

Using Rigorous Evidence To Improve Government Effectiveness: An Introduction

North Carolina Family Impact Seminar

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Coalition for Evidence-Based Policy

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Coalition for Evidence-Based Policy

- ◆ A nonprofit, nonpartisan organization.
- ◆ Mission: To increase government effectiveness through rigorous evidence about “what works.”
- ◆ Independent assessment found: Coalition has been “instrumental” in advancing evidence-based reforms.
- ◆ Coalition has no affiliation with any programs or program models – thus serves as an objective, independent resource on evidence-based programs.
- ◆ Funded independently, by MacArthur, WT Grant, and Clark Foundations.

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1. Rationale for Evidence-Based Policy

The Problem: Little progress in many key areas of policy

- ◆ U.S. has made very limited progress in raising K-12 achievement over past 30 years.
- ◆ U.S. poverty rate today is higher than in 1973.
- ◆ U.S. has made no significant progress versus drug/alcohol abuse since 1990.



Rigorous evaluations have identified interventions that are ineffective/harmful:

◆ Vouchers for disadvantaged workers, to subsidize their employment

Well-designed randomized trial found large negative effects on employment.

◆ Drug Abuse Resistance Education (DARE)

Ineffective in preventing substance use, according to randomized trials (is now being redesigned).

Rigorous evaluations have identified a few highly-effective interventions:

◆ Nurse-Family Partnership

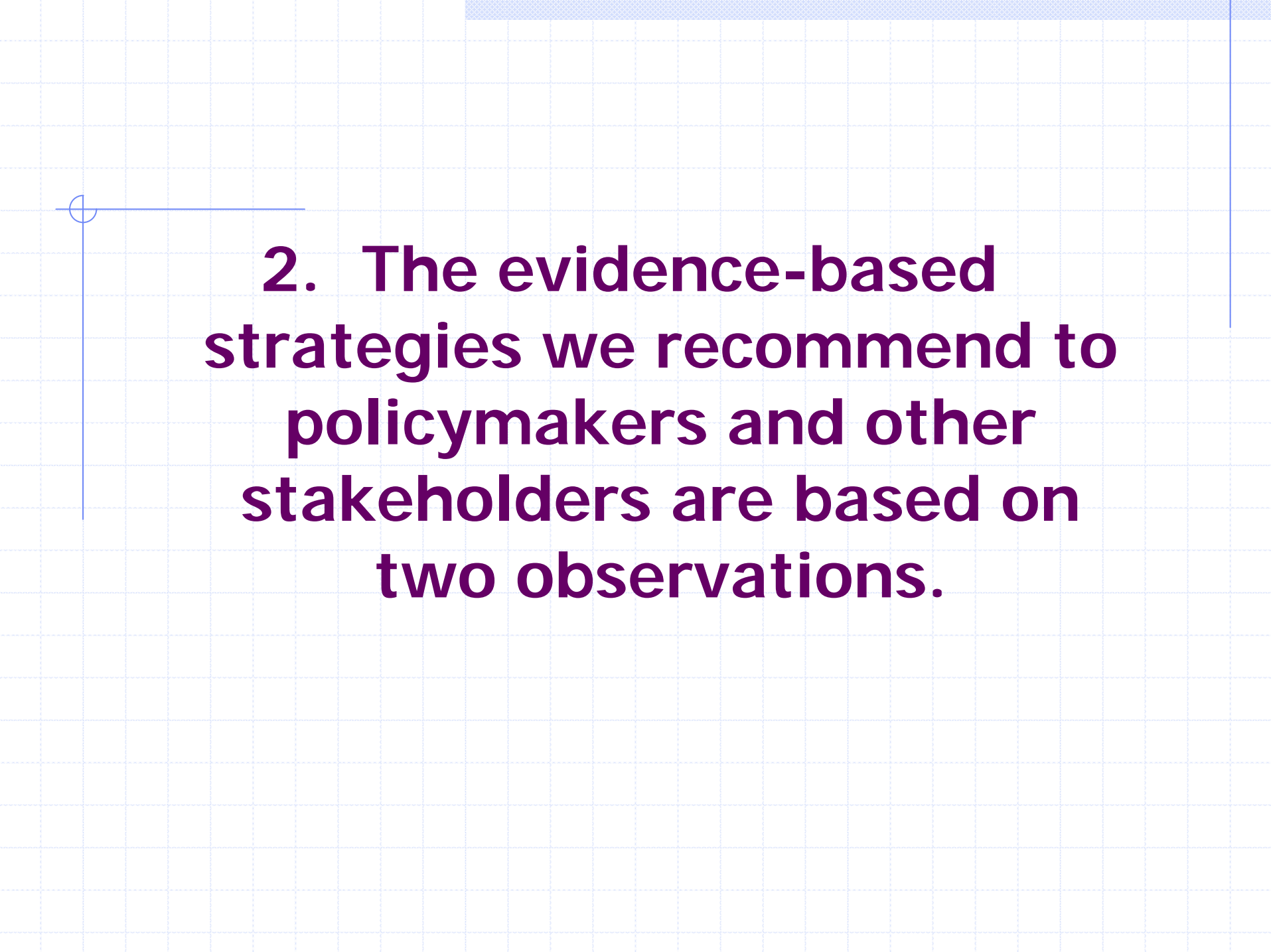
By age 15, produced 40-70% reductions in child abuse/neglect, & criminal arrests of children vs controls

◆ Carrera Teen Pregnancy Prevention Program –

- At 3-year followup, reduced females' pregnancies/births by 40-50% vs. controls.
- At 7-year followup, increased high school completion & college enrollment by 30-40% vs. controls.

Evidence-based policy seeks to incorporate two main reforms into social programs:

1. Increased funding for rigorous evaluations, to build the number of research-proven interventions.
2. Strong incentives & assistance for program grantees to adopt the research-proven interventions.



2. The evidence-based strategies we recommend to policymakers and other stakeholders are based on two observations.

There is strong evidence to support:

- ◆ Well-implemented randomized controlled trials as the highest quality evaluation to determine program impact.
- ◆ Observably-equivalent comparison-group studies as a second-best alternative. The groups should be:
 1. Highly similar in key characteristics (including their likely motivational level);
 2. Preferably, chosen prospectively (i.e., before the intervention is administered).

Less rigorous study designs:

◆ Less rigorous evaluation methods include:

- Comparison-group studies in which the groups are *not equivalent* in key characteristics;
- Pre-post studies;
- Outcome metrics (without reference to a control or comparison group).

◆ Such designs can be very useful in generating hypotheses about what works, but often produce erroneous conclusions.

Job Training Partnership Act: Impact on Earnings of Male Youth (Non-arrestees)

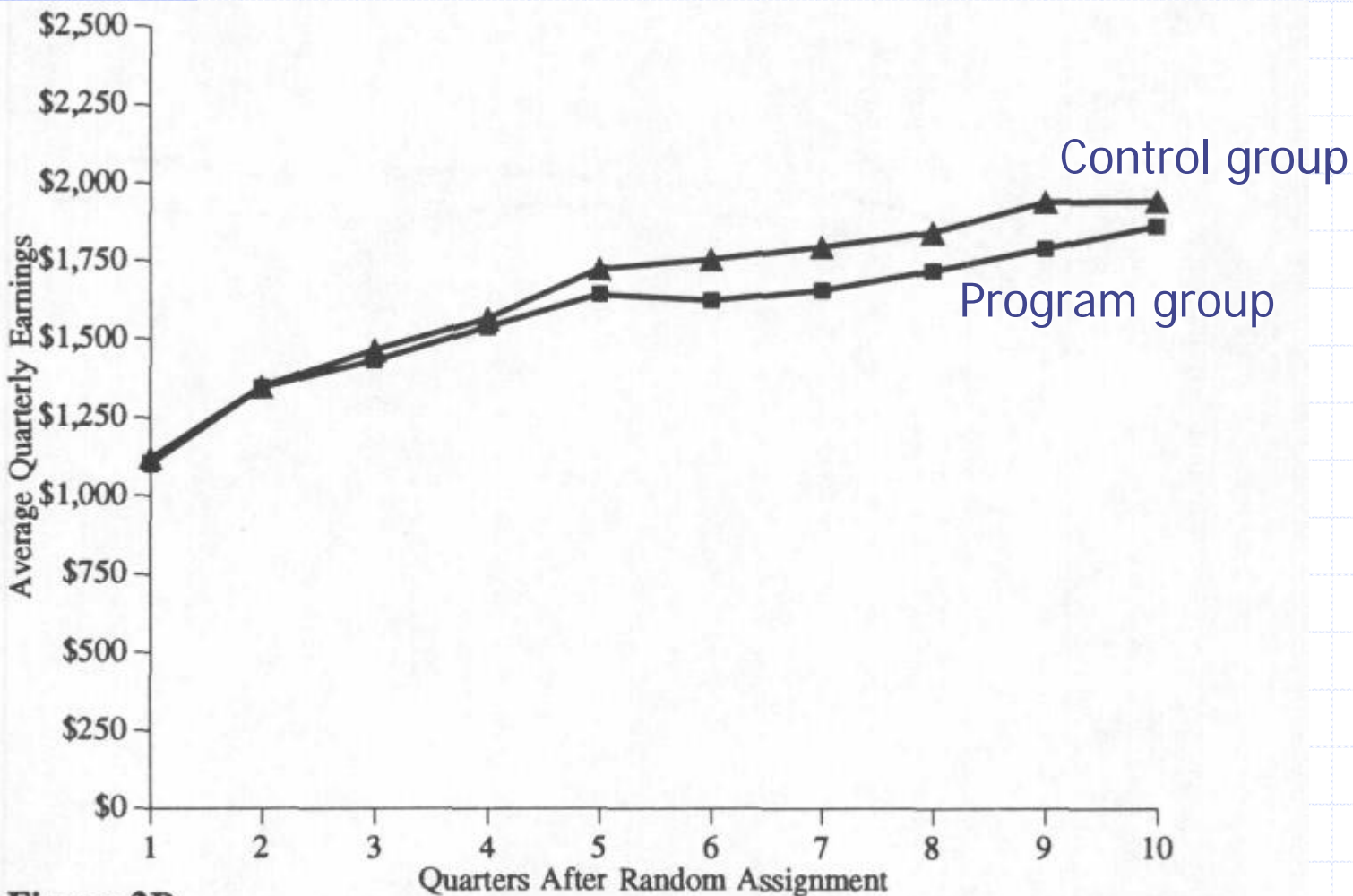
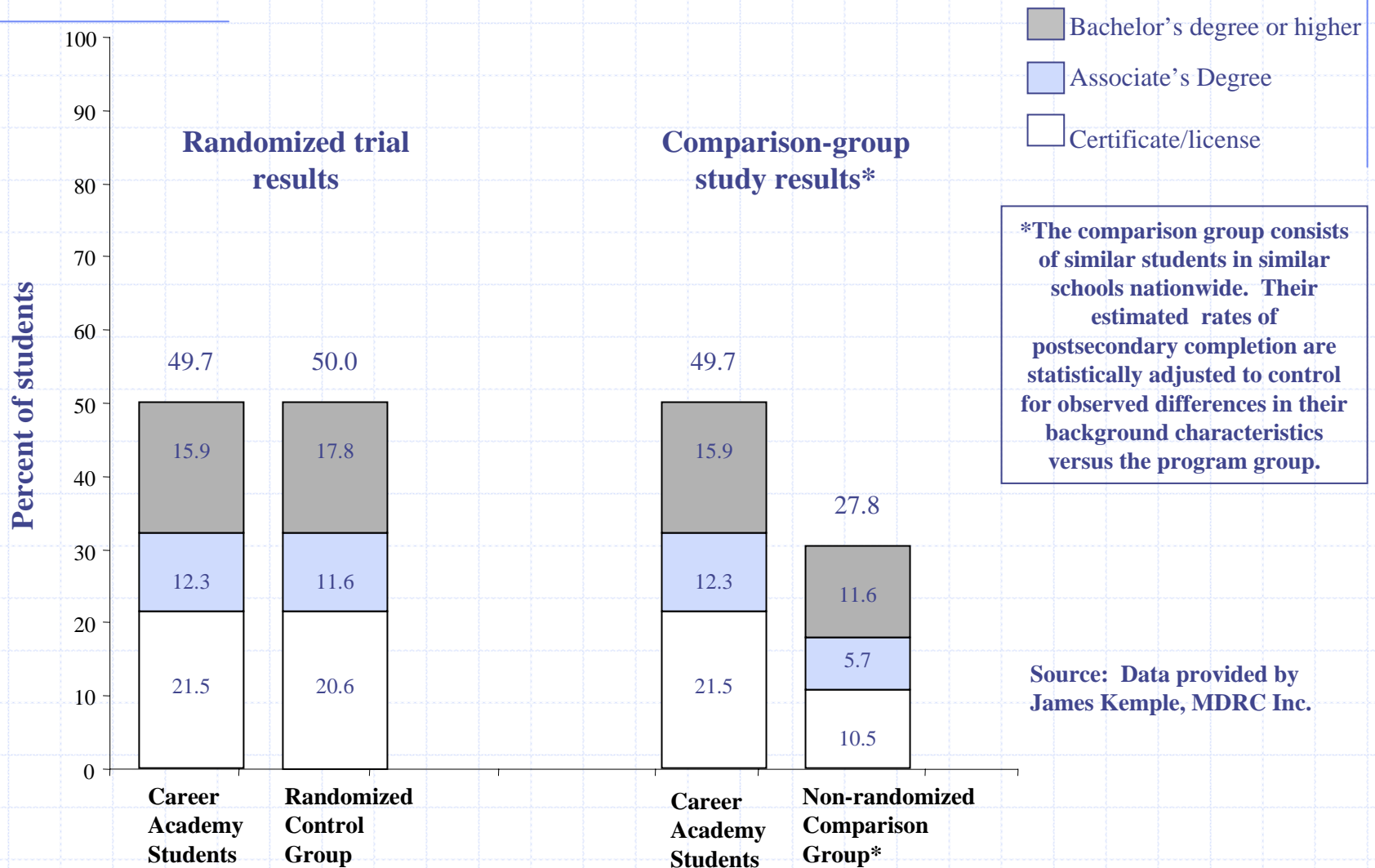


Figure 2B

Mean Earnings, by Quarter: Male Youth Non-arrestees

Impact of Career Academies on Completion of a Postsecondary Credential



Typical Outcome Metrics Often Yield Erroneous Conclusions about Program Effectiveness

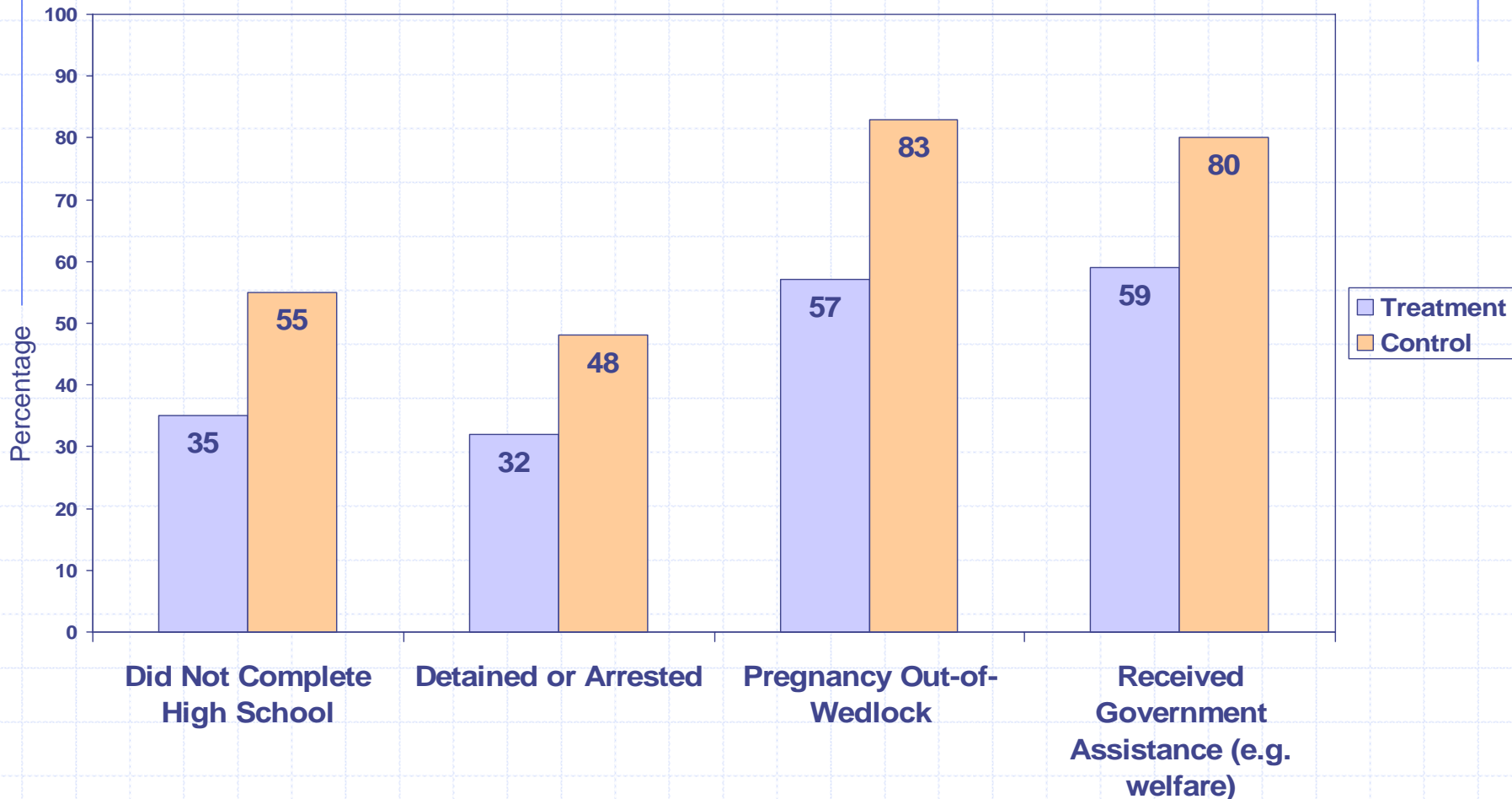
Adult outcomes for individuals who participated in an early childhood education program:

- **35%** didn't finish high school or complete a GED
- **32%** had been detained or arrested
- **57%** of females had out-of-wedlock births
- **59%** received gov't assistance (e.g., welfare)

Was this program effective?

Outcomes compared to the control group show large positive effects

Impact of Perry Preschool Project on life outcomes:



2. Much of the conventional wisdom about “what works” is probably wrong

Specifically:

- ◆ Much of what is thought to work probably does not, or has weak effects.
- ◆ Findings of true effectiveness exist, but tend to be the exception.

This pattern occurs in many different fields (e.g., medicine, psychology, social policy).

Examples of medical wisdom overturned by well-implemented randomized controlled trials

- ◆ Intensive efforts to lower blood sugar of diabetics to normal levels (increases risk of death)
- ◆ Hormone replacement therapy for post-menopausal women (increases risk of stroke and heart disease for many women)
- ◆ Dietary fiber to prevent colon cancer (shown ineffective)
- ◆ Stents to open clogged arteries (shown no better than drugs for most heart patients).

Examples from medicine, continued

- ◆ Having babies sleep on their stomachs (increases risk of SIDS)
- ◆ Beta-carotene and vitamin E supplements (“anti-oxidants”) to prevent cancer (ineffective or harmful)
- ◆ Oxygen-rich environment for premature infants (increases risk of blindness)
- ◆ Recent promising AIDS vaccines (found to double risk of AIDS infection)
- ◆ Bone marrow transplants for women with advanced breast cancer (ineffective)

Examples from medicine, continued

◆ Head of AIDS Vaccine Advocacy Coalition, commenting on AIDS vaccine failure:

"This is ... an important milestone in many respects. This is the way products get developed. Lots of things don't work, and we're on the road to finding something that does."

-- Mitchell Warren, July 2008

Same pattern occurs in social policy –
Examples or randomized trials showing weak or
no effects (or adverse effects):

- ◆ DOL's "New Chance" Demonstration Program, for teenage welfare mothers and their children.
- ◆ Even Start family literacy program for low-income families.
- ◆ Many home visitation programs (e.g., HHS Comprehensive Child Development Program).
- ◆ 21st Century Community Learning Centers -- after-school activities in high-poverty schools.
- ◆ NYC Vouchers for disadvantaged youth (K-4) for private school.

Illustrative examples, continued:

- ◆ **15 leading educational software products** -- for teaching K-12 reading and math
- ◆ **4 HHS-funded abstinence education programs,** in grades 3-8
- ◆ **Drug Abuse Resistance Education (DARE)** – School-based substance-abuse prevention
- ◆ **Many other Substance-Abuse Prevention programs** (e.g., Project Alert)
- ◆ **Job Corps** (academic & vocational training for disadvantaged youth age 16-24).

Illustrative examples, continued:

- ◆ **Summer Training & Employment Program** (summer jobs & academic classes to 14-15 yr olds).
- ◆ **Job Training Partnership Act** (workforce training for adults and youth). Randomized evaluation of 16 sites that volunteered for the study.
- ◆ **Upward Bound** (provides instruction, tutoring, counseling starting 9-10 grade).
- ◆ **ED's dropout prevention programs** (middle and high school).
- ◆ **A Widely-Used Teacher Professional Development Program ("LETRS")**, incorporating key elements of scientifically-based reading research.

1. Scale-up existing research-proven interventions :

- ◆ Our estimate: 10-15 such interventions – proven to have large effects – now exist.
- ◆ Scaling them up could produce major progress vs reading failure, substance abuse, crime, child abuse/neglect, workforce failure, teen pregnancy.

Websites for identifying research-proven social programs

- ◆ Social Programs that Work
www.evidencebasedprograms.org
- ◆ Top Tier Evidence Initiative (coming soon)
www.toptierevidence.org
- ◆ Blueprints for Violence Prevention
www.colorado.edu/cspv/blueprints/index.html
- ◆ Best Evidence Encyclopedia (K-12 Education)
www.bestevidence.org

Strategies To Scale Up Proven Interventions

- ◆ Based on federal FY 08 Appropriations Act, award funds competitively to organizations –
 - That scale up a model "*shown, in well-designed randomized controlled trials, to produce sizeable, sustained effects on important child outcomes such as abuse and neglect.*"
 - That adhere closely to the specific elements of the proven model; and
 - That obtain sizeable matching funds from other sources, such as federal formula grant programs

Strategies To Scale Up Proven Interventions



Give priority consideration, in competitive grant programs, to applicants that propose to:

- (i) implement a research-proven model, and
- (ii) adhere closely to key elements of the model.

(For example, 25 points in addition to the usual 100.)

2. Pursue a carefully-focused evaluation strategy:

◆ Key Goal: Grow the number of research-proven interventions that state/local governments can then scale up to increase gov't effectiveness:

- Accept that much state/local funding will continue to fund unevaluated (often ineffective) interventions.
- This is different from the usual Legislature focus on evaluating whole programs.

A. Scale-up & rigorously evaluate interventions backed by promising evidence:

◆ Examples of such interventions:

- Good Behavior Game (a behavior management strategy for 1st graders).
- ◆ Teach for America (recruits/trains academically-strong college seniors and recent college graduates to teach in low-income communities).

B. Develop & test new interventions in areas evidence suggests are fruitful targets

◆ Examples of such target areas:

- High-quality, one-on-one tutoring programs for struggling readers in early elementary school;
- High-quality mentoring programs for at-risk youth;
- Earnings supplements for welfare recipients who find full-time work, coupled with a strong work requirement.

Suggestions to keep in mind re evaluation:

1. To evaluate effectiveness (or “impact”) of an intervention, use a randomized controlled trial. If not feasible (only if), consider a comparison-group study with observably-equivalent groups.

Suggestions on Evaluation Strategy

2. Focus rigorous evaluations on most promising interventions (as opposed to evaluating everything).
... if possible, interventions that are low-cost and easy to implement.
3. Make sure an intervention is well-developed and well-implemented before rigorously evaluating its effectiveness.
4. Recognize that well-designed randomized trials can sometimes be done at modest cost (e.g., \$50,000).

Suggestions on Evaluation Strategy

5. Select a capable study team! (one with a demonstrated track record in well-designed, rigorous evaluations.)
6. Where To Start? Start by trying to get a small number of rigorous evaluations underway (e.g., one or two).

Grant/contract mechanisms that federal programs have used to advance rigorous evaluations

- ◆ Competitive priority for projects that include a rigorous (preferably randomized) evaluation.
- ◆ Absolute priority (i.e., requirement) for projects to include such an evaluation.
- ◆ The program sponsors the evaluation, and requires grantees to participate in the evaluation if asked.
- ◆ The program funds a sheltered competition to evaluate a specific model at several program sites.
- ◆ The agency “waives” law/regulation to allow demonstration projects, and requires rigorous evaluation.



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