



RESEARCH REPORT

Arches Transformative Mentoring Program

An Implementation and Impact Evaluation in New York City

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NYC Opportunity Response to Urban Institute Evaluation of Arches Transformative Mentoring

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The Arches Transformative Mentoring program (Arches) advances New York City's commitment to maintain public safety through community-based programming that supports personal development as a mechanism to avoid future criminal activity. Through a combination of credible messenger mentoring and an evidence-based curriculum, *Arches reduces one-year felony reconviction by over two-thirds and reduces two-year felony reconviction by over half*. These findings demonstrate the promise of combining an evidence-based curriculum and credible messenger mentoring to achieve recidivism reduction.

This evaluation report reflects the findings of a qualitative and impact evaluation of Arches, a group mentoring program serving young adult probation clients ages 16 to 24. Arches uses an evidence-based interactive journaling curriculum centered on cognitive behavioral principles, delivered by mentors with backgrounds similar to those of their mentees, known as “credible messengers,” direct service professionals with backgrounds similar to the populations they serve, often including prior criminal justice system involvement. Launched in 2012 as part of the NYC Young Men's Initiative (YMI) and with private funding from Bloomberg Philanthropies and oversight from the Mayor's Office for Economic Opportunity (NYC Opportunity), Arches is managed by the NYC Department of Probation (DOP) and currently operates with City funding at 13 sites across the five boroughs.

The evaluation was conducted using a matched comparison group to assess the impact of Arches on participant outcomes, including recidivism reduction; to explore participant and staff experiences in and attitudes toward the program; to identify practices associated with successful programmatic operation and positive outcomes; and to develop recommendations for program enhancement.

The evaluation finds that Arches participants are significantly less likely to be reconvicted of a crime. Relative to their peers, felony reconviction rates among Arches participants are 69 percent lower 12 months after beginning probation and 57 percent lower 24 months after beginning probation. This impact is driven largely by reductions among participants under age 18. The evaluation also indicates the program helps participants achieve improvement in self-perception and relationships with others.

Pre- and post-assessment show gains in key attitudinal and behavioral indicators, including emotion regulation and future orientation. Qualitative findings show that participants report very close and supportive relationships with mentors, attributed to mentors' status as credible messengers, their 24/7 availability for one-on-one mentoring, and a "family atmosphere" within the program.

The report presents several recommendations to enhance the Arches program model and capitalize on its success, including better tailoring the content of the curriculum to reflect the lived experience of the participant population, increasing the frequency and length of programming to support participant engagement, and introducing wraparound and aftercare services. The report highlights the potential for expanded collaboration across Arches providers to improve knowledge sharing and adoption of best practices, as well as enhanced partnerships between Arches providers and other young adult programming to supplement service delivery and grow community awareness of the program. The report also calls for expanded mentor supports, including opportunities for full-time employment and advanced training.

This evaluation confirms that Arches is an impactful program with demonstrated ability to reduce participant recidivism and great promise to produce sustainable attitudinal and behavioral change for justice system-involved young adults. New York City has already formalized its commitment to Arches through the new allocation of City funding to sustain the program following the completion of Bloomberg Philanthropies grant funding. Additionally, as part of the Mayor's Action Plan for Neighborhood Safety, the Mayor's Office of Criminal Justice has launched the Next STEPS program, a modified version of Arches targeted to serve young adults at risk of justice-system involvement who reside in select high-crime New York City Housing Authority developments.

NYC Opportunity is working with DOP to carefully consider the programmatic recommendations presented in this report and work with providers to determine program improvements. Moreover, the findings from this evaluation will inform NYC Opportunity and YMI work related to the development of new young adult justice programming and policy. Finally, NYC Opportunity will partner with DOP in the broad dissemination of this research to support Arches program replication in other jurisdictions and to advance the implementation of impactful, evidence-based programming for justice system-involved young adults.

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Executive Summary

The Arches Transformative Mentoring program (Arches) is a New York City-based group mentoring intervention that serves young people ages 16 to 24 who are on probation. With funding from Bloomberg Philanthropies, Arches was launched in 2012 as a component of the New York City Young Men’s Initiative, a public-private municipal strategy to reduce inequities between young men of color and their white peers in the areas of education, employment, health, and justice. It is part of a larger effort to establish a strong and comprehensive community-based continuum of care for justice-involved young people.

Arches is administered by the New York City Department of Probation (DOP), one of the largest community corrections agencies in the nation. DOP determines whether juveniles are eligible for diversion from prosecution and provides community supervision for some 25,000 adults and juveniles. DOP has implemented several initiatives designed to strengthen communities and improve outcomes for justice-involved young people and their families. The Neighborhood Opportunity Network (NeON) is a citywide network of community-based DOP offices that partner with other agencies, schools, businesses, nonprofits, community- and faith-based organizations, and local residents in the seven neighborhoods of New York City where large concentrations of people on probation reside. At NeONs, people on probation can meet with their probation officers and receive a wide range of services, such as High School Equivalency classes, employment preparation, mentoring, health care, and literacy programs, and participate in arts and sports activities. Many of these programs and resources are also available to other community residents at no cost.

The Arches program model delivers intensive group mentoring sessions using an Interactive Journaling (IJ) curriculum based on cognitive behavioral therapy principles. Arches mentors are “credible messengers,” people with backgrounds and characteristics similar to the populations they serve, who develop robust relationships with program participants built upon authentic shared experiences and understanding. Mentors are trained to facilitate group mentoring sessions and are expected to be available for additional one-on-one meetings with mentees, using motivational interviewing in both contexts. Participants typically take 6–12 months to complete the program, which consists of 48 group sessions and four IJ course books. Arches is based on the idea that credible messengers are best positioned to engage the young people who are hardest to reach.

From November 2015 to June 2017, the Urban Institute (Urban) conducted an implementation and impact evaluation of Arches. The implementation evaluation collected qualitative data from several

sources, including focus groups with Arches participants and alumni; in-depth interviews with program directors, mentors, DOP staff, and various other stakeholders; and direct observation of programming. These data were entered into a qualitative data analysis software package and analyzed to discern important themes.

For the impact evaluation, Urban used a quasi-experimental design to examine rearrests and reconvictions for 279 Arches participants compared with a group of 682 young people who began probation at approximately the same time but who did not participate in Arches. Treatment cases (i.e., Arches participants) were matched to one or more comparison group cases using a technique called propensity score matching, and outcomes are compared in this matched sample.

Results of the implementation evaluation suggest that Arches has several strengths:

- Management of the program by DOP was viewed favorably in stakeholder interviews.
- Stakeholders generally believed that different Arches sites had positive relationships with each other.
- Mentees reported very close relationships with their mentors and appreciated that mentors had backgrounds similar to their own and were available at any time, day or night.
- Program stakeholders reported that the training and technical assistance provided to the mentors was of high quality.
- Individual Arches sites innovated on program components, for example, adding a restorative justice circle approach in addition to the IJ course books.

The results of the impact evaluation indicate that Arches was generally successful:

- Arches participants were less likely to be reconvicted of a crime than members of the comparison group.
 - » In the matched sample, 1.8 percent of participants were reconvicted within 12 months of beginning probation versus 5.9 percent of the comparison group.¹
 - » Twenty-four months after beginning probation, 6.2 percent of participants had been reconvicted versus 14.3 percent of the matched comparison group.²
 - » At both 12 and 24 months, the comparison group had more than double the percentage of felony reconvictions than the Arches group.³
- There is evidence that Arches was particularly successful for participants ages 17 and younger.⁴

- » At 12 months, the comparison group had significantly higher rates of any arrest and any reconviction.
- » At 24 months, the comparison group had significantly higher rates of felony arrest, any reconviction, and felony reconviction.

Both evaluations highlighted the strengths of Arches, but stakeholders also identified several ways to improve the program:

- Interviewees noted that the referral process into Arches was complicated by poor communication with probation officers, whose referrals program sites depend on to achieve adequate enrollment.
- Most interviewees said that a six-month program was not long enough.
- Direct observation of group mentoring sessions suggests that mentors could be more proficient in facilitation. Many interviewees also said the mentor training should be expanded to put more emphasis on developing group facilitation skills.
- Stakeholders identified strengths and limitations of the curriculum, noting that it is designed for the convenience of people in detention settings, not for people on probation whose attendance may be inconsistent. A curriculum that takes into consideration the fluidity of a probation population through an iterative application of session materials may be more effective.
- Although a performance measurement strategy was in place, stakeholders questioned whether that strategy is suited to maximally monitor and improve site-specific performance in the future.

Based on the impact and implementation evaluations, we make the following recommendations to further improve this already successful program:

- Increase focus on mechanisms that support consistent application of services across all sites.
- Incorporate trauma-informed principles and crisis intervention strategies into training modules for mentors.
- Tailor IJ curriculum to align with the real-world experiences, resources, and expectations of participants.
- Support mentors through increased training and opportunities for full-time employment and advanced education.

- Expand program length, alumni engagement, and aftercare services for participants to better address positive youth development outcomes.
- Create additional opportunities to collaborate between Arches sites.
- Incorporate site-specific program data into day-to-day decisionmaking and institute new data collection practices to improve group facilitation.
- Increase community engagement and collaboration with local youth-supported organizations.
- Increase funding (e.g., more full-time mentors per site) and operational capacity (e.g., expanded wraparound services).

Introduction

From November 2015 to March 2017, the Urban Institute (Urban) conducted an evaluation of the Arches Transformative Mentoring program (Arches) by request of the Mayor's Office for Economic Opportunity's (NYC Opportunity). With funding from Bloomberg Philanthropies, Arches was launched in 2012 as a component of the New York City Young Men's Initiative (YMI). Arches serves youth and young adults ages 16 to 24 who are on probation and seeks to reduce recidivism and increase education and workforce engagement by strengthening their problem-solving and social skills. Together, approximately 7,500 youth and young adults make up nearly one-third of New York City's overall probation population. Arches uses an intensive group mentoring model centered on cognitive behavioral therapy principles and an evidence-based Interactive Journaling (IJ) curriculum, Forward Thinking. Arches mentors are "credible messengers," people with backgrounds and characteristics similar to the populations they serve, who develop robust relationships with program participants built on authentic shared experiences and understanding. Mentors are trained to facilitate group mentoring sessions and are expected to be available for additional one-on-one meetings with mentees, using motivational interviewing in both contexts.

Urban conducted a comprehensive, multimethod implementation and impact evaluation of Arches. Staff and stakeholder interviews, a review of program materials and activities, and youth focus groups informed the implementation evaluation, which identified program strengths, barriers to success, and best practices. The impact evaluation used a rigorous, quasi-experimental design, drawing on NYC Department of Probation (DOP) and New York State Division of Criminal Justice Services (DCJS) data, to answer critical questions about the program's effectiveness.

This report examines the implementation of the Arches program through a sample of 8 of the 18 original program sites across all five boroughs of New York City and presents findings of its impact on youth and young adults on probation.⁵ Specifically, this report is meant to provide the reader with (1) an overview of the extant literature on topics related to mentoring, positive youth development, and the role that Arches could fill in this space; (2) an in-depth examination of the implementation of Arches through the eyes of program staff, participants, and stakeholders; (3) impact evaluation findings that assess the effectiveness of Arches in reducing recidivism and other criminal justice outcomes; and (4) recommendations to promote best practices and address barriers to success moving forward.

Review of the Literature

Mentoring can help young people develop social and emotional skills, strengthen their cognitive functions, and work toward positive identity development (Aos et al. 2004; Dubois et al. 2011; Rhodes and DuBois 2008; Rhodes et al. 2006). A meta-analysis of 73 evaluations of mentoring programs found they had positive impacts on behavioral, socioemotional, and academic outcomes (DuBois et al. 2011). Studies consistently find that participation in mentoring programs is associated with better school attendance, increased social competence, lower levels of aggression, improved ability to complete schoolwork, and a greater willingness to participate in college preparatory activities/courses and pursue higher education (Bernier, Larose, and Tarabulsky 2005; Soucy and Larose 2000; Tolan et al. 2008). Strengths-based mentoring in particular, which focuses on identifying and building on someone's strengths rather than their deficits (Resiliency Initiatives 2010), supports youth resiliency and decreases the likelihood of criminal justice involvement, drug and alcohol use, and violence (Grossman and Garry 1997; Hurd, Zimmerman, and Reischl 2011; Matz 2014).

Mentoring may be particularly useful for justice-involved youth, who, when returning to their communities after incarceration, face significant barriers to getting the support they need to avoid subsequent contact with the justice system (Lieberman and Fontaine 2015; Petrosino, Turpin-Petrosino, and Guckenberg 2013). Youth often return to their communities with a multitude of experiences that may affect their post release success (Mears and Travis 2004). Further, the varied communities they live in play a key role in altering their reentry pathways. Most incarcerated youth come from and return to communities with concentrated disadvantage, with high crime rates and limited opportunities for education and employment (Spencer and Jones-Walker 2004; Sullivan 2004). Some of these youth commit even more crimes after being incarcerated (Mulvey, Schubert, and Chassin), though data on recidivism is inconsistently measured and reported across states (CSG Justice Center 2014).

Evidence shows that mentoring can reduce recidivism for justice-involved youth (Jolliffe and Farrington 2008; Tolan et al. 2008). Jolliffe and Farrington's rapid evidence assessment of 49 studies, 1 of which examined group mentoring, revealed 18 studies that showed small or moderate effects on reoffending.⁶ However, results varied significantly depending on the methodological rigor, and high-quality studies did not show significant effects. A 2012 study that identified best practices for serving justice-involved youth based on 13 sites across the country noted that decreases in youth recidivism were attributed to close partnerships between probation officers (POs) and mentors; housing mentoring staff in the court; engaging youth in prosocial relationships, activities, and leadership capacities; and involving a diverse community to demonstrate its commitment to youth (Miller et al.

2012). Mentoring also appears to work better when mentor and mentee meet more frequently and for longer sessions (Jolliffe and Farrington 2008).

Mentoring works best when it occurs simultaneously with other interventions. Methods like IJ have been found to reduce recidivism among adults (Proctor, Hoffman, and Allison 2012).⁷ Interactive Journaling, trademarked by The Change Companies, is designed to help people identify the bridge between their substance dependence and criminal activities and enable them to seek treatment of their own accord.⁸ The IJ curriculum is rooted in principles such as motivational enhancement therapy and cognitive behavioral therapy (CBT) that work in tandem to equip participants with the necessary tools to reflect on their choices, identify and accept barriers to their success, and pave a path toward a more rewarding life.

Motivational Enhancement Therapy

Motivational enhancement therapy is a person-centered approach to therapy that focuses on transforming attitudes toward change, particularly for people who engage in and know the implications of self-destructive behaviors but show little desire to change them (Miller et al. 1992). It was first conceived as a treatment intervention in 1993 during a randomized clinical trial of treatment options for people addicted to alcohol and resulted in long-term reductions in alcohol consumption (Miller et al. 1992; Project MATCH Research Group 1997). Rather than guiding participants through recovery, motivational enhancement therapy focuses on using their own motivational strategies toward action. It is rooted in principles of motivational psychology and employs motivational interviewing techniques, a goal-oriented counseling style developed by William R. Miller and Stephen Rollnick that involves a holistic assessment of a persons' behaviors and systematic feedback based on the findings (Miller 1983). Motivational enhancement therapy involves engagement, eliciting thoughts about change, and evoking motivation for positive change.

Motivational interviewing was first used in the corrections field in the 1990s by the National Institute of Corrections' Evidence-based Practices Model (Thigpen 2010) and has since been applied in various criminal justice settings to enable positive change for justice-involved people and facilitate recidivism reduction (McMurrin 2002; Miller 1999). One study that examined the impact of an offending-focused motivational interviewing intervention in 58 incarcerated males in New Zealand found that people who received motivational interviewing were significantly less likely to be reconvicted (21 percent) and reincarcerated than those who received standard treatment. The

treatment group also had a longer mean length of time for reconviction and reincarceration (Anstiss, Polaschek, and Wilson 2011).

Cognitive Behavioral Therapy

A form of psychotherapy, CBT is a short-term, traditional variety of treatments commonly referred to as “talk therapy” (McGuire 1996). Therapists are capable of tailoring CBT interventions to fit individual needs but generally follow a practical approach to treatment that consists of several short, semi-structured, “problem-oriented” conversations with a trained therapist in a confidential setting. The theoretical foundation of CBT is the cognitive model, or the idea that reactions are influenced more by a person’s perception of a situation—automatic thoughts—than the situation itself (McGuire 1996). People are taught to identify their own inaccurate or negative thinking and how to challenge and modify those thoughts.⁹ CBT encourages recognition of the relationship between thoughts, feelings, and behaviors (Pearson et al. 2002) and, by extension, how to perceive difficult situations with clarity and react more effectively.¹⁰

Research has consistently confirmed the efficacy of CBT in treating a wide range of psychiatric disorders (Butler et al. 2006). Its focus on problem-solving and stress management can also be beneficial for people without a mental health condition. A breadth of research establishes CBT as an effective strategy to reduce adult and juvenile recidivism, particularly when it includes anger management and interpersonal problem-solving components (Landenberger and Lipsey 2006). One study used a retrospective quasi-experimental design to evaluate the impact of a CBT program on recidivism for 4,101 women released from prison in Minnesota and found the program had a positive effect on rearrest (14 percent less than the comparison group) and reconviction (13 percent less than the comparison group) but no significant effect on new offense incarceration or technical violation revocation (Duwe and Clark 2015). One study examining the effectiveness of CBT-based IJ in jails found that males who used the journal had significantly lower recidivism rates than the comparison group 12 months after release (Proctor, Hoffman, and Allison 2012).

Although IJ has seemingly prompted change in various adult contexts, there is a dearth of research assessing its use with youth on probation. With IJ woven into the fabric of its programmatic approach, Arches presents a unique opportunity to contribute to the research on mentoring interventions broadly and to explore key program characteristics that make mentoring effective for justice-involved youth.

Gaps Remain

Despite the abundance of research supporting mentoring programs for justice-involved youth, the literature has considerable gaps that limit our knowledge and ability to make them more effective. Although studies have looked at impact, they have not looked at the characteristics that make programs most effective for specific groups (Darling et al. 2006; Larson 2006). Given the numerous ways that justice involvement can inhibit a successful transition from youth to adulthood, it is more pressing than ever to examine mentoring programs with empirically sound, rigorous evaluations that identify best practices that can be employed to meet youth's needs.

Background on Arches

In January 2012, DOP, in collaboration with NYC Opportunity, YMI, and the Mayor’s Fund to Advance New York City, released a request for applications seeking qualified, local, community-based organizations to implement Arches. The initiative was branded as a “transformative mentoring intervention” and would target six New York City communities: Bedford Stuyvesant, Brownsville, East New York, Jamaica, Harlem, and the South Bronx. Although this request for applications marked the birth of Arches, various developments helped bring this initiative to life.

Momentum Toward Community-Based Support for Youth Involved in the New York City Justice System

In late 2010, the Dispositional Reform Steering Committee, subsequently known as the Juvenile Justice Advisory Committee, was created to plan a locally operated system of care that could better serve young people involved in the New York City justice system.¹¹ The committee identified three priorities for a more effective juvenile justice system in the city:

1. Promote public safety and reduce recidivism by developing a stronger and more comprehensive continuum of community-based intervention of graduated intensity and varied approaches.
2. Develop a safe and effective continuum of residential services within New York City that works with youth and families to ensure a smooth transition back to the community.
3. Ensure that all youth have access to quality educational services that help them achieve significant academic progress (New York ACS/DOP 2012).

The Young Men’s Initiative

Concurrently, and in alignment with these priorities, YMI was launched in August 2011 to help breach the education, health, employment, and justice inequities between young black and Latino men and their white peers. It sought to address these gaps by supporting their professional, educational, and personal goals through multiple comprehensive programs and services designed to improve access to mentoring, education, employment, and civic and community education opportunities. In 2016, Mayor Bill de Blasio increased the city’s investment in YMI and expanded its focus to include greater emphasis

on youth in schools while making explicit its geographic priority areas (Astone, Katz, and Gelatt 2014). NYC Opportunity, created in 2006 to develop innovative initiatives to reduce poverty in New York City, is responsible for overseeing the implementation and evaluation of many YMI programs.¹²

The Neighborhood Opportunity Network

In December 2011, DOP launched the Neighborhood Opportunity Network (NeON). NeONs are community-based DOP offices that support medium- and high-risk people on probation based on principles of community justice and justice reinvestment (McGarry, Yaroni, and Addie 2014). NeONs bring POs and resources into the targeted communities to improve and facilitate access to services for people on probation, with the aim of improving their outcomes generally and reducing criminal justice system involvement in particular. Each NeON partners with other city agencies, schools, businesses, nonprofits, community- and faith-based organizations, and local residents in the seven neighborhoods of New York City that have historically faced great socioeconomic challenges and where large concentrations of people on probation reside.

At NeONs, people on probation can meet with their probation officers and receive a wide range of services, such as High School Equivalency classes, employment preparation, mentoring, health care, and literacy programs, and participate in arts and sports activities. Many of these programs and resources are also available to other community residents at no cost. Each NeON also has a stakeholder group that helps make decisions regarding community-facing programs and services.

Implementation of Arches

Urban utilized qualitative evaluation methods to document the implementation of Arches. The evaluation sought to identify best practices associated with successful program operations (as well as challenges that inhibit program performance) and synthesize lessons learned across sites into concrete recommendations that may enhance program success in the future. The following sections outline the purpose and goals of the implementation evaluation and present the study's analytic strategy and descriptions of the implementation research questions, study population, site selection, site visits, and data organization and analysis plan.

Purpose and Goals

To better understand the arc of Arches participation and how it occurs within the milestones of participants' lives, researchers examined a range of participant, staff, and stakeholder experiences. To do so, Urban incorporated staff and stakeholder interviews, youth focus groups, field observations, and a review of program materials to identify program strengths, barriers to success, and best practices.

The primary goals of the implementation evaluation were to answer the following research questions:

1. How is Arches implemented?
2. How is Arches perceived by key stakeholders?
3. What lessons were learned for the future of Arches?

Analytic Strategy

To address the study's three process evaluation research questions, Urban researchers used several qualitative strategies.

Research Question 1: Implementation

To better understand what the Arches model was meant to look like in practice, Urban researchers asked about the primary components of the Arches model as they were originally scoped and how these components were communicated to sites, mentors, and participants. Urban researchers also sought to

better understand the fidelity with which the Arches model was implemented across sites and identify which key components were consistent across sites. Urban qualitatively examined these constructs through the use of participant focus groups, interviews with program stakeholders (e.g., program coordinators, mentors, etc.) from each site in the sample, and observations of group mentoring sessions and use of the IJ curriculum.

Research Question 2: Perceptions

To assess how Arches was experienced by those engaged in the day-to-day application and receipt of program activities, Urban researchers investigated participant and stakeholder perceptions of the program. During stakeholder interviews, researchers asked if their opinions of the Arches program had changed over time, their grounds for deeming the program a success, **and how they defined overall program effectiveness**. Focus groups with program participants asked about their initial perceptions of the program, the social and emotional ways Arches impacted or changed their behaviors, and the influence of program components (e.g., Interactive Journaling, group mentoring, etc.) and program stakeholders (e.g., mentors, POs, etc.) on their decisionmaking.

Research Question 3: Lessons Learned

To examine how Arches could better address participant and stakeholder needs and determine how best to use program resources and assets to achieve positive youth outcomes, Urban probed on the strengths and limitations of the Arches program and solicited suggestions for an ideal program design to address issues facing youth and young adults on probation. Through stakeholder interviews and program participant focus groups, researchers sought to better understand (1) how they define success for the Arches program, (2) the best practices associated with program performance and operations, and (3) the challenges that inhibited successful program outcomes. Finally, researchers also searched for unique and promising practices implemented in different Arches sites that were considered successful.

Study Population

The implementation evaluation focused on the range of stakeholders who play an active role in Arches, including program participants, provider staff, technical assistance and training staff, and overall/cross-site management staff (e.g., DOP, NYC Opportunity, etc.). Participants currently or previously enrolled

in the program who could speak to their personal experiences were a key resource. Since launching in April 2012, Arches has enrolled more than 2,300 New York City youth and young adults; youth serving an adult probation sentence were voluntarily referred to Arches by DOP staff.

Additional populations included Arches mentors and program coordinators who engaged in day-to-day activities with youth participants, as well as a comprehensive range of program stakeholders who could speak to background and macro-level issues with the program—specifically stakeholders from NYC Opportunity, DOP, the technical assistance and training provider Community Connections for Youth (CCFY), and former Arches staff.

Site Selection

At the start of the evaluation, November 2015, Arches was operating in 18 sites across all five boroughs of New York City. This was reduced to 13 sites during the early phases of the evaluation as the program transitioned from its initial funding (provided by Bloomberg Philanthropies as part of YMI) to DOP city tax levy funding. Stakeholder interviews revealed that the primary reason for the reduction was geographic redistribution of sites, as DOP and site-specific data revealed that, in most sites, the average number of participants enrolled on a yearly basis was below the estimated admission capacity. DOP strategically consolidated Arches programming into two NYC boroughs while maintaining access to services for youth.

To better understand the scope of Arches, Urban selected a subset of sites for an in-depth examination of program activities. Specifically, Urban identified a random (stratified) sample of 8 of the original 18 total Arches sites. Sample stratification was based on location (i.e., city borough and whether the site was in a NeON or non-NeON neighborhood).¹³ The study population included various adult stakeholders involved in implementing and executing the Arches program, as well as youth¹⁴ (ages 16 and 17) and young adults (ages 18 to 24) currently or previously enrolled in the Arches program at one of the eight sites.

Arches Site Visits

In two-person teams, researchers conducted a series of four in-person visits to each of the eight sites. Site visits occurred over a six-week period in March and April 2016 and consisted of at least two days of

evaluation activities. The research team conducted initial phone interviews with each site's program coordinator to review site visit objectives, schedules, and activities.

Researchers observed program activities and conducted semi-structured staff interviews and focus groups with program participants and alumni. Semi-structured interviews were also conducted with Arches stakeholders not connected to specific Arches sites (e.g., DOP, NYC Opportunity, and technical assistance provider staff).

Organization and Analysis of Implementation Data

Urban researchers used several data organization techniques for qualitative data collection and analyses. Verbatim notes were taken during all focus groups and interviews, and most were also audio-recorded to ensure accurate note-taking. Urban obtained active written consent from each interviewee to participate in the study and to be recorded.

For analysis, researchers developed a coding scheme to align with (1) *a priori* constructs used to develop the interview and focus group protocols and (2) general themes gleaned during the interviews and focus groups. Urban used qualitative codes to systematically classify the information obtained from interviews and focus groups to support a rigorous subjective analysis meant to “identify key themes and patterns” (Hsieh and Shannon 2005; Zhang and Wildermuth 2017). Researchers used a topic-based coding process to classify similar themes across responses and to analyze patterns associated with the implementation of Arches across sites. Urban coded all interview and focus group transcripts in NVivo 10 qualitative data analysis software.¹⁵ Researchers assessed coding consistency before coding interview and focus group text.¹⁶ The research team then thoroughly analyzed all qualitative data through text, coding, and word frequency queries in NVivo. Urban synthesized the findings of these analyses to distill key lessons learned and develop recommendations for program improvement.

How Was Arches Implemented in NYC?

The following sections describe how Arches was implemented across the eight program sites in the sample. Specifically, they provide a roadmap of the *expectations* behind the Arches model, as well as the fidelity with which it was implemented *in practice*. Box 1 outlines the Arches program model.

BOX 1

Summary of the Arches Program Model

- Participants are between the ages of 16 to 24, are justice involved, and are currently serving a probation sentence on supervised probation in New York City.
- **Arches' group process** includes 2 one-hour group mentoring sessions per week (48 total over six months). Mentors and program coordinators facilitate a discussion of IJ curriculum and encourage participants to build a support system for each other, fostering a family-like environment that includes mentors and program coordinators.
- The Forward Thinking **Interactive Journaling Curriculum**, designed by The Change Companies, is an evidence-based workbook series that helps justice-involved youth make “positive changes to their thoughts, feelings, and behaviors.” Sessions include Individual Change Plan, Responsible Behavior, Relationships and Communication, Family, and Handling Difficult Feelings. The IJ curriculum is based on CBT principles, is delivered by culturally appropriate mentors in group mentoring sessions, and incorporates **positive youth development** principles. In addition to attending 48 mentoring sessions, participants must complete all four journals to graduate.
- Sites employ a staffing structure that includes one full-time **program coordinator** that organizes program activities (e.g., group mentoring sessions, trips, training, etc.), supervises and conducts case conferencing with mentors, and acts as a liaison with DOP. Sites employ three to four **mentors** (one full-time lead mentor and two to three part-time mentors). Mentors are available to participants 24/7 for support, advice, and guidance. Mentors also help facilitate group mentoring sessions, one-on-one mentoring, and referrals to other services.
- Probation officers act as the primary referral source for all Arches participants. Officers provide one-on-one engagement and **case management** to Arches participants, coordinating referrals to additional services such as training, programming, and so on.
- Training and technical assistance is provided to all Arches sites by Community Connections for Youth, a New York City-based nonprofit organization. Training includes mandatory orientation (e.g., group facilitation), and follow-up in-service trainings (e.g., conflict resolution). On-site directed technical assistance and directed feedback to sites through observations of program activities is also provided.
- Participants are provided with up to \$800 in **stipends**, distributed via debit card, for attendance and completion of all 48 IJ sessions. Program coordinators send weekly attendance updates to DOP to create accountability and process stipend payments. All sites were also required to provide **group meals** to participants.

This information comes from interviews with Community Connections for Youth, DOP, and Arches program staff. Items in bold are considered the seven core components of Arches.

Urban’s implementation **roadmap** includes a description of

- participating organizations;
- program goals;
- the outreach, recruitment, and retention of participants;
- the seven core program components;
- program schedules;
- relationships with DOP; and
- training and technical assistance.

Participating Organizations and Neighborhood Characteristics

Arches sites span the five boroughs of New York City. They are centrally situated in communities, as one DOP stakeholder put it, “[where] people feel safe getting there [and] the atmosphere is a safe space where you don’t feel you are going to be rejected.” Arches emphasizes neutral locations, where participants feel physically safe when traveling, and organizations known for providing support to community members. Despite some striking differences across sites, there are also common threads that weave together the demographic characteristics of Arches neighborhoods.

Table 1 shows the very different demographic characteristics of the eight neighborhoods Urban visited. The neighborhoods vary in their racial and ethnic makeup: neighborhoods two and four are majority Hispanic, while neighborhoods one, three and seven are majority non-Hispanic black. The others have substantial Hispanic and non-Hispanic black populations, with only one (neighborhood eight) being truly diverse. Evaluation neighborhoods had higher than average unemployment rates but vary in terms of education and income. In neighborhoods six, seven, and eight, residents are more highly educated than in others. More than half the children in neighborhoods one, two, and four live in low-income households, while the median income in neighborhoods three and eight is over \$40,000 per year. In sum, the Arches sites Urban visited vary widely in terms of the neighborhoods they serve.

TABLE 1

Arches Neighborhood Characteristics

	Neighborhoods								NYC
	1	2	3	4	5	6	7	8	
Race/ethnicity									
Hispanic or Latino (of any race)	17.3%	67.0%	22.7%	62.2%	38.6%	49.5%	23.9%	30.0%	28.8%
Non-Hispanic white	1.0%	2.8%	2.3%	1.9%	3.8%	8.3%	8.1%	26.6%	32.7%
Non-Hispanic black	79.7%	28.6%	71.0%	24.4%	19.6%	35.4%	62.0%	35.9%	22.6%
Non-Hispanic other	2.0%	1.7%	4.1%	11.5%	38.1%	6.8%	6.1%	7.5%	15.9%
Education									
High school graduate or higher	73.3%	56.9%	78.2%	60.0%	66.5%	69.0%	78.5%	82.8%	80.1%
Bachelor's degree or higher	10.1%	9.5%	18.1%	10.7%	18.4%	22.6%	29.4%	28.5%	35.0%
Employment									
Age 16 or older in labor force	52.6%	56.5%	64.1%	58.8%	66.2%	51.9%	60.9%	59.5%	63.4%
Age 16 or older in labor force who are unemployed	7.9%	9.9%	10.9%	8.7%	9.6%	6.6%	9.9%	6.9%	6.5%
Income and benefits									
Median household income	\$25,252	\$22,076	\$40,019	\$30,338	\$40,209	\$25,101	\$34,123	\$44,774	\$52,737
Households with SSI	12.8%	20.1%	8.5%	12.0%	8.4%	16.3%	10.5%	8.8%	7.8%
Household with cash public assistance income	8.1%	11.2%	7.0%	9.7%	5.7%	7.9%	6.7%	8.3%	4.2%
Households with SNAP benefits in the past 12 months	42.1%	55.3%	28.2%	42.2%	27.1%	31.3%	27.8%	27.3%	20.4%
Families in poverty	35.6%	38.9%	22.9%	36.0%	21.1%	34.4%	25.3%	23.5%	17.5%
People under age 18 in household in poverty	50.8%	56.7%	33.4%	50.4%	33.5%	48.5%	36.5%	38.4%	29.7%

Source: Data obtained in December 2015 from the NYC Census FactFinder Database.

Notes: NYC = New York City, SNAP = Supplemental Nutrition Assistance Program, SSI = Supplemental Security Income.

The following sections detail the implementation of Arches program components through the examination of stakeholder interviews, participant focus groups, and program observations. They also provide context on the background of each program component and how site-specific components and role-based insights address each.

Arches Goals and Expectations

There was resounding agreement among stakeholders that reducing justice system involvement is at the core of the Arches program and that positive attitudinal and behavioral changes are necessary to accomplish the program's goals. However, priorities for achieving participant goals varied from site to site and according to the role stakeholders played at each Arches site. Interviews with **administrative stakeholders** (i.e., DOP (including POs), NYC Opportunity, YMI, and CCFY) tended to focus on objectives associated with reducing recidivism. As one administrative stakeholder indicated, "Ultimately, for both [NYC Opportunity] and the funder, recidivism is a key [outcome] measure."

Another administrative stakeholder agreed, indicating that "for almost any program we do in the justice space, *reduction of recidivism* is the primary goal." Administrative stakeholders suggested that reducing recidivism is also important to program staff, but because of nuances across organizations, "their milestones might be [achieved] differently."

BOX 2

Arches Interviews and Focus Groups

- Conducted **program stakeholder** interviews at eight Arches sites.
 - » Lead mentors at five sites and mentors at six sites (14 total).
 - » Program coordinators at six sites and directors at three sites.
- Conducted **12 administrative stakeholder** interviews.
- Conducted **program participant** focus groups at seven of eight Arches sites.
 - » Focus groups ranged from two to seven youth and young adult participants.
 - » Alumni were present in two focus groups alongside current participants.

Program (site-specific) stakeholders (e.g., program directors, program coordinator, and mentors) tended to emphasize goals specific to developing positive relationships in the program and in the broader local community. *Program directors* oversee the operations of multiple programs, including Arches, for a community organization. *Program coordinators* oversee Arches program operations and day-to-day scheduling. *Lead mentors* are typically tasked with running group mentoring sessions and

providing support to 3–4 part-time mentors. Program stakeholders also refer Arches participants to additional supportive services during the program and after completion. Indeed, program stakeholders acknowledged that reducing recidivism is a goal of the program but prioritized relationship-specific goals.

Arches sites focus on improving the relationships that program participants have within their networks. Sites work to create family-like environments where participants establish a trusting relationship with their mentors. Mentor relationships are meant to support positive reinforcement and youth development. Program stakeholders emphasized that, in addition to mentors, peers also serve as positive role models for each other.

Across sites, mentors emphasized the need for safe environments that *foster relationship building* and viewed this as the first step to influencing participant behavior. Mentors often described themselves as a bridge between participants and external stakeholders perceived as authority figures (e.g., POs). In addition to providing direct support, mentors also help participants access additional resources and wraparound services, in many cases acting in a case management role. Mentors often make referrals to other New York City programs (consistent with the individual needs of participants) for additional services (e.g., work readiness, housing, individual therapy, etc.), though referrals were inconsistently provided across sites.

Among the goals mentors most frequently suggested for their mentees were positive changes in thinking and behavior, future employment opportunities and services, and positive relationships with others. Participants described how the support of mentors helped them take steps toward achieving personal goals and emphasized that this process reinforces a positive relationship with their mentors.

Arches' goal is to get [participants] focused; [mentors] don't want us to take the same path that they went through. Every time, the conversation is to [put] yourself in a different situation, to change your mindset.

—Program participant

Administrative and program stakeholder goals tend to align with participants' own goals. Focus groups revealed that program participants overwhelmingly view the goal of Arches as keeping youth from “getting into trouble” through “changing the way we think.” Youth participants shed light on the

program's ability to address their decisionmaking process through an increased focus on "thinking before action." Across sites, the evaluation found that youth are guided to concentrate on social connections through improved communication skills and humility and by motivating them to function as positive role models for their peers.

Participant Outreach

Recruitment and Referrals to Arches

Arches is administered and overseen by DOP, and participants are enrolled in program services through direct referrals from their probation officers, who they continue to meet with while in the program. Before submitting a program referral, a PO conducts an individual action plan¹⁷ to create milestones for education, work, and community involvement.¹⁸ If the youth is enrolled in Arches, their individual action plan is reinforced through group and individual mentoring program activities. Although POs take various factors into consideration when making a referral, administrative stakeholders noted that the program's mentoring component is particularly appealing.

Interviews with program and administrative stakeholders indicated that the program's recruitment process is influenced by the relationships that POs have with Arches program sites. Specifically, program stakeholders indicated that sites often directly pursued referrals from POs through outings, introductory meetings, and appreciation meals. Sites that built stronger and more consistent relationships with POs tended to receive more referrals.

Administrative stakeholders indicated that a PO's willingness to refer potential participants to an Arches program site may be based on their previous interactions and relationships with the site, the client's readiness, and to a lesser degree, outcomes of participants previously referred to the program. Administrative stakeholders revealed that, in certain cases, POs consider safety issues for the client. An administrative stakeholder highlighted that if, for example, they were aware that current participants at a program site were affiliated with a particular gang, they would not refer a client from a rival gang because it could put people at risk. Participant focus groups also recognized that neighborhood issues such as a gang presence can create safety concerns and may negatively impact a participant's willingness to attend a program site or activity outside of a program's location.

Considering the reliance on PO referrals, the inflow of participants is also highly influenced by the climate in the probation office. Changes to DOP staff and leadership and the rollout of new DOP policies

and practices can affect referrals. As one program stakeholder described, “Because [Arches sites] can only receive mentees through probation, if there is upheaval in the probation office, this can reduce the flow of participants. ...[There was] a dip in participants in late 2015 which has only recently abated.”

Arches program stakeholders also indicated that although most sites were set up with a participant capacity of 20, intended to yield 40 program completions per year, many have not been able to reach that level of enrollment. Program stakeholders see this as problematic because many young people in their communities need mentoring services. In many cases, however, these young people do not meet the criteria for enrollment because they are not on probation, are too old, or live outside of the program’s service area.

Some Arches participants said their friends and family members also have benefited from its services because they invited them to take part—albeit informally—in the program. Some mentors encourage participants to invite their friends. By nature of its design, the program skews heavily male, and some female participants noted that the curriculum—or its application—seems geared more toward male participants. However, at least one participant told us, “Arches has open arms to everybody.” Urban did not directly observe the program’s cross-site women’s group but recognizes a potential gap in services related to the unique issues facing young women on probation.

Lastly, although program attendance and completion is not a mandatory component of participants’ probation requirements, one program stakeholder indicated that “some participants experience it as a mandated program.” Although POs may have simply suggested Arches to them, some felt mandated to attend.

Retaining Arches Participants

Arches participants must attend 48 sessions to “graduate” from the program. Although this can be accomplished in six months if they attend all sessions in order, it often takes longer. Generally, participants who miss five sessions are dismissed under the current program model, but program staff acknowledged that participants may experience various challenges that force them to miss sessions. In many cases, program staff encourage these participants to continue, with some allowed to reenroll.

TABLE 2

Completion and Attendance Rates of Eight Evaluation Sites

Provider (borough)	Completed program	Dismissed from program	Completed program	Attendance in group sessions
Site 1 (Bronx)	4	7	36.4%	42.0%
Site 2 (Bronx)	7	6	53.8%	36.8%
Site 3 (Bronx)	0	9	0.0%	42.9%
Site 4 (Brooklyn)	7	0	100.0%	38.9%
Site 5 (Manhattan)	9	20	31.0%	30.4%
Site 6 (Manhattan)	13	8	61.9%	48.8%
Site 7 (Staten Island)	3	7	30.0%	26.9%
Site 8 (Queens)	12	11	52.2%	25.6%

Source: Analysis completed by the New York City Department of Probation and reviewed by authors.

Note: Sites 3 and 4 (0 and 100 percent completion rate, respectively) had comparatively small enrollment numbers because of program phasing when examined for the evaluation. Reported enrollment period from January 2013 to December 2014.

Retention varies across sites (see table 2 for completion and attendance rates in evaluation sites), but focus groups and interviews suggest that a consistent factor in retention is the experience participants have with the curriculum. The content of the curriculum is not always appealing to participants, with one saying, “I decided to leave early because I felt like it [program curriculum] was getting boring. It wasn’t like anything new.” It was suggested that engaging new participants during the early phases of the program, when much of the engagement is structured in the curriculum, is essential to sustaining their participation. Access to program components (e.g., hot meals, stipends, etc.) can provide the necessary foundation for an innovative application of the curriculum to take hold.

I think [program participants] come into the site guarded, skeptical, cynical. But then there is a hot meal, there is a MetroCard, and a stipend. They are going to keep coming back and eventually something is going to click.

—Administrative stakeholder

Other factors that affect participant retention include the time of the year, their relationships with mentors, and their access to additional services. It was suggested that attendance at some Arches sites shrinks during the summer, presumably because there are other activities for youth to engage in.¹⁹ Program participants indicated that more opportunities to travel to off-site activities during the summer

could provide increased incentive to attend and would align with the interests of participants. Participants at various Arches sites said their one-on-one relationships with mentors motivate them to maintain regular attendance. Employment and job readiness programming, often accessed through program site connections and referrals, can also create opportunities for continued participation and engagement.

Arches Program Components

The Arches program model consists of seven core elements (see box 1 on page 12) meant to “achieve developmental outcomes that prepare young people to succeed at education, work, and civic participation.”²⁰ In addition to short-term outcomes focused on behavioral and attitudinal changes, the program targets long-term outcomes related to “education, employment, and self-sufficient living in addition to the cessation of criminal activity.”

People familiar with Arches implementation across program sites overwhelmingly considered its welcoming and family-like environment as one of the most important components contributing to successful youth outcomes. In addition to the core components, all sites in the sample offered hot meals to participants and helped them develop positive one-on-one relationships with program staff and their peers.

In the following section, stakeholder interviews, participant focus groups, and program observations shed light on the origin of Arches' *core program components* and how each component was implemented within and across sites. The discussion is focused on *best practices* and *barriers to implementation* to develop recommendations to “lift up” and enhance youth development for Arches participants.

Group Mentoring Process and Organization

Arches was implemented to function as a group mentoring model, in which group process and facilitation are important factors to success. Group mentoring occurs twice a week in open and ongoing groups where, according to the 2012 Arches request for applications, “new participants are able to join existing groups at specified entry points (e.g., first week of each month).”²¹ In practice, this seemed to be the ideal method for integrating new participants, although there were instances where participants were added outside of the specified entry points. Generally, group mentoring sets Arches apart from other programs in that the members are “trying to help each other.” Group mentoring produces a positive learning environment, and for many, motivation to stay off the streets.

Although it takes time for new participants to feel comfortable opening up to the group, participants and program stakeholders said that the family atmosphere and the mentor-driven focus on group process that emphasizes the safety and support of participants make it easier to engage.

[For Arches to succeed], the mentors must be credible messengers. It must be a safe place, consistently and reliably available, have a no-eject policy (no one can fail or get thrown out in general), a belief that participants can succeed.

—Program stakeholder

To support program stakeholders charged with implementing a positive group experience, mandatory trainings on group facilitation techniques are provided during program orientation. DOP contracts CCFY, to train and provide ongoing technical assistance to Arches mentors, program directors, and program coordinators on IJ curriculum and group facilitation. CCFY also offers periodic in-service trainings on topics such as gang awareness, conflict resolution, and so on. CCFY provides 28 hours of mandatory orientation training: two full days of IJ training and one full day of orientation where trainers provide context on the foundation of Arches. CCFY also conducts observations of program activities and provides feedback on facilitation.

Program stakeholders considered group discussions, which are designed to help identify and trigger critical thinking in youth participants, to be very important. Often, mentors sought to have youth “own the group” while they merely facilitated group discussion and modified it to their needs in real time. However, our group observations showed inconsistent application of principles associated with positive group facilitation and process. Additionally, although initial group facilitation training was widely viewed as successful, mentors and program coordinators indicated a need for continued training that reinforces group facilitation and supports positive group process. The following subsections summarize the team’s observations (see box 3) of group process across sites.

BOX 3

Arches Group Mentoring Observations

- Conducted at eight Arches program sites.
 - Included 61 total youth and young adult participants.
 - Ranged between 5 and 12 participants per site.
 - Alumni were included at three of eight sites.
 - Included 24 total mentors.
-

Observing the Group Mentoring Process

SITE-SPECIFIC ACTIVITIES

At all eight evaluation sites, group mentoring sessions consisted of a hot meal, a recap of the previous session, icebreakers, an introduction to the current session, activities that included journaling and motivational interview techniques, a recap of the key session takeaways, and an introduction to next week's session. In certain instances, facilitators would deviate from the model without providing introductions or establishing the session's objectives. Urban also observed that certain group facilitators struggled to effectively manage group participation, and others did not provide observations or conclusions that reflected the group's goals. Regardless of inconsistencies in group process, all sessions lasted the allotted time, attempted to cover topics related to IJ curriculum, and transitioned smoothly between activities.

GROUP MENTOR FACILITATION

Arches group facilitation training materials specify that the IJ curriculum should be supplemented by motivational interviewing techniques with an emphasis on open-ended questions, reflective listening, and affirmations. This was further reinforced through CCFY facilitation training courses and materials (e.g., the Keeping It Flowing training worksheet), which specify that the best facilitators "are not those who give the most impressive performance during sessions" but those who can "step back" to foster and manage organic group conversation.

Urban observed that a limited number of mentors used motivational interviewing techniques effectively (e.g., reflective listening, avoiding direct argument, etc.). Some mentors appeared to have

difficulty facilitating “cohesive, organic conversations” between peers, and some focused heavily on personal anecdotes. Urban also observed mentors in nearly half the sites using “but” statements rather than “I” statements. “I” statements are an oft-used technique in CBT and focus on a person’s thoughts and feelings and reducing blame, whereas “but” statements tend to minimize responsibility and circumstances expressed previously. Similarly, some mentors spoke for a majority of the allotted time and conducted sessions in a lecture format, neglecting participant engagement techniques.

In other cases, program coordinators and mentors appeared to rely on previous counseling experiences and training to supplement their Arches facilitation training with cognitive behavioral therapy, motivational interviewing, and aggression replacement therapy techniques. Evaluators inquired into the backgrounds of program coordinators and mentors and found some had prior experience and training in advanced counseling techniques. Although not all mentors could fully replicate these skills, most recognized the need for and benefits of additional training and requested opportunities for peer learning, role-playing, and coaching.

PROGRAM COORDINATOR ENGAGEMENT

Arches training materials do not describe a clear role for program coordinators during group mentoring sessions, but they were often present and engaged with mentors and participants. However, Urban observed little consistency in the roles they fulfilled. In some instances, they provided group facilitation support to mentors. Some were trained as counselors or social workers and sat in on entire group sessions, regularly provided feedback, displayed active listening, set ground rules, and checked in with quieter participants. Others entered the room for short intervals, supplementing the mentors by providing examples and tying the discussion back to the larger Arches curriculum.

YOUTH PARTICIPATION

Urban observed varying levels of youth participation in the group mentoring sessions. It was common for youth to take a few minutes at the beginning of sessions to settle down, and the use of phones was frequently a distraction despite most groups prohibiting phones. In some sessions, participants often left the room to take phone calls. Some facilitators were able to facilitate engagement by regularly asking for a show of hands, calling on each member to participate, and allowing them to organically explore pertinent topics. The groups varied in how often youth volunteered their participation or stories. Positive participation was often correlated with facilitators who successfully produced effective group process techniques, including group problem-solving, brainstorming, and modeling. Many groups opened with icebreakers to prompt a high level of participant engagement early on. Some facilitators also used humor to diminish side chatter and redirect energy back into a productive conversation.

In groups grounded in effective facilitation techniques, journaling drew a very high level of engagement and participants volunteered to read their answers. These groups often wove IJ materials into the entire group discussion instead of making it a stand-alone activity. However, some youth immediately became disengaged when facilitators directed the session to journaling.

In a focus group that spoke directly to participant engagement, one participant under age 18 mentioned that he would feel more engaged if workshops and group discussions were targeted to younger members. Others agreed broadly that modifications to the curriculum were needed to reflect nuanced issues that young people face in New York City, such as gangs, gender identity, and so on. Interviews with program stakeholders revealed that there is room (and a perceived need from DOP leadership) to expand Arches to include participants as young as 12 years old, lending credence to the need for a curriculum that focuses on younger members.²²

ALUMNI PARTICIPATION

Urban observed that alumni engagement in current group mentoring sessions varied across sites. Some sites did not include alumni at all, but others actively called on alumni to serve as credible messengers, to provide reflective validation of the program through their own progress, and to encourage current participants. In two sites, mentors directly introduced alumni to share their experiences, which focused discussions on pre- and post-graduation topics. In both instances, participants remained extremely focused on the alumni sharing their stories and asked questions related to their own situations (e.g., what it is like being employed, how the program prepared them for their post-Arches life, etc.). One site completely integrated alumni into the group, embracing a no-discharge policy and treating alumni the same as current participants. However, alumni did not receive all program components, such as stipends. In the groups observed, active integration of alumni provided a positive model for behavior, and this practice could be operationalized formally across all Arches sites.

Interactive Journaling Curriculum

Developed by The Change Companies, IJ is an evidence-based curriculum used to assess a person's "readiness to change" through "strategies that lead an individual successfully through the process of change, action, and maintenance of prosocial behavior" (Proctor, Hoffman, and Allison 2012). IJ is employed by all Arches program sites. Journaling usually occurs once a week and focuses on topics associated with anger management and communication skills. It is an essential component of the Arches

program, and participants are required to complete four journals to graduate.²³ Topics are selected at the beginning of each week by site teams and are based on what is pertinent to the group discussion.

Participants said that mentors who have little to talk about in group sessions rely more heavily on the IJ curriculum, and they viewed mentors who rarely used it more positively. Participants said journal topics can sometimes be repetitive but are nonetheless relatable and conducive to conversation. However, they considered filling out the journals tedious and said it often reminded them of school. Some participants said they would prefer more time discussing journaling topics and less time completing the journals.

Mentors and program coordinators agreed that the IJ curriculum is reminiscent of a school curriculum, making Arches less appealing than it could be. To some, the content itself does not appear to be relevant to the youth it is intended to serve. In some instances, youth could not see themselves in the examples provided and wished the curriculum was more interactive, although this may be a function of group facilitation and not content.

The IJ curriculum [was previously] used in detention centers, so the language is for people in facilities. [It] could be enhanced if it focused on issues young people were dealing with in the community.

—Program stakeholder

Mentors also acknowledged that group facilitation can vary significantly based on the facilitator. In some cases, the IJ course books are used as a guide to tailor discussion; sometimes they are not used at all. One group used local news articles to introduce topics of community engagement, and another discussed current events associated with national politics. In part, this may be the result of skepticism some mentors expressed regarding the effectiveness of following the curriculum very closely. “I don’t believe that IJ [is] the connection to these young people,” one said. “It takes a person to teach them how to apply these lessons. But they are helpful for outlining important topics or flagging topics.” In other cases, sites acknowledged that program participants simply are not fond of IJ and felt compelled to compromise to make the content more appealing.

In a community, to make kids come who had other things to do—hang out with girlfriends, parties, especially in the summertime—you have to make your group appealing. I'd suggest finding a video, article, clip from a movie—something to make it dynamic. If we were going to talk about a subject based on the curriculum, I'd put a video on a SMART Board, and once everyone's talking, we'd pull out the books.

—Program stakeholder

During the implementation evaluation, Urban observed a wide range of fidelity to the program model. Some mentors strayed quite a bit from the curriculum and focused on unrelated topics seemingly inconsistent with the facilitator guides provided with the Forward Thinking workbooks.

One group did not use the journals at all and instead relied on a restorative justice approach. Interviews revealed this to be standard practice. Other groups did not always rely on the journals but used them briefly to guide a conversation or to cite examples. In contrast, one group relied heavily on the journal, encouraging each participant to read their writing aloud and carrying out a role-playing exercise from the course book. As noted previously, journal use resulted in a broad range of engagement. Some youth were very engaged and would sit, writing and reflecting, then volunteering to share with the group.

Mentors

Arches mentors overwhelmingly viewed themselves as agents of change for participants' thinking. Mentors are in charge of building rapport with youth, teaching them how to interact with law enforcement, filling gaps in services to reduce recidivism, and serving as a bridge between participants, POs, and families. Mentors serve as a voice for youth and are available 24/7. A lead mentor is responsible for managing mentorship at each site.

Program participants and stakeholders alike acknowledged the importance of mentors as credible messengers. Program staff and participants described mentors as “being able to relate to youth,” often through similar backgrounds and experiences. The definition of a credible messenger varied by site, and recruitment of mentors depended on program leadership beliefs. In some instances, mentors were hired because of their extensive group facilitation and counseling skills and previous experience working with

justice-involved youth. Mentors were often formerly justice involved, from the same neighborhood as participants, and had been engaged in similar services previously.

For some mentors, this is their first job, and various factors motivated them to pursue that role with Arches. Some grew up in the neighborhoods where they work and are familiar with the challenges participants face. Others are not from the neighborhood but are still able relate to youth through their shared experiences. Still others experienced mentoring in prison. Even if mentors had previously not been justice involved, it was important that they could empathize with the experiences of the young people in the program and respond to their needs in a culturally sensitive manner.

[Of the mentors] I hired initially, one had done 10 years [in prison]; another might have sold drugs but never went to jail and instead went to a conversion program. ...One of my mentors was a therapist; another was a woman who grew up in foster care. ...If a kid came up with an issue, we had our little mod squad address it.

—Program stakeholder

Besides empathy, there are other important factors that make a mentor a credible messenger. Without explicitly using the term, participants described a credible messenger as someone who is trustworthy, honest, caring, and available. Program staff members seemed to agree. Mentors acknowledged the importance of gaining the trust of participants, noting that if they are not comfortable sharing the barriers they face, mentors cannot help them address those barriers. Culturally sensitive mentors with similar backgrounds and experiences as youth have been shown to develop closer relationships (Liang and Rhodes 2007; Liang and West 2007) and achieve positive youth development outcomes (DuBois and Silverthorn 2005).

Often, mentors' connections to the community, through relationships with other community organizations (e.g., work readiness programs) and local businesses (e.g., barber shops, food/clothing pantry, etc.), become essential to tackling the challenges youth face. Relationships in the community provided additional resources for Arches sites, in the form of discounted hot meals, local tickets for outings, and so on, that otherwise would not have been available.

Connecting youth to the resources they need is important, but as a program stakeholder mentioned, “Sometimes, it’s just listening that is needed. Being a good listener is part of being a good mentor.” This is consistent with the literature on effective mentoring relationships (Jones, Rhine, and Bratton 2002). The need for mentors to provide active listening can arise at odd hours, and the availability of mentors during and outside of work hours was consistently emphasized as a strength of the Arches program, partly because participant engagement is generally unpredictable.

One-on-one mentoring, although not a primary component of Arches, is integrated by sites in several ways. Program stakeholders revealed that mentors engage with youth participants outside of official program activities, including one-on-one meetings to discuss issues not otherwise addressed in group mentoring sessions (e.g., family, additional services, etc.). These sessions help build rapport with program staff, provide additional CBT, and allow for individual attention on goal planning and attainment. One-on-one mentoring sessions were not consistently implemented at each site but were viewed favorably by mentors and participants.

Youth described their mentors in a positive light, emphasizing their belief that their mentors unconditionally care for them, challenge them to think differently, and understand that “changes don’t happen overnight.” Whatever their driving forces, mentors consistently said they want to make a positive difference in the lives of program participants but need more resources to do so (e.g., full-time mentoring positions with increased pay, increased funding for mentor education, cross-site mentor engagement opportunities, etc.).

Several Arches and DOP stakeholders indicated that mentors are often underpaid for the extensive work they do. Mentors receive an hourly wage during official hours, but their work extends beyond the nine to five schedule. Full- and part-time mentors both work on-call around the clock and participate in and facilitate various youth programming activities. Budget constraints often require part-time mentors to obtain other jobs and can lead to high rates of turnover, which in turn negatively affects youth outcomes. Mentor consistency and the frequency and length of interactions can positively affect youth outcomes (Bruce and Bridgeland 2014; DuBois et al. 2002). This speaks to a broader issue: when mentors face other competing demands that limit their availability, their relationships with youth can be negatively affected.

Program Coordinators

Program coordinators oversee the administrative aspects of Arches. As such, they serve as liaisons with DOP and manage mentors, often discussing program activities, youth participants, and challenges to successful program implementation.

[Program coordinators' roles include] overall administration—supervising mentors, communication with the probation department, all daily operations, assisting young people, writing reports, enrolling clients...managing the group sessions and one-on-one sessions with mentors and mentees, making sure stipend payments were submitted on time.

—Program stakeholder

Program coordinators also help program participants with their résumés and connect them with job opportunities. This is facilitated by their familiarity with the communities they serve, and some may know or have worked with Arches participants before the program's inception. Program coordinators may have had similar upbringings as the youth they serve, positioning them as additional credible messengers. Some program coordinators consider building relationships with everyone in the program to be major component of their job, and this provides a certain comfort level that, in turn, informs how they operate.

Positive Youth Development

Arches uses a positive youth development model (Lerner et al. 2005). Positive youth development is an approach that emphasizes a young person's strengths and sources of resilience rather than focusing on their risks and the prevention of problem behavior. People and organizations that use a positive youth development approach not only seek to capitalize on young people's intrinsic assets but also explicitly seek to develop general skills (such as the five C's: competence, confidence, connection, character, and caring) that will serve them well in many domains of life (Bowers et al. 2010). Program participants overwhelmingly agreed that Arches has accomplished some of this positive development and said they are now more social with their friends and family. Observations suggest that Arches sites have "features

of positive development settings” where young people can discover and build on their strengths (Arnold, Nott, and Meinhold 2012).

The program is meant to create a family environment where youth can practice positive prosocial skills to create better lives for themselves, their families, and their communities (Butts, Bazemore, and Meroe 2010). Participants indicated that the program helps them feel empowered to take better control of their emotions. In the words of one participant, “They help you learn certain things you shouldn’t do and certain places—like there’s a time for everything. The way you carry yourself, it’s different.” Participants also mentioned that Arches had connected them with employment and education opportunities that align with their strengths. Referrals through program sites tend to depend on the community organization’s capacity and connections to partners. Service referrals, however, are not an official part of the program site’s responsibilities and instead fall under the case management services of DOP and individual POs.

Program stakeholders said that mentors can use a structured screening tool during the intake process to help identify additional participant needs.²⁴ Mentors often try to link youth to services in the community that the site cannot provide. The capacity of each community organization housing an Arches program helps determine how much it focuses on “service referrals.” Organizations with high capacity (i.e., large staff, additional internal services internally) tend to seek direct referrals independent of DOP staff.

Internal referrals directly from community organizations seem to be most beneficial to Arches participants because program staff members have more intimate knowledge of their needs and strengths. Organizations with less capacity to facilitate service referrals directly could benefit from more collaboration with DOP when referring participants to services. Additionally, Arches’ wide web of service providers could be used to create cross-site referral opportunities.

They do other programs here: résumé, look for jobs. I can come to [a mentor] when I need a job. He’ll get in the computer and look for a long term, short term. He got me a paid internship. You talk to them and let them know what you want to do and then they have the connection. The person in the next office will send out opportunities.

—Program participant

Arches program developers incorporated a comprehensive and developmentally appropriate positive youth development framework into the program's curriculum to promote successful outcomes. Upon entry, and again before graduation, participants complete pre- and post-test self-assessments examining changes in youth development through the Positive Youth Development Index (Butts, Bazemore, and Meroe 2010). Participant results, detailed in table 6, show an improvement in both the overall and subscale measures of the Positive Youth Development Index among Arches participants.

Case Management and Engagement with Probation Officers

In collaboration with program staff, POs provide case management services and additional support to participants through service referrals. Although program staff seemed to focus on program-specific service referrals (e.g., education, employment, training, etc.), POs focused on referrals to specialized services (e.g., therapeutic, housing, and family services). Coordination between POs and Arches staff could be improved through an increased focus on wraparound services for participants approaching graduation.

Additional factors helped further strengthen the relationship between DOP and Arches sites. Some POs work in DOP offices near program sites, making probation and mentoring services conveniently situated; this is particularly true in NeON sites. One site instituted an open-door policy between program staff and POs, allowing them to openly communicate and collaborate on addressing participants' issues while being mindful of confidentiality.

POs also check in with mentors, although how often and to what extent varies by site and relationship, and may request their insight before deciding whether to file a violation of probation with the courts.

Oftentimes, when a PO wants to [file a violation of probation], they will check with the mentor first—good relationships. We invite POs to awards nights. We try to involve the POs. They tell mentees to use [them], not abuse, and they try to strengthen relationships between youth and POs.

—Program stakeholder

Some program participants view POs as role models who positively impact their lives. Still, they admitted that, unlike their relationships with mentors, they are more cautious about what information they share with their POs. One said, “There are things you can go to your mentor [about] that you can’t with your PO.” Several program stakeholders said they viewed the role of the mentor as filling a gap for Arches participants that POs could not. Although a clear designation of roles was evident, there are opportunities for program staff and POs to overlap support services for participants.

Participant Stipends

Arches provides participants with cash stipends that total up to \$800 for attending all group mentoring sessions. DOP administers a centralized stipend system used by all providers to manage stipend payments. Debit cards are distributed by program providers to each participant shortly after they enroll in the program. Stipends are then electronically loaded to the cards on a biweekly basis, and Arches program staff members enter participants’ weekly attendance into the DOP online system. Program stakeholders and participants from all sites felt the stipends were too low to ensure attendance, and for participants with additional responsibilities (e.g., family support), stipends were not enough of an incentive to attend sessions.

Participants were also provided with MetroCards after each group mentoring session. MetroCards, along with the hot meals that precede sessions, served as positive reinforcement while limiting barriers to attendance.

Arches Planning

Program Hours and Group Mentoring Schedule

Although hours of operation varied across sites, participants were required to attend two one-hour group mentoring sessions per week. Participants were divided on this time commitment: some believed it was not enough while others thought the commitment was too much. Many agreed on a need for more flexibility in group meeting times. This was addressed by the 24/7 availability of Arches staff members, and participants cited this as a strength of the program.

We have to have the door open 24 hours a day. I don't mean physically, but each and every one of [the participants] has my number. This is about you having access to somebody. You have that linkage to somebody. [We] want to make sure that is always present.

—Program stakeholder

Generally, lead mentors organize each site's calendar of events, including group sessions and outings. Regular check-ins between mentors and program coordinators help keep program staff up to date on program developments, participant needs, and internal staff support.

Program Length, Transition Planning, and Graduation

Arches is intended as a six-month program, but most participants who successfully graduate take longer, often up to a year, to do so. Participation is commonly extended because of semiregular attendance of the required 48 sessions, and it is important to note that the curriculum was often applied in a linear fashion. Participants who do not attend sessions do not have the opportunity to obtain the IJ skills from a particular module for another six months. Generally, program participants and stakeholders said they wished the program was longer because it can take weeks or months for participants to buy in to the program. Some emphasized incongruence between the needs of the participants and the program's capacity to fulfill.

It's ridiculous to think someone can change behaviors in six months after it took 16 to 18 or more years to develop.

—Program stakeholder

Although the literature supports the possibility of behavior change in children involved in group mentoring interventions in as little as 12 weeks (Jent and Niec 2009), stakeholders emphasized that a one-size-fits-all approach to a program timeline is limited in its ability to address the individual needs of

youth and young adults (those ages 16 to 24). Participants and stakeholders also recognized the need for additional resources in the areas of employment, education, and so on leading up to and immediately following graduation. However, access to these wraparound resources varied across sites because of differences in the external resources and programming organizations use. Program stakeholders indicated a need for systematic access to wraparound services for participants and alumni to help them successfully transition out of the program.

Stakeholders insisted that a more practicable capacity for transition planning is needed, one in which all Arches sites would have access to referrals for wraparound services beyond their own capacity. Although jobs and education were discussed as primary needs for participants and sought-after wraparound destinations, several program sites looked to transition graduates into the Arches Alumni Academy for Advancement to keep them involved in Arches programming.²⁵

DOP Oversight

The DOP Arches program manager oversees the day-to-day administration of Arches across all sites. The program manager serves as a liaison between DOP and the sites, often providing guidance for POs on how to make referrals into the program. The program manager also serves in a data management capacity, overseeing data reporting and ensuring that sites use DOP Connect, its program data management system, properly. This involves familiarizing sites with DOP Connect, providing tips for efficient use of the system, troubleshooting issues, and ensuring that program rosters are updated. The program manager also hosts monthly coordinating meetings, where Arches administration presents site representatives with programing content and technical assistance.

The DOP program manager coordinates monthly site visits, which rotate in purpose between the observation of group sessions and administrative visits. During group session visits, the program manager speaks with sites to gauge their progress in working toward the goals of Arches and to identify their needs and determine how DOP can provide support. Administrative visits focus on the review of sites' use of DOP Connect and technical assistance related to the system. DOP also provides advice on a range of site management topics, including case management, motivating attendance, and serving as a liaison to foster cross-site learning. DOP administrators follow up with assessments on what worked, what did not, and what tools program coordinators could look to for improvement.

DOP stakeholders confirmed that POs forge and maintain strong relationships with Arches sites. They are invited to attend trips and graduation ceremonies, invest significant time with program staff,

and work with staff on helping youth build good community relationships. Their model practices are informed by robust and highly interactive training and technical assistance that helps them develop relationships with site stakeholders and mentors.

DOP stakeholders noted some issues with the Arches model, particularly how the IJ curriculum limits a mentor's ability to engage with youth in a way that attends to their development. They worried that the curriculum mimics schoolwork and that other, more interactive and community-minded activities could guide youth just as well. One said, "We believe young people thrive and grow through real relationships, not necessarily models or tools." Another stakeholder, however, said that although the IJ course books may not be the perfect vehicle for addressing participants' needs, "its ability to be modified as the program progressed" (through DOP guidance and technical assistance) is its strength.

Opportunities for Training

CCYF conducts Arches-specific trainings for facilitating and overseeing the program's core components. New program staff receive introductory training courses on group facilitation, mentoring, and icebreakers, as well as follow-up training opportunities and on-site training assistance. The initial training provides information about the scope of Arches programming and how to work with young people, including cognitive behavioral therapy and motivational interviewing—both core components of the IJ curriculum.

Although CCFY trainings were intended to encompass the range of skills needed for Arches programming, several stakeholders suggested ways to improve them. One stakeholder felt it would be useful to coordinate a retreat for mentors to connect with one another and see things from another perspective, noting that opportunities for cross-site mentor connection are currently limited, which restricts the potential for collaborative problem-solving. Interviewees also said they would like to see trainings that cover a wider range of topics, including the ethics of mentoring, trauma-informed care, mental health concerns, youth engagement, and conflict de-escalation. Respondents would like to see some training expanded to better address issues related to gang awareness and identification, restorative justice circles, and so on, although these are already provided in the form of follow-up trainings.

Transition in Funding

Initially, there was skepticism on behalf of DOP stakeholders regarding the implementation of Arches. The program's launch coincided with a cultural change at DOP, including the appointment of a new commissioner, a significant shift away from a law enforcement approach for people on probation toward an emphasis on supportive services, and the introduction of adolescent-only caseloads for POs. Over time, POs came to see that Arches was providing their clients with options other than traditional probation. Although a transition in the New York City mayor's office occurred at the end of 2013, Arches was not affected in its programming or operations because of its private funding source. Through the years, the program has built community partnerships and trust. Phase 1 of the Arches program was privately funded by Bloomberg Philanthropies as a pilot program under YMI with 15 program sites. Phase 2 of Arches, which was also funded by Bloomberg Philanthropies, grew the program to 20 sites (though this was reduced to 18 sites before the evaluation period). In early 2016, in anticipation of the end of the Bloomberg Philanthropies grant period, DOP submitted a funding request to the New York City Office of Management and Budget and was provided with new city tax levy funding to launch new provider contracts.

As of July, 2016 (during the evaluation period), the city tax levy allocation assumed the ongoing funding responsibility for a consolidation of Arches sites.²⁶ As a result, the evaluation findings can provide context for improvements to the implementation of the program to better serve youth and young adult participants.

Impact of Arches

Urban researchers used a quasi-experimental design to assess the impact of the Arches program. Urban used propensity score matching methods (described in detail in the appendix) to assess the differences between Arches participants and a comparison group of youth and young adults on probation not involved with the program. The evaluation sought to address several key research questions:

- How does participation in Arches affect youth and young adult criminal justice outcomes related to **recidivism** (defined as rearrests or reconvictions)?
 - » How do **age**, **gender**, and **risk level** affect Arches participants' rates of recidivism?
- How does participation in Arches affect youth and young adults' **positive youth development**?
 - » How does Arches curriculum affect participants' perception of self, their behaviors, and their relationships with others?

Treatment and Comparison Groups

The *treatment group* consisted of young people ages 16 to 24 who were referred to any Arches site (i.e., not just the eight that were the focus of the implementation evaluation) between January 2013 and October 2014. To be in the treatment group, a young person had to be currently serving a probation sentence and had to live in one of the neighborhoods that Arches targeted, both Arches enrollment criteria.

The *comparison group* consisted of young people ages 16 to 24 also serving a probation sentence in New York City but who were not referred to the program because they did not come from communities with Arches sites. For the comparison group, a person's probation sentence had to begin between January 2013 and December 2014.

Data

The study sample was assembled by combining data from three sources: DOP Connect, Caseload Explorer (DOP's supervision case management system), and the New York State Division of Criminal Justice Services (see the appendix).²⁷ The total number of cases in the merged database is 961 (279 treatment and 682 comparison).

Variables

Outcomes

To measure the impact of Arches, Urban focused on eight recidivism outcomes:

- Any arrest within the first 12 or 24 months after probation begins.
- Any felony arrest within 12 or 24 months after probation begins.
- Any reconviction within 12 or 24 months after probation begins.
- Any felony reconviction within 12 or 24 months after probation begins.

Table 3 provides the distributions of these outcomes by treatment status. It shows that Arches participants were more likely than members of the comparison group to be rearrested but less likely to be reconvicted.

TABLE 3

Outcomes by Treatment, Pre-Match Sample (n = 961)

	Arches N = 279 (%)	Comparison N = 682 (%)
Arrest within 12 Months	58.4	50.3*
Felony arrest within 12 months	26.5	25.4
Arrest within 24 months	74.2	66.7*
Felony arrest within 24 months	41.9	40.0
Reconviction within 12 months	19.4	23.3
Felony reconviction within 12 months	1.8	5.0*
Reconviction within 24 months	29.0	36.1*
Felony reconviction within 24 months	6.5	10.7*

Source: Analysis completed by the New York City Department of Probation and reviewed by the authors.

* $p < 0.05$.

Other Variables

In models, Urban used several background demographic factors of the youth and young adults from before they began probation. These included *age*, *race/ethnicity* (non-Hispanic white, non-Hispanic black, Hispanic of any race, or other), *education* (less than high school, high school grad/GED, or some postsecondary), *employment status* (employed, unemployed), and *borough of residence* (Brooklyn, the Bronx, Manhattan, Queens, or Staten Island).

Another variable used was an indicator of the *seriousness* of the original offense: Class I (A and B felonies, violent and nonviolent, and violent C felonies), Class II (nonviolent C felonies and violent D felonies), Class III (nonviolent D felonies, all E felonies, misdemeanor assault, and misdemeanor weapons possession), and Class IV (all other A misdemeanors and all B misdemeanors).

Each youth and young adult on probation was assessed a “risk level” score on the Level of Service Inventory-Revised (LSI-R) screening instrument. The LSI-R produces a quantitative indicator of people on probation’s attributes that helps identify the services they may need and their likelihood of recidivism (Andrews, Bonta, and Wormith 2006). However, the LSI-R was still being phased into use during the project period, and as a result, data gathering for this indicator occurred slowly and was ultimately incomplete—216 cases are missing a risk level score.²⁸

The distributions of these variables for the treatment and comparison groups are found in table 4. All differences between the treatment and comparison groups listed in the table were statistically significant. The table shows that, relative to the comparison group, Arches participants were more likely to be black and less educated, less likely to be employed (at intake), more likely to have committed a serious offense, more likely to be scored as high risk on the LSI-R, and more likely to be from Manhattan, Queens, or Staten Island. These differences in the unmatched sample underscore the need for a propensity score analysis because Arches participants appear to be at higher risk than the comparison cases overall. Therefore, it is important to make sure we are comparing Arches participants with comparison group members who are at similar risk.

TABLE 4

Variables in the Analysis by Treatment Group

	Arches	Comparison
Mean age at start of probation	19.0	20.1
Standard deviation	2.3	2.4
Male (%)	86.5	85.3
Race/ethnicity (%)		
Non-Hispanic white	0.7	6.0
Non-Hispanic black	75.6	56.7
Hispanic	17.9	26.1
Other	4.0	9.1
Missing	1.8	2.1
Education (%)		
Less than high school	73.5	61.1
High school graduate or GED	17.9	19.8
Some postsecondary	2.5	7.5
Missing	6.1	11.6
Employed at intake (%)	20.8	28.3
Seriousness of offense (%)		
Most serious	35.1	24.2
More serious	8.6	12.9
Less serious	32.3	34.0
Least serious	18.3	21.6
Missing	5.7	7.3
Risk level (%)		
Low	6.8	5.4
Medium	52.3	54.4
High/highest	22.9	15.8
LSI-R not completed	17.9	24.3
Borough (%)		
Brooklyn	21.1	43.7
The Bronx	34.4	25.1
Manhattan	24.4	13.5
Queens	12.5	17.6
Staten Island	7.5	0.1

Source: Analysis completed by the New York City Department of Probation and reviewed by the authors.

Methods

For the impact evaluation, Urban and DOP researchers used propensity score matching. Matching techniques of all kinds attempt to overcome potential biases caused by selection into the treatment group by comparing treatment and comparison cases that are matched on observed characteristics or covariates. Originally proposed in the 1980s (Rosenbaum and Rubin 1983), propensity score matching is now widely used (Morgan and Harding 2006).

The technique assigns each case a “propensity” (or probability of being assigned) to be in the treatment group. One then compares the outcomes a sample of treatment and comparison cases with the same distribution of propensities to be in the treatment group by including, for each treatment, comparisons with a similar propensity to be in the treatment group. The appendix provides details about various specifications used for the propensity score analysis, as well as details of these analyses and diagnostics for the models.

Impact Evaluation Results

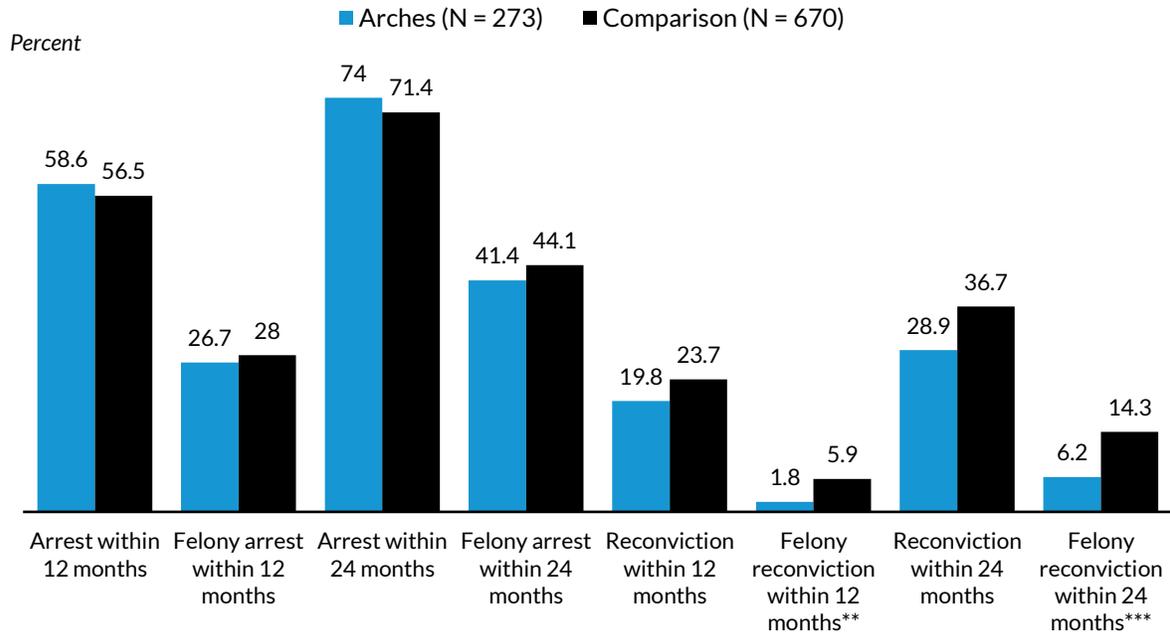
Treatment Effect

The comparison of this matched sample is displayed in figure 1. The comparison group had more than double the percentage of felony reconvictions (within 12 and 24 months) than the Arches group, and this difference was statistically significant at both 12 ($p < 0.01$) and 24 ($p < 0.001$) months. Differences between the Arches group and the comparison group in arrests, shown in table 3, disappear when the higher level of risk faced by Arches participants is taken into account.²⁹

FIGURE 1

Outcomes by Treatment

Match sample (n = 943)



Source: Analysis completed by New York City Department of Probation and reviewed by the authors.

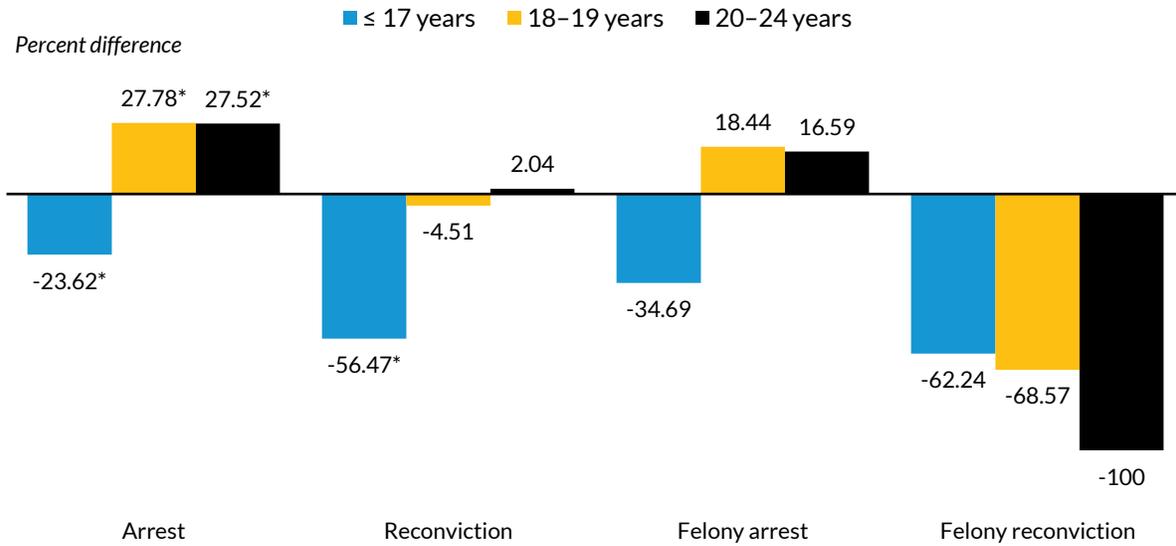
p = 0.01; *p = 0.001

Urban also separately examined the effect of the treatment for participants of different genders, ages, and risk levels. There were no differences in effects by gender or risk level. The results (for the matched sample) of the treatment effects by age show that the treatment worked better for young people who were under the age of 18 at the start of the program. At both 12 and 24 months, the comparison group had significantly higher rates of reconviction than Arches participants. At 12 months, the comparison group also had significantly higher rates of arrest (felony arrests also were marginally significant at $p = .051$). At 24 months, the comparison group had significantly higher rates of felony arrest and reconviction (see figures 2 and 3).

Arches worked better for youths who were under the age of 18 at the start of the program.

FIGURE 2

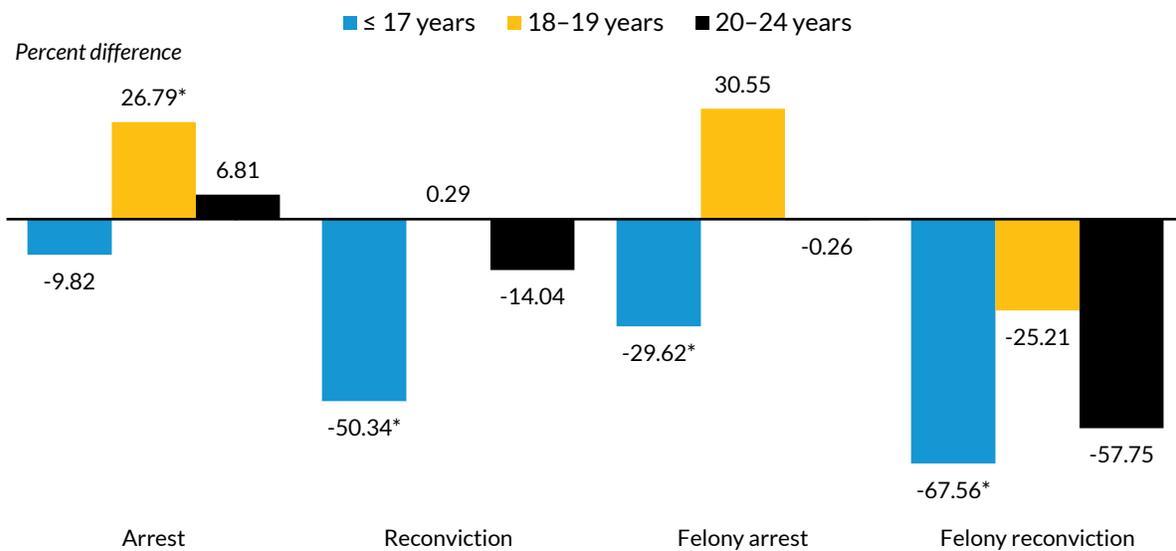
Differences in 12-Month Group Outcomes by Age
Difference between Arches group and comparison group



Source: Analysis completed by New York City Department of Probation and reviewed by the authors.
 * $p < 0.05$

FIGURE 3

Differences in 24-Month Group Outcomes by Age
Difference between Arches group and comparison group



Source: Analysis completed by New York City Department of Probation and reviewed by the authors.
 * $p < 0.05$

Differences that are statistically significant are indicated with asterisks. Although several of the differences between Arches participants and the comparison group were statistically significant for people under the age of 18, there were few statistically significant differences among the older age groups, and those that are significant are not in the expected direction (i.e., Arches participants fared worse than the comparison group).

There were several relationships approaching statistical significance at $p < 0.10$ (not reported in figures 2 and 3), but because of small sample sizes, they only marginally approached significance. The comparison group had higher rates of felony reconviction within 12 months than Arches participants; among 16- and 17-year-olds ($p = 0.106$), 18- and 19-year-olds ($p = 0.101$), and 20–24-year-olds ($p = 0.095$). Note that the study was not set up to look at differences by age, and future evaluations should examine these differences.

Within-Group Effect

Within the treatment group, Urban looked at different components of the Arches program and how they were associated with positive youth development and curriculum-based outcomes. Specifically, Urban examined the time from when a person entered probation until they enrolled in Arches, time spent in the program, whether the Arches program was in a NeON neighborhood, and whether the participant completed the curriculum. Urban also looked at pre- and post-test scores on two indicators that may measure the influence of the program on the participants' perception of self and relationships with others.

Table 5 shows a comparison between Arches participants in NeON neighborhoods and those in other neighborhoods. The findings are mixed, but there is little evidence of different rates of recidivism among Arches participants attending sites in NeON neighborhoods, and none of the differences are statistically significant. The table also shows that Arches participants who completed the curriculum had lower levels of recidivism across all eight outcomes than those who did not. Four of these differences—any felony arrest (12 and 24 months), any reconviction within 12 months, and any felony reconviction within 12 months—were statistically significant. To address the potential confounding effect of in-program rearrests, additional analyses were conducted excluding all in-program rearrests and using program end dates to calculate 12-month post-program rearrest and reconviction rate outcomes for all Arches participants.³⁰ Differences in rates between program graduates and nongraduates remained in the same direction (for 12-month outcomes) as reported in table 5, but were not statistically significant. The results may suggest a dose-response effect of the Arches program, with

participants who got “more” of the program doing better. One must bear in mind, however, that the Arches participants who completed the curriculum might be systematically different from those who did not (i.e., more motivated), and this could be causing the observed dose-response relationship.

TABLE 5

Differences in Outcomes among Arches Participants, by NeON Neighborhood and Curriculum Completion

	Arches NeOn (%)	Arches non-NeOn (%)	Completed curriculum (%)	Did not complete curriculum (%)
Arrest within 12 months	58.3	58.6	55.6	60.6
Felony arrest within 12 months	25.5	28.7	20.2	31.6
Arrest within 24 months	74.0	74.7	68.5	78.7
Felony arrest within 24 months	39.1	48.3	29.8	51.6
Reconviction within 12 months	21.4	14.9	13.7	23.9
Felony reconviction within 12 months	1.6	2.3	0.0	3.2
Reconviction within 24 months	29.2	28.7	23.4	33.5
Felony reconviction within 24 months	5.7	8.0	4.0	8.4

Source: Analysis completed by the New York City Department of Probation and reviewed by the authors.

Notes: Bold indicates that a difference is statistically significant at $p < 0.05$. Completing the Arches curriculum is defined as completing all four interactive journals and attending 48 group mentoring sessions.

The Positive Youth Development Index was developed by Arnold and colleagues (2012) to capture a young person’s status with respect to the five C’s of positive youth development (Lerner et al. 2005). In addition to developing the index, Arnold and colleagues used confirmatory factor analysis and concluded that the index has face validity. Arches administered the short version of the index to participants before and after their participation in the program. The Positive Youth Development Index portion of table 6 shows that the post-program scores on this index were higher than the pre-program scores and that this difference is statistically significant.

The IJ curriculum comes with other suggested instruments to test for improvement in the cognitive attributes it is meant to improve. As in the case of the Positive Youth Development Index, there was a statistically significant increase in these measures over time, suggesting a positive effect on participants’ perceptions of their behavior and relationships with others.

TABLE 6

Pre- and Post-Test Scores for Arches Participants*Positive Youth Development Index and Interactive Journal assessments*

	Pre-test	Post-test
Overall Positive Youth Development Index Short version	98.7	107.3**
<i>Subscales</i>		
Prosocial values	2.9	3.2
Future orientation	3.3	3.4
Emotional regulation	3.0	3.2
Personal standards	3.3	3.5
Adult support	2.9	3.0
Friendship	2.7	2.9
Contribution	2.9	3.1
Interactive Journals self-assessment	81.6	87.8**
<i>Subscales</i>		
Attitudes	3.3	3.5
Knowledge	3.2	3.4
Skills	3.1	3.3
Mentoring	3.3	3.5

Source: Analysis completed by the New York City Department of Probation and reviewed by the authors.

Notes: For the Positive Youth Development Index Short Version, a paired samples t-test revealed significant difference in the self-assessment score across subscales between pre-test (M = 98.7, SD = 19.3) and post-test (M = 107.3, SD = 16.0), $t(45) = -2.82$, $p = 0.004^{**}$. For the Interactive Journal self-assessment, a paired samples t-test revealed significant difference in the self-assessment score across subscales between pre-test (M = 81.6, SD = 12.5) and post-test (M = 87.8, SD = 13.5), $t(45) = -2.99$, $p = 0.002^{**}$.

In the matched sample, 1.8 percent of Arches participants had been reconvicted within 12 months of beginning probation versus 5.9 percent of the comparison group, an **approximately 69 percent difference**. Twenty-four months after beginning probation, 6.2 percent of Arches participants had been reconvicted versus 14.3 percent of the comparison group, an **approximately 57 percent difference**.

Arches participants were less likely than the comparison group to be reconvicted of a felony.

These differences were statistically significant and quantitatively very large. The results were robust with respect to various specifications of the propensity score analysis (see appendix A). Although it appeared that Arches participants were more likely to be rearrested when compared without matching, these differences seem to be caused by the program deliberately selecting high-risk people on probation and disappeared when comparing the matched sample, which paired Arches participants

with comparison participants with similar risk levels. This finding underscores the need for very rigorous evaluation of programs that target high-risk populations; by the very nature of that risk, they are likely to experience worse outcomes and should be compared to people of equal risk.

Although both the implementation and impact evaluation components showed the strengths of the Arches program, stakeholders identified several ways to improve the program. The following section broadly outlines best practices and lessons learned to inform our recommendations to increase the efficiency and effectiveness of the Arches program.

Lessons Learned and Next Steps

Through the synthesis of stakeholder interviews, participant focus groups, and program observations and an analysis of administrative program data, Urban has developed a set of recommendations to *sustain* and *promote* effective practices and *enhance* the program in areas that currently present barriers to positive youth development.

Best Practices

1. **Culture and fit.** Arches has a *family atmosphere* that fosters trust, communication, and support that can lead to changes in the thoughts and behaviors of participants. This atmosphere also translates to positive interactions with family and friends outside of the program and opportunities for participants to create stronger relationships with the support systems in their lives while reassessing negative relationships. Stakeholders and participants indicated that the program *fit* its target population of high-risk youth and young adults on probation. The family-style support “does not dismiss [high-risk] people” and instead works with them.
2. **Mentoring and credible messengers.** Arches fosters deep connections between participants and mentors through group mentoring sessions and one-on-one meetings, which both participants and stakeholders view favorably. At several Arches sites, participants emphasized that mentoring affects how they interact with others, fostering positive relationships, stronger social interactions, and improved self-confidence. Some participants also said that mentoring helped them learn about professionalism.
 - » **Credible messengers** are often people who grew up in similar environments and, as a result, know firsthand the “pitfalls, traps that many young people go through.” Participants indicated the importance of having mentors who they could see themselves in and who were available 24/7.
3. **Changing the mindset of participants.** One of the primary goals of Arches emphasized in the curriculum and in group mentoring discussions is the importance of changing participants’ perceptions of and cognitive responses to stress and conflict and challenging those perceptions and responses when appropriate.
4. **Peer support and influence.** In a few sites, mentors were able to facilitate peer exchanges between participants that created opportunities to hear about successes and failures from

other current members and program alumni. The idea of introducing “credible alumni” also lent credence to the power that peer exchanges and role models had in changing participants’ thoughts. Peer relationships that grew out of the group mentoring model were viewed favorably by participants and stakeholders across sites.

5. **Fluid structure and schedule.** Many sites allow participants to join at any time without feeling “behind.” This fluid nature of the program’s structure and schedule, though variable across sites, allows for mentors and other program stakeholders to meet each participant where they are. In early stages, the focus is on gaining their trust. Later, staff seek to teach and mirror positive cognitive skills that can lead to positive youth development outcomes.
 - » Focus groups revealed that the schedule keeps participants occupied during the week and engaging in new opportunities that “helped keep [me] out of trouble...especially in the summer.”
 - » There also seems to be **flexibility in assigning mentors** to program participants that produces positive outcomes. Some programs do not assign each participant to one mentor and instead provide group mentorship, which allows participants to identify the mentor with whom they feel most comfortable.
6. **CCFY training and support.** Although there were varied responses about the sustained effects of training, generally the training topics and, in some sites, on-site support and technical assistance were viewed favorably. Some staff wanted increased training opportunities, including on-site coaching, and expanded topics, including trauma-informed skills. Observations revealed that an increased emphasis on facilitation skills and cognitive behavioral techniques would be beneficial, as expertise on these subjects varied significantly across sites. In a few sites, positive references to and observations of the use of restorative justice circles provided opportunities for a group process that may lead to positive youth development.
7. **Community connections.** One administrative stakeholder suggested, “Arches is a bridge that connects the community back with the people.” The level of connection between Arches and other community organizations varied by site, but program staff and participants valued them where they existed.
8. **Proximity to NeONs.** In some cases, basing POs in NeON offices made it easier to report probation conditions for Arches participants, helped build relationships between program stakeholders and POs overseeing referrals, and increased access to additional services provided through NeON community offices (e.g., employment and academic support, health

care, etc.). Still, we found no difference in Arches program outcomes for those programs operating in NeON neighborhoods.

Barriers to Implementation

- 1. Fidelity and fit of CBT curriculum.** The IJ curriculum is a key component of the Arches model, and observations, interviews, and focus groups in all eight sites revealed significant variations in the use of journals and application of IJ principles.
 - » The IJ curriculum, *Forward Thinking*, was developed for use with adults in correctional settings. Although interview and focus group members confirmed that its topics were relevant, how these topics were presented often seemed out of touch with the probation population. Stakeholders made numerous recommendations to modify the curriculum specifically for youth and young adults on probation in New York City.
- 2. Role of alumni.** Although other programs exist for Arches alumni (the Arches Alumni Academy for Advancement), interviews and focus groups with program stakeholders and participants revealed a desire for more direct involvement from alumni in current Arches groups. In mentoring groups that included alumni, discussions often turned to goal planning, with alumni talking about their trajectory through Arches and beyond.
- 3. Group facilitation skills.** There was significant variation in group facilitation skills across sites. Within sites, there were also considerable skill gaps between mentors. Interviews revealed that people see a need for an increased focus on educating and training mentors on group facilitation.
 - » **Trauma-informed skills.** Interviews with program stakeholders indicated that many Arches participants have trauma that surfaces during group and one-on-one mentoring sessions. Stakeholders believed mentors would benefit from training on techniques and skills that are appropriate for youth who have experienced trauma.
- 4. Site referrals.** Referrals to the Arches program are driven by DOP and, more specifically, POs who supervise youth who may benefit from group mentoring. Sites indicated that although their relationships with POs are generally positive, poor communication can make sustaining enrollment targets difficult.

5. **Arches program length.** The Arches program is meant to provide group mentoring services to youth and young adults on probation over six months, but many participants take longer to graduate. People in our interviews and focus groups consistently described the length of the program as too short and the number of program days per week (two) as too few. Many program stakeholders said participants often need time to feel comfortable in the program and that some who do not attend regularly would be better served by an extended program length.
6. **Cross-site collaboration.** Program stakeholders indicated that there are limited opportunities to collaborate with other Arches sites.
7. **Part-time mentor benefits.** Across all sites, program stakeholders indicated that a part-time status for some mentors was not consistent with the realities of their job, which can include requests for 24/7 availability and duties that extend beyond the weekly schedule of group mentoring activities. Interviews revealed high rates of turnover among mentors. There was similar sentiment among administrative stakeholder groups (e.g., DOP, NYC Opportunity, etc.) on the need for increased support for mentors.
 - » Some stakeholders also cited more education opportunities for mentors as a way to improve their capacity to carry out their Arches responsibility and expand their future job prospects.
8. **Wraparound services.** Sites differ drastically in their capacity to connect graduates to services such as education, work, and so on and to accommodate additional services needed by current participants, such as housing.
9. **Site funding.** One of the most consistent barriers identified through interviews with program stakeholders was the limited funds available to support program activities, currently just \$170,800 per site. References were made to budgetary constraints impacting off-site trips and learning opportunities and placing limits on access to quality hot meals and adequate stipends offered to participants.

Recommendations

1. **Increase focus on mechanisms that support consistent application of services across all sites.** The evaluation documented that execution of the program's key components, including the application of the IJ curriculum and facilitation of group mentoring sessions, was inconsistent across sites. Although service delivery was unique from site to site, it would be ideal to develop

mechanisms that support consistent application of services across sites. Such mechanisms may include site-to-site learning and in-person observation, increased coaching for group facilitators, and the application of site-specific data collection (e.g., participant feedback) to inform group activities.

2. **Incorporate trauma-informed principles and crisis intervention strategies into training modules.** With cognitive behavioral and motivational enhancement principles at the center of the curriculum, an increased focus on trauma principles may provide program stakeholders with tools for managing individual and group trauma that may arise during mentoring sessions. Training through Arches' TA provider, CCFY, may be an ideal application of trauma and crisis techniques for program stakeholders.
3. **Tailor IJ curriculum to align with the real-world experiences, resources, and expectations of participants.** The IJ curriculum was originally developed for adult males incarcerated in state and federal prisons. Although the current format is meant to fit the Arches population of youth and young adults, interviews and focus groups suggested adapting the curriculum to specifically fit New York City youth and young adults on probation may make it more effective. To do so, DOP could put together working groups of Arches participants, alumni, and program stakeholders to provide feedback on ways to improve the curriculum so that it better reflects the day-to-day issues faced by participants.
4. **Provide support to mentors through increased training, opportunities for full-time employment, and advanced education opportunities.** Through conversations with program stakeholders, it became evident that providing internal and external options to support mentors' further education and training and extending full-time employment to more mentors could decrease staff turnover and provide participants with a more highly skilled and consistent staff.
5. **Expand program length to accommodate increased alumni engagement and aftercare services for participants to better address positive youth development outcomes.** Literature suggests that high-frequency engagement between mentors and mentees can help reduce recidivism. Increasing the number of program days per week, and thus the engagement between mentors and participants, may better align with more positive recidivism outcomes. Expanding the program beyond six months also provides more opportunities for participant engagement (buy-in takes time) and learning, increased focus on aftercare and wraparound services, and greater emphasis on positive youth outcomes. Expanding the program with an official alumni engagement component would provide more positive peer role models for participants to learn from.

6. **Create opportunities for cross-site collaboration.** At all levels, stakeholder interviews consistently suggested that expanding opportunities for peer-to-peer, cross-site learning between mentors and program coordinators would benefit participants. Stakeholders recommended creating more frequent opportunities to share knowledge and troubleshoot similar challenges across sites. Formalized cross-site collaboration could also expand access to wraparound services once participants graduate.
7. **Incorporate site-specific program data into day-to-day decision making and new data collection opportunities to improve group facilitation.** Site-specific monthly reports are developed through the DOP Connect database and provide information on attendance, admissions, and site narratives. Data collection could include participant and mentor-to-mentor feedback following group sessions. Participant feedback could be collected at weekly intervals through self-administered satisfaction surveys (on paper or through a tablet/web app).
8. **Increase community engagement and collaboration with local, youth-supported partner organizations.** Greater collaboration with local organizations could help supplement program funding through mutually supportive youth services (e.g., youth work opportunities) and may indirectly increase community awareness and foster a positive image of the program.
9. **Expand access to group mentoring services for younger participants (those under 16 years old).** Arches was shown to work better for younger participants (those 16 and 17 years old). Additionally, stakeholder interviews indicated service gaps exist for youth under age 16.
10. **Arches works.** Keep it going.

Conclusions

In the current evaluation of the Arches Transformative Mentoring program, Urban Institute researchers examined the implementation and impact of the group mentoring program on youth and young adults in New York City. In line with key administrative programming goals, Arches reduced recidivism among participants when compared to a comparison group of youth and young adults on probation. The evaluation also yielded positive results for its youngest participants (those ages 16 and 17) when compared to young adults (those ages 18 and older), providing opportunities for Arches to address perceived service gaps by offering group mentoring to youth 16 years of age and younger.

For program graduates, Arches led to increased positive youth development outcomes.

These results are generally consistent with the literature on youth behavior changes and group mentoring and open the door for opportunities to refine (and expand) the program's services in New York City. Since 2013, DOP has pursued strategies to improve public safety and address the nuanced risks and needs of youth and young adults on probation. By focusing on evidence-based policies and practices meant to “do more good,” DOP has stressed the use of validated risk assessment tools and strengths-based approaches to juvenile justice (New York City Department of Probation 2013). The development of the Young Men's Initiative, meant to address disparities in the criminal justice system for youth and young men of color, supports the building of positive relationships, which Arches has been successful in implementing.

Parallel to Arches and other New York City youth-based initiatives, New York State has also undergone a transformation in how it addresses justice-involved youth and young adults. Until recently, New York remained one of two states that enforced a minimum age of criminal responsibility of 16 years old; this is set to change in October 2018 and will provide criminal justice actors with more opportunity to pursue youth-specific programming. In line with this evaluation's findings and ongoing research on brain development in young people, DOP may look to expand the services it offers to youth under the age of 16.

The current evaluation of Arches also provides context for the national narrative on strategies for engaging justice-involved youth and young adults. With structured mentoring programs yielding promising research, an emphasis on mentoring has continued to guide juvenile-justice funding nationwide. Since 2015, the Office of Juvenile Justice and Delinquency Prevention has invested in mentor programming to address youth reentry and diversion through a focus on positive youth decision making and recidivism reduction. Arches, a structured group mentoring program, aligns with these initiatives to address justice-involved youth's reentry and diversion needs (e.g., incorporating formal wraparound and alumni services) while increasing public safety.

Overall, program participants, as well as administrative and program stakeholders, expressed strong support for the expansion of Arches and, more importantly, suggested ways it can better meet the needs of participants. It is important to note that although the evaluation revealed that Arches works, for youth and young adults in New York City, implementation matters. Looking for ways to

improve implementation of cognitive behavioral principles (via cross-site learning and training opportunities), tailor the curriculum to better address local youth and young adult issues, and incorporate site-specific data into day-to-day decision making may help improve youth outcomes. Through the lessons learned, barriers to implementation, and recommendations described above, Urban has provided a roadmap for the city to enhance and potentially replicate the Arches program going forward.

Appendix. Impact Data Collection Strategies

Data Continued

The data for the impact evaluation came from three sources. The first, DOP Connect, contains information on Arches participants. This information consists of data on program participation, such as attendance and scores on attitudinal and psychological scales that the program administered during intake and after graduation.

The second data source, Caseload Explorer, contains information on all people on probation in New York City, including but not limited to Arches participants. These data contain basic information on people such as demographic characteristics and important dates including the beginning of their probation and dates of subsequent arrests or violations while on probation.

The third source is a database from the New York State Division of Criminal Justice Services that contains data on arrests and convictions for all people arrested in the state. These data were important because DOP only has data on arrests that take place while someone is on probation, and it was important for the evaluation to take into account behavior of people on probation outside that. These data are not available to DOP as a matter of course, and DOP needed to petition DCJS for post-probation arrest data for Arches participants and the comparison group. This application was made on May 8, 2016, and was approved around October 1, 2016. The data were sent by DCJS on November 3, 2016 and were merged with program data on November 21, 2016.

Methods Continued

The Arches program did not have an embedded randomized comparison trial. In a randomized comparison trial, people eligible for the program are randomly assigned to the treatment group or a comparison group. Randomization should ensure that participants in the treatment and comparison groups are indistinguishable from each other with respect to observed or even unobserved characteristics at the time of randomization. Under these conditions, it is therefore possible to attribute any difference between the comparison and treatment groups to the treatment itself.

Due to the absence of a randomized comparison trial, Urban adopted a quasi-experimental design for the impact evaluation. The comparison group, as explained above, consisted of people who began probation at the same time as the Arches group. We know there are systematic differences between those who began probation during the year 2013 and were assigned to Arches and those who were not assigned. This is because the program’s referral protocols included recommending young people at very high risk of recidivism (as indicated by a high LSI-R score) and young people from particular neighborhoods. Table 4 shows that this targeting was effective.

Propensity score matching consists of assigning each case a “propensity” to be in the treatment group. This is done by using a regression (usually a logistic regression or probit regression), where the outcome is membership in the treatment group. From this regression, it is possible to calculate the predicted probability that a case—either treatment or comparison—is in the treatment group. There are several ways to match the propensity scores of treatment and comparison groups, Urban used “nearest neighbor” matching, which matched a comparison group member to a treatment group member if their propensity score was within 0.01 of the treatment case.

One compares the outcomes in a sample of treatment and comparison cases with the same distribution of propensities to be in the treatment group by including, for each treatment, comparison cases with a similar propensity to be in the treatment group. Urban used three different models for this analysis. Because there was such a high level of missing data, especially for risk level scores, we needed to check the robustness of our model to different ways of dealing with missing data. In the first analysis (reported in the main body of the report), we kept all 961 cases in the analysis and made “missing” a valid category for all variables in the regression analysis that predicted the propensity score (see the estimates associated with “missing” in the second column of appendix A.1). This approach, referred to as model 1, avoids the danger that the cases with missing data are somehow different from the others. If they were, this might bias the results.

TABLE A.1

Outcomes by Treatment and Matched Comparison Sample by Model

	Arches	Comparison
Model 1 (n = 943)	N = 273	N = 670
Arrest within 12 months	58.6	56.5
Felony arrest within 12 months	26.7	28.0
Arrest within 24 months	74.0	71.4
Felony arrest within 24 months	41.4	44.1
Reconviction within 12 months	19.8	23.7
Felony reconviction within 12 months	1.8**	5.9**
Reconviction within 24 months	28.9	36.7
Felony reconviction within 24 months	6.2***	14.3***
Model 2 (n = 810)	N = 246	N = 536
Arrest within 12 months	59.8	55.9
Felony arrest within 12 months	26.0	27.3
Arrest within 24 months	76.0	74.7
Felony arrest within 24 months	41.5	44.6
Reconviction within 12 months	19.5	23.3
Felony reconviction within 12 months	1.2**	6.0**
Reconviction within 24 months	29.7	37.0
Felony reconviction within 24 months	6.1***	14.0***
Model 3 (n = 571)	N = 195	N = 376
Arrest within 12 months	61.0	56.8
Felony arrest within 12 months	25.6	30.2
Arrest within 24 months	77.4	74.7
Felony arrest within 24 months	43.1	47.2
Reconviction within 12 months	21.0	25.6
Felony reconviction within 12 months	1.5*	5.7*
Reconviction within 24 months	31.3	38.2
Felony reconviction within 24 months	6.7**	14.7**

Source: Analysis completed by the New York City Department of Probation and reviewed by the authors.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Urban then ran the propensity score analysis including all the cases that were missing risk level scores but eliminating cases missing on any other variable. This is referred to as model 2. The missing data on this variable was more troubling than on the others for two reasons. First, a person's score on this variable affected whether he or she was assigned to Arches. Second, it is the variable with the most missing data.

Finally, we ran the propensity score analysis deleting cases that were missing on any variable in the analysis. This is referred to as model 3.

Table A.2 shows the regressions that calculate the propensity scores for the three models. This table contains estimates of probit coefficients from models regressing whether or not a case was in the treatment group on the variables in table 4. The estimates of the coefficients are similar across models,

indicating that the propensity score prediction equation was quite robust across different specifications. Across models, age, race/ethnicity, risk level, and borough of residence were all significant predictors of whether a case was in the treatment group.

TABLE A.2

Probit of Treatment on Background Variables

	Model 1	Model 2	Model 3
Age at start of probation	-0.11***	-0.10***	-0.12***
Male	0.00	-0.02	0.13
Race/ethnicity (ref = non-Hispanic black)			
Non-Hispanic white	-1.26***	-1.17**	-1.57***
Hispanic	-0.41***	-0.41***	-0.40**
Other	-0.64***	-0.49*	-0.47*
Missing	-0.11		
Education (ref = less than high school)			
High school grad or GED	0.07	0.16	0.12
Some postsecondary	-0.40	-0.51	-0.71*
Missing	-0.44		
Employed at intake	-0.07	-0.09	-0.09
Seriousness of offence (ref = least serious)			
Most serious	0.12	0.11	0.13
More serious	-0.09	-0.10	-0.26
Less serious	0.03	0.02	0.03
Missing	0.09		
Risk (ref = medium)			
Low	0.16	0.19	0.20
High/highest	0.33***	0.39**	0.40**
LSI-R not completed	-0.14	-0.13	
Borough (ref = Brooklyn/The Bronx)			
Manhattan/Queens/Staten Island	0.41***	0.37***	0.36**
Constant	1.57	1.50**	1.62**
Cases	961	810	622

Source: Analysis completed by the New York City Department of Probation and reviewed by the authors.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

There are several diagnostic tools one can use to evaluate the quality of the propensity score analysis. One is the number of treatment cases that need to be dropped from the analysis because there is no comparison case with as high a propensity to be in the treatment group. Another diagnostic is the assessment of how balanced the treatment and matched comparison samples are after matching. To evaluate this, one can calculate the amount of bias (with respect to the variables in the prediction regression) in the matched comparison sample. Bias of 5 percent is the usual cut point. One can also use t-tests to determine whether the treatment and matched comparison samples are different with respect to a particular variable. Table A.3 contains a summary of these diagnostics for the three models.

TABLE A.3

Diagnostics on Propensity Score Analysis by Model

	Model 1	Model 2	Model 3
Treatment cases eliminated	6	2	7
Mean bias	3.7	3	2.9
Significant differences between treatment and comparison on background variables	0	0	0

Source: Analysis completed by the New York City Department of Probation and reviewed by the authors.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

All three models do very well. There are only six, two and seven treatment cases eliminated from the analysis because there were no comparison cases with a sufficiently high propensity to match. The overall bias is below 5 percent in all cases, and there were no significant t-tests indicating that the treatment and matched comparison samples were different with respect to any of the predictors.

The results of the propensity score analysis are also quite robust. In table A.1, we present a comparison between the treatment group and the matched samples for all three models. In all three cases, these tabulations indicate that the treatment had a salutatory effect on felony reconvictions within both 12 and 24 months. The apparent differences (from table 3) in arrests do not persist when the people being compared are more similar.

Notes

1. Statistically significant at $p < 0.01$.
2. Statistically significant at $p < 0.001$.
3. 12 and 24 months were statistically significant at $p < 0.05$.
4. Statistically significant at $p < 0.05$.
5. Sample refers to the selection of sites for the implementation evaluation component.
6. Rapid evidence assessment is a method, similar to a systematic review, for identifying and synthesizing evidence from research studies on a particular topic. Rapid evidence assessments differ from systematic reviews in the use of a rapid (restricted time frame) search application that may limit the identification of certain studies, for example, those that are unpublished.
7. Steven L. Proctor, Caleb J. Corwin, Norman G. Hoffman, and Steve Allison, "A Tool to Engage Jail Inmates," *Addiction Professional*, January 1, 2009, <https://www.addictionpro.com/article/tool-engage-jail-inmates>.
8. Proctor, Corwin, Hoffman, and Allison, "A Tool to Engage Jail Inmates."
9. "Cognitive Behavioral Therapy: Overview," Mayo Clinic, accessed August 4, 2017, <http://www.mayoclinic.org/tests-procedures/cognitive-behavioral-therapy/home/ovc-20186868>.
10. Mayo Clinic, "Cognitive Behavioral Therapy: Overview."
11. The Steering Committee was composed of representatives from the NYC Family Court, the NYC Mayor's Office, the NYC Law Department, The Legal Aid Society, the NYC Police Department, the New York City Council, the NYC Administration for Children's Services, the NYC Department of Probation, the NYC Department of Education, the Office of the NYC Criminal Justice Coordinator, the NYC Health and Hospital Corporation, and members of the advocacy community.
12. City of New York, "Mayor Bloomberg, Deputy Mayor Gibbs, and Probation Commissioner Schiraldi Launch first Neighborhood Opportunity Network—Neon—A Central Element of Young Men's Initiative," news release, December 8, 2011, <http://www1.nyc.gov/office-of-the-mayor/news/432-11/mayor-bloomberg-deputy-mayor-gibbs-probation-commissioner-schiraldi-launch-first-neighborhood>.
13. In 2011, DOP implemented the Neighborhood Opportunity Network (NeON), opening the first of what would become seven NeONs in New York neighborhoods (these overlapped with eventual Arches sites), colocating with community-based organizations to better engage people on probation.
14. New York State's age of criminal responsibility is currently 16, and the state automatically prosecutes all 16- and 17-year-olds as adults. Beginning in October 2018, the state will begin phasing in a raised age of criminal responsibility to 18 years of age for all 16- and 17-year-olds charged with misdemeanors and some felonies.
15. NVivo is computer-assisted qualitative data software that "aides researchers in the search for an accurate and transparent picture of the data whilst also providing an audit of the data analysis process" (Walsh 2002). While time intensive in the coding and analysis of qualitative data, NVivo's organizational capacity to provide an accurate portrayal of interview and focus group themes makes it ideal for applying to the range of qualitative activities to glean themes across sites, stakeholders, and topics related to this evaluation.
16. Before coding all interviews and focus groups, coding consistency was assessed across coders. Coded interviews were reviewed for code stripe consistency—comparing coding results across multiple coders—and NVivo's coding comparison queries—examining interrater reliability—were reviewed for agreement. High levels of intercoder agreement were obtained across two randomly selected interviews for all coders.

17. Individual action plans, negotiated by probation officers and their clients, are an essential part of the city's new model of probation for all clients. The plans are individualized and transparent probation agreements with specific goals and conditions that match the interests and needs of and challenges facing each probation client. See City of New York, Department of Probation, "Arches: A Transformative Mentoring Intervention," RFA 78112ARCHESRFA, issued January 19, 2012, http://www.nyc.gov/html/prob/downloads/pdf/arches_rfa_01192012_3.pdf.
18. The seven individual action plan domains include housing, education, workforce development, healthy relationships with a positive adult, antisocial/criminal thinking, behavioral health, and additional services and support. See City of New York, Department of Probation, "Arches: A Transformative Mentoring Intervention."
19. Arches participants have access to and are encouraged to attend a number of summer programs, including the Department of Youth and Community Development's Summer Youth Employment Program.
20. City of New York, Department of Probation, "Arches: A Transformative Mentoring Intervention."
21. City of New York, Department of Probation, "Arches: A Transformative Mentoring Intervention."
22. DOP's Advocate, Intervene, Mentor program, a court-mandated alternative-to-placement program (i.e., not accessible to any/all juveniles on probation) incorporates credible messengers into an individual mentoring program serving youth on probation between ages 13 and 18.
23. Program completion is defined as having attended 48 sessions and completing four journals. However, DOP did not discretely track completion of journals until July 2016.
24. Assessment practices vary by site, and providers are not required to use an assessment tool; no tool is prescribed for the Arches program.
25. The Arches Alumni Academy for Advancement program is a youth leadership initiative (privately funded and operating independently of DOP and Arches) for Arches graduates who, by virtue of their prior experience with the justice system and their desire to give back to their communities, are credible messengers for their peers and for younger youth (see Community Connections for Youth's website at <https://cc-fy.org/project/4as/>). The Arches Alumni Academy for Advancement offers graduates the opportunity to develop leadership and mentoring skills and could serve as a natural extension to programming and a potential bridge to education and employment opportunities.
26. The program shrank from 18 to 13 sites, which was feasible because the program sites had not been operating at capacity.
27. Arches alumni who participated in the Arches Alumni Academy for Advancement program were not included in the sample for this analysis.
28. Currently, DOP assesses probationers for risk at intake and every subsequent six months. In this analysis, Urban used their initial scores.
29. Police make arrests in NeON neighborhoods 15 percent more often than they do in non-NeON neighborhoods. According to NYC Open Data, in 2010, NeON neighborhoods consisted of 1.9 million people, for which 24,652 arrests were made. Non-NeON neighborhoods consisted of 6.6 million people, for which 75,122 arrests were made the same year. "New York City Population by Community Districts," NYC Open Data, accessed October 6, 2017, <https://data.cityofnewyork.us/City-Government/New-York-City-Population-By-Community-Districts/xi7c-iiu2>.
30. Arrest data for Arches participants do not go far enough to calculate 24-month rates.

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