



Antiretroviral Adherence over Six Months Following Prison Release in a Randomized Trial of the imPACT Intervention to Maintain Suppression of HIV Viremia

Bethany DiPrete¹, Brian Pence¹, Carol Golin¹, Kevin Knight², Patrick Flynn², Jessica Carda-Auten¹, Jennifer Groves¹, Kimberly Powers¹, Michelle Gould², Becky White¹, Sonia Napravnik¹, David Wohl¹

¹ University of North Carolina at Chapel Hill

² Texas Christian University

Background

- Treatment as Prevention (TasP) improves personal and public health.
- HIV prevalence among prisoners is 3-5x that of the general US population.
- Many HIV+ prisoners do not engage or remain in care following release from prison.
- Low adherence to ART and lack of engagement leads to loss of viral suppression following release from prison.



Study Objectives

- Project imPACT (individuals motivating to participate in adherence, care and treatment)
 - A randomized trial to test the effectiveness of a comprehensive linkage to care and adherence intervention on maintaining viral suppression following prison release.
 - Project imPACT primary outcome: viral suppression
- This study's primary outcome: adherence to antiretroviral therapy following release from prison.





Three main components of
Project imPACT

**Motivational Interviewing (MI) sessions
with accompanying videos**

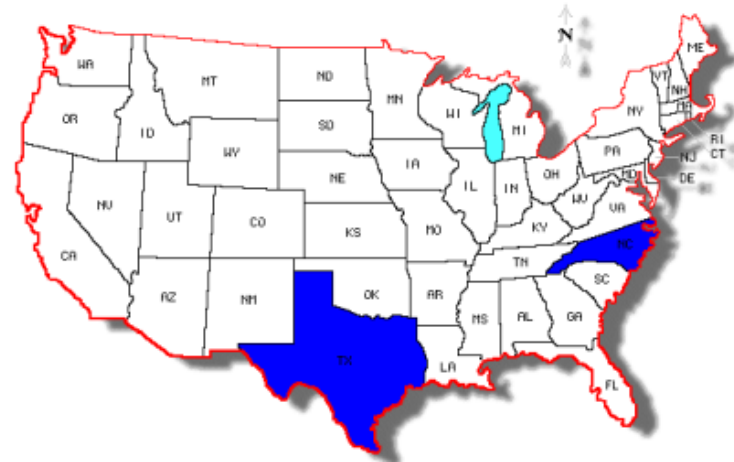
Brief Link Coordination

Text Messages (SMS)



Setting

- NC and Texas
- 90+% of inmates tested at prison entry.
- HIV care/ART provided for free during incarceration.
- Routine discharge planning prior to release.
- Supply of ART given at release
 - TX: 10 days
 - NC: 30 days



Study Eligibility

- At least 18 years old, English-speaking
- Incarcerated in a prison in:
 - Texas Department of Criminal Justice (TDCJ)
 - North Carolina Department of Public Safety (NCDPS)
- Documented HIV+, ART, viral load < 400 copies/mL
- Within 12 weeks of prison release
- Not convicted of violent offenses
(i.e. involving serious injury, sexual assault, or death)

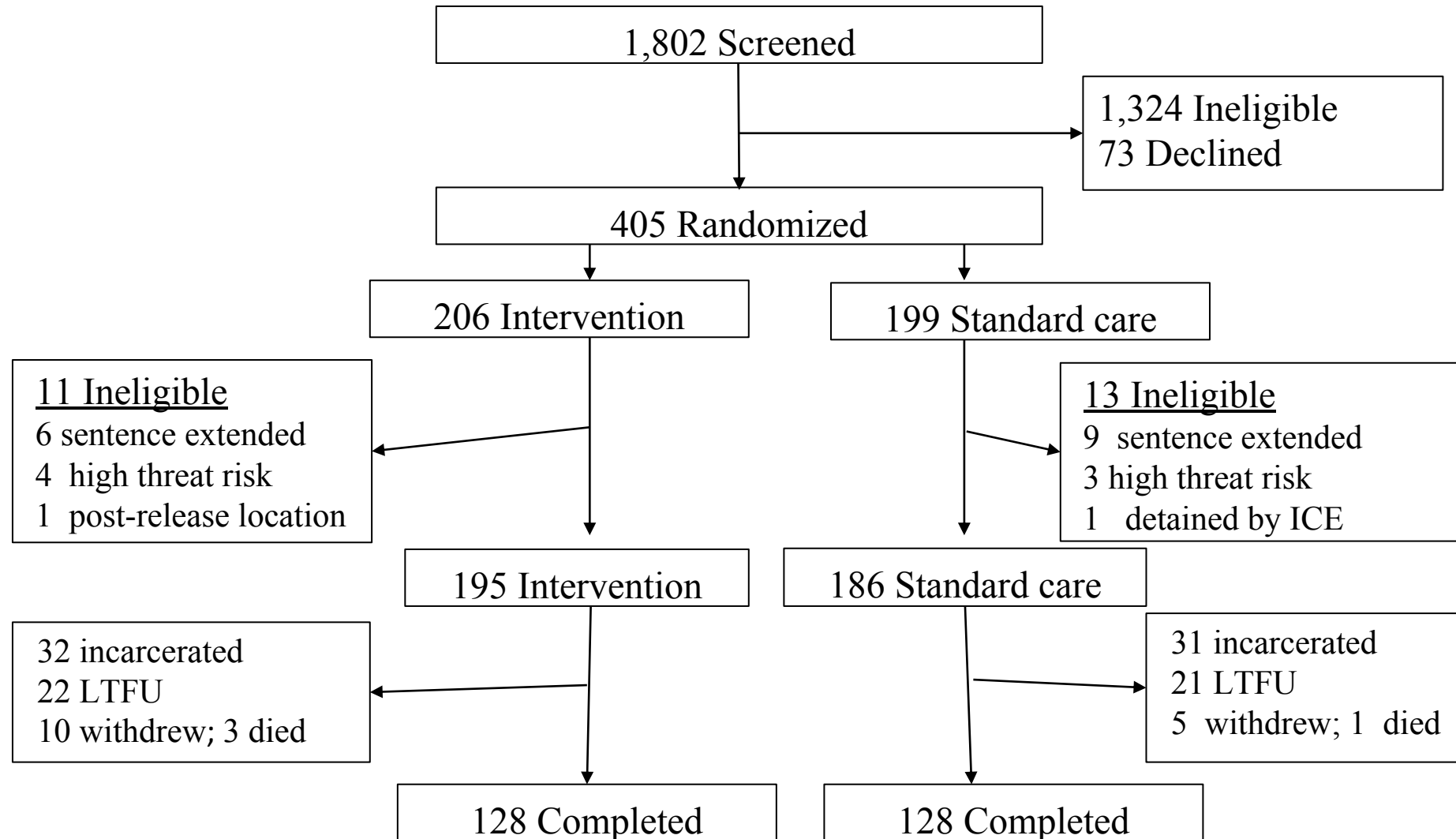


Methods

- Examined the effect of the intervention post-release on ART adherence.
 - Measured at unannounced telephone pill counts, conducted monthly for 6 months.
- Adherence: ratio of observed pills taken to expected pills taken at each telephone count.
- Intent to treat analysis
- Complete case



Study Participation



Participant Characteristics

Characteristic	Intervention (N = 195)	Standard Care (N = 186)	All Patients (N = 381)
Age - year			
Median	44	43	44
Interquartile range	35 - 49	34 - 50	35 - 49
Male sex - no. (%)	147 (79)	150 (77)	297 (78)
Race - no. (%)			
White	46 (24)	39 (21)	85 (22)
Black	121 (62)	128 (69)	249 (65)
Other	28 (14)	19 (10)	47 (12)
Hispanic - no. (%)	7 (6)	12 (9)	27 (7)
CD4 cell count/mm			
Median	490	511	505
Interquartile range	339 - 709	300 - 734	328 - 724
HIV RNA copies/ml - no (%)			
<400	194 (99)	186 (100)	380 (>99)
≥400	1 (<1)	0	1 (<1)
History of substance use – no. (%)	127 (68)	116 (66)	243 (67)
Incarceration length - year			
Median	0.77	0.84	0.81
Interquartile range	0.49 - 1.82	0.50 - 1.92	0.49 - 1.88



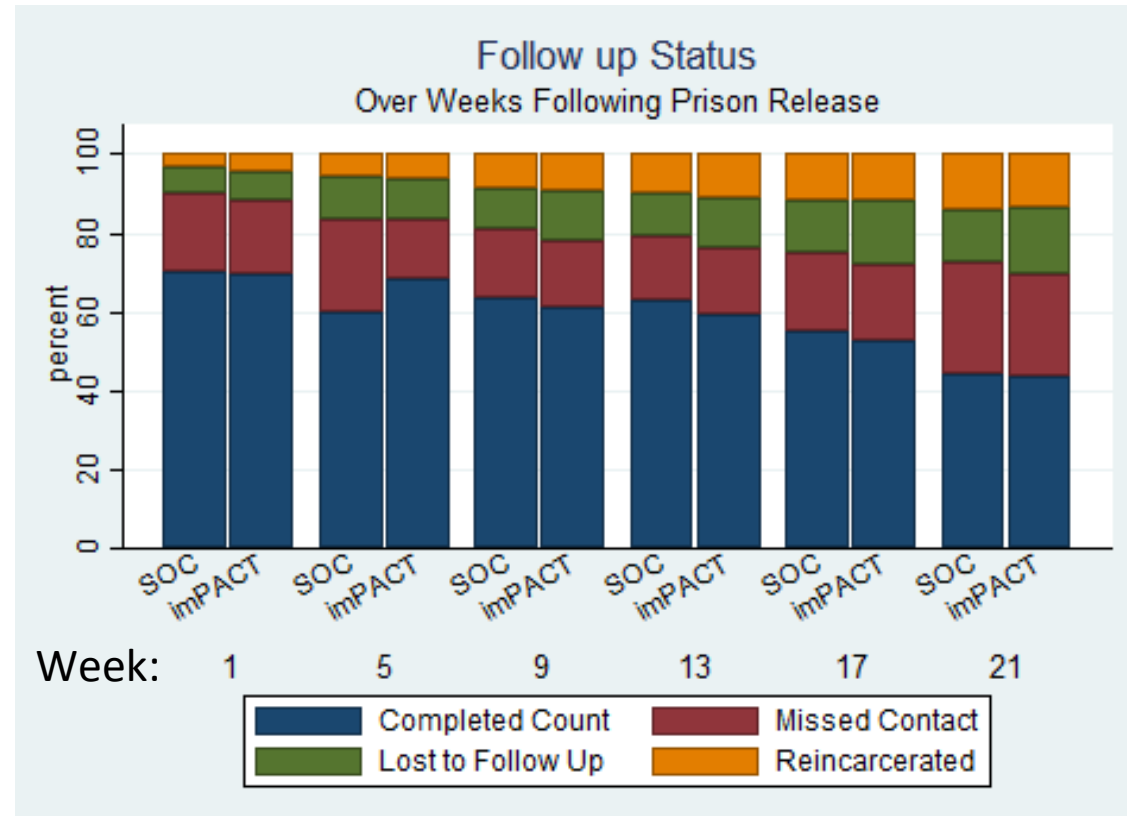
Participant Characteristics

Characteristic	Intervention (N = 195)	Standard Care (N = 186)	All Patients (N = 381)
Health and wellbeing - no (%)			
Excellent	58 (30)	53 (28)	111 (29)
Very good / good	101 (52)	93 (50)	194 (51)
Fair / poor	36 (18)	40 (22)	76 (20)
Psychological distress - no (%)			
< High	129 (66)	133 (72)	262 (69)
High	22 (11)	24 (13)	46 (12)
Very high	44 (23)	29 (16)	73 (19)
Education - no (%)			
Some high school	76 (39)	80 (43)	156 (41)
High school / GED	73 (37)	61 (33)	134 (35)
Some college / trade school	46 (24)	45 (24)	91 (24)
Marital Status - no (%)			
Married	33 (17)	24 (13)	57 (15)
Formerly married	47 (24)	35 (19)	82 (22)
Never married	115 (59)	127 (68)	242 (64)
Functional health literacy - no (%)			
Inadequate	7 (3)	5 (4)	12 (4)
Adequate	13 (9)	8 (6)	21 (8)
Functional	121 (86)	122 (90)	243 (88)

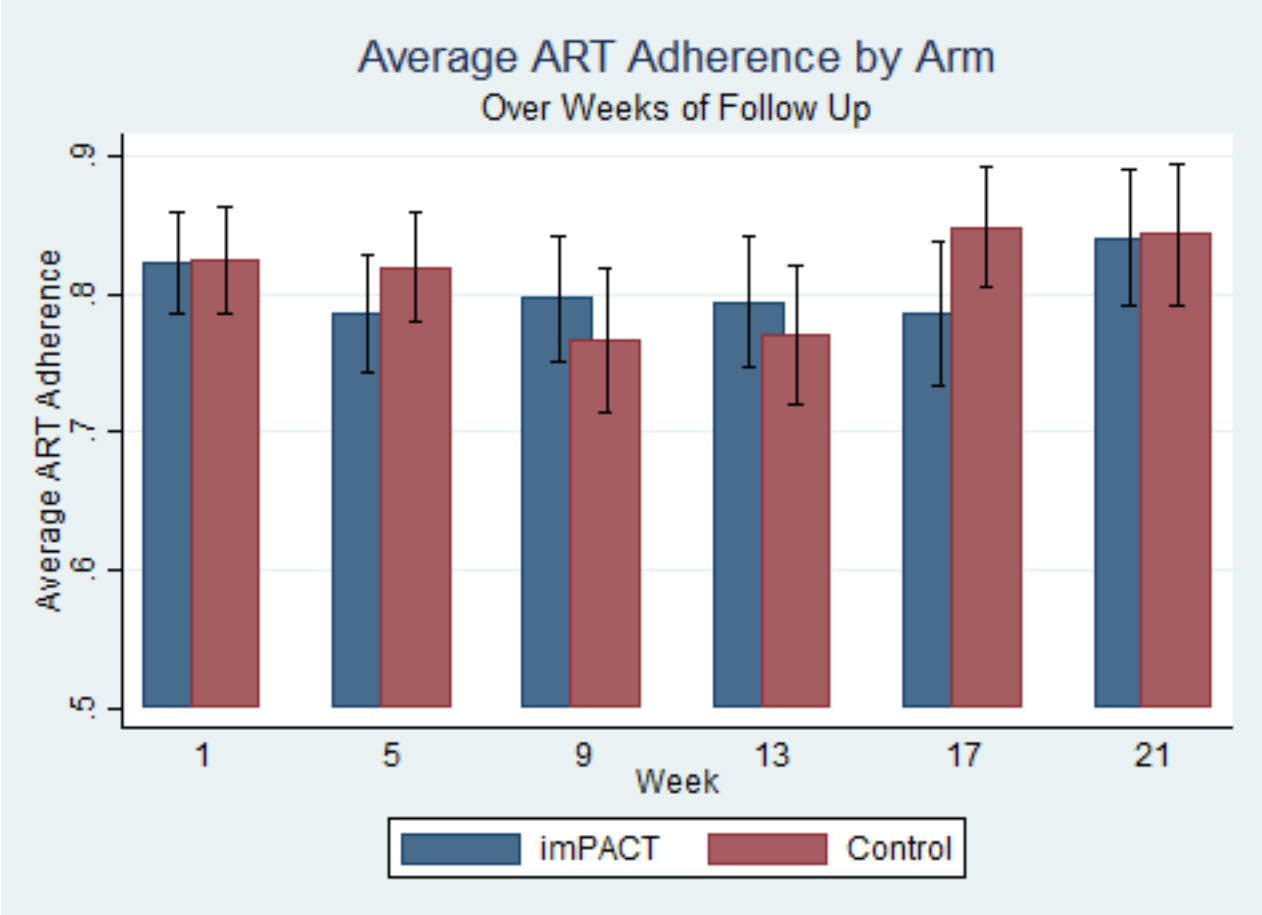


Rates of pill count completion

- 302 (79%) participants completed at least 1 pill count over 6 months
 - Median: 3
 - IQR: 2-5
- 63 (17%) re-incarcerated
- Those LTFU were less adherent before being lost
 - No difference between arms



Results: Adherence



Overall adherence: imPACT- 80.3% (SD 2.4)

Control- 81.0% (SD 2.5)

Limitations

- Missing Data - Loss to follow up
 - Re-incarceration - balanced between arms
 - Missed contacts
 - Next steps: Apply multiple imputation
- Two state prison systems
- Imperfect measure of adherence

Conclusions

- ART adherence averaged >80% in both arms through 6 months after release from prison among those who completed pill counts.
- No difference between study arms, consistent with primary outcome of the trial.
- Factors independent of intervention influence ART adherence.
- Future targeted interventions needed.

Acknowledgements

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imPACT co-Investigators:

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Sonia Napravnik (UNC)
Kim Powers (UNC)

imPACT Project Managers:

Jessica Carda-Auten (UNC)
Michele Gould (UNC)

imPACT Data Manager:

Jennifer Groves

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Questions?

Bethany DiPrete
Doctoral student
Department of Epidemiology
University of North Carolina at Chapel Hill
diprete@email.unc.edu

