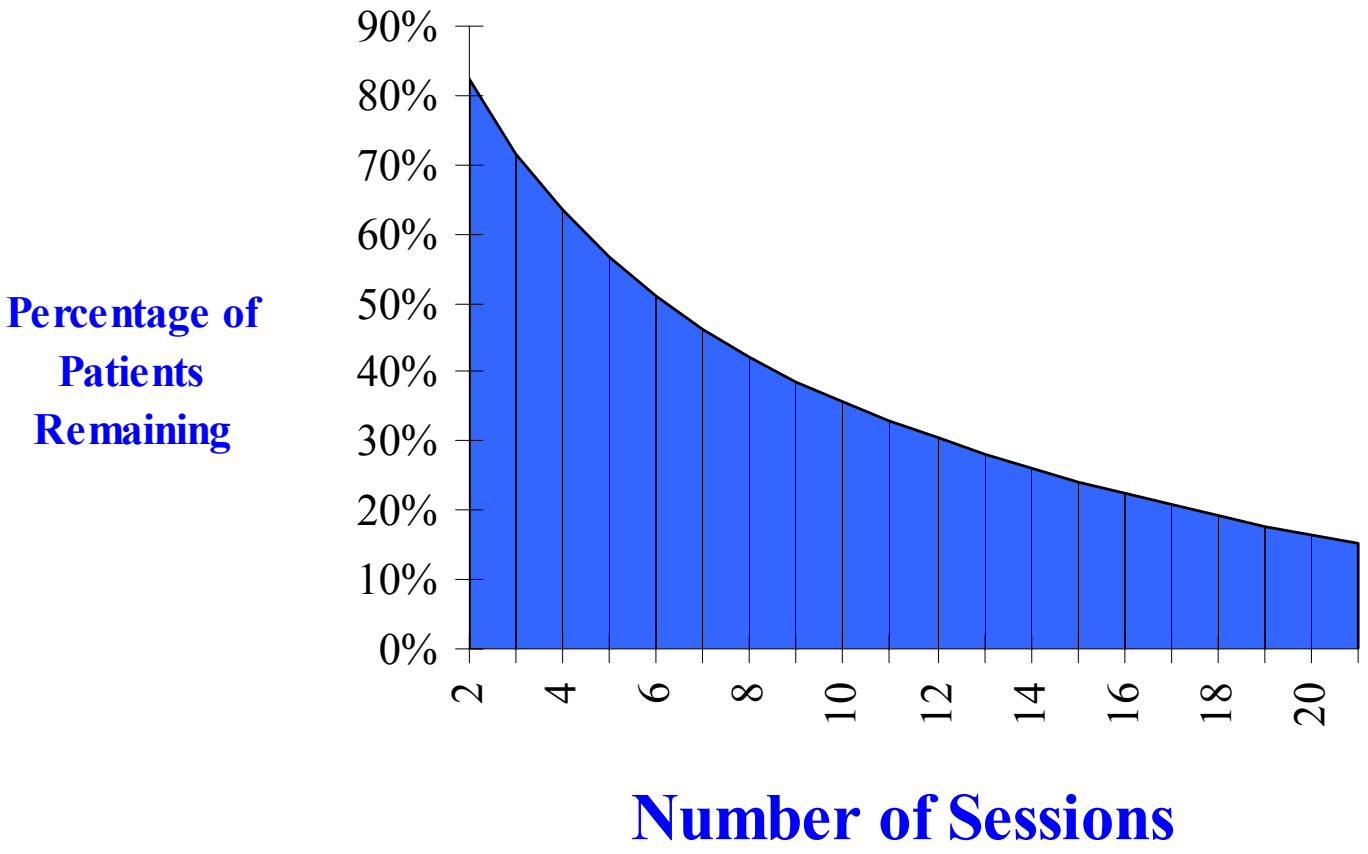
Total time in treatment episode

Duration - sessions



Total sessions in treatment episode

Duration - distribution

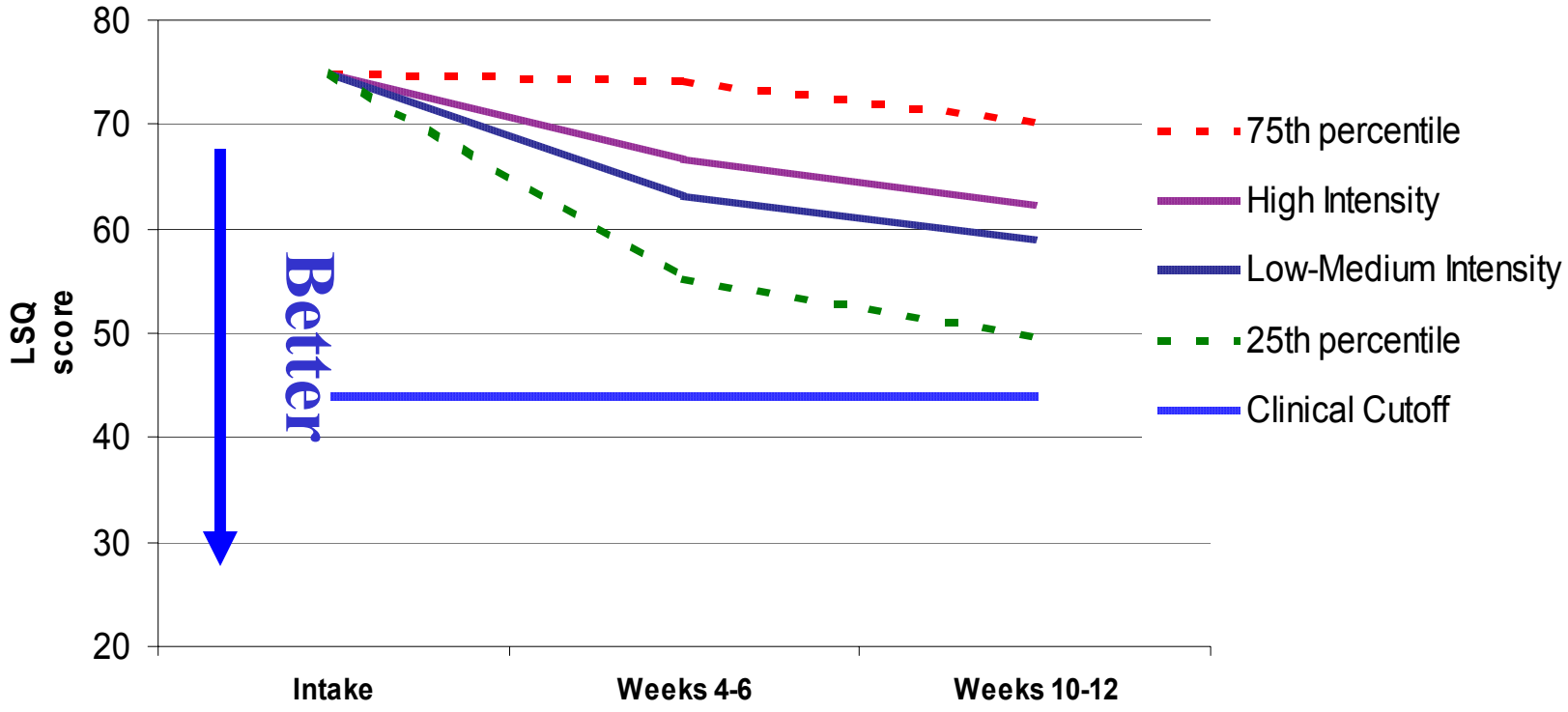


Intensity

- Frequency of sessions or dosage of medication
- Goldilocks prediction: patients with slow rate of recovery will tend to receive higher intensity of treatment

Intensity of service

- Example: trajectory of change for patients with severe symptoms; high intensity => 1 session per week



Clinician

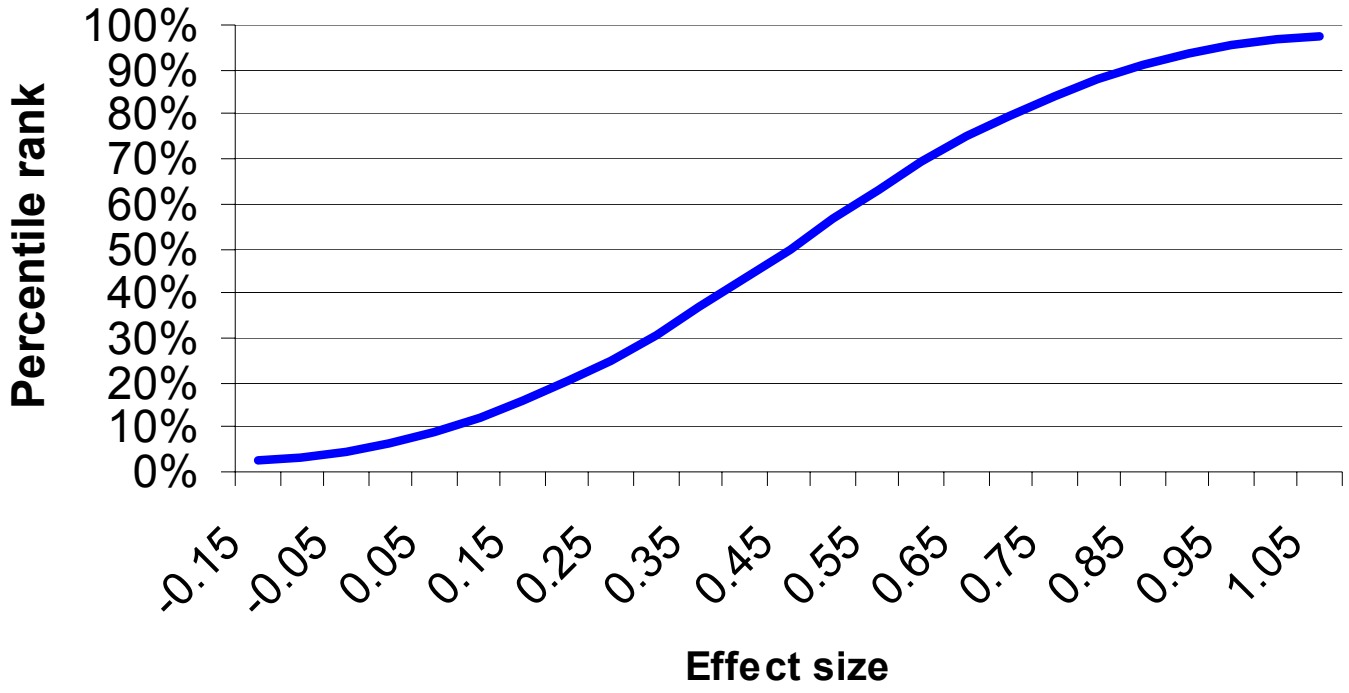
- Degree and years of experience explain 0% of variance
- >25% of variance explained by *who* does the treatment

  PBH data; n > 3,400 individual clinicians and 15,000 adult patients

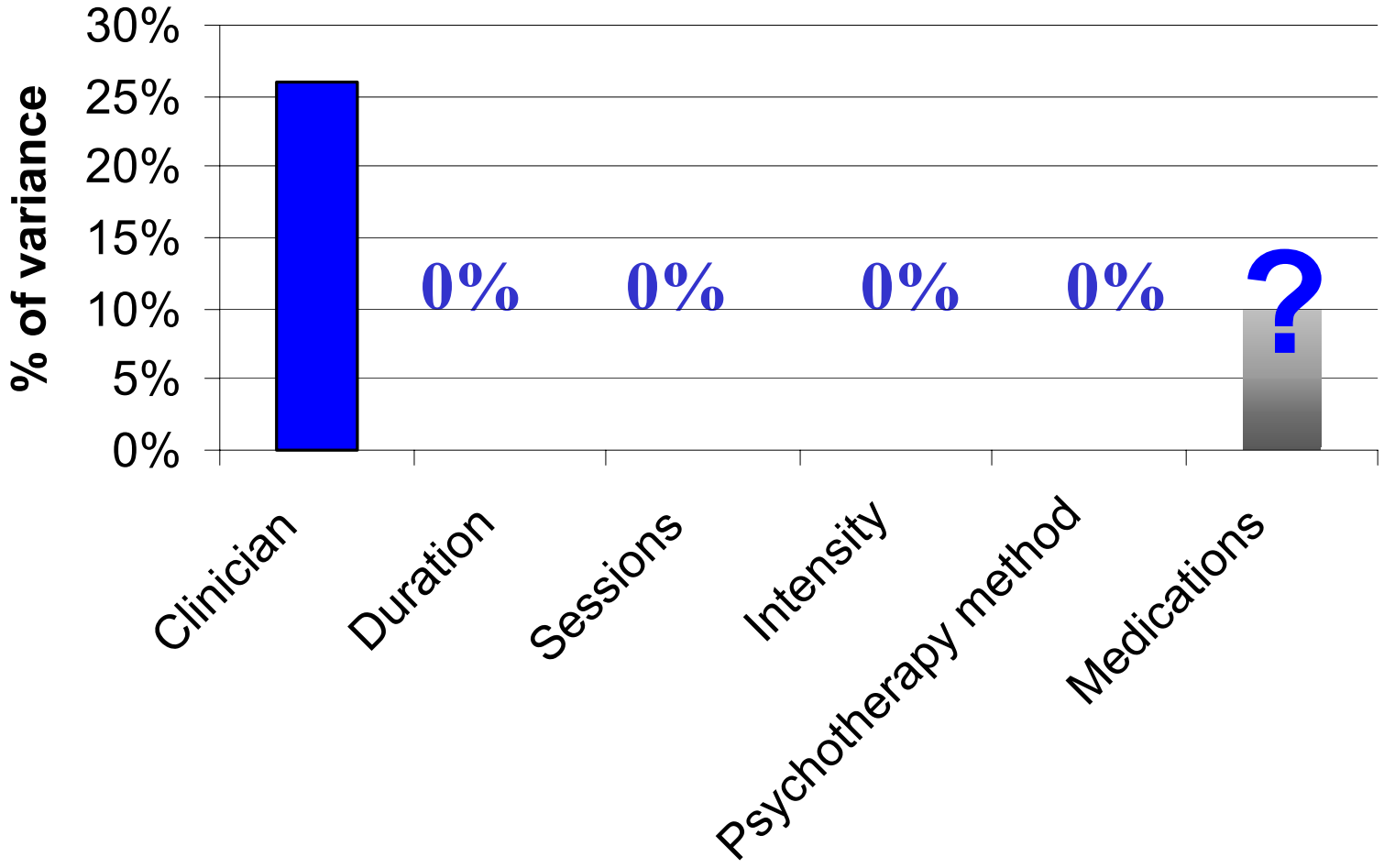
Clinician skill

Estimated distribution of clinician "skill", as measured by effect size

(PBH data; clinicians with sample sizes 20 or greater)



Where's the variance?



Medications

- Pharmacy data has been added to PBH data repository
- Who prescribed: Primary care doctor; specialist
- Brand name, dosage, dates prescriptions were filled and refilled
- Research team now taking bets on % of variance accounted for by medications; analyses to be completed this summer.

Goldilocks and QI

- Little attention has been given to the possible benefits of encouraging the Goldilocks Effect.
- Quality improvement initiatives that encourage use of "empirically validated treatments" and adherence to treatment protocols make the implicit assumption to quality is improved by limiting the Goldilocks Effect.

Quality: Goldilocks perspective

- No differences should be found between treatments, which means that individual patients are getting the treatment that is "just about right" for them
- Higher intensity of services should be associated with *worse* outcomes, which means that treatment resources are focused on patients with highest distress and slow response to treatment

Cost: Goldilocks perspective

- Effective treatment does not add to the cost of care.
- When treatment is effective, patients utilize fewer sessions.
- More effective providers tend to user fewer sessions.
- Focus on improving outcomes and the cost will remain stable on decrease.

Use of outcome data at PBH

- Clinicians no longer asks to justify “medical necessity” for outpatient care.
- No requirement for treatment plan
- Additional sessions are certified automatically *each time* a Y/LSQ questionnaire in faxed to PBH.
- Clinicians actively encouraged to keep symptomatic patients engaged in treatment via use of ALERT letters.

How to improve outcomes

- Measure outcomes rather than compliance with “rules” – i.e.guidelines, protocols, favored treatment methods, etc.
- Provide ongoing feedback to clinicians on their patients outcomes.
- Identify effective clinicians
- Reward effective clinicians with increased referrals *and* reimbursement. They’re worth it!

About the presenter

G.S. (Jeb) Brown is a licensed psychologist with a Ph.D. from Duke University. He served as the Executive Director of the Center for Family Development from 1982 to 19987. He then joined United Behavioral Systems (an United Health Care subsidiary) as the Executive Director for of Utah, a position he held for almost six years. In 1993 he accepted a position as the Corporate Clinical Director for Human Affairs International (HAI), at that time one of the largest managed behavioral healthcare companies in the country with 23,000,000 covered lives.

Dr. Brown was the primary driver behind HAI's successful outcomes management initiative. In 1998 he left HAI to found the Center for Clinical Informatics. His present projects include the development of the ALERT outcomes management system for PacifiCare Behavioral Health (4,000,000 covered lives).

Dr. Brown continues to provide direct clinical care a few hours per week in a behavioral health clinic in Salt Lake City, Utah. He does measure his outcomes.

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