Disseminating Contingency Management: A Training and Implementation Trial

Bryan Hartzler, Ph.D.
Alcohol & Drug Abuse Institute
University of Washington

Contingency Management defined

- "*based on operant conditioning and involves the systematic application of behavioral consequences to promote changes in drug use or other therapeutic goals*" (Higgins & Silverman, 2008)
- First emerged in Opiate Treatment Programs (OTPs) in 1970s with take-home doses used as incentives
- 200+ trials have tested its efficacy, with small-to-medium effect sizes reported in meta-analyses

'In theory, there is no difference between theory and practice. In practice, there is.' (Yogi Berra)

Contingency Management dissemination

- Provider surveys show limited familiarity for CM by the treatment community*
- Providers show less interest in CM than other ESTs with similar (or weaker) empirical support*
- Most efficacy studies employ external RAs instead of clinic staff to implement CM procedures
- Need studies evaluating CM as implemented by treatment staff in community-based clinics

* Bride et al., 2010; Benishek et al., 2010; Herbeck et al., 2008; Kirby et al., 2006; McCarty et al., 2007; McGovern et al., 2004

Collaborative Intervention Design

An empirically-supported process is collaborative design of CM interventions.* Accordingly, the OTP defined the:

- Target population - introductory phase patients (1st 90 days of enrollment in OTP services)
- Target behavior - attendance of weekly individual counseling visits
- Available reinforcers - low-cost gift cards (multiple vendors) and single-use take-home doses
- Reinforcement method – a 'point-system,' akin to a token economy

* Kellogg et al., 2005

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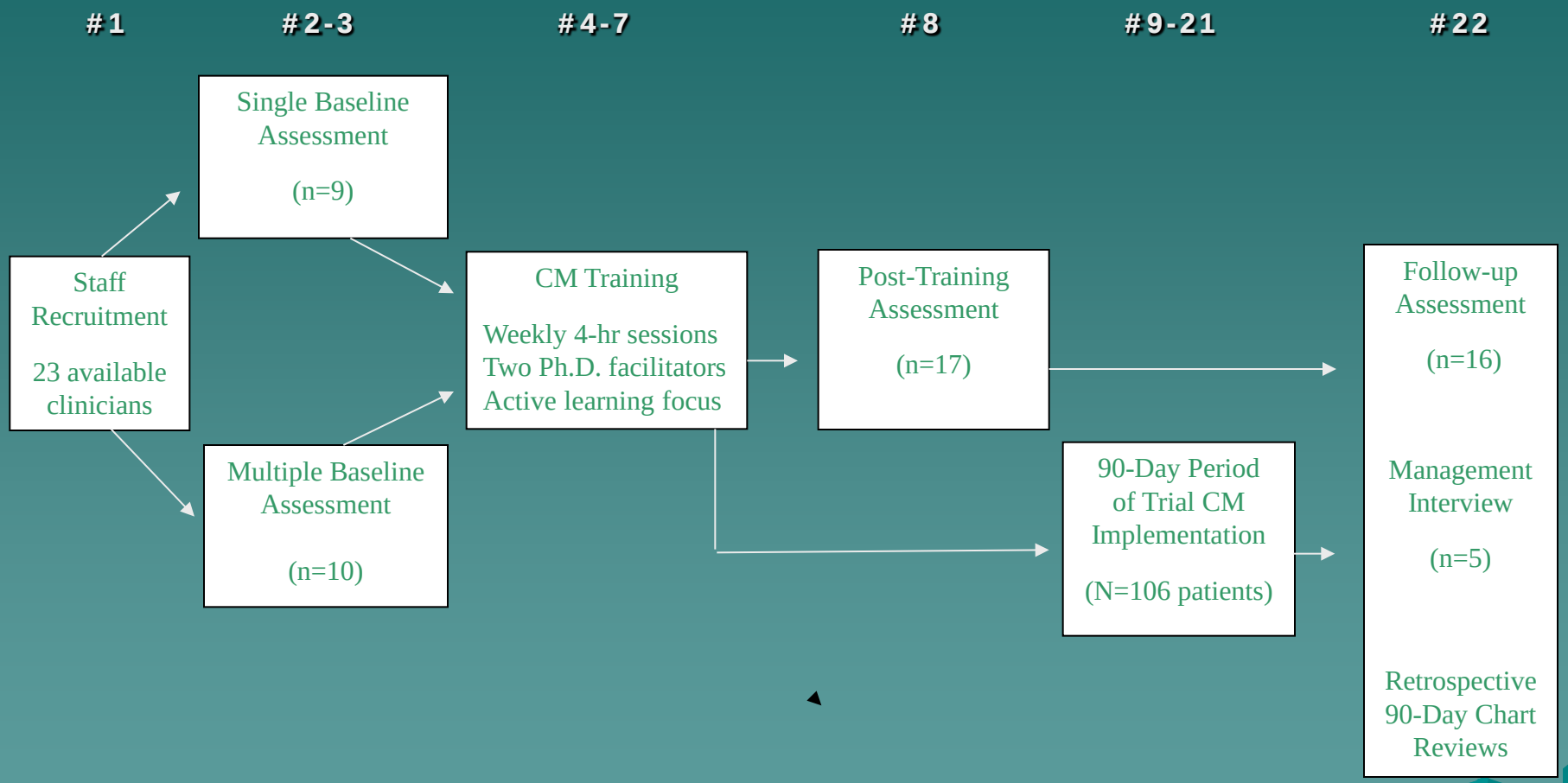
Trial Design and Chronology (by week):



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Repeated Measures (staff):

- Delivery Skill - Standardized Patient visit, scored by independent raters using validated fidelity scale*
- Knowledge – test with 18 multiple-choice items
- Adoption readiness – a single item

Follow-up Only Measures:

- Costs, feasibility, and sustainability (management)
- Penetration among staff and clinical effectiveness (chart review)

*Contingency Management Competence Scale, Petry et al., 2010

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Hypotheses/hopes for trial outcomes:

- Immediate training impacts on intervention delivery skill, knowledge, & adoption readiness
- Eventual impacts after an implementation period
- Eventual management-focused implementation outcomes (cost, feasibility, sustainability)
- Intervention penetration among staff
- Intervention effectiveness

'It's tough to make predictions, especially about the future.'

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Description of the staff sample:

- N=19, all currently providing clinical services at OTP
- Primarily female (89%), mean age of 59.32 years (SD=12.73)
- Distribution of race was 79% Caucasian, 16% Multi-Racial, 5% Native American
- Educational attainment was 58% Masters-level, 26% Bachelors-level, 16% Associates-level degrees
- Mean clinic tenure of 12.24 years (SD=9.72)

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Immediate Impacts of Training:

- Substantial increase in intervention delivery skill (*D*=2.09, p<.001)
- Large increase in knowledge (*D*=1.10, p<.001)
- Medium effect in adoption readiness (*D*=.63, p<.05)

‘It ain’t over til it’s over.’

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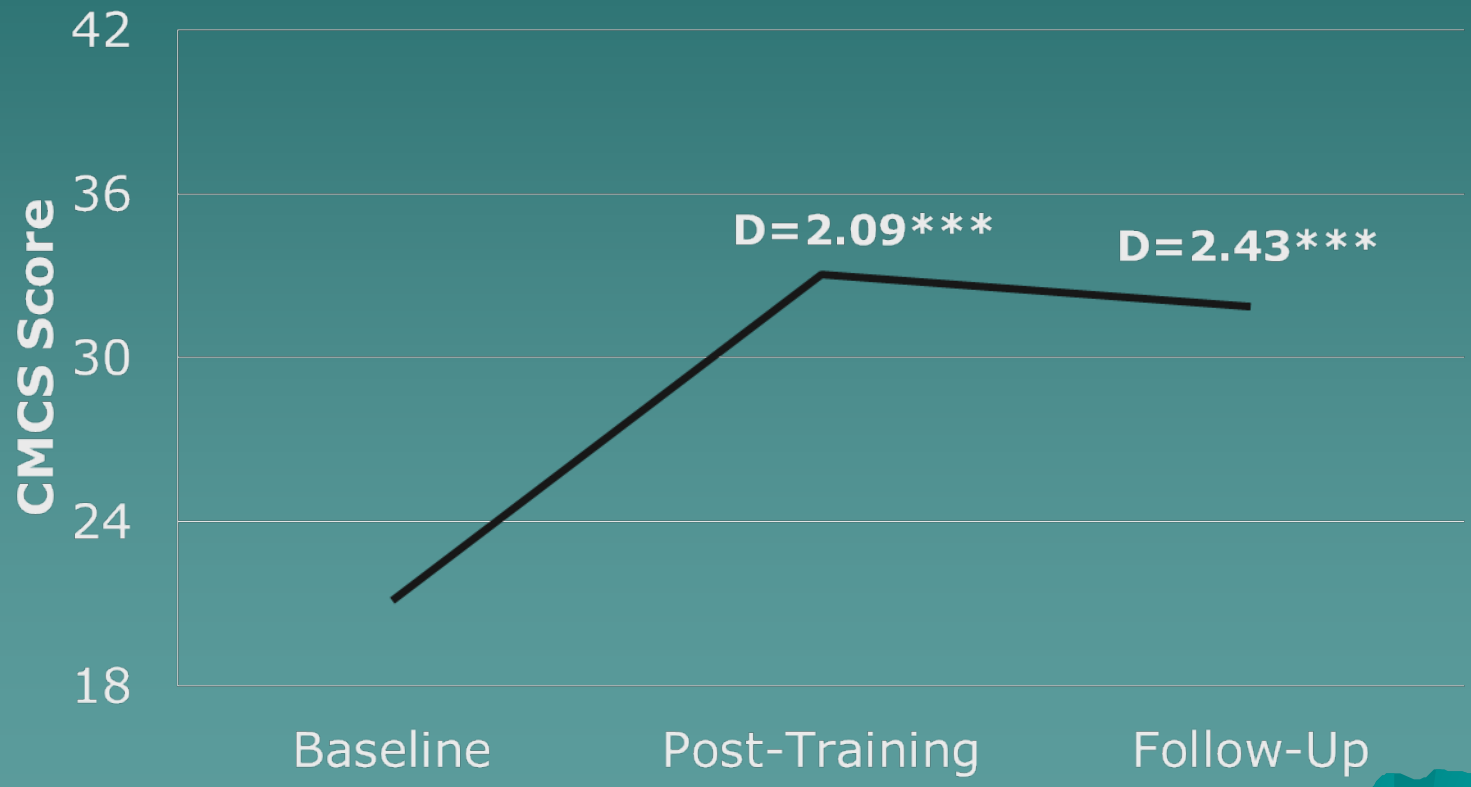
Eventual training impact on intervention delivery skill:



*** p<.001

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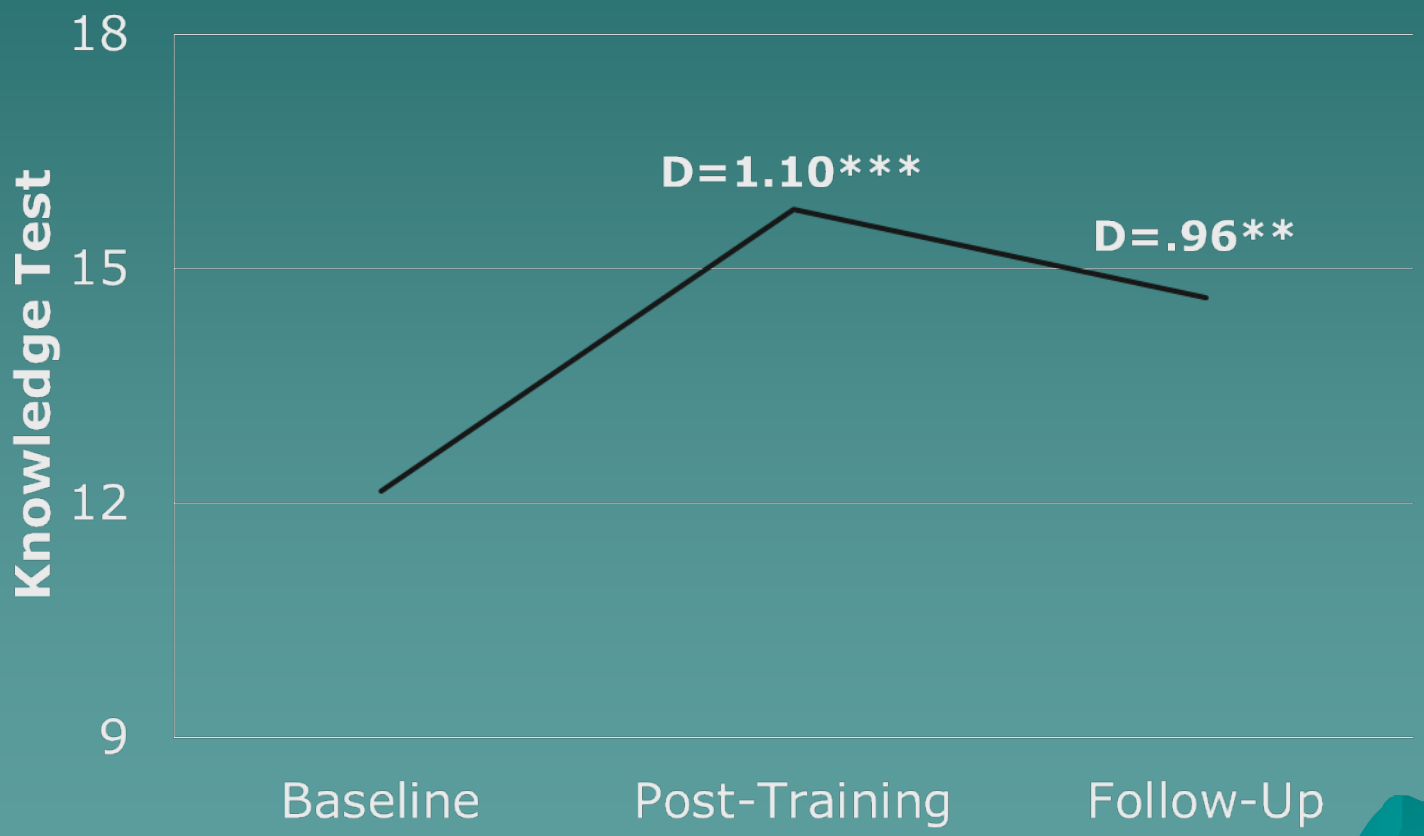
Eventual training impact on intervention knowledge:



***p<.001, **p<.01

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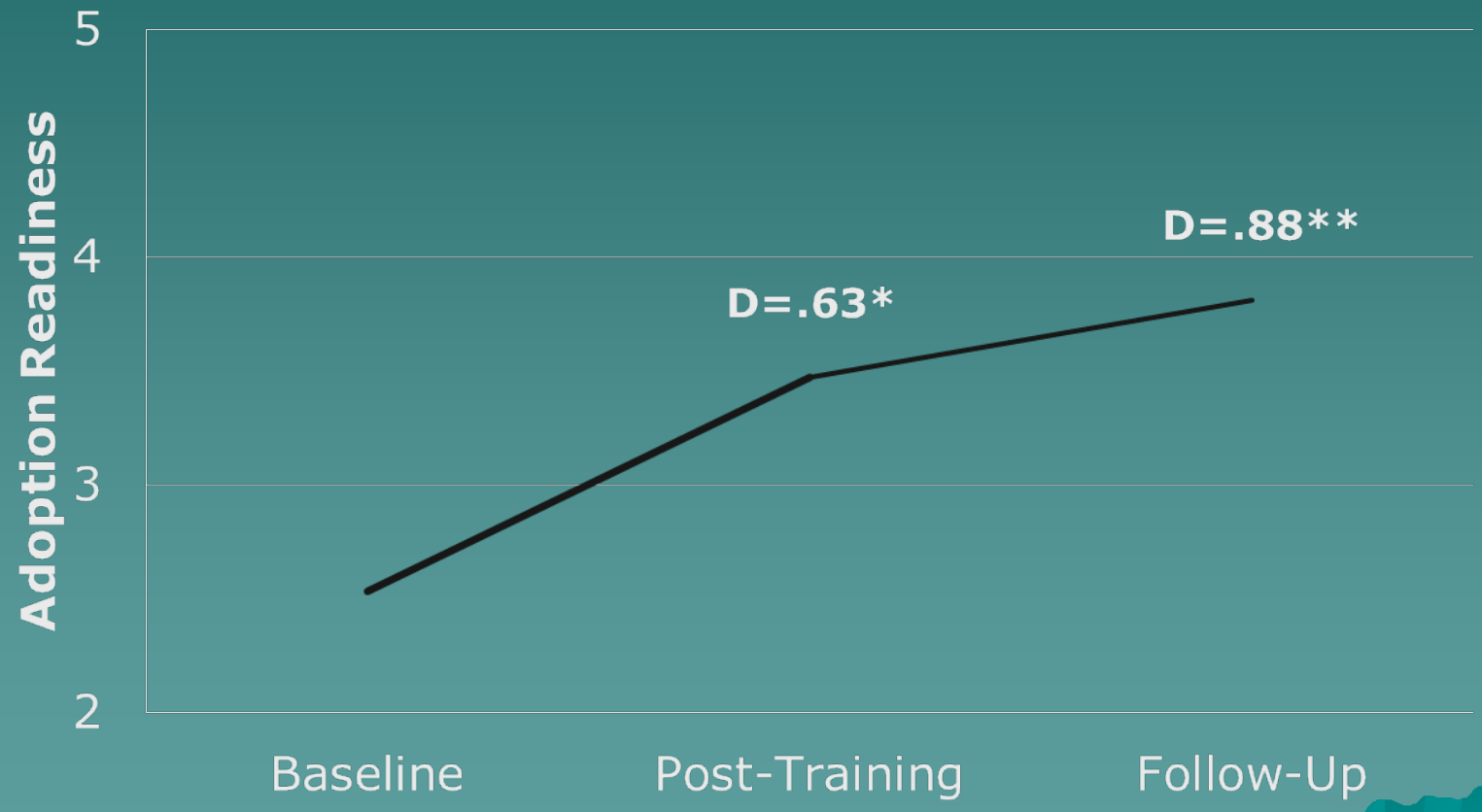
Eventual training impact on adoption readiness:



**p<.01, *p<.05

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Management view on cost:

Executive Director: *Actually, the cost of the reinforcers is trivial. If you think about the counselors, they're going to be seeing these folks anyway. So they're delivering this in a session we were already going to be paying staff time for, so there is no additional cost. The amount of administration time, leadership time is relatively trivial, mostly in ramp-up when you're trying to decide what the reinforcers are going to be, and so forth.*

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Management views on feasibility:

Deputy Executive Director: *In terms of the logistics, we've come up with solutions for just about everything that's come up. The implementation doesn't need to be all that sophisticated to be done successfully. What made it manageable was it was circumscribed in scope, and we had two point-people that all questions could be directed to. That was critical.*

'That's too coincidental to be a coincidence.'

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Management views on sustainability:

Deputy Executive Director: *We have the majority of the counselors interested in continuing it. If people hated it, that would be different. But that's not the case here. Going forward, there's a lot of evidence in the literature that this is an effective retention technique. Once we get the data, assuming the data shows a positive effect, we're all inclined to continue implementing this.*

Treatment Director: *I think there are a number of people who have said 'if the data supports it, do we then want to utilize contingency management in any other kind of areas that are like this, with a specific target behavior?' I think there could be some other potential uses of it.*

'If you come to a fork in the road, take it.'

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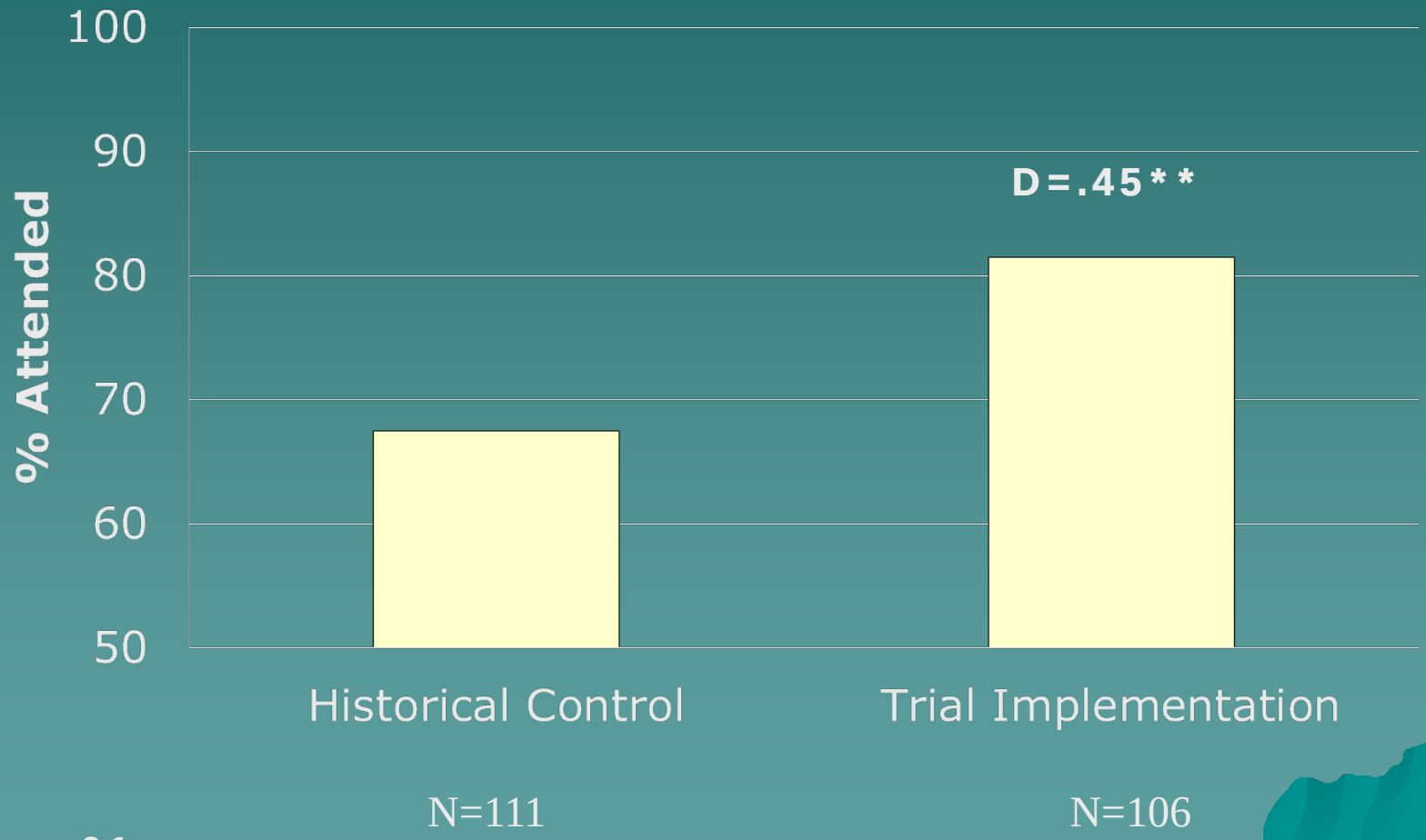
Penetration of the CM intervention among staff during the 90-day trial implementation period:

- 14 staff implemented with 1 or more patients
- 82% of CM-trained clinical staff
- 100% of CM-trained clinical staff who had opportunity to implement

Did the CM Intervention work?

Did the CM Intervention work?

Clinical Effectiveness – aggregate attendance rate



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Summary of trial results:

- Robust initial training impact in fidelity measures, medium effect on adoption readiness
- Eventual impacts reflect maintenance/amplification
- Management perspective of CM intervention as cost-effective, logistically-compatible, and sustainable
- Small-to-medium effect size for clinical impact of intervention during trial implementation

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Caveats concerning trial results:

- Single site, with self-selected staff sample that was well-educated and long-tenured
- Investigator/trainer familiarity at clinic
- Absence of direct measure of intervention delivery skill during patient visits
- Follow-up interval limited to 90 days

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Implications of trial results:

- Implementation science models aid creative trial design and measurement
- Successful community implementation may occur via clinic-involved design of EST adaptations
- A focus in training on active learning strategies led to development of durable EST delivery skills
- After this OTP helped design a CM intervention and implemented it using only its own staff and resources, the clinical impact slightly exceeded the mean effect size reported in a meta-analysis*

* Prendergast et al., 2006

Acknowledgements

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‘I didn’t really say everything I said.’