

# The Internal and External Impacts of the Clinical Trials Network: A View from a Longitudinal Platform Study

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## ABSTRACT

We overview ten years of findings from the University of Georgia's longitudinal platform study of the CTN. Our research shows a greater adoption of evidence-based practices (EBPs) in CTN affiliated community-based treatment programs (CTPs) than non-CTPs. CTN-affiliated counselors also hold more favorable attitudes toward EBPs.

## BACKGROUND & AIMS

The National Drug Abuse Treatment Clinical Trials Network (CTN) conducts multi-site clinical trials of substance abuse treatment techniques and translates these EBPs into everyday practice in order to improve the quality of substance abuse treatment in the U.S. A key feature of the CTN is the collaboration between researchers and CTPs in the design and implementation of these trials, which facilitates the dissemination of findings.

### AIMS:

- Study 1 compares the adoption of buprenorphine in CTN and non-CTN OTPs using data collected in 2006.
- Study 2 compares the adoption of buprenorphine and MI/CM in CTPs over 4-years using both longitudinal and repeated cross-sectional data.
- Study 3 contrasts the adoption of tablet naltrexone and acamprosate between publicly-funded CTPs and non-CTPs.
- Study 4 and 5, respectively, assesses differences in attitudes toward buprenorphine and motivational incentives / contingency management (MI/CM) between CTN-affiliated counselors and non-CTN affiliated counselors.

## METHOD

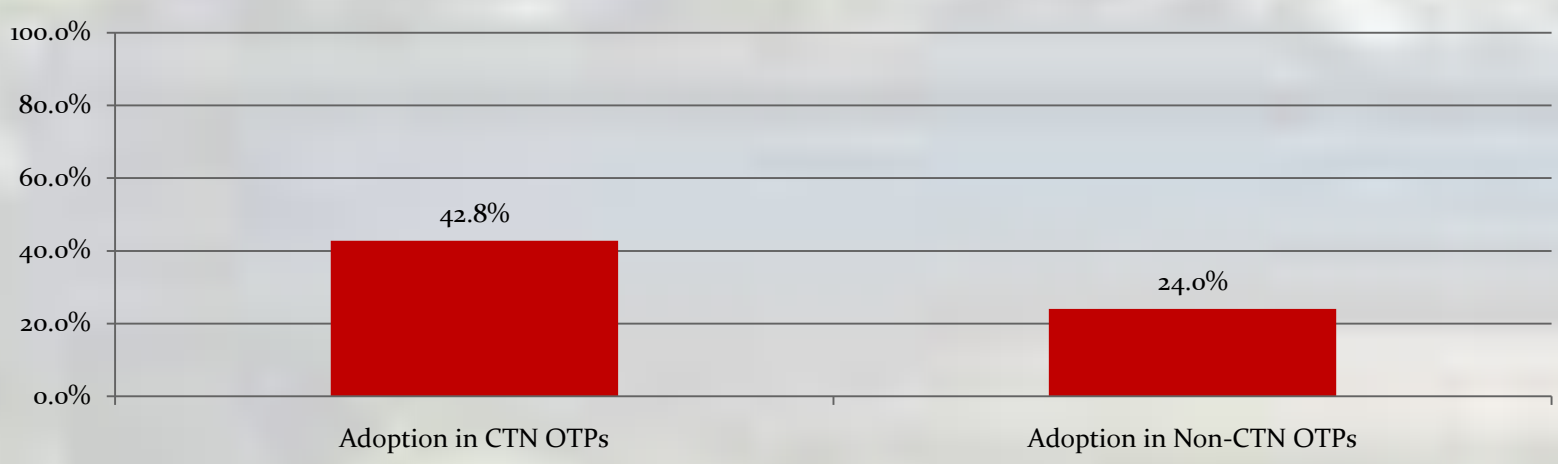
Data [longitudinal and (repeated) cross-sectional] for these analyses were collected from CTPs participating in the CTN (2000-2008). During the study period, three waves (baseline, 24-month follow-up and 48-month follow-up) of onsite data were collected via face-to-face interviews with administrators and/or clinical directors of eligible CTPs and via mail-based questionnaires with counselors employed in CTPs. Adoption was defined as current use of EBPs. Attitudes toward buprenorphine and MI/CM were measured with a Likert-type scale where 1=*completely unacceptable* to 7=*very acceptable*.

## SAMPLE

**Study 1:** Comparison between a matched sample of 49 OTPs in the CTN to a nationally representative sample of 50 non-CTN OTPs drawn from SAMHSA's 2005 treatment facility locator.  
**Study 2:** Repeated-cross sectional data consisted of 241 CTPs at baseline, 215 CTPs at 2-year follow-up (FU), and 198 CTPs at 4-year FU. Longitudinal data consisted of 129 CTPs that participated in all waves.  
**Study 3:** 147 CTPs at baseline and 127 CTPs at 2-yr FU; 362 non-CTPs at baseline and 244 non-CTPs at 2-yr FU.  
**Study 4:** 561 CTN-affiliated counselors and 1745 non-CTN affiliated counselors reported on attitudes toward buprenorphine.  
**Study 5:** 749 CTN-affiliated counselors and 1,210 non-CTN affiliated counselors reported on attitudes toward MI/CM.

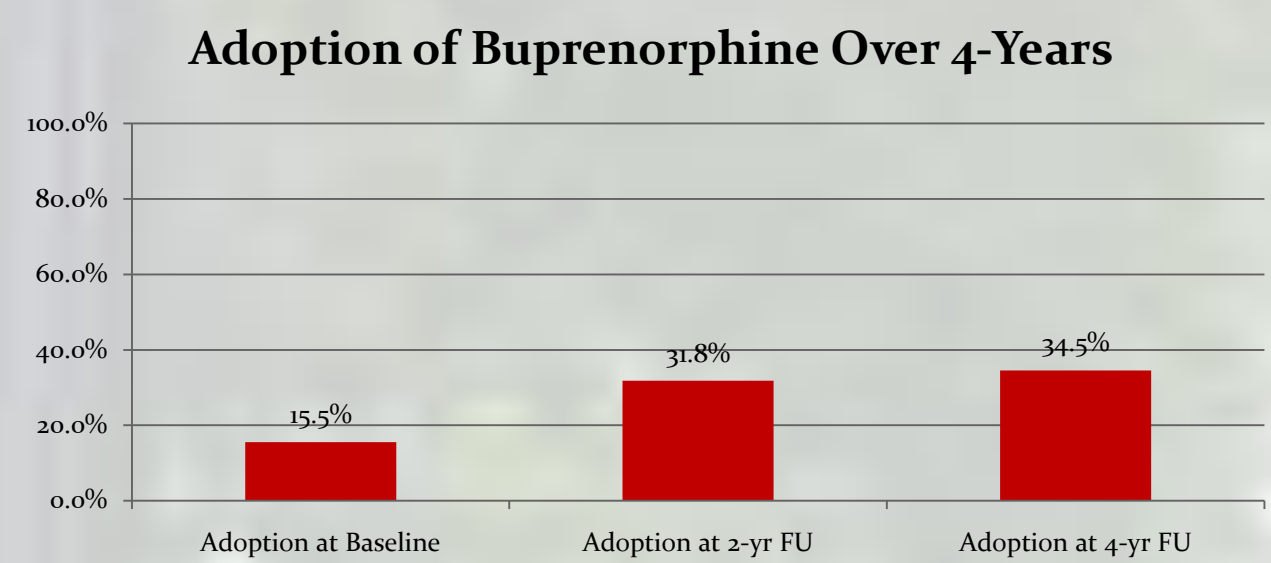
## RESULTS: STUDY 1

**Adoption of Buprenorphine in OTPs** (Ducharme & Roman, 2009, JSAT)  
•CTN affiliation was significantly associated with buprenorphine adoption: CTN OTPs were **twice** as likely as non-CTN OTPs to adopt buprenorphine, controlling for profit-status & staff characteristics (i.e., number of employees, nurses, and % master's level counselors). CTN OTPs were **three times** more likely to adopt buprenorphine, controlling for program census.

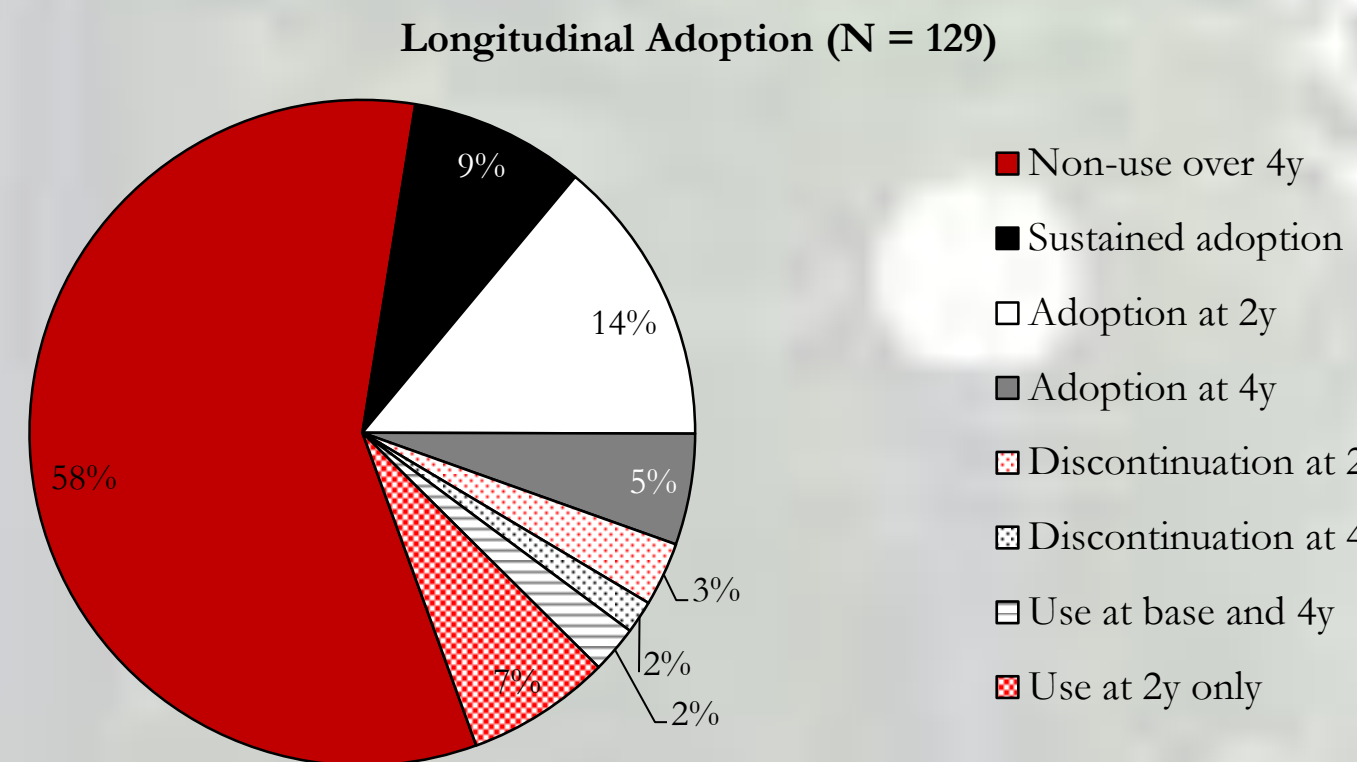


## RESULTS: STUDY 2

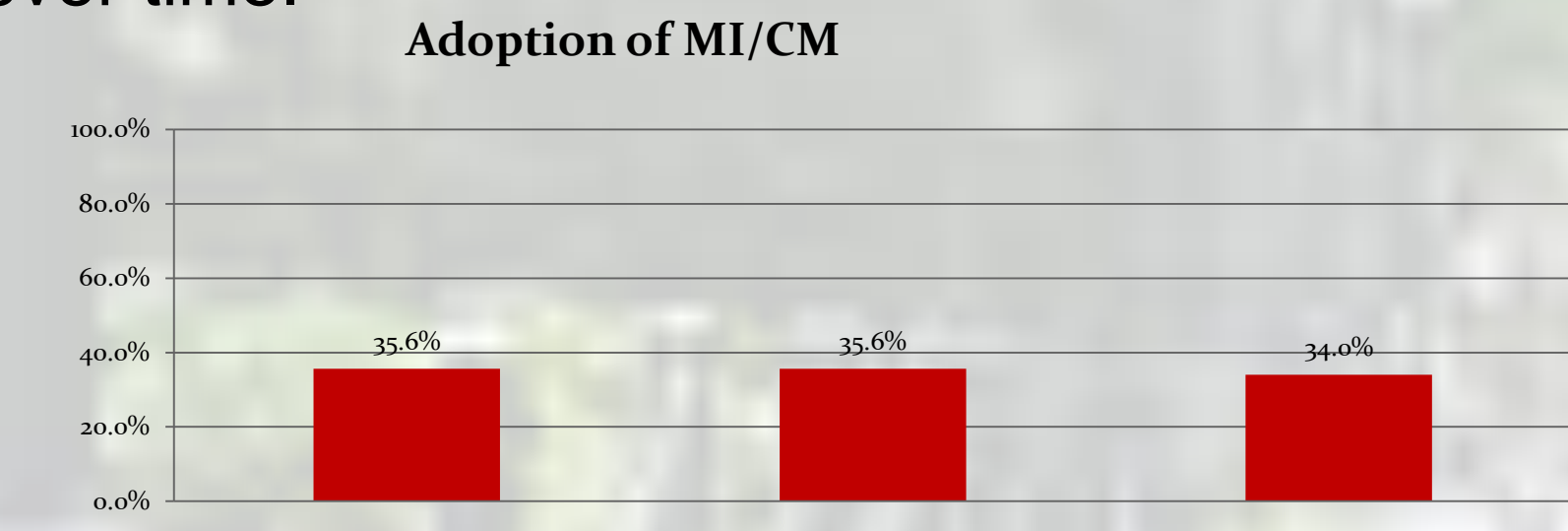
**Adoption of Buprenorphine with Cross-sectional and Longitudinal Data** (Knudsen et al., 2009, JSAT; Roman et al., in press, JSAT)  
•Repeated cross-sectional data show considerable expansion in the number of CTPs offering buprenorphine over four-years.



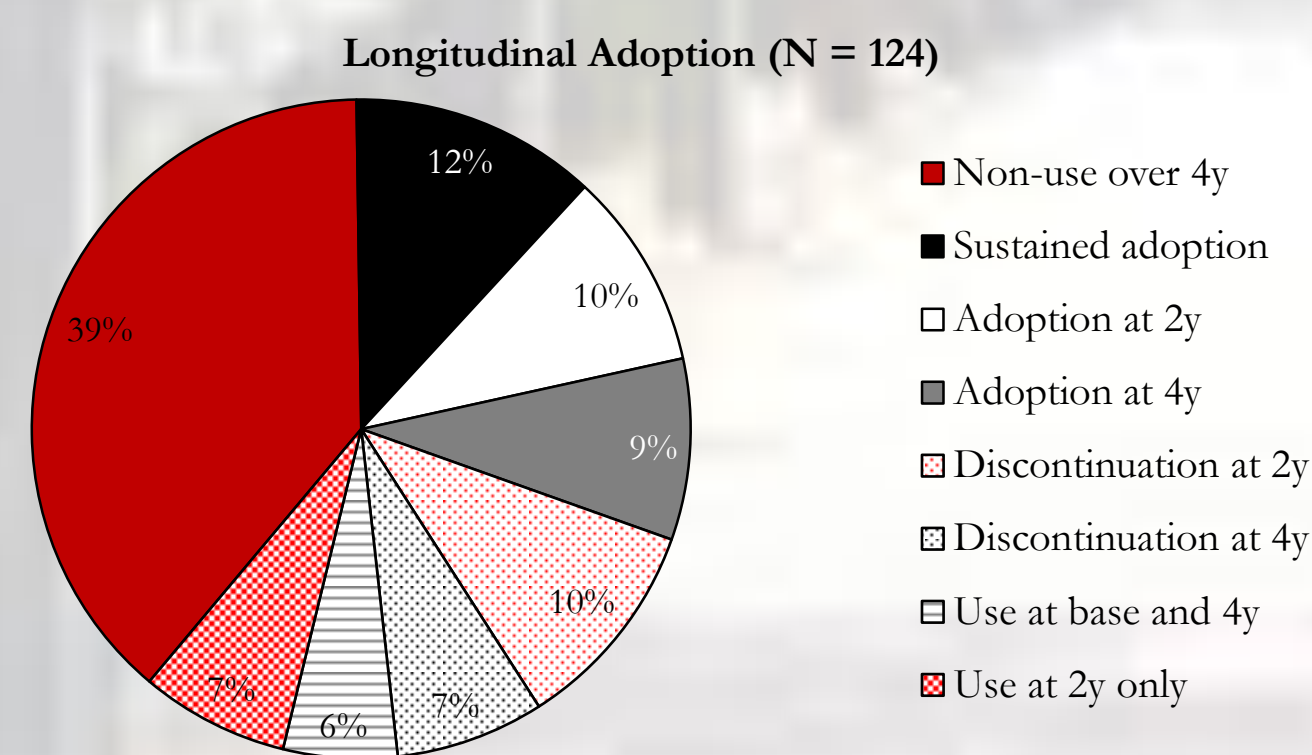
•A more complicated picture emerges when the cohort of CTPs that were in the CTN for all 48-months (n=129) are analyzed.



**Adoption of MI/CM with Cross-sectional and Longitudinal Data** (Roman et al., 2010, JSAT)  
•Repeated cross-sectional data show a remarkably flat adoption of MI/CM over time.

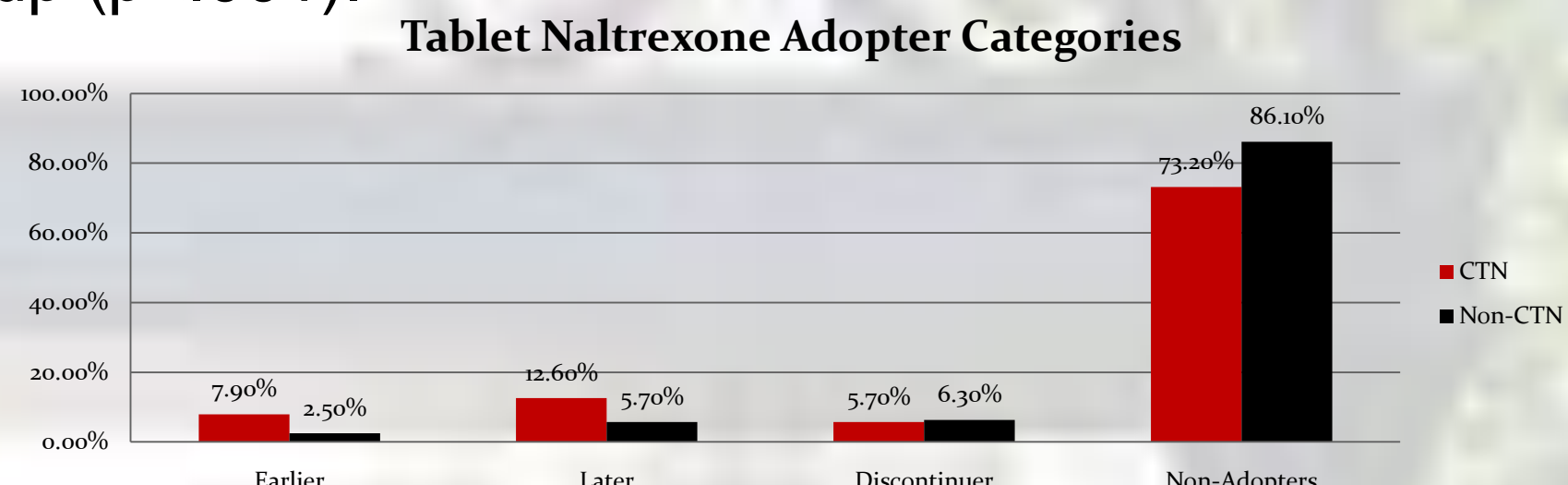


•A more dynamic picture emerges when the cohort of CTPs that were in the CTN for all 48-months (n=124) are analyzed.



## RESULTS: STUDY 3

**Study 3: Adoption of Tablet Naltrexone and Acamprosate over Time** (Abraham et al., 2010, JSAT)  
•There were significant differences between CTN and non-CTN programs in the typology of tablet naltrexone adopters (p<.05).  
•A greater percentage of CTN programs (20.33%) compared to non-CTN programs (6.28%) adopted acamprosate at 24-month follow-up (p<.001).



•CTN programs were 3X more likely than non-CTN programs to adopt tablet naltrexone and acamprosate at 24-month follow-up, net of the effects of organizational characteristics.

Logistic Regressions: Adoption of Naltrexone & Acamprosate in 2006

	Naltrexone OR	Acamprosate OR
CTN participation	3.18**	3.53**
FTEs (log)	.99	1.00
Administrator degree	1.39	.94
Accredited	2.25	1.04
Environmental Scanning	1.07	1.08
Collection of Satisfaction Data	1.08	.97
12-Step meetings held	1.28	1.28
Provider Association	1.09	1.21
Referrals from Legal System	1.00	1.00
% Master's Level Counselors	1.01	1.01 *
Prescribing Physician	3.02	3.37 *
Government Owned	5.04**	1.15
Baseline Adoption	4.78**	N/A
McKelvey & Zavonia's R <sup>2</sup>	.40	.28

## RESULTS: STUDY 4

**Study 4: Counselor Attitudes toward Buprenorphine** (Knudsen, Ducharme, & Roman, 2007, AJA)  
•CTN-affiliated counselors viewed buprenorphine more favorably.  
•Exposure to this EBP via training and program use were strong predictors of favorable attitudes of both counselors.

## RESULTS: STUDY 5

**Study 5: Counselor Attitudes toward MI/CM** (Ducharme, Knudsen, Abraham, & Roman, in press, AJA)  
•CTN counselors were more supportive of using tangible prizes to reward abstinence than non-CTN counselors, even after controlling for whether the program had adopted motivational incentives/contingency management (MI/CM).  
•This difference in attitudes was partially mediated by the amount of training that counselors had received about MI/CM. CTN counselors had received significantly more training than non-CTN counselors.  
•Exposure to MI/CM via training was more strongly associated with attitudes when counselors worked in programs that had adopted MI/CM. While there is substantial resistance to MI/CM, dissemination and training about the essential elements of MI/CM may enhance counselors' receptivity toward this intervention.

## CONCLUSIONS-SIGNIFICANCE

•These data indicate that the CTN is fulfilling its goal of increasing the quality of treatment within its constituent CTPs as indicated by the adoption of EBPs.  
•Our findings also demonstrate the importance of a research network in promoting adoption of EBPs and fostering a higher level of receptivity to innovation adoption in general.  
•Although not addressed in this presentation, multiple barriers to the use of these innovations remain. Included are beliefs that either medications or reward-based motivators are inconsistent with the treatment ideologies of both individuals and programs. Also, there is a notable element of non-acceptance of the scientific evidence supporting these EBPs, or a belief that the evidence is inadequate.

•Ongoing research will continue to monitor the impact of the CTN on participating CTPs and the wider treatment community.

•Findings also suggest that the value of research involvement extends beyond interventions tested in the CTN protocols.

### Limitations

•Participating CTPs do not reflect a nationally representative sample and findings may not generalize to other organizations.  
•Measures of adoption relied on self-reports by administrators; thus, it is possible that descriptions of their programs may be biased. However, we note that reliance on program self-reports is consistent with other studies of organizational innovation adoption.  
•Third, although our study addressed the adoption of buprenorphine, naltrexone, acamprosate, and MIs (i.e., any current use of the intervention), we do not examine the implementation (i.e., routine use) of these innovations. Future research should examine the extent to which programs use these interventions in everyday treatment practice and assess the fidelity with which these practices are implemented.

### Acknowledgements

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## REFERENCES

•Abraham, A. J., Knudsen, H. K., Rothrauff, T. C., & Roman, P. M. (under review). The adoption and implementation of alcohol pharmacotherapies in the Clinical Trials Network.  
•Ducharme, L. J., Knudsen, H. K., Abraham, A. J., & Roman, P. M. (in press). Counselor attitudes toward the use of motivational incentives in addiction treatment. *The American Journal on Addictions*.  
•Ducharme, L. J., & Roman, P. M. (2009). Opioid treatment programs in the Clinical Trials Network: Representativeness and buprenorphine adoption. *Journal of Substance Abuse Treatment*, 37, 90-94.  
•Knudsen, H. K., Ducharme, L. J., & Roman, P. M. (2007). Research network involvement and addiction treatment center staff: Counselor attitudes toward buprenorphine. *The American Journal on Addictions*, 16, 365-371.  
•Roman, P. M., Abraham, A. J., Rothrauff, T. C., & Knudsen, H. K. (in press). A longitudinal study of organizational formation, innovation adoption, and dissemination activities within the Clinical Trials Network of the National Institute on Drug Abuse. *Journal of Substance Abuse Treatment*.