



# Global Appraisal of Individual Needs (GAIN)

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Association Adolescent Assessment Instruments Webinar  
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## Objectives

1. Provide an overview of why people use the GAIN and its logic model
2. Summarize our certification model and progressive approach to conducting assessment
3. Highlight three variations of the GAIN including the 3-5 minute Short Screener, 20-30 minute Quick and 1-2.5 hour Initial Biopsychosocial
4. Give a sense of the training requirements and costs
5. Provide an opportunity to answer your questions



## What is the GAIN?

- The GAIN is a family of instruments, training, quality assurance, certification, and monitoring protocols designed to:
  - Provide an infrastructure for implementing and monitoring evidenced based practice
  - Supporting clinical decision making
  - Integrating outcome monitoring and research into clinical assessment
  - Pooling data to support program evaluation and planning
- These protocols also focus on building local work force/capacity



## Why Use the GAIN?

- The substance abuse treatment field is increasingly facing demands from payers, policymakers, and the public at large for “evidence-based practices (EBP)” which can reliably produce practical and cost-effective interventions, therapies and medications that will
  - reduce substance use and its negative consequences among those who are abusing or dependent, and
  - reduce the likelihood of relapse for those who are recovering
- Quality assurance is the process of managing the reliability and validity of implementing evidenced based practices



# Implementation is Essential

(Reduction in Recidivism from .50 Control Group Rate)

Program Implementation:  
Amount of Service, Quality of Delivery

| Program Type Grouped by Rank | Low | Medium | High |
|------------------------------|-----|--------|------|
| Group 1 (best)               | 24% | 34%    | 46%  |
| Group 2                      | 16% | 30%    | 40%  |
| Group 3                      | 6%  | 20%    | 32%  |
| Group 4 (poorest)            | 0%  | 12%    | 24%  |

The best is to have a strong program implemented well

Thus one should optimally pick the strongest intervention that one can implement well

The effect of a well implemented weak program is as big as a strong program implemented poorly

Source: Adapted from Lipsey, 1997, 2005



## Other Key Lessons from Implementation Science From Over Two Dozen Fields (Fixsen et al 2005)

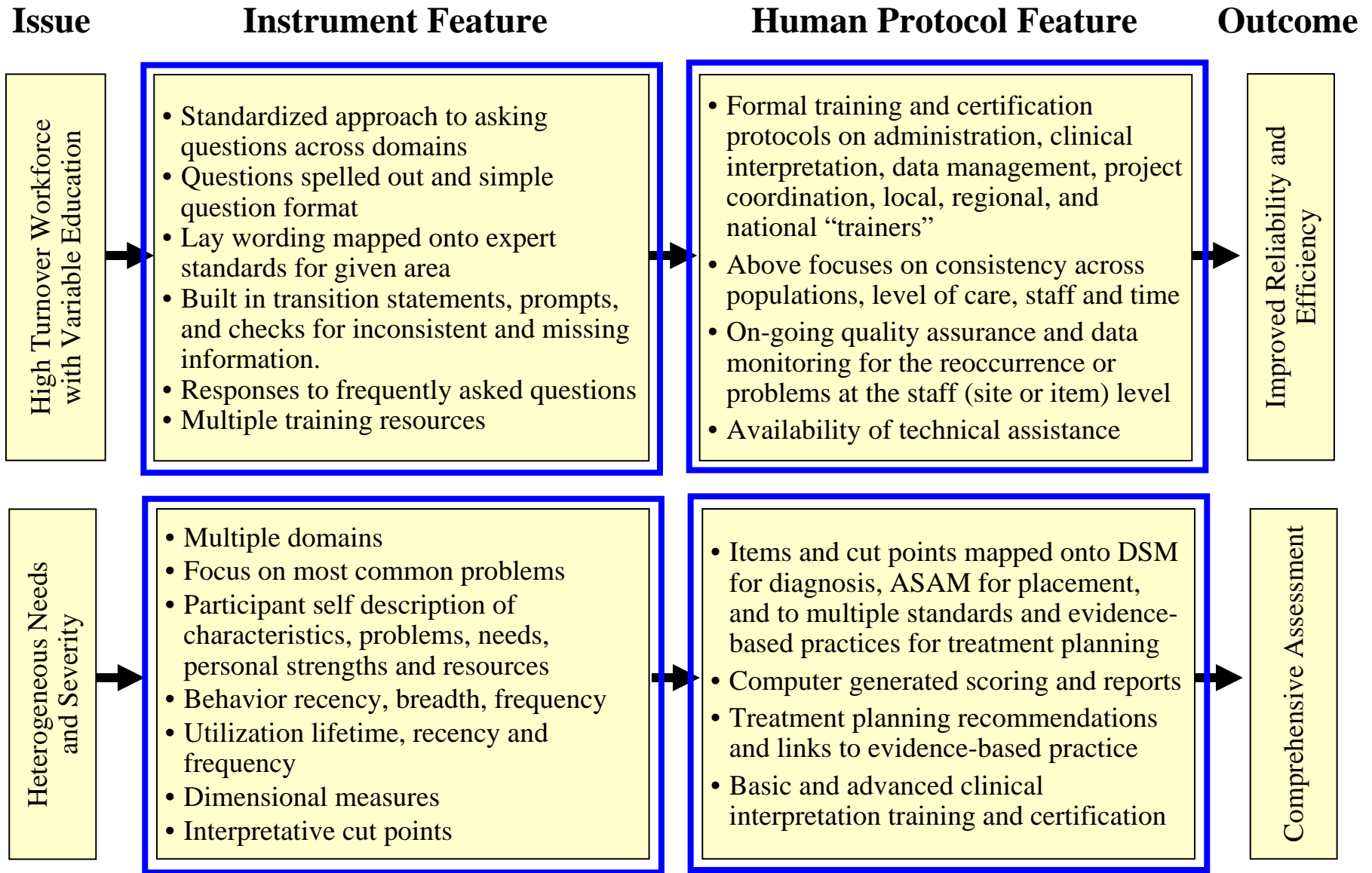
- Major changes like this consistently take 2-3 years to complete (or longer)
- Manuals and workshops alone have little impact on practice
- It is the addition of practice, feedback and monitoring that have reliably produced change in practice
- Implementation is governed by three factors: **quality, speed and cost**
- You can optimize up to **two** of the above, but the third will **always** give as a result
- Chestnut's model prioritizes
  - 1) high quality (central value of evidenced based practice);
  - 2) holding down costs (value of our federal, state, and other clients); and
  - 3) taking the time to grow local trainers/resources (which can be slow)



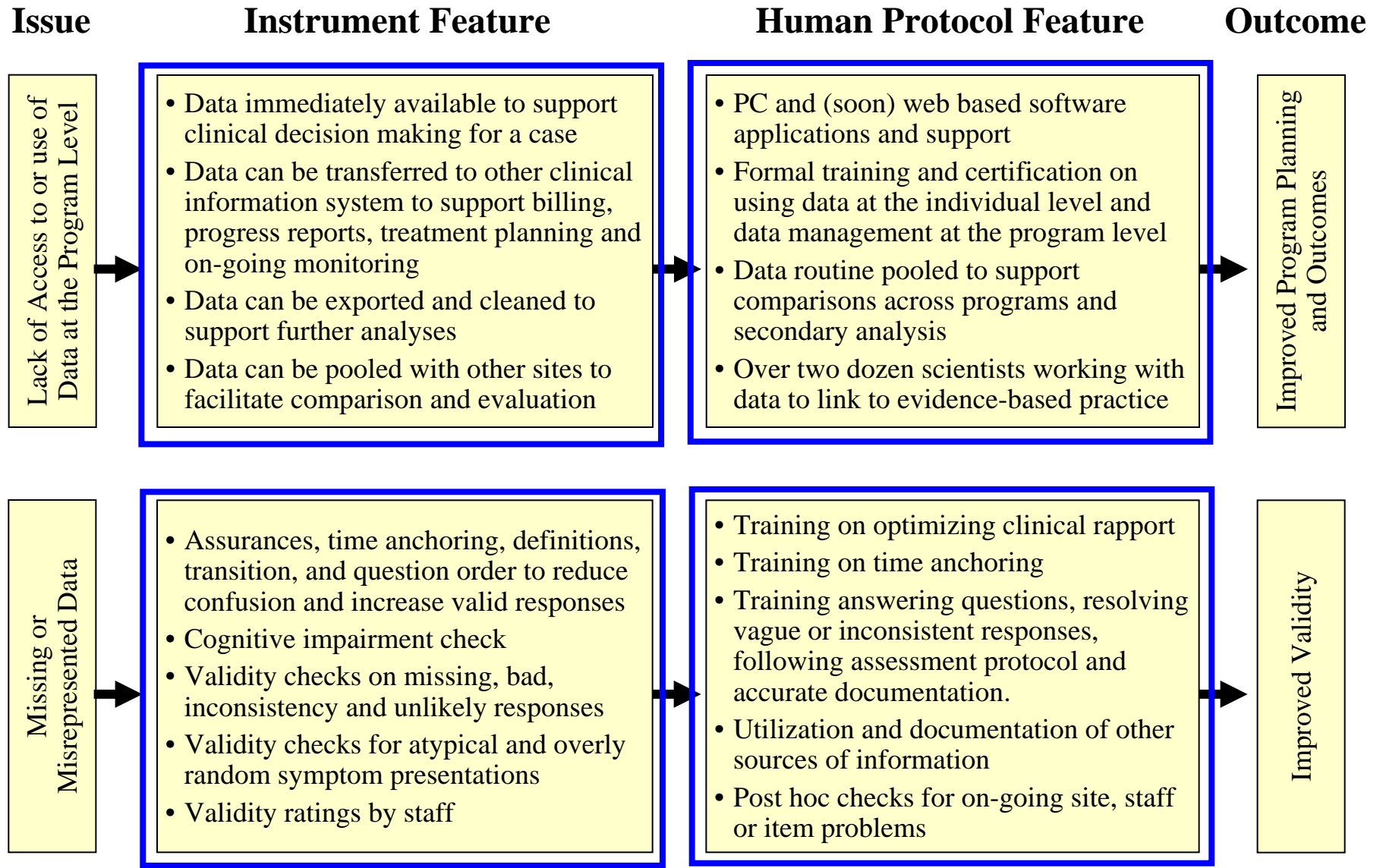
## Key Issues that we try to address

- **High turnover workforce with variable education** background related to diagnosis, placement and treatment planning.
- **Heterogeneous needs and severity** characterized by multiple problems, chronic relapse, and multiple episodes of care
- **Lack of access to or use of data at the program level** to guide immediate clinical decisions, billing and program planning
- **Missing or misrepresented data** that needs to be minimized and incorporated into interpretations

# GAIN Logic Model



# GAIN Logic Model (continued)





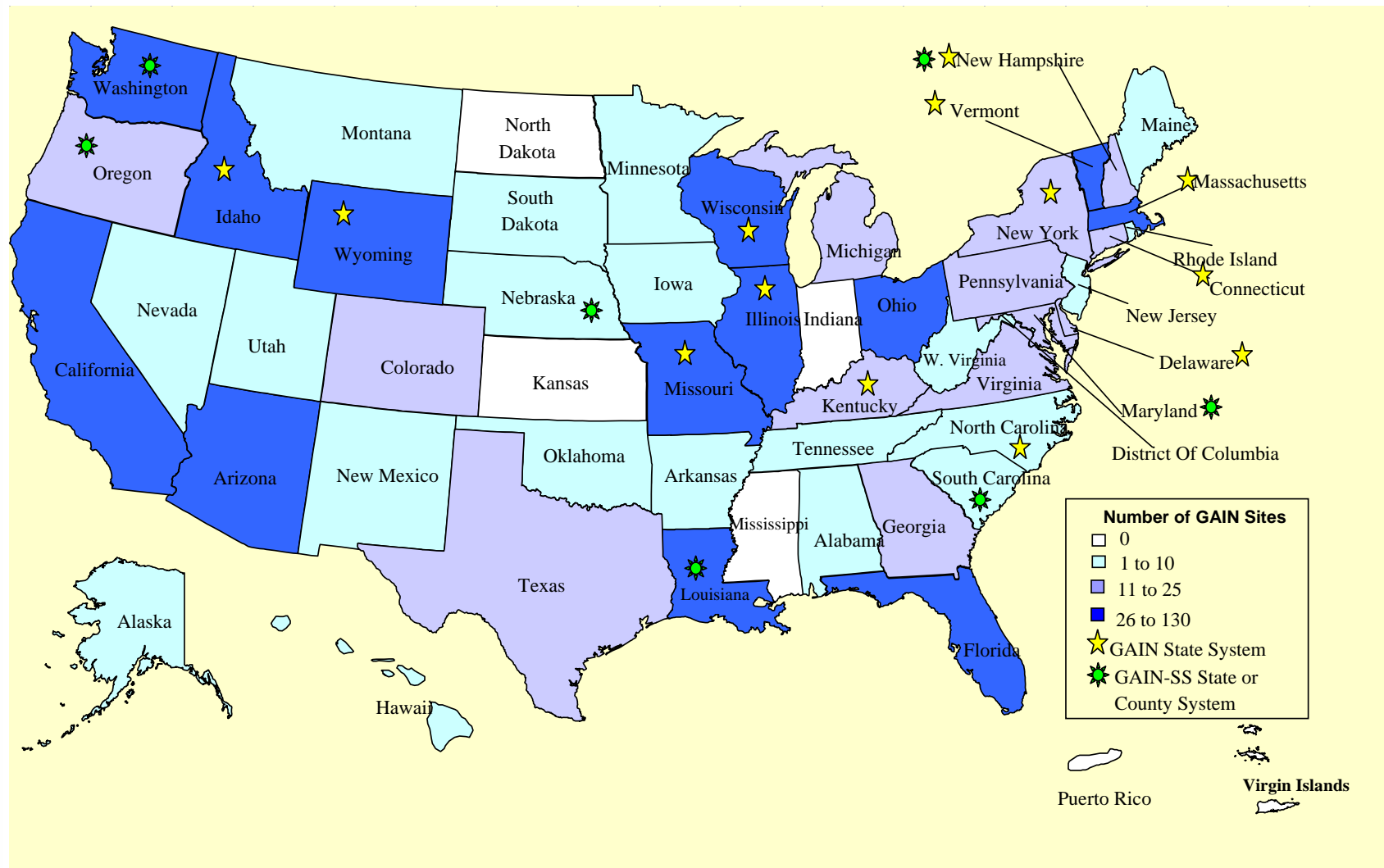
## Widespread use of the GAIN in treatment studies

- 1994-2000 NIDA's Drug Abuse Treatment Outcome Study of Adol. (DATOS-A)
- 1995-1997 Drug Abuse Treatment Outcome Study (DOMS)
- 1997-2000 CSAT's Cannabis Youth Treatment (CYT) experiments
- 1998-2003 NIAAA/CSAT's 15 individual research grants
- 1998-2003 CSAT's 10 Adolescent Treatment Models (ATM)
- 2000-2003 CSAT's Persistent Effects of Treatment Study (PETS-A)
- 2002-2007 CSAT's 12 Strengthening Communities for Youth (SCY)
- 2002-2007 RWJF's 10 Reclaiming Futures (RF) diversion projects
- 2002-2007 CSAT's 12+ Targeted Capacity Expansion TCE/HIV
- 2003-2009 NIDA's 14 individual research grants and CTN studies
- 2003-2006 CSAT's 17 Adolescent Residential Treatment (ART)
- 2003-2008 NIDA's Criminal Justice Drug Abuse Treatment Study (CJ-DATS)
- 2003-2007 CSAT's 38 Effective Adolescent Treatment (EAT)
- 2004-2007 NIAAA/CSAT's study of diffusion of innovation
- 2004-2009 CSAT 22 Young Offender Re-entry Programs (YORP)
- 2005-2008 CSAT 20 Juvenile Drug Court (JDC)
- 2005-2008 CSAT 16 State Adolescent Coordinator (SAC) grants
- 2006-2010 CSAT 32 Adolescent Assertive Family Treatment (AAFT) grants
- 2007-2010 OJJDP 3 juvenile diversion grants

Full (•) or Partial (•) use of the Global Appraisal of Individual Needs (GAIN)

# GAIN Clinical Collaborators

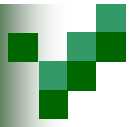
## Adolescent and Adult Treatment Program



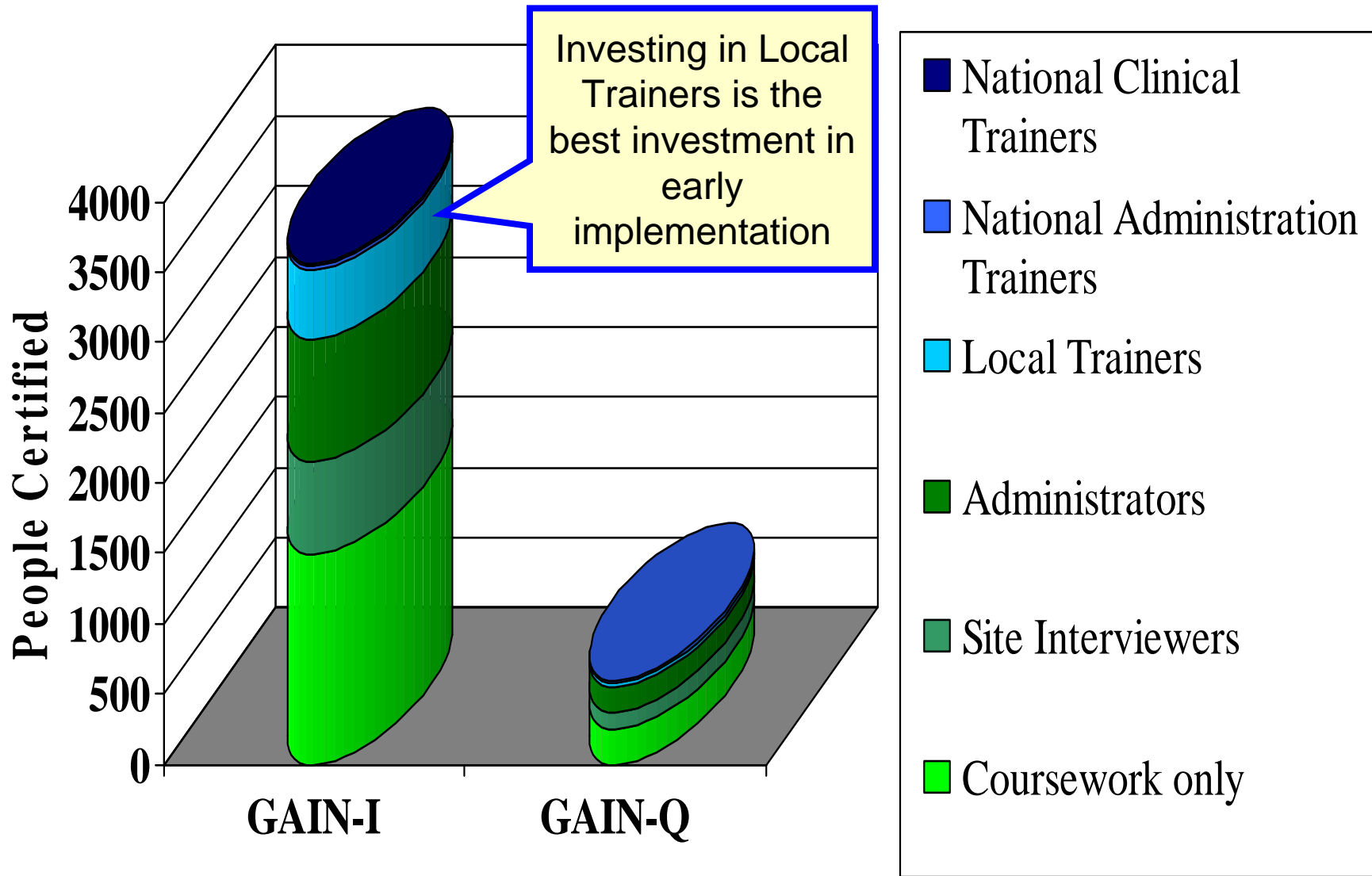


## Goals of GAIN Quality Assurance (QA) and Certification Program

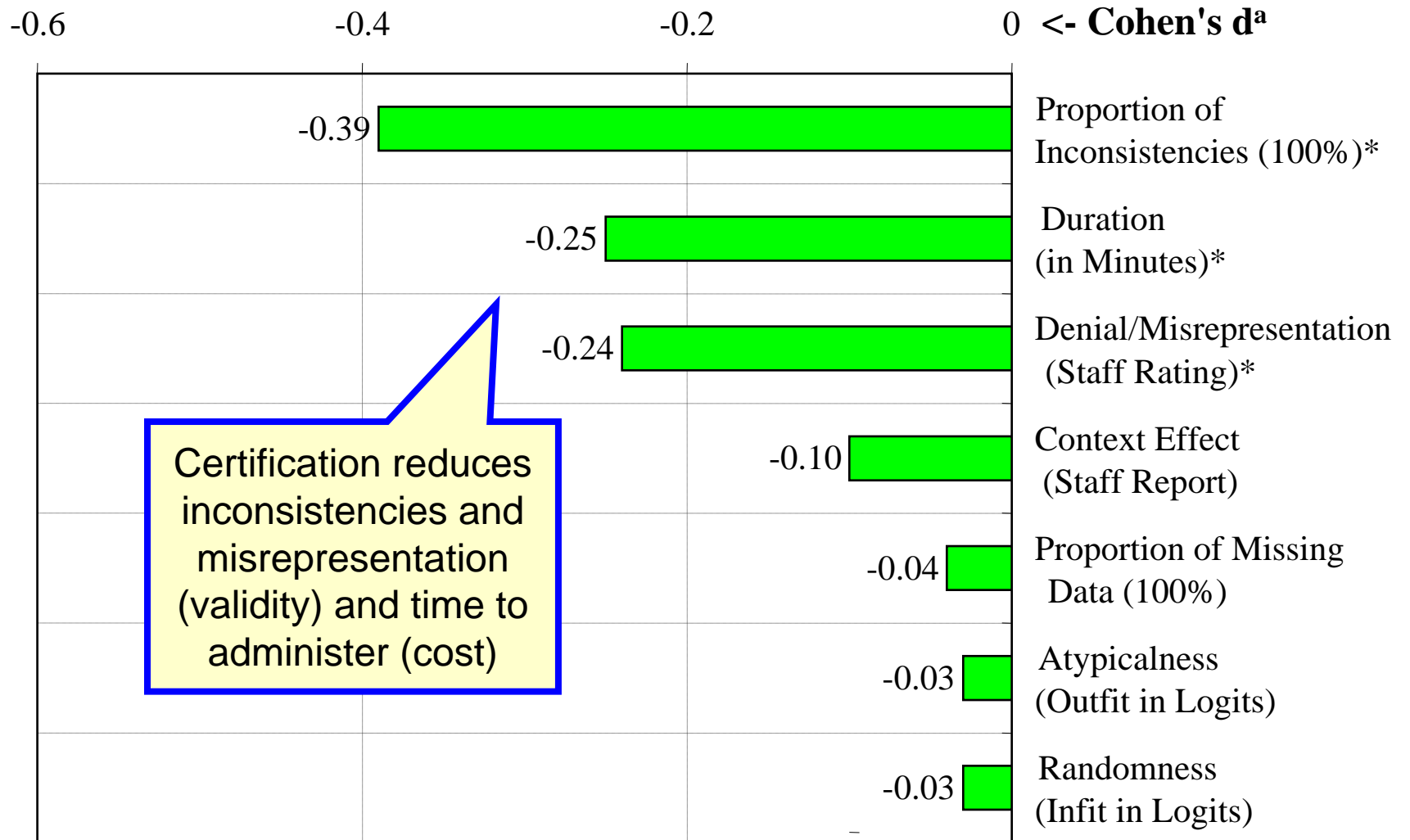
- To achieve a sufficiently reliable and valid assessment **delivery** so that it does not matter as much which “staff person” conducts the assessment.
- To teach local trainers to train, QA and supervise their staff to the national standards so that it does not matter which “site” the data comes from when it is pooled.
- To recognize that the above is a process that typically takes repeated cycles of monitoring and feedback to achieve and sustain.
- To recognize that there should be ongoing monitoring and QA after certification to prevent “drift” from protocol.



# Staff Certification To Date



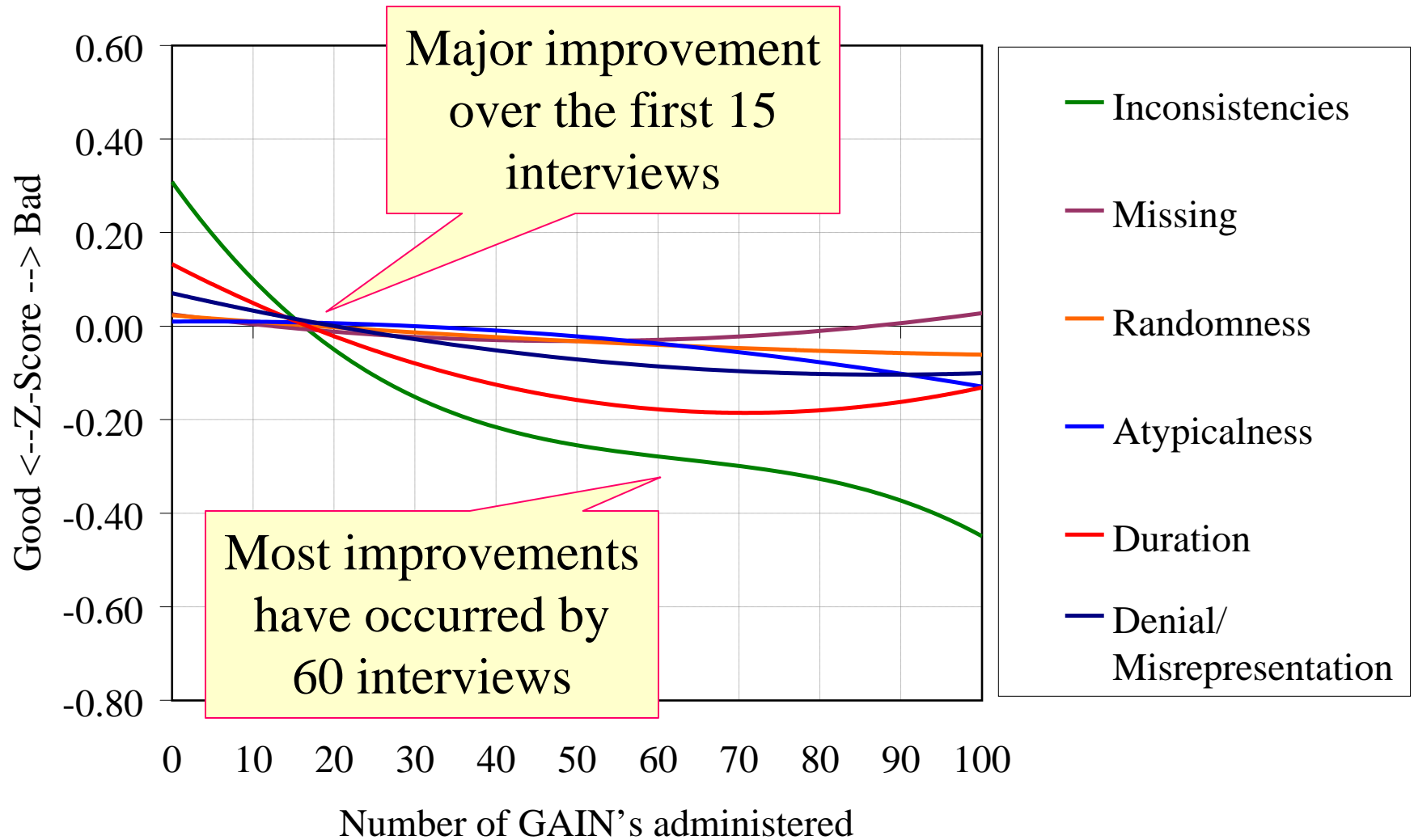
# Impact of Certification on GAIN Validity Measures



<sup>a</sup> Cohen's d (Post Certification - Pre Certification)/Pooled STD

\* p<.05

# Impact of Staff Experience with the GAIN





# GAIN's Progressive Assessment Approach

- **GAIN Short Screener**
  - Screening, Triage and Referral to appropriate system
  - Monitoring across systems, staff or time
  - Focus on brevity and simplicity for administration & scoring
- **GAIN Quick**
  - Screening, Brief Intervention and Referral for more specialized Assessment or Treatment
  - Additional focus on brief motivational interventions
- **GAIN- Initial and M90**
  - Comprehensive Biopsychosocial of most common problems
  - Designed to support clinical decision making related to diagnosis, treatment planning, placement and referral for additional assessment by other specialists (e.g., psychiatrist, TANF, school counselor)
  - Integrates research measures for to support analysis of case mix, outcome monitoring, and economic analysis across adolescents and adults levels of care
- **Program Level Assessment**
  - For staff management, evaluation, and program planning

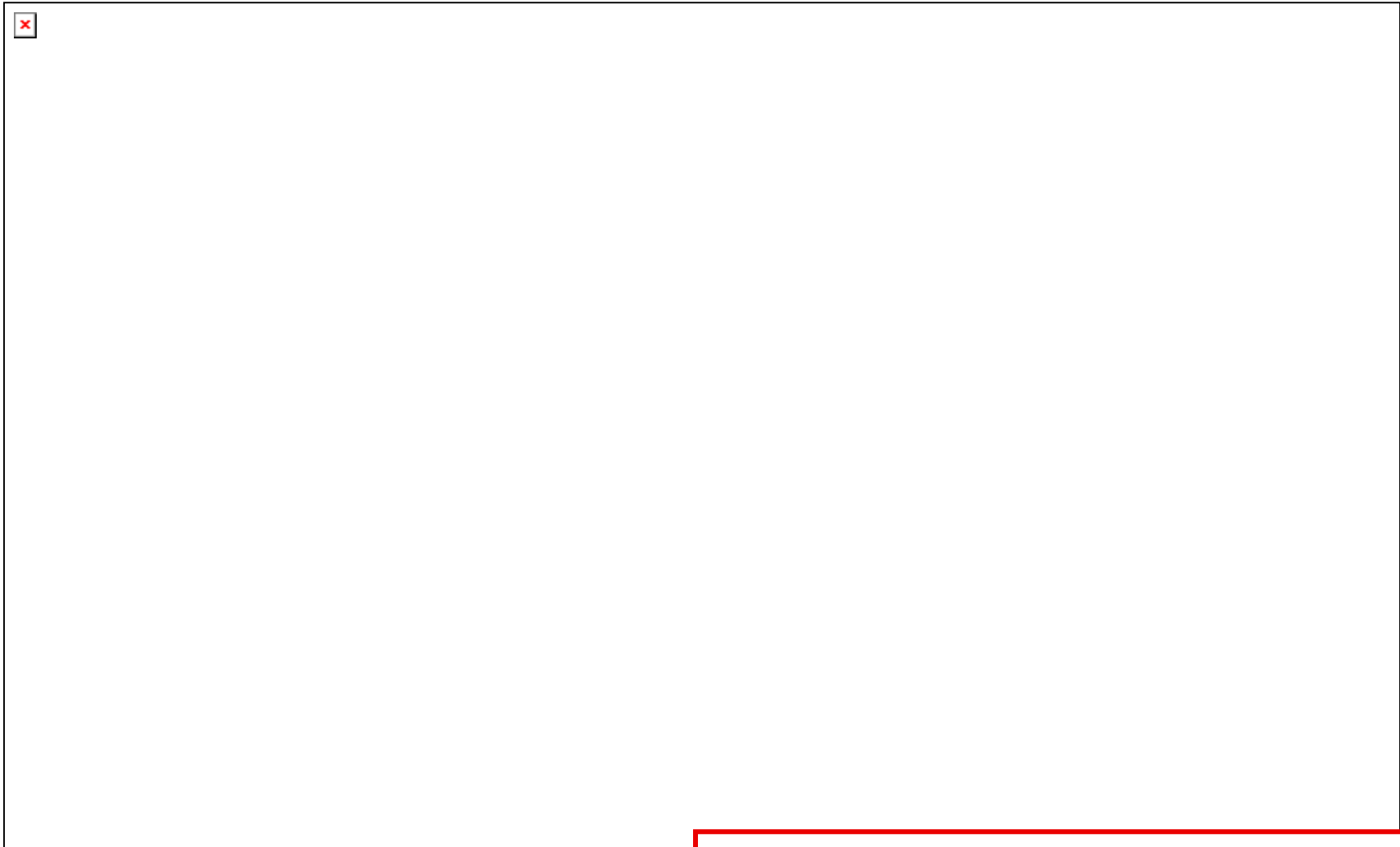


## GAIN Short Screen (GAIN-SS)

- Purpose: Screening and Referral
- Administration Time: 5 minutes
- Mode: Self or staff administered, paper or web administered
- Scales: The total scale (20-symptoms) and its 4 subscales (5-symptoms each) for internal disorders (somatic, depression, suicide, anxiety, trauma, behavioral disorders (ADHD, CD), substance use disorders (abuse, dependence), and crime/violence (interpersonal violence, property crime, drug related crime) can be used to generate symptom counts for the past month to measure change, past year to identify current disorders and lifetime to serve as covariates/validity checks.
- Software: Available from commercial vendors (e.g., Assessments.com) or a modifiable ASP.net application that can be incorporated into a local system or programmed directly
- Reports: Web versions include brief clinical report to help with screening and monitoring.
- Training Recommendations: Review of Manual, 1 hour Web or In Person Training with a with a typical staff burden of 1-2 hours.
- Typical Costs: \$100 per agency for General GAIN license fee for 5 year; and \$100 per local trainer or \$1,500 for a web training for up to 20 trainees (\$75/trainee) or \$2500 for in person training (\$125/person)



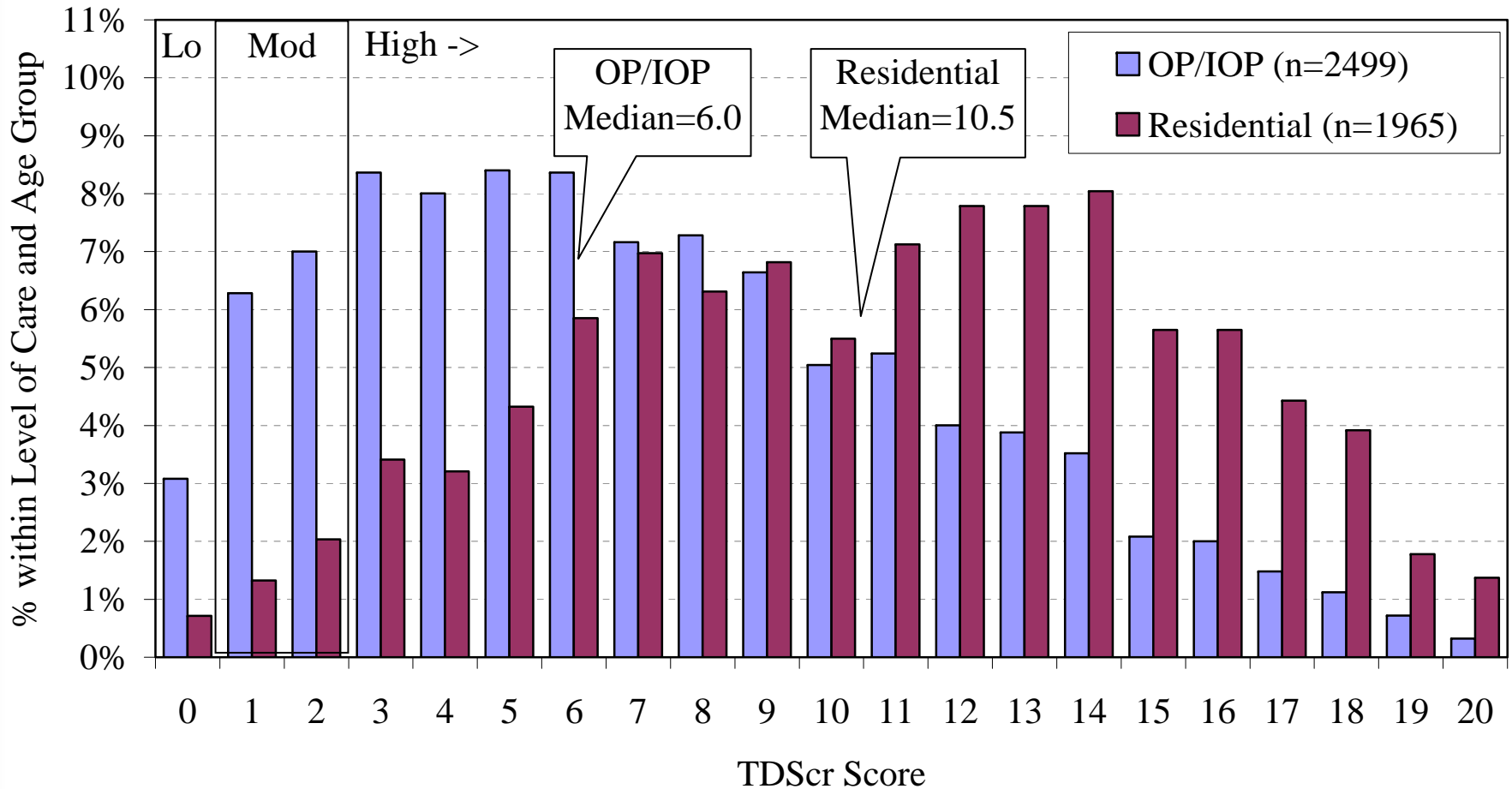
# Factor Structure of GAIN's Psychopathology Measures



Source: Dennis, Chan, and Funk (2006)

90% sensitivity, 90% specificity, correlated .9  
with full scales, and total alpha of .9

# Using GAIN SS to Help with Placement Decisions for Adolescents Substance Users

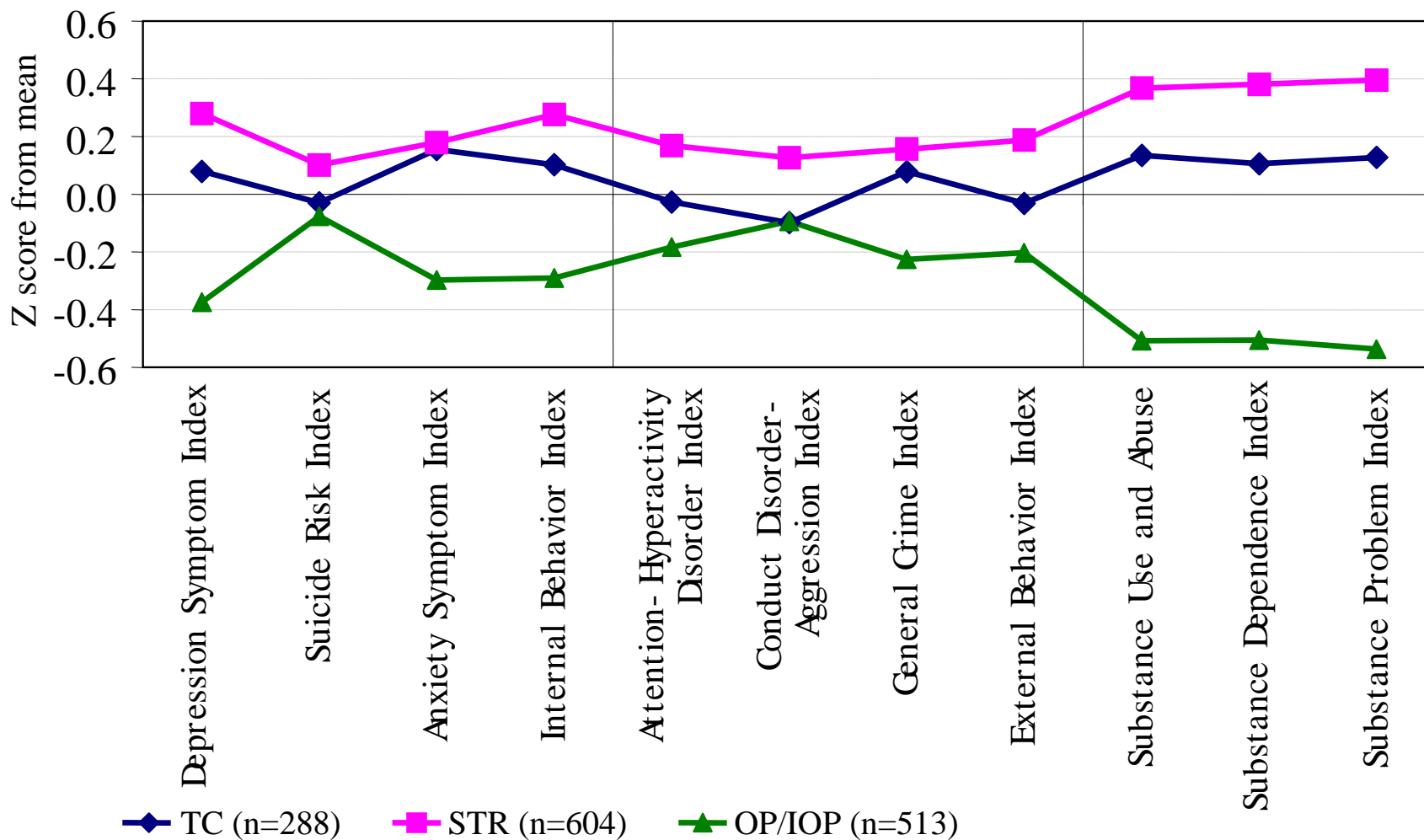




## GAIN Quick (GAIN-Q)

- Purpose: Screening, Brief Intervention and Referral
- Administration Time: 20-30 minutes
- Mode: Generally Staff Administered on Computer (can be done on paper or self administered)
- Scales: The GQ has total scale (99-symptoms) and 15 subscales (including more detailed versions of the GSS scales and subscales plus scales for service utilization, sources of psychosocial stress, and health problems). All scales focus on the past year only and it is primarily used to support motivational interviewing or for a one time assessment (though there is a shorter follow-up version).
- Reports: Summary narrative report and a graphic individual profile to support clinical decision making.
- Training Recommendations: 1 day in person training plus individualized feedback on 3-6 taped reviews over 6 months to reach local trainer certification with a typical staff burden of less than 20 hours. .
- Typical Costs: \$100 per agency for General GAIN license fee for 5 year; \$1800 per agency-year web account; \$750 per local trainer or \$25,000 for an in person training and quality assurance to certification for 36 local trainers (\$694/local trainer)

# The GAIN-Quick Can Predict Level of Care



Good reliability (alpha over .9 on main scales, .7 on subscales) and correlated .9 or higher with full GAIN scale

Source: Titus et al, 2003; 2008

CYT

Cannabis Youth Treatment  
Experiment

Treatment  
Series  
Volume 1

Motivational Enhanced Treatment/  
Cognitive Behavior Therapy 5 (MET/CBT5)

**Sampl, S., & Kadden, R. (2001)**  
University of Connecticut Health Center  
Farmington, CT USA

Brief Intervention Based on MET/CBT5



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
Substance Abuse and Mental Health Services Administration  
Center for Substance Abuse Treatment  
[www.samhsa.gov](http://www.samhsa.gov)



# GAIN Initial (I) and Monitoring 90 Days (M90)

- Purpose: Standardized biopsychosocial for people presenting to a substance abuse treatment and possibly in need of other services
- Administration Time: Core version 60-90 minutes/Full version 120-160 minutes (depending on severity and inclusion of GPRA module)
- Mode: Generally Staff Administered on Computer (can be done on paper or self administered with a proctor)
- Scales: The GI has 9 sections (access to care, substance use, physical health, risk and protective behaviors, mental health, recovery environment, legal, vocational, and staff ratings) that include 103 long (alpha over .9) and short (alpha over .7) scales, summative indices, and over 2000 created variables to support clinical decision making and evaluation. It is also modularized to support customization
- Training Recommendations: 3.5 day in person training plus individualized feedback on 3-6 taped reviews, and re-reviews of people they have trained over 6 months (administration certification within 3 months of training; local trainer certification within 6 months of training) with a typical staff burden of 90-110 hours; After approximately 1 year and 15-20 GAIN completed, also consider advance clinical certification involving DSM/ASAM pretests, another 3.5 days of training and 2-6 months of case work reviews with a typical staff burden of 80-110 hours.
- Typical Costs: Typical Costs: \$100 per agency for General GAIN license fee for 5 year, \$1,800 per agency-year web account; \$3,000 per local trainer or \$64,800 for an in person training and quality assurance to certification for 24 local trainers (\$2,700/ local trainer); and approximately a year later, \$3,000 per advance clinical trainee or \$32,400 for 12 advance clinical trainees (\$2,700/ advanced clinical trainee)



# Organization of the Core GAIN

## **A. Administration**

(including records information, cognitive impairment, calendaring, referral information, general instructions)

## **B. Background and Treatment Arrangements**

(demographics, custody, access to care)

## **S. Substance Use**

(including treatment readiness, relapse potential, withdrawal, abuse, and dependence, treatment history, content and satisfaction with recent treatment, current medication)

## **P. Physical Health**

(including disabilities, current and childhood infectious diseases, allergies, lifetime history, treatment history, current medication)

## **R. Risk Behaviors and Disease Prevention**

(including needle and sexual risk behaviors, sexual preference, birth control, tobacco use/dependence, fasting and exercise, testing and prevention classes)



# Organization- Continued

## **M. Mental Health and Emotions**

(including somatic, depressive, suicide risk, anxiety, traumatic distress, ADHD, CD, personality disorder, treatment history, current medication)

## **E. Environment and Living Situation**

(including housing, homelessness, public/emergency housing, use in home, controlled environment, children status, living, vocational, and social risk, violence towards others, traumatic victimization, other psycho-social stressors, general social support, spirituality, general satisfaction)

## **L. Legal (Civil & Criminal)**

(civil court involvement, illegal activities, status offenses, arrest history, current criminal justice involvement, outstanding warrants and payments)

## **V. Vocational (School, Work, Financial)**

(educational attainment/degrees, school problems and involvement, military history, vocational attainment, work problems and involvement, current vocational status, financial problems, pathological gambling, TANF participation, personal and family income, HHS poverty index, drug/alcohol expenses)

## **Z. End**

(administrative time, comments, signatures, administrative ratings and methods information, diagnostic impressions, special study information)



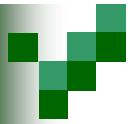
# Within Section Organization

- **Status**
  - Recency (past prevalence)
  - Breadth (symptom count/covariate)
  - Current prevalence (days or times)
  - ASAM or diagnostic check boxes for hand scoring
- **Utilization**
  - Lifetime History
  - Recency
  - Current utilization
- **Cross Item Ratings**  
(substance problems, satisfaction)
- **Treatment Planning**  
(urgency, wants)
- **Staff Ratings**  
(urgency, denial and misrepresentation)<sup>2</sup>



# GAIN-I's Main Reports

- GAIN Referral and Recommendation Summary (GRRS): A text-based narrative in MS Word designed to be edited and shared with specialists, clinical staff from other agencies, insurers and lay people. Expanding in 2008 to include detailed treatment planning recommendations
- Individual Clinical Profile (ICP): A more detailed report in MS Access designed to help triage problems and help the clinician go back to the GAIN for more details if necessary (generally not edited or shared).
- Personal Feedback Reports (PFR): A text based summary to support the motivational interviewing or MET based on the GAIN-I (or GAIN-Q).
- Validity Reports: A list of potential problems and areas for clarification and.
- Other: Custom reports to word, excel or transferring data from/to other data systems.



## Other Features

- Alternative versions, supplemental modules and filters can be customized to fit needs (additional time/cost)
- Subgroups collaborating on translating instruments, reports and training materials into several languages including French, Spanish, Portuguese, Japanese
- Data can be imported/exported to other information systems
- Open source code for scoring, treatment planning and analysis and over a 4 dozen scientist using it to improve linkage to evidenced based practices
- Commitment to stay current with federal, state and private certification requirements related to assessment
- Current PC based software already in use in over 500 agencies around the U.S.



## New GAIN ABS Software Features

- **Web-based:** GAIN ABS can be used on any moderately recent workstation (Windows, Mac, Linux) with a web browser (Internet Explorer, Firefox, Safari, Opera) with a network connection.
- **Hosted:** GAIN ABS is hosted on a central server so no special client software needs to be installed or updated.
- **Secure:** GAIN ABS was designed to meet modern security standards similar to other on-line banking or health information systems
- **Reliability:** GAIN ABS's server is co-located on the internet in a safe/ high security environment with a company that has 7 different Internet connections and has never been down.
- **Ease of Integration** GAIN ABS will support web services integration with other modern software systems, facilitating the secure sharing of information between similarly-enabled systems.



## Other Products and Features

- Consulting trips to help introduce products and plan implementation
- Quality assurance support for turnover and new staff
- Opportunities for local trainers to act as consultants for training or doing quality assurance for other agencies
- Quarterly Client Profiles by Clinic, Agency, Region or Planning group
- Data Management Training
- Pooled data to support secondary analysis and program planning



## Bio and More Information



**Michael Dennis, Ph.D.** is the GAIN Coordinating Center Director and a Senior Research Psychologist at Chestnut Health Systems in Bloomington, IL. He received his Ph.D. in psychology from Northwestern University in 1988 and over 20 years of experience working in the areas of substance abuse treatment, mental health and criminal justice. He the chair of one of the Data Safety Monitoring Board (DSMB) for the National Institute on Drug Abuse (NIDA's) Division of Epidemiology, Services and Prevention Research, a past chair of the Health Services Research Review group for the

National Institute Alcohol Abuse and Alcoholism, and the director of CSAT's adolescent treatment coordinating center. He has a MERIT award for NIDA to support his work on managing substance use disorders as a chronic condition, the 2006 Research to Practice Award from the Joint Meeting Adolescent Treatment Effectiveness and has over 200 peer reviewed publications to date.

For more information on the GAIN instrument, training or other services, e-mail [gaininfo@chestnut.org](mailto:gaininfo@chestnut.org) or visit our website at [www.chestnut.org/li/GAIN](http://www.chestnut.org/li/GAIN) .



Questions?