An Effective Model for Improving Clinician Education:
The Mississippi DETECT Program

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AADMD CONFERENCE, SEATTLE, WA — JUNE 30, 2018
DETECT of MS:
Mission and Context
DETECT and Its Mandate

- Developmental Evaluation, Training and Educational Consultative Team of Mississippi (MS)
- Title II (ADA): Transition qualified individuals with IDD to community settings rather than institutions
- DETECT supports MS clinicians & patients for community-based care
DETECT Concept and Creation

- 2011 Visit by “Friends”
- First thought – “People are gonna die.”
- Why? - Lack of training
IDD in the US: The Big Picture

- IDD prevalence in US
  - 1.5%-3.0% of all citizens
  - Thus, **5-9 million** Americans are affected

- Life expectancy for severe IDD
  - 20% fewer years of life
Medical Education

- Medical school education in IDD healthcare varies
- Depends on the presence of a “champion”
- No national expectations on training in IDD healthcare
- Minimal, if any training in primary care residencies in IDD
- **However**, people with IDD look to FP/general medicine providers for their continuing and comprehensive healthcare
- What does this mean?
5-9 MILLION PEOPLE IN THE U.S ARE LOOKING FOR HEALTHCARE FROM PEOPLE THAT HAVE HAD NO TRAINING IN THIS FIELD.
DETECT’s Challenge

- Greatly elevated health and social risks among Mississippians with IDD vs. other states
- Mississippians with IDD have
  - Higher rates of obesity and smoking
  - Lower rates of exercise
  - Lower rates of employment
  - Diminished earnings
Medical Utilization: MS vs. US

Past Year Medical Exams among Patients with IDD
NCI 2012-2013

- Had a hearing exam in the past year: MS 30% vs. US 56%
- Had an eye exam in the past year: MS 44% vs. US 57%
- Had a dental exam in the past year: MS 62% vs. US 80%
- Had a physical exam in the past year: MS 63% vs. US 89%
Health Disparities and IDD

- Lack of sound and effective medical care available for patients with IDD
  - Community-based medical providers lack training related to IDD-focused patient care
  - Patients with IDD have specialized medical needs
DETECT’s Mission and Role

- Prepare current and future medical providers to care for patients with IDD
  - Education
  - Training
  - Consultation
  - Informational resources
  - Referral services
DETECT’s Mission and Role

- Build a path to effective care for patients with IDD
  - Help find physicians, dentists, and other providers to meet specific needs
- Provide a support system for all
  - Providers, patients, caregivers
  - Critical networking liaison
Transform Delivery of Care

Education

- Broad reach of educational seminars
  - Over 1,700 seminar attendees through more than 20 seminars
  - Majority are clinicians: Physicians, nurse practitioners, and RNs
  - Others served: Behavioral health providers, interested citizens (parents)
  - Educational seminars offered statewide
Transform Knowledge Base

Education

- Create and share clinician resources
  - Annotated bibliographies and fact sheets based on systematic review of hundreds of published medical studies

- Diverse communication channels
  - Over 404,000 web hits with impressive click-through rates; 12,600 FB likes
  - Over 13,500 post cards; 4,700 letters; magazine and newsletter ads
Transform Career Trajectories

Training

- Alter clinician pipeline
- MS medical school curricula now address IDD
  - UMMC
  - William Carey College of Medicine
- IDD-X: Site visits for medical students
  - Training + Observation → Skills
  - FP residents rotations
Transform Services

Consultation

- Create clinician referral network
  - Over 350 clinicians
  - Over 40 dentists
  - Statewide reach

- Deliver consultations
  - In-person clinical consultations
  - Phone consultations
  - Telehealth
Foster Change Beyond MS

- DETECT best practice dissemination
- MS now recognized as leader in IDD-related clinician education
  - Train clinicians, health administrators, others in states other than MS
  - NC, FL, GA,
Supported by Research

- Rigorous evaluation of DETECT’s outreach and educational efforts
- Research team reviewed medical periodicals to assist in information dissemination for clinicians & patients
  - Annotated bibliographies
  - Fact sheets
Evaluation Results
Why MS? Scientific Rationale

- MS as most stringent test of medical education effectiveness
  - Significant IDD prevalence
  - Severe IDD-related health disparities
  - Physician shortage
  - Population dispersion
DETECT Educational Seminars

- Clinician awareness of DETECT
  - 82% unaware of DETECT pre-seminar
  - 86% unaware of mission beforehand
- Document clinician knowledge gap
  - Clinician attendees who self-rated as very knowledgeable about IDD before seminars: 22%
### DETECT Seminar Attendees Survey

<table>
<thead>
<tr>
<th>Survey Question</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Medical providers would benefit from more IDD expertise</td>
<td>88%</td>
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<tr>
<td>Degree provided any expertise in treating patients with IDD</td>
<td>38%</td>
</tr>
<tr>
<td>Current clinic previously treated patient(s) with IDD</td>
<td>93%</td>
</tr>
<tr>
<td>Medical provider previously treated patient(s) with IDD</td>
<td>93%</td>
</tr>
<tr>
<td>Willing to receive additional training on IDD</td>
<td>77%</td>
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Seminar Attendee Appraisals

**DETECT Seminar Impact**

- Presenter responsive to questions: 98%
- Will change treatment: 95%
- Seminar increased IDD awareness: 100%
- Would recommend seminar to colleague: 98%
- Educational seminar was effective: 97%
- Satisfied with educational seminar: 98%
Objective Knowledge Gains

- Compare attendee knowledge before and after seminars
  - Pretest/post-test methodology
    - Compare scores across knowledge quiz items to discern objective impact
  - Calculate statistical significance
    - Magnitude of pre/post change
Objective Knowledge Gains

- Item-specific statistically significant knowledge gains (4 of 6 measures)
  - Knowledge of federal law governing **living arrangement options** for people with IDD
  - Knowledge of **fatal four health conditions** that threaten well-being of people with IDD
  - Knowledge of **common dental issues** faced by people with IDD
  - Knowledge of **three DETECT clinic locations** in Mississippi
Create composite measure

- Recode all pretest and post-test quiz items as binary composite measure
  - Correct vs. incorrect responses: \( n = 447 \)
  - Significant improvement: \( p < 0.001 \)

- Add control variables: Experience in field, gender, race, and occupation
  - Significance persists: \( p < 0.001 \)
Objective Knowledge Gains

Clinician Knowledge (6-Item Quiz)

Pre-Seminar: 3.45
Post-Seminar: 4.72

Statistically significant change: $p < 0.001$
Subjective Self-Assessments

- Clinicians score themselves on a 100-point scale for effectively treating patients with IDD
  - Pre-seminar self-assessment score: 49.25
  - Post-seminar self-assessment score: 66.75
  - Proportional gain from seminar completion: 35.5% improvement over baseline
- Confidence-competence link: Clinician self-appraisals influence actual delivery of care
Subjective Self-Assessments

Barometer Self-Ratings (1 – 100)

Pre-Seminar: Mean Self-Ratings = 49.25
Post-Seminar: Mean Self-Ratings = 66.75

Statistically significant change: \( p < 0.001 \)
Conclusion
Summing Up

- DETECT of Mississippi successfully achieved, even exceeded, its goals
- Infrastructure enhancement through network formation, curricular change
- Knowledge dissemination through various conduits
  - Seminars, fact sheets, annotated bibliographies, conventional and social media
Summing Up

- DETECT as national model of clinician education for treatment of patients with IDD
- Ultimate aim: Alter IDD-related health disparities
  - NCI tracking permits aggregate impact to be assessed

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