

# Methamphetamine Treatment in Rural Western North Carolina

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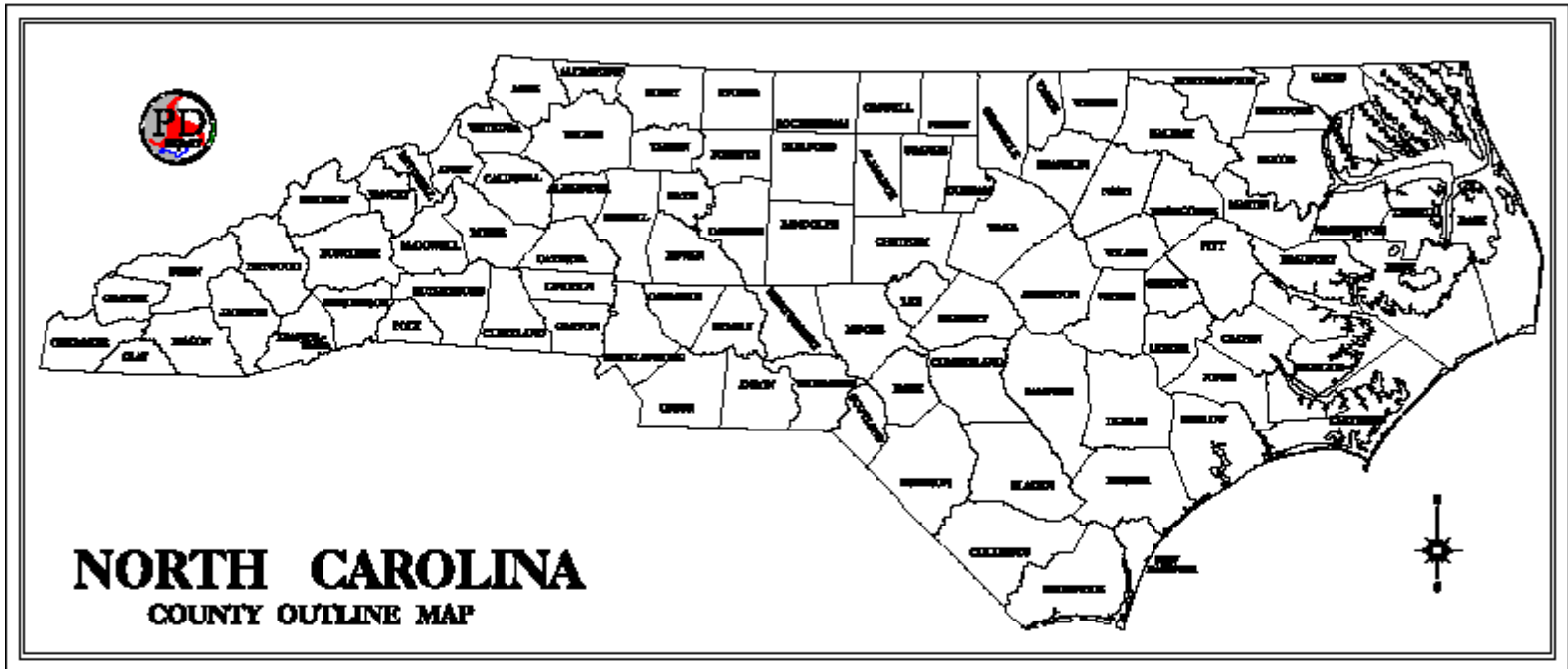


# Introduction

- 2003: ↑ in reports of manufacture (NCLD, 2008) and use
- Watauga County (WC): children found in labs  
→ Dept. of Social Services' (DSS) custody
  - children reside in approximately 1 / 3 of MA manufacture sites (NDIC, 2002)
- WC organized a team, which developed Meth Lab Response Protocol
- NC DMHDDSAS recognized need and encouraged submission of grant proposal

# Introduction (con't.)

- WC developed model treatment program, which eventually became Family Solutions (FS)
- By 2006, NC DMHDDSAS provided grants to 4 Local Management Entities (LMEs), each selected 2 counties to participate
  - New River: Watauga and Ashe (FS)
  - Foothills: Caldwell and McDowell
  - Smoky Mountain: Haywood and Macon
  - Western Highlands: Buncombe and Rutherford



(North Carolina Department of Transportation, 2010)

# Introduction (con't)

- Each LME was to develop its own treatment model
- Community collaboration and partnerships were encouraged
- Appalachian State University research team involved from the beginning
- NC Methamphetamine Initiative/ASU Partnership for Treatment Program Development and Evaluation

(Renkert, Reed-Ashcraft, & Thorp, 2008)

# Family Solutions Model

(Developed by NR, DSS, ASU, other agencies)

- Intensive treatment for meth user and family
- Rapid Entry intake process: DSS and FS staff conduct home visit within 24 hrs of abuse/neglect report to DS
- FS rapid entry assessment/intake occurs during acute 7–10 day withdrawal
- All family members assessed for treatment and service needs
- UDS or SDS administered on site

(Renkert, Reed–Ashcraft & Thorp, 2008)

# Family Solutions Model (con't.)

- Within 2 weeks, Support Network Intervention Team (SNIT) selected with client: family members, friends, FS clinicians/staff, DSS workers, other school, agency, and community reps (Winek et. al, 2010)
- SNIT developed and begins to meet during subsequent 2-week subacute phase

(For discussion of phases, see McGregor et. al, 2005)

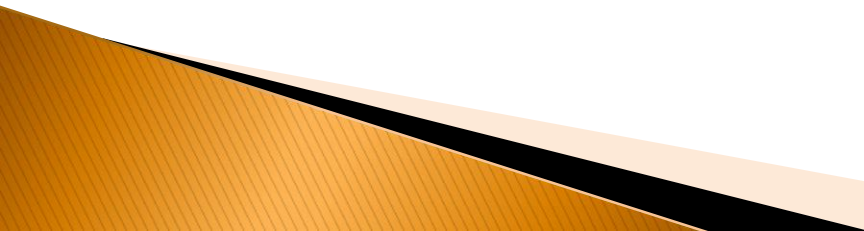
- SNIT met regularly: support, problem solving, overcomes barriers, accountability

# Family Solutions Model (con't.)

- Other interventions used as needed:
  - IOP, individual, family, and group therapies
  - AA/NA
  - Case management and support
  - Transportation, child care, and meals provided at group therapy meetings
  - Services delivered in homes, schools, community, and office



# Family Solutions Model (con't.)

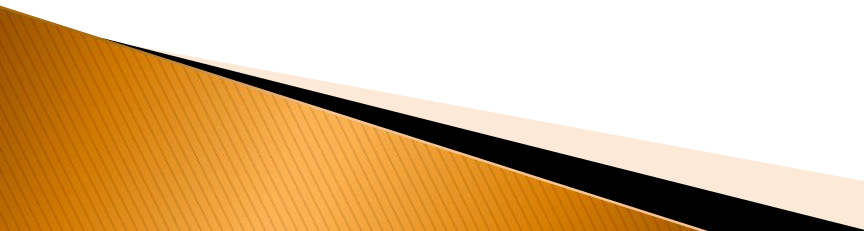
- UDS and SDS administered randomly and routinely
  - Clients progress through defined levels of treatment
  - Treatment  $\approx$  1 year
  - Weekly supervision (for treatment fidelity)
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# Matrix Model (Center for Substance Abuse Treatment, 2006;

Rawson et al., 2004)

- All other counties adopted this model
- NC DMHDDSAS encouraged use at all sites and provided ongoing training and supervision
- Manualized psycho-educational and cognitive-behavioral IOP treatment intervention
  - [http://www.kap.samhsa.gov/products/manuals/matrix/pdfs/counselor\\_treatment\\_manual.pdf](http://www.kap.samhsa.gov/products/manuals/matrix/pdfs/counselor_treatment_manual.pdf)
- 16 weeks: Early Recovery Skills, Relapse Prevention, Family Education, Social Support groups

# Matrix Model (con't.)

- AA, NA, and drug screens expected
  - Previous “graduate” becomes peer co-leader
  - Specific topics addressed in individual sessions and included in the manual
  - NC DMHDDSAS adopted the model as a Best Practice intervention
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# Program Evaluation

- 3 year longitudinal study 2004–07
- Quasi–experimental design with comparison groups to be selected from other NC counties
- Qualitative process evaluation surveyed clients , clinicians, administrators, n = 29

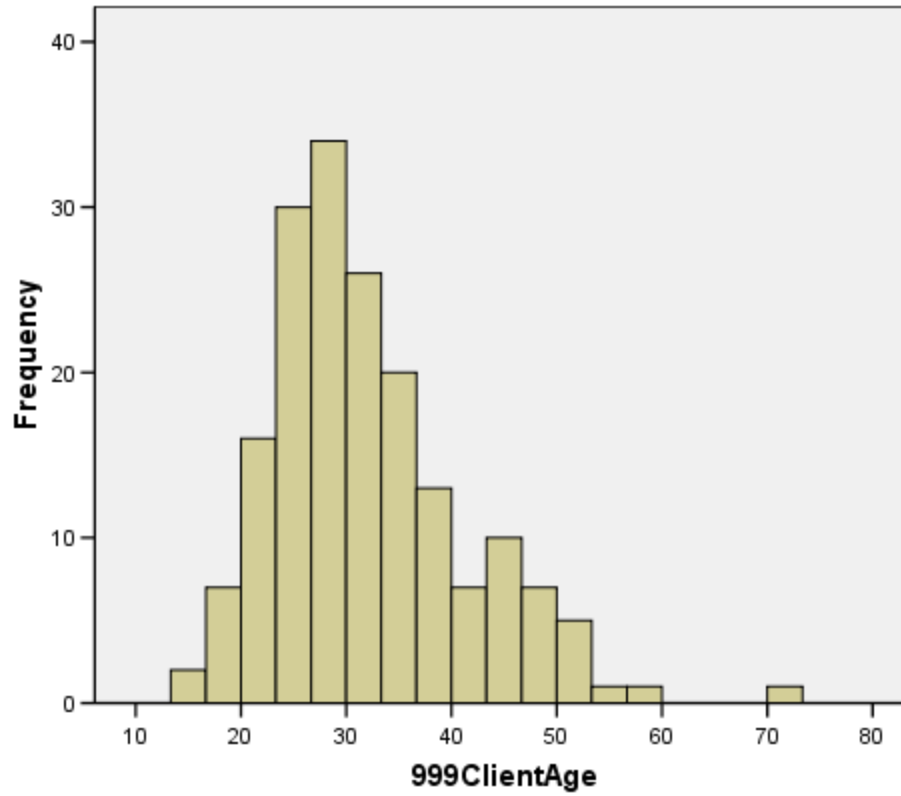
(Renkert, Reed–Ashcraft, & Thorp, 2008)

- Quantitative study included data collected from client case records at treatment sites and local DSSs, N = 317

# Demographics

Local Management Entity	n %
Foothills (Caldwell, McDowell)	19 7.6
New River (Ashe, Watauga)	123 49.4
Smoky Mountain (Haywood, Macon)	79 31.7
Western Highlands (Buncombe)	28 11.3
TOTAL	249 100

### Histogram



Mean = 32.16  
Std. Dev. = 9.248  
N = 180

# Demographics

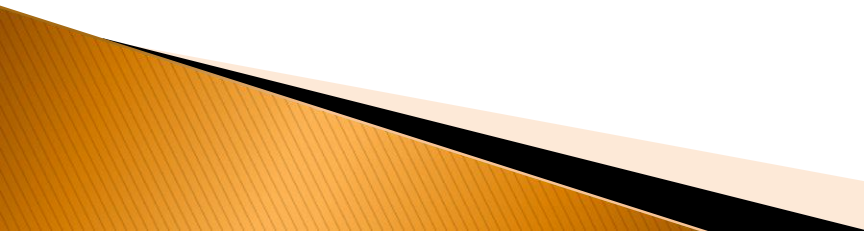
- Age:  $X = 32.2$  ( $SD = 9.25$ )
- 65% Female
- 92% Caucasian
  
- Marital Status
  - 45% never married
  - 31% divorced or separated
  - 22% married
  - 3% Widowed



## ➤ Education

- 54% less than high school
- 33% high school diploma or GED
- 13% some college or college degree (n = 1)

## ➤ Employment

- 32% employed (24% full-time)
  - 62.5% unemployed
  - 5.5% not in labor force
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# Preliminary Outcomes

# Treatment Length

➤ Significant Difference ( $p < .0001$ )

➤ Family Solutions

➤ Mean Days = 356 ( $SD = 269.7$ )

➤ Matrix

➤ Mean Days = 141.5 ( $SD = 131.4$ )


# Preliminary Outcome Variables

- Use based on UDS and SDS results
  - Average # = 8.6 (no difference between FS & Matrix)
  - Time period covered by UDS and SDS ( $p < .0001$ )
    - Family Solutions average 288 days
    - Matrix average 128 days
- (1) Ratio of positive screens to overall # of screens and (2) Continuous Abstinence Rates
  - Methamphetamine
  - Other Stimulants
  - Overall

# Ratio of positive screens/screens: Methamphetamine

- Significant difference between Family Solutions and Matrix,  $F(1, 248) = 5.09$ ,  $p = .025$
- Family Solutions: Mean = .03 ( $SD = .09$ )
- Matrix: Mean = .08 ( $SD = .23$ )

# Continuous Abstinence: Methamphetamine

- Overall, 80.2% of clients were continuously abstinent from methamphetamine
  - No differences were noted between Family Solutions (80.3%) and Matrix (80%)
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# Ratio of positive screens/screens: Other Stimulants

- No significant difference between Family Solutions and Matrix

# Continuous Abstinence: Other Stimulants

- Overall, 63.6% of clients were continuously abstinent from other stimulants
- No significant differences were noted between Family Solutions (59%) and Matrix (68%)



# Ratio of positive screens/screens: Overall

- No significant difference between Family Solutions and Matrix

# Continuous Abstinence: Overall

- Overall, 31.7% of clients were continuously abstinent
- Matrix (40.5%) resulted in higher levels of overall continuous abstinence compared to Family Solutions (22.8%),  $X^2 (df = 1, N = 249) = 9.01, p = .002$
- Possibly related to greater time-period assessed by drug screens (288 days vs. 128 days)


# Limitations

- Quasi-experimental design
- Future analyses to control for time in treatment
- “Real World” data collection:
  - Missing data
  - DMHDDSAS eventually allowed sites to serve other stimulant users
  - Undocumented inconsistencies regarding eligibility
  - Mandated changes to meet Medicaid Service definitions, including shortening to 14 weeks
  - Inconsistent fidelity across sites

# Implications: Who?

- Women
  - Caucasian
  - Early 30's
  - High school education or less
  - Unemployed
  - Never married
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- Similar to previous findings (Drug and Alcohol Services Information System, 2004)


# Implications: Treatment

- Treatment can work
  - Implications for real-world adoption of empirically-supported treatment programs even with various levels of fidelity
  - Implications for locally-developed, culturally-sensitive treatment programs
  - Appeared acceptable to clients
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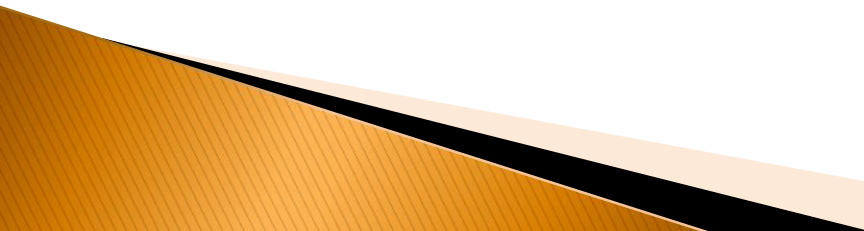
# Implications: Treatment

- MA-focused treatment effective for MA use:
  - ↑ # of clients were continuously abstinent throughout treatment across sites
  - FS sites had significantly lower ratio of positive drug screens for meth
- Higher rates of overall continuous abstinent in Matrix sites
  - Use of non-stimulant substance increases across time?
  - FS primary focus on MA?

# Future Research

- Implications of length of treatment and length of follow-up
  - FS model includes family treatment and often DSS involvement → child and family well-being outcomes to be examined across sites
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# Resources

## **Matrix Treatment Manual:**

[http://www.kap.samhsa.gov/products/manuals/matrix/pdfs/counselor\\_treatment\\_manual.pdf](http://www.kap.samhsa.gov/products/manuals/matrix/pdfs/counselor_treatment_manual.pdf)

<https://ncadistore.samhsa.gov/catalog/productDetails.aspx?ProductID=17441>