

# outcome referrals

Let's review a PCORI-funded, JAMA-published breakthrough in behavioral health service quality



Our mission: to make behavioral health work for everyone

David R. Kraus, PhD  
President and Chief Science Officer  
[dkraus@outcomereferrals.com](mailto:dkraus@outcomereferrals.com)  
(508) 834-7323 x121

# The poor state of our industry



## Access

>28

Actual weeks waiting



## Quality

16%

Return to health and productivity

40%

Show "meaningful change"

75%

Move at least a point on the PHQ-9



## Dropout

23%

Dropout after 1 session

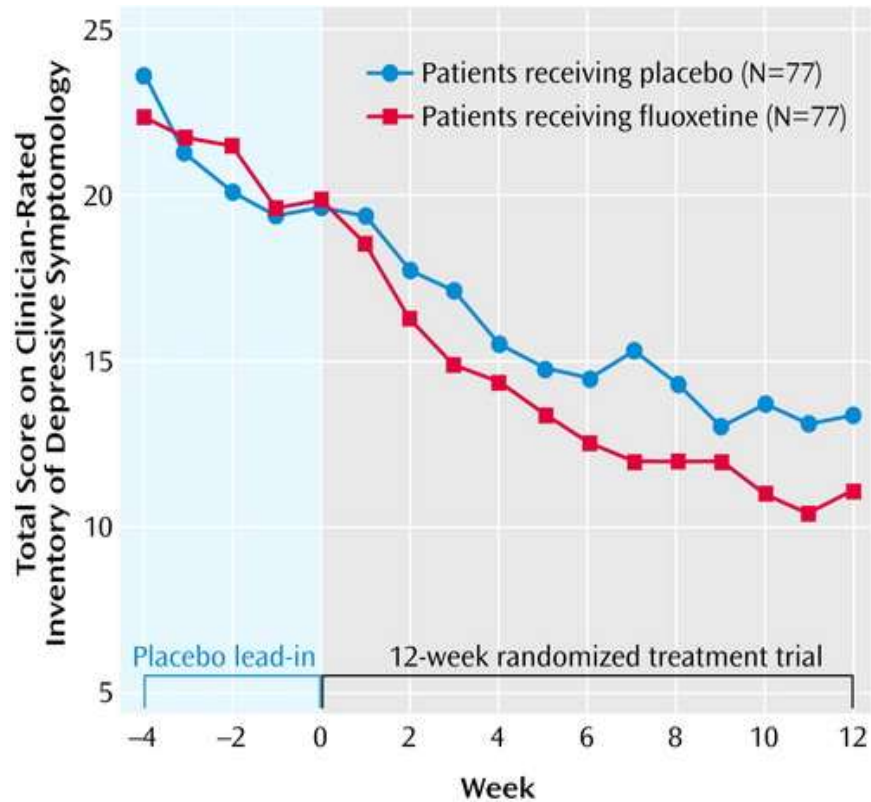


## Relapse

50%

Relapse within year

# Evidence-based treatments are not the solution



Judd LL, Rapaport MH, Yonkers KA, Rush AJ, Frank E, Thase ME, Kupfer DJ, Plewes JM, Schettler PJ, Tollefson G. Randomized, placebo-controlled trial of fluoxetine for acute treatment of minor depressive disorder. *Am J Psychiatry*. 2004 Oct;161(10):1864-71. doi: 10.1176/ajp.161.10.1864. PMID: 15465984.

RESEARCH REPORT

World Psychiatry 22:1 - February 2023

## Cognitive behavior therapy vs. control conditions, other psychotherapies, pharmacotherapies and combined treatment for depression: a comprehensive meta-analysis including 409 trials with 52,702 patients

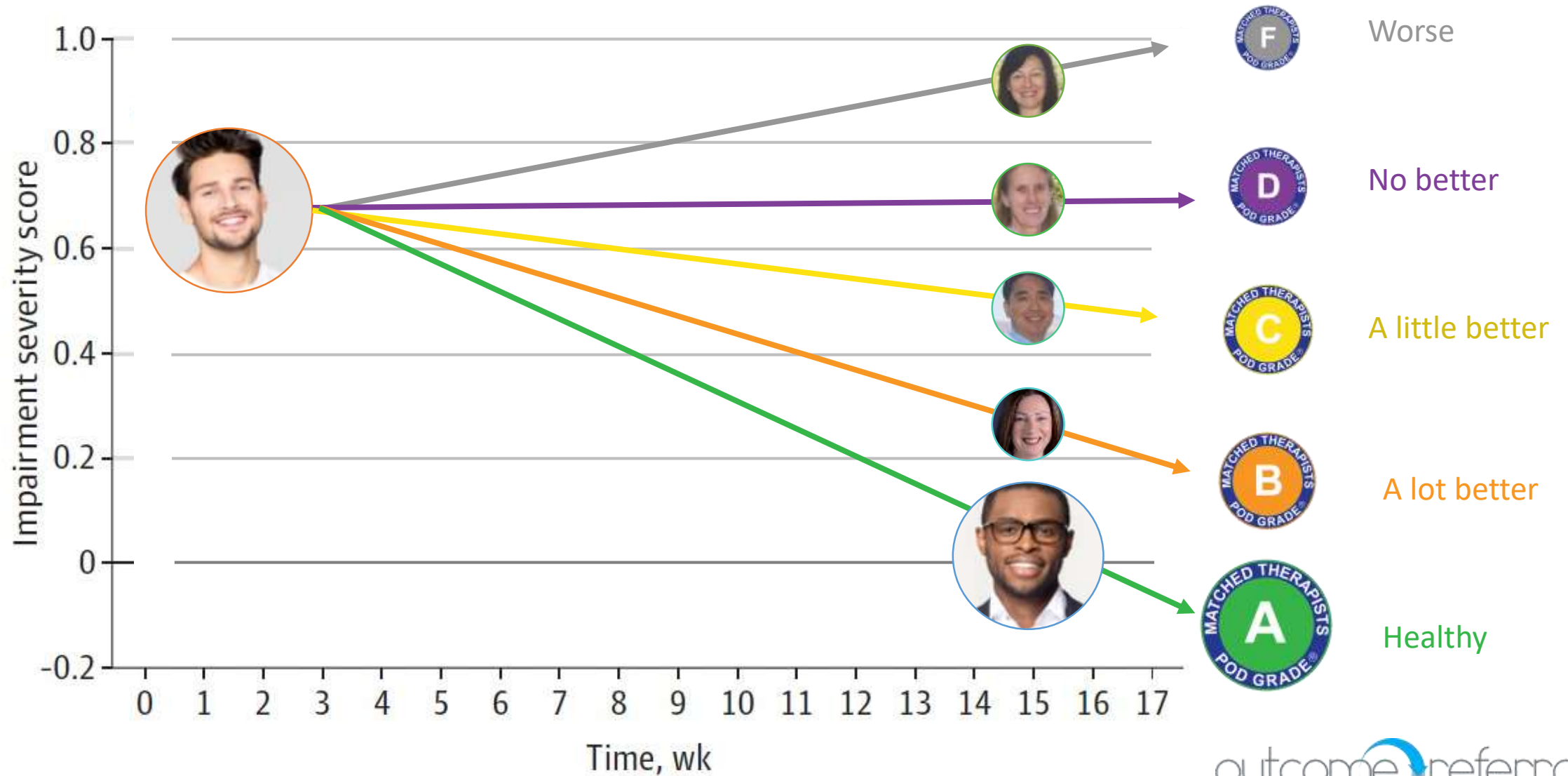
Pim Cuijpers<sup>1,3</sup>, Clara Miguel<sup>1</sup>, Mathias Harrer<sup>4,5</sup>, Constantin Yves Plessen<sup>1,6</sup>, Marketa Ciharova<sup>1</sup>, David Ebert<sup>4</sup>, Eirini Karyotaki<sup>1</sup>

*“However, the superiority of CBT over other psychotherapies for depression does not emerge clearly from this meta-analysis.”*

Cognitive behavior therapy (CBT) is by far the most examined type of psychological treatment for depression and is recommended in most treatment guidelines. However, no recent meta-analysis has integrated the results of randomized trials examining its effects, and its efficacy in comparison with other psychotherapies, pharmacotherapies and combined treatment for depression remains uncertain. We searched PubMed, PsycINFO, Embase and the Cochrane Library to identify studies on CBT, and separated included trials into several subsets to conduct random-effects meta-analyses. We included 409 trials (518 comparisons) with 52,702 patients, thus conducting the largest meta-analysis ever of a specific type of psychotherapy for a mental disorder. The quality of the trials was found to have increased significantly over time (with increasing numbers of trials with low risk of bias, less waitlist control groups, and larger sample sizes). CBT had moderate to large effects compared to control conditions such as care as usual and waitlist ( $g=0.79$ ; 95% CI: 0.70-0.89), which remained similar in sensitivity analyses and were still significant at 6-12 month follow-up. There was no reduction of the effect size of CBT according to the publication year (<2001 vs. 2001-2010 vs. 2011). CBT was significantly more effective than other psychotherapies, but the difference was small ( $g=0.06$ ; 95% CI: 0-0.12) and became non-significant in most sensitivity analyses. The effects of CBT did not differ significantly from those of pharmacotherapies at the short term, but were significantly larger at 6-12 month follow-up ( $g=0.34$ ; 95% CI: 0.09-0.58), although the number of trials was small, and the difference was not significant in all sensitivity analyses. Combined treatment was more effective than pharmacotherapies alone at the short ( $g=0.51$ ; 95% CI: 0.19-0.84) and long term ( $g=0.32$ ; 95% CI: 0.09-0.55), but it was not more effective than CBT alone at either time point. CBT was also effective as unguided self-help intervention ( $g=0.45$ ; 95% CI: 0.31-0.60), in institutional settings ( $g=0.65$ ; 95% CI: 0.21-1.08), and in children and adolescents ( $g=0.41$ ; 95% CI: 0.25-0.57). We can conclude that the efficacy of CBT in depression is documented across different formats, ages, target groups, and settings. However, the superiority of CBT over other psychotherapies for depression does not emerge clearly from this meta-analysis. CBT appears to be as effective as pharmacotherapies at the short term, but more effective at the longer term.

# The best predictor of Sam's success in treatment

Is the strength of the patient-provider match ("grade")

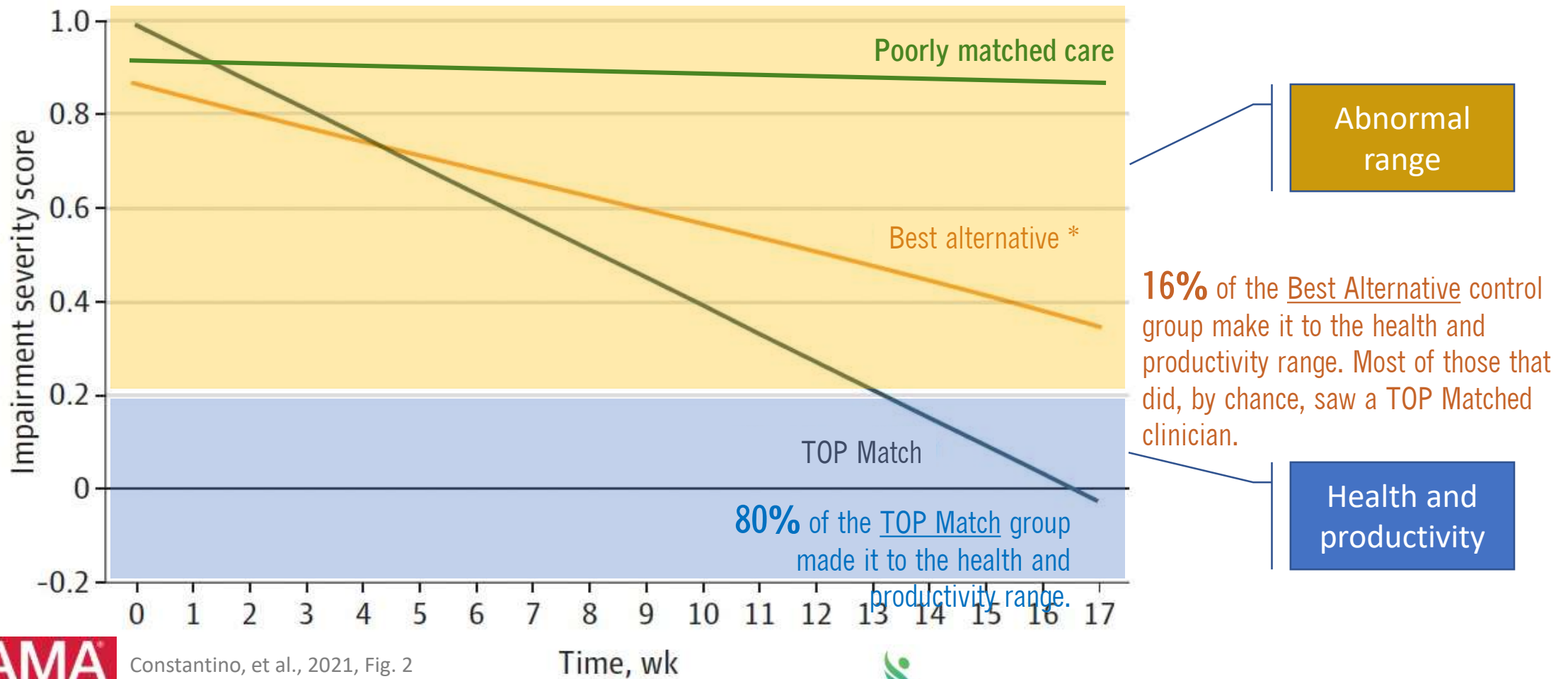


# For TOP Match™ we set the bar as high as possible

- We **selected the best** providers in Cleveland
  - Recommended by Cleveland Clinic's head of family medicine
- We **enriched their program** with measurement-based care for four years
- Then we **compared** their best matching process to our researched-based process
- All clinicians saw an **equal number** of patients in both groups, BUT
  - Neither patient nor clinician knew which matching process was being used (**blinded**)

We **doubled** population outcomes and **quintupled** the number of patients that returned to health and productivity without changing anything that the clinician *did*, just *who* they treated

# More people back to work at maximum productivity



JAMA

Constantino, et al., 2021, Fig. 2

Time, wk

pcori PATIENT-CENTERED OUTCOMES RESEARCH INSTITUTE

\* Measurement-based-care + self-identified matching

outcome referrals

# Current PCORI dissemination grant

This is up and working in PA and DE

1

Matched Therapists  
"Healthcare's first, proven scientific referral system"

This is your anonymous TOP assessment. Please answer the following questions so we may scientifically match you with an extraordinary therapist.

Indicate how much of the time during the last TWO WEEKS you have ....

1. had trouble falling asleep  
All Most A Lot Some A Little None

2. had nightmares  
All Most A Lot Some A Little None

3. woke up during the night (excluding trips to bathroom)  
All Most A Lot Some A Little None

4. had trouble getting back to sleep in the night

100% of patients takes 5-10-minute assessment before scheduling

2

Preview Matched Providers

Click NEXT to filter by your preferences: insurance, location, etc.

**Dr. Isabel O'Brien**  
Psychiatrist  
Office is near: Sandwich, Massachusetts: 02563  
Estimated wait time: 2-14 days

**Dr. Jonathan Kelly**  
MD  
Office is near: Sandwich, Massachusetts: 02563  
Estimated wait time: 21 days

**Mahbuba Islam**  
LMSW  
Office is near: Sandwich, Massachusetts: 02563  
Estimated wait time: 30 days

Next

Intake staff review best-matched options with patient and book priority cases\* into care within a week

Optum



Best appointment availability is reserved for patients with health plan coverage that pays higher rates for our speed to quality care solution (i.e., Optum, Highmark and IBX).

# We can finally unlock savings



Emerging \$60B market



\$245B in total cost of care savings



Scaling evidence-based, accessible, affordable, equitable behavioral healthcare could reduce US healthcare spending annually by \$185 billion

THE LANCET  
Psychiatry

ARTICLES | VOLUME 3, ISSUE 5, P415-424, MAY 2016

## Scaling-up treatment of depression and anxiety: a global return on investment analysis

Dr Dan Chisholm, PhD • Kim Sweeny, PhD • Prof Peter Sheehan, PhD • Prof Bruce Rasmussen, PhD • Prof Filip Smit, PhD • Prof Pim Cuijpers, PhD • et al. [Show all authors](#)

Open Access • Published: April 12, 2016 • DOI: [https://doi.org/10.1016/S2215-0366\(16\)30024-4](https://doi.org/10.1016/S2215-0366(16)30024-4)

[Check for updates](#)

**The economic case for investment in mental health is strong:** for every \$1 invested in scaled-up treatment for depression and anxiety, there is a \$4 return in better health and productivity



We make behavioral health  
work for everyone



**David R. Kraus, PhD**  
President and Chief Science Officer  
[dkraus@outcomereferrals.com](mailto:dkraus@outcomereferrals.com)  
(508) 834-7323 x121